

Results - Soil

Project: 315531 EAF Meltshop

Client: RSK Geosciences		Chemtest Job No.:	24-27128	24-27128	24-27128	24-27128	24-27793	24-27793	24-27793	24-29969
Quotation No.: Q24-35208		Chemtest Sample ID.:	1855529	1855532	1855534	1855536	1858447	1858448	1858450	1867652
Order No.: P02150967		Client Sample Ref.:					ES4	ES1	ES3	
		Client Sample ID.:								
		Sample Location:	TP376	TP375	TP374	TP341	BH305	BH303A	BH303A	TP3005
		Sample Type:	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):	0.25	1.60	1.40	2.30	5.5	0.6	3.0	1.50
		Bottom Depth (m):								
		Date Sampled:	19-Aug-2024	19-Aug-2024	19-Aug-2024	19-Aug-2024				
		Asbestos Lab:	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD					
4-Chlorotoluene		U	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
Tert-Butylbenzene		U	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
1,2,4-Trimethylbenzene		M	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
Sec-Butylbenzene		U	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
1,3-Dichlorobenzene		M	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
4-Isopropyltoluene		U	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
1,4-Dichlorobenzene		M	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
N-Butylbenzene		U	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
1,2-Dichlorobenzene		M	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
1,2-Dibromo-3-Chloropropane		U	2760	µg/kg	50	[B] < 50		[A] < 50		[A] < 50
1,2,4-Trichlorobenzene		M	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
Hexachlorobutadiene		N	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
1,2,3-Trichlorobenzene		U	2760	µg/kg	2.0	[B] < 2.0		[A] < 2.0		[A] < 2.0
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	[B] < 1.0		[A] < 1.0		[A] < 1.0
N-Nitrosodimethylamine		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
Phenol		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
2-Chlorophenol		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
Bis-(2-Chloroethyl)Ether		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
1,3-Dichlorobenzene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
1,4-Dichlorobenzene		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
1,2-Dichlorobenzene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
2-Methylphenol		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
Bis(2-Chloroisopropyl)Ether		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
Hexachloroethane		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
N-Nitrosodi-n-propylamine		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
4-Methylphenol		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
Nitrobenzene		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
Isophorone		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
2-Nitrophenol		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
2,4-Dimethylphenol		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
Bis(2-Chloroethoxy)Methane		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
2,4-Dichlorophenol		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
1,2,4-Trichlorobenzene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
Naphthalene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
4-Chloroaniline		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50
Hexachlorobutadiene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50		[A] < 0.50

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Client: RSK Geosciences		Chemtest Job No.:		24-27128	24-27128	24-27128	24-27128	24-27793	24-27793	24-27793	24-29969
Quotation No.: Q24-35208		Chemtest Sample ID.:		1855529	1855532	1855534	1855536	1858447	1858448	1858450	1867652
Order No.: P02150967		Client Sample Ref.:						ES4	ES1	ES3	
		Client Sample ID.:									
		Sample Location:		TP376	TP375	TP374	TP341	BH305	BH303A	BH303A	TP3005
		Sample Type:		SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):		0.25	1.60	1.40	2.30	5.5	0.6	3.0	1.50
		Bottom Depth (m):									
		Date Sampled:		19-Aug-2024	19-Aug-2024	19-Aug-2024	19-Aug-2024				
		Asbestos Lab:		DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD						
4-Chloro-3-Methylphenol		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
2-Methylnaphthalene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
4-Nitrophenol		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
2,4,6-Trichlorophenol		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
2,4,5-Trichlorophenol		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
2-Chloronaphthalene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
2-Nitroaniline		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Acenaphthylene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Dimethylphthalate		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
2,6-Dinitrotoluene		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Acenaphthene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
3-Nitroaniline		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Dibenzofuran		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
4-Chlorophenylphenylether		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
2,4-Dinitrotoluene		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Fluorene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Diethyl Phthalate		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
4-Nitroaniline		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Azobenzene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
4-Bromophenylphenyl Ether		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Hexachlorobenzene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Phenanthrene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Anthracene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Carbazole		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Di-N-Butyl Phthalate		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Fluoranthene		M	2790	mg/kg	0.50	[B] 0.64		[A] < 0.50			[A] < 0.50
Pyrene		M	2790	mg/kg	0.50	[B] 0.57		[A] < 0.50			[A] < 0.50
Butylbenzyl Phthalate		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Benzo[a]anthracene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Chrysene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Bis(2-Ethylhexyl)Phthalate		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Di-N-Octyl Phthalate		N	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Benzo[b]fluoranthene		M	2790	mg/kg	0.50	[B] 1.1		[A] < 0.50			[A] < 0.50
Benzo[k]fluoranthene		M	2790	mg/kg	0.50	[B] < 0.50		[A] < 0.50			[A] < 0.50
Benzo[a]pyrene		M	2790	mg/kg	0.50	[B] 0.62		[A] < 0.50			[A] < 0.50
Indeno(1,2,3-c,d)Pyrene		N	2790	mg/kg	0.50	[B] 0.69		[A] < 0.50			[A] < 0.50

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Client: RSK Geosciences		Chemtest Job No.:				24-27128	24-27128	24-27128	24-27128	24-27793	24-27793	24-27793	24-29969
Quotation No.: Q24-35208		Chemtest Sample ID.:				1855529	1855532	1855534	1855536	1858447	1858448	1858450	1867652
Order No.: P02150967		Client Sample Ref.:								ES4	ES1	ES3	
		Client Sample ID.:											
		Sample Location:				TP376	TP375	TP374	TP341	BH305	BH303A	BH303A	TP3005
		Sample Type:				SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
		Top Depth (m):				0.25	1.60	1.40	2.30	5.5	0.6	3.0	1.50
		Bottom Depth (m):											
		Date Sampled:				19-Aug-2024	19-Aug-2024	19-Aug-2024	19-Aug-2024				
		Asbestos Lab:				DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD								
Dibenz(a,h)Anthracene		N	2790	mg/kg	0.50	[B] < 0.50				[A] < 0.50			[A] < 0.50
Benzo[g,h,i]perylene		M	2790	mg/kg	0.50	[B] 0.88				[A] < 0.50			[A] < 0.50
Naphthalene		M	2800	mg/kg	0.10	3.5	66	< 0.10	12	< 0.10	0.15	< 0.10	< 0.10
Acenaphthylene		N	2800	mg/kg	0.10	2.4	< 0.10	< 0.10	0.65	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		M	2800	mg/kg	0.10	1.0	13	< 0.10	3.1	< 0.10	0.19	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	1.4	7.3	< 0.10	3.1	< 0.10	0.30	< 0.10	< 0.10
Phenanthrene		M	2800	mg/kg	0.10	2.8	9.2	< 0.10	6.9	0.20	1.6	< 0.10	< 0.10
Anthracene		M	2800	mg/kg	0.10	1.2	1.6	< 0.10	0.93	< 0.10	0.49	< 0.10	< 0.10
Fluoranthene		M	2800	mg/kg	0.10	4.4	2.4	< 0.10	1.9	0.24	1.4	< 0.10	< 0.10
Pyrene		M	2800	mg/kg	0.10	3.4	2.5	< 0.10	2.3	0.19	1.0	< 0.10	< 0.10
Benzo[a]anthracene		M	2800	mg/kg	0.10	2.1	< 0.10	< 0.10	0.80	< 0.10	0.28	< 0.10	< 0.10
Chrysene		M	2800	mg/kg	0.10	3.1	< 0.10	< 0.10	2.1	< 0.10	0.25	< 0.10	< 0.10
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	6.5	< 0.10	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	1.9	< 0.10	< 0.10	0.28	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		M	2800	mg/kg	0.10	3.8	< 0.10	< 0.10	0.77	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	5.1	< 0.10	< 0.10	0.35	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	4.8	< 0.10	< 0.10	0.67	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		N	2800	mg/kg	2.0	49	100	< 2.0	37	< 2.0	5.7	< 2.0	< 2.0

Results - Soil

Project: 315531 EAF Meltshop

Client: RSK Geosciences		Chemtest Job No.:				24-29969	24-29969
Quotation No.: Q24-35208		Chemtest Sample ID.:				1867654	1867656
Order No.: P02150967		Client Sample Ref.:					
		Client Sample ID.:					
		Sample Location:				TP3005	BH318
		Sample Type:				SOIL	SOIL
		Top Depth (m):				0.70	0.30
		Bottom Depth (m):					
		Date Sampled:					
		Asbestos Lab:				DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
ACM Type		U	2192		N/A	-	-
Asbestos Identification		U	2192		N/A	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry		U	2192	%	0.001		
Total Asbestos		U	2192	%	0.001		
Moisture		N	2030	%	0.020	3.6	11
Soil Colour		N	2040		N/A	Brown	Brown
Other Material		N	2040		N/A	Stones and Roots	Stones
Soil Texture		N	2040		N/A	Sand	Sand
pH at 20C		M	2010		4.0	[A] 9.9	[A] 9.3
Arsenic		M	2455	mg/kg	0.5	2.8	18
Cadmium		M	2455	mg/kg	0.10	0.11	1.9
Chromium		M	2455	mg/kg	0.5	14	54
Copper		M	2455	mg/kg	0.50	6.0	74
Mercury		M	2455	mg/kg	0.05	< 0.05	0.12
Nickel		M	2455	mg/kg	0.50	5.3	30
Lead		M	2455	mg/kg	0.50	16	500
Selenium		M	2455	mg/kg	0.25	2.5	1.2
Zinc		M	2455	mg/kg	0.50	45	800
Chromium (Hexavalent)		N	2490	mg/kg	0.50	< 0.50	< 0.50
Aliphatic VPH >C5-C6	HS_2D_AL	U	2780	mg/kg	0.05	[A] < 0.05	[A] < 0.05
Aliphatic VPH >C6-C7	HS_2D_AL	U	2780	mg/kg	0.05	[A] < 0.05	[A] < 0.05
Aliphatic VPH >C7-C8	HS_2D_AL	U	2780	mg/kg	0.05	[A] < 0.05	[A] < 0.05
Aliphatic VPH >C6-C8 (Sum)	HS_2D_AL	N	2780	mg/kg	0.10	[A] < 0.10	[A] < 0.10
Aliphatic VPH >C8-C10	HS_2D_AL	U	2780	mg/kg	0.05	[A] < 0.05	[A] < 0.05
Total Aliphatic VPH >C5-C10	HS_2D_AL	U	2780	mg/kg	0.25	[A] < 0.25	[A] < 0.25
Aliphatic EPH >C10-C12 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	[A] < 2.0	[A] 2.5
Aliphatic EPH >C12-C16 MC	EH_2D_AL_#1	M	2690	mg/kg	1.00	[A] < 1.0	[A] < 1.0
Aliphatic EPH >C16-C21 MC	EH_2D_AL_#1	M	2690	mg/kg	2.00	[A] < 2.0	[A] < 2.0
Aliphatic EPH >C21-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	3.00	[A] 5.5	[A] 7.3
Aliphatic EPH >C35-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	[A] < 10	[A] < 10
Total Aliphatic EPH >C10-C35 MC	EH_2D_AL_#1	M	2690	mg/kg	5.00	[A] 7.7	[A] 10
Total Aliphatic EPH >C10-C40 MC	EH_2D_AL_#1	N	2690	mg/kg	10.00	[A] < 10	[A] < 10
Aromatic VPH >C5-C7	HS_2D_AR	U	2780	mg/kg	0.05	[A] < 0.05	[A] < 0.05
Aromatic VPH >C7-C8	HS_2D_AR	U	2780	mg/kg	0.05	[A] < 0.05	[A] < 0.05

Results - Soil

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Client: RSK Geosciences		Chemtest Job No.:				24-29969	24-29969
Quotation No.: Q24-35208		Chemtest Sample ID.:				1867654	1867656
Order No.: P02150967		Client Sample Ref.:					
		Client Sample ID.:					
		Sample Location:				TP3005	BH318
		Sample Type:				SOIL	SOIL
		Top Depth (m):				0.70	0.30
		Bottom Depth (m):					
		Date Sampled:					
		Asbestos Lab:				DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
Aromatic VPH >C8-C10	HS_2D_AR	U	2780	mg/kg	0.05	[A] < 0.05	[A] < 0.05
Total Aromatic VPH >C5-C10	HS_2D_AR	U	2780	mg/kg	0.25	[A] < 0.25	[A] < 0.25
Aromatic EPH >C10-C12 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	[A] < 1.0	[A] < 1.0
Aromatic EPH >C12-C16 MC	EH_2D_AR_#1	U	2690	mg/kg	1.00	[A] < 1.0	[A] < 1.0
Aromatic EPH >C16-C21 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	[A] 6.0	[A] 8.6
Aromatic EPH >C21-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	2.00	[A] 3.5	[A] 6.0
Aromatic EPH >C35-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	1.00	[A] < 1.0	[A] 14
Total Aromatic EPH >C10-C35 MC	EH_2D_AR_#1	U	2690	mg/kg	5.00	[A] 9.7	[A] 15
Total Aromatic EPH >C10-C40 MC	EH_2D_AR_#1	N	2690	mg/kg	10.00	[A] < 10	[A] 29
Total VPH >C5-C10	HS_2D_Total	U	2780	mg/kg	0.50	[A] < 0.50	[A] < 0.50
Total EPH >C10-C35 MC	EH_2D_Total_#1	U	2690	mg/kg	10.00	[A] 17	[A] 25
Total EPH >C10-C40 MC	EH_2D_Total_#1	N	2690	mg/kg	10.00	[A] 17	[A] 39
Naphthalene		M	2700	mg/kg	0.10		
Acenaphthylene		M	2700	mg/kg	0.10		
Acenaphthene		M	2700	mg/kg	0.10		
Fluorene		M	2700	mg/kg	0.10		
Phenanthrene		M	2700	mg/kg	0.10		
Anthracene		M	2700	mg/kg	0.10		
Fluoranthene		M	2700	mg/kg	0.10		
Pyrene		M	2700	mg/kg	0.10		
Benzo[a]anthracene		M	2700	mg/kg	0.10		
Chrysene		M	2700	mg/kg	0.10		
Benzo[b]fluoranthene		M	2700	mg/kg	0.10		
Benzo[k]fluoranthene		M	2700	mg/kg	0.10		
Benzo[a]pyrene		M	2700	mg/kg	0.10		
Indeno(1,2,3-c,d)Pyrene		M	2700	mg/kg	0.10		
Dibenz(a,h)Anthracene		M	2700	mg/kg	0.10		
Benzo[g,h,i]perylene		M	2700	mg/kg	0.10		
Total Of 16 PAH's		M	2700	mg/kg	2.0		
Dichlorodifluoromethane		U	2760	µg/kg	1.0	[A] < 1.0	
Chloromethane		M	2760	µg/kg	1.0	[A] < 1.0	
Vinyl Chloride		M	2760	µg/kg	1.0	[A] < 1.0	
Bromomethane		M	2760	µg/kg	20	[A] < 20	
Chloroethane		U	2760	µg/kg	2.0	[A] < 2.0	
Trichlorofluoromethane		M	2760	µg/kg	1.0	[A] < 1.0	
1,1-Dichloroethene		M	2760	µg/kg	1.0	[A] < 1.0	

Results - Soil

Project: 315531 EAF Meltshop

Client: RSK Geosciences		Chemtest Job No.:				24-29969	24-29969
Quotation No.: Q24-35208		Chemtest Sample ID.:				1867654	1867656
Order No.: P02150967		Client Sample Ref.:					
		Client Sample ID.:					
		Sample Location:				TP3005	BH318
		Sample Type:				SOIL	SOIL
		Top Depth (m):				0.70	0.30
		Bottom Depth (m):					
		Date Sampled:					
		Asbestos Lab:				DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
Dichloromethane		N	2760	µg/kg	50	[A] < 50	
Trans 1,2-Dichloroethene		M	2760	µg/kg	1.0	[A] < 1.0	
1,1-Dichloroethane		M	2760	µg/kg	1.0	[A] < 1.0	
cis 1,2-Dichloroethene		M	2760	µg/kg	1.0	[A] < 1.0	
Bromochloromethane		U	2760	µg/kg	5.0	[A] < 5.0	
Trichloromethane		M	2760	µg/kg	1.0	[A] < 1.0	
1,1,1-Trichloroethane		M	2760	µg/kg	1.0	[A] < 1.0	
Tetrachloromethane		M	2760	µg/kg	1.0	[A] < 1.0	
1,1-Dichloropropene		U	2760	µg/kg	1.0	[A] < 1.0	
Benzene		M	2760	µg/kg	1.0	[A] < 1.0	
1,2-Dichloroethane		M	2760	µg/kg	2.0	[A] < 2.0	
Trichloroethene		N	2760	µg/kg	1.0	[A] < 1.0	
1,2-Dichloropropane		M	2760	µg/kg	1.0	[A] < 1.0	
Dibromomethane		M	2760	µg/kg	1.0	[A] < 1.0	
Bromodichloromethane		M	2760	µg/kg	5.0	[A] < 5.0	
cis-1,3-Dichloropropene		N	2760	µg/kg	10	[A] < 10	
Toluene		M	2760	µg/kg	1.0	[A] < 1.0	
Trans-1,3-Dichloropropene		N	2760	µg/kg	10	[A] < 10	
1,1,2-Trichloroethane		M	2760	µg/kg	10	[A] < 10	
Tetrachloroethene		M	2760	µg/kg	1.0	[A] < 1.0	
1,3-Dichloropropane		U	2760	µg/kg	2.0	[A] < 2.0	
Dibromochloromethane		U	2760	µg/kg	10	[A] < 10	
1,2-Dibromoethane		M	2760	µg/kg	5.0	[A] < 5.0	
Chlorobenzene		M	2760	µg/kg	1.0	[A] < 1.0	
1,1,1,2-Tetrachloroethane		M	2760	µg/kg	2.0	[A] < 2.0	
Ethylbenzene		M	2760	µg/kg	1.0	[A] < 1.0	
m & p-Xylene		M	2760	µg/kg	1.0	[A] < 1.0	
o-Xylene		M	2760	µg/kg	1.0	[A] < 1.0	
Styrene		M	2760	µg/kg	1.0	[A] < 1.0	
Tribromomethane		U	2760	µg/kg	1.0	[A] < 1.0	
Isopropylbenzene		M	2760	µg/kg	1.0	[A] < 1.0	
Bromobenzene		M	2760	µg/kg	1.0	[A] < 1.0	
1,2,3-Trichloropropane		N	2760	µg/kg	50	[A] < 50	
N-Propylbenzene		U	2760	µg/kg	1.0	[A] < 1.0	
2-Chlorotoluene		M	2760	µg/kg	1.0	[A] < 1.0	
1,3,5-Trimethylbenzene		M	2760	µg/kg	1.0	[A] < 1.0	

Results - Soil

Project: 315531 EAF Meltshop

Client: RSK Geosciences		Chemtest Job No.:				24-29969	24-29969
Quotation No.: Q24-35208		Chemtest Sample ID.:				1867654	1867656
Order No.: P02150967		Client Sample Ref.:					
		Client Sample ID.:					
		Sample Location:				TP3005	BH318
		Sample Type:				SOIL	SOIL
		Top Depth (m):				0.70	0.30
		Bottom Depth (m):					
		Date Sampled:					
		Asbestos Lab:				DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
4-Chlorotoluene		U	2760	µg/kg	1.0	[A] < 1.0	
Tert-Butylbenzene		U	2760	µg/kg	1.0	[A] < 1.0	
1,2,4-Trimethylbenzene		M	2760	µg/kg	1.0	[A] < 1.0	
Sec-Butylbenzene		U	2760	µg/kg	1.0	[A] < 1.0	
1,3-Dichlorobenzene		M	2760	µg/kg	1.0	[A] < 1.0	
4-Isopropyltoluene		U	2760	µg/kg	1.0	[A] < 1.0	
1,4-Dichlorobenzene		M	2760	µg/kg	1.0	[A] < 1.0	
N-Butylbenzene		U	2760	µg/kg	1.0	[A] < 1.0	
1,2-Dichlorobenzene		M	2760	µg/kg	1.0	[A] < 1.0	
1,2-Dibromo-3-Chloropropane		U	2760	µg/kg	50	[A] < 50	
1,2,4-Trichlorobenzene		M	2760	µg/kg	1.0	[A] < 1.0	
Hexachlorobutadiene		N	2760	µg/kg	1.0	[A] < 1.0	
1,2,3-Trichlorobenzene		U	2760	µg/kg	2.0	[A] < 2.0	
Methyl Tert-Butyl Ether		M	2760	µg/kg	1.0	[A] < 1.0	
N-Nitrosodimethylamine		M	2790	mg/kg	0.50	[A] < 0.50	
Phenol		M	2790	mg/kg	0.50	[A] < 0.50	
2-Chlorophenol		N	2790	mg/kg	0.50	[A] < 0.50	
Bis-(2-Chloroethyl)Ether		M	2790	mg/kg	0.50	[A] < 0.50	
1,3-Dichlorobenzene		M	2790	mg/kg	0.50	[A] < 0.50	
1,4-Dichlorobenzene		N	2790	mg/kg	0.50	[A] < 0.50	
1,2-Dichlorobenzene		M	2790	mg/kg	0.50	[A] < 0.50	
2-Methylphenol		M	2790	mg/kg	0.50	[A] < 0.50	
Bis(2-Chloroisopropyl)Ether		M	2790	mg/kg	0.50	[A] < 0.50	
Hexachloroethane		N	2790	mg/kg	0.50	[A] < 0.50	
N-Nitrosodi-n-propylamine		M	2790	mg/kg	0.50	[A] < 0.50	
4-Methylphenol		M	2790	mg/kg	0.50	[A] < 0.50	
Nitrobenzene		N	2790	mg/kg	0.50	[A] < 0.50	
Isophorone		M	2790	mg/kg	0.50	[A] < 0.50	
2-Nitrophenol		N	2790	mg/kg	0.50	[A] < 0.50	
2,4-Dimethylphenol		N	2790	mg/kg	0.50	[A] < 0.50	
Bis(2-Chloroethoxy)Methane		M	2790	mg/kg	0.50	[A] < 0.50	
2,4-Dichlorophenol		N	2790	mg/kg	0.50	[A] < 0.50	
1,2,4-Trichlorobenzene		M	2790	mg/kg	0.50	[A] < 0.50	
Naphthalene		M	2790	mg/kg	0.50	[A] < 0.50	
4-Chloroaniline		N	2790	mg/kg	0.50	[A] < 0.50	
Hexachlorobutadiene		M	2790	mg/kg	0.50	[A] < 0.50	

Results - Soil

Project: 315531 EAF Meltshop

Client: RSK Geosciences		Chemtest Job No.:		24-29969	24-29969
Quotation No.: Q24-35208		Chemtest Sample ID.:		1867654	1867656
Order No.: P02150967		Client Sample Ref.:			
		Client Sample ID.:			
		Sample Location:		TP3005	BH318
		Sample Type:		SOIL	SOIL
		Top Depth (m):		0.70	0.30
		Bottom Depth (m):			
		Date Sampled:			
		Asbestos Lab:		DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD
4-Chloro-3-Methylphenol		N	2790	mg/kg	0.50 [A] < 0.50
2-Methylnaphthalene		M	2790	mg/kg	0.50 [A] < 0.50
4-Nitrophenol		N	2790	mg/kg	0.50 [A] < 0.50
2,4,6-Trichlorophenol		N	2790	mg/kg	0.50 [A] < 0.50
2,4,5-Trichlorophenol		N	2790	mg/kg	0.50 [A] < 0.50
2-Chloronaphthalene		M	2790	mg/kg	0.50 [A] < 0.50
2-Nitroaniline		N	2790	mg/kg	0.50 [A] < 0.50
Acenaphthylene		M	2790	mg/kg	0.50 [A] < 0.50
Dimethylphthalate		M	2790	mg/kg	0.50 [A] < 0.50
2,6-Dinitrotoluene		N	2790	mg/kg	0.50 [A] < 0.50
Acenaphthene		M	2790	mg/kg	0.50 [A] < 0.50
3-Nitroaniline		N	2790	mg/kg	0.50 [A] < 0.50
Dibenzofuran		M	2790	mg/kg	0.50 [A] < 0.50
4-Chlorophenylphenylether		M	2790	mg/kg	0.50 [A] < 0.50
2,4-Dinitrotoluene		N	2790	mg/kg	0.50 [A] < 0.50
Fluorene		M	2790	mg/kg	0.50 [A] < 0.50
Diethyl Phthalate		M	2790	mg/kg	0.50 [A] < 0.50
4-Nitroaniline		N	2790	mg/kg	0.50 [A] < 0.50
Azobenzene		M	2790	mg/kg	0.50 [A] < 0.50
4-Bromophenylphenyl Ether		M	2790	mg/kg	0.50 [A] < 0.50
Hexachlorobenzene		M	2790	mg/kg	0.50 [A] < 0.50
Phenanthrene		M	2790	mg/kg	0.50 [A] 0.70
Anthracene		M	2790	mg/kg	0.50 [A] < 0.50
Carbazole		M	2790	mg/kg	0.50 [A] < 0.50
Di-N-Butyl Phthalate		N	2790	mg/kg	0.50 [A] < 0.50
Fluoranthene		M	2790	mg/kg	0.50 [A] 1.4
Pyrene		M	2790	mg/kg	0.50 [A] 0.96
Butylbenzyl Phthalate		N	2790	mg/kg	0.50 [A] < 0.50
Benzo[a]anthracene		M	2790	mg/kg	0.50 [A] 0.82
Chrysene		M	2790	mg/kg	0.50 [A] 0.81
Bis(2-Ethylhexyl)Phthalate		N	2790	mg/kg	0.50 [A] < 0.50
Di-N-Octyl Phthalate		N	2790	mg/kg	0.50 [A] < 0.50
Benzo[b]fluoranthene		M	2790	mg/kg	0.50 [A] 1.1
Benzo[k]fluoranthene		M	2790	mg/kg	0.50 [A] < 0.50
Benzo[a]pyrene		M	2790	mg/kg	0.50 [A] 0.63
Indeno(1,2,3-c,d)Pyrene		N	2790	mg/kg	0.50 [A] < 0.50

Results - Soil

Project: 315531 EAF Meltshop

Client: RSK Geosciences		Chemtest Job No.:				24-29969	24-29969
Quotation No.: Q24-35208		Chemtest Sample ID.:				1867654	1867656
Order No.: P02150967		Client Sample Ref.:					
		Client Sample ID.:					
		Sample Location:				TP3005	BH318
		Sample Type:				SOIL	SOIL
		Top Depth (m):				0.70	0.30
		Bottom Depth (m):					
		Date Sampled:					
		Asbestos Lab:				DURHAM	DURHAM
Determinand	HWOL Code	Accred.	SOP	Units	LOD		
Dibenz(a,h)Anthracene		N	2790	mg/kg	0.50	[A] < 0.50	
Benzo[g,h,i]perylene		M	2790	mg/kg	0.50	[A] < 0.50	
Naphthalene		M	2800	mg/kg	0.10	< 0.10	0.80
Acenaphthylene		N	2800	mg/kg	0.10	< 0.10	0.12
Acenaphthene		M	2800	mg/kg	0.10	< 0.10	< 0.10
Fluorene		M	2800	mg/kg	0.10	< 0.10	0.14
Phenanthrene		M	2800	mg/kg	0.10	< 0.10	1.5
Anthracene		M	2800	mg/kg	0.10	< 0.10	0.29
Fluoranthene		M	2800	mg/kg	0.10	< 0.10	1.9
Pyrene		M	2800	mg/kg	0.10	< 0.10	1.2
Benzo[a]anthracene		M	2800	mg/kg	0.10	< 0.10	1.2
Chrysene		M	2800	mg/kg	0.10	< 0.10	1.7
Benzo[b]fluoranthene		M	2800	mg/kg	0.10	< 0.10	2.1
Benzo[k]fluoranthene		M	2800	mg/kg	0.10	< 0.10	0.49
Benzo[a]pyrene		M	2800	mg/kg	0.10	< 0.10	0.99
Indeno(1,2,3-c,d)Pyrene		M	2800	mg/kg	0.10	< 0.10	0.83
Dibenz(a,h)Anthracene		N	2800	mg/kg	0.10	< 0.10	0.31
Benzo[g,h,i]perylene		M	2800	mg/kg	0.10	< 0.10	0.90
Total Of 16 PAH's		N	2800	mg/kg	2.0	< 2.0	15

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1819250			BH323	#####	B	Amber Glass 250ml
1819250			BH323	#####	B	Amber Glass 60ml
1819250			BH323	#####	B	Plastic Tub 500g
1819263			BH322	#####	B	Amber Glass 250ml
1819263			BH322	#####	B	Amber Glass 60ml
1819263			BH322	#####	B	Plastic Tub 1000g
1819264			BH322	#####	B	Amber Glass 250ml
1819264			BH322	#####	B	Amber Glass 60ml
1819264			BH322	#####	B	Plastic Tub 1000g
1819265			BH322	#####	B	Amber Glass 250ml
1819265			BH322	#####	B	Amber Glass 60ml
1819265			BH322	#####	B	Plastic Tub 1000g
1819266			BH322	#####	B	Amber Glass 250ml
1819266			BH322	#####	B	Amber Glass 60ml
1819266			BH322	#####	B	Plastic Tub 1000g
1819267			BH322	#####	B	Amber Glass 250ml
1819267			BH322	#####	B	Amber Glass 60ml
1819267			BH322	#####	B	Plastic Tub 1000g
1819268			BH322	#####	B	Amber Glass 250ml
1819268			BH322	#####	B	Amber Glass 60ml
1819268			BH322	#####	B	Plastic Tub 1000g
1825240			BH319	19-Jun-2024	B	Amber Glass 250ml
1825240			BH319	19-Jun-2024	B	Amber Glass 60ml
1825240			BH319	19-Jun-2024	B	Plastic Tub 500g

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1825241			BH319	19-Jun-2024	B	Amber Glass 250ml
1825241			BH319	19-Jun-2024	B	Amber Glass 60ml
1825241			BH319	19-Jun-2024	B	Plastic Tub 500g
1825242			BH319	19-Jun-2024	B	Amber Glass 250ml
1825242			BH319	19-Jun-2024	B	Amber Glass 60ml
1825242			BH319	19-Jun-2024	B	Plastic Tub 500g
1825243			BH319	19-Jun-2024	B	Amber Glass 250ml
1825243			BH319	19-Jun-2024	B	Amber Glass 60ml
1825243			BH319	19-Jun-2024	B	Plastic Tub 500g
1825244			BH319	19-Jun-2024	B	Amber Glass 250ml
1825244			BH319	19-Jun-2024	B	Amber Glass 60ml
1825244			BH319	19-Jun-2024	B	Plastic Tub 500g
1825245			BH320	19-Jun-2024	B	Amber Glass 250ml
1825245			BH320	19-Jun-2024	B	Amber Glass 60ml
1825245			BH320	19-Jun-2024	B	Plastic Tub 1000g
1825246			BH320	19-Jun-2024	B	Amber Glass 250ml
1825246			BH320	19-Jun-2024	B	Amber Glass 60ml
1825246			BH320	19-Jun-2024	B	Plastic Tub 1000g
1825247			BH320	19-Jun-2024	B	Amber Glass 250ml
1825247			BH320	19-Jun-2024	B	Amber Glass 60ml
1825247			BH320	19-Jun-2024	B	Plastic Tub 1000g
1848064			TP302		A	Amber Glass 250ml
1848064			TP302		A	Amber Glass 60ml
1848064			TP302		A	Plastic Tub 500g

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1848065			TP303		A	Amber Glass 250ml
1848065			TP303		A	Amber Glass 60ml
1848065			TP303		A	Plastic Tub 500g
1848066			TP387		A	Amber Glass 250ml
1848066			TP387		A	Amber Glass 60ml
1848066			TP387		A	Plastic Tub 500g
1849334			TP391		A	Amber Glass 250ml
1849334			TP391		A	Amber Glass 60ml
1849334			TP391		A	Plastic Tub 500g
1849335			TP391		A	Amber Glass 250ml
1849335			TP391		A	Amber Glass 60ml
1849335			TP391		A	Plastic Tub 500g
1849337			TP345		A	Amber Glass 250ml
1849337			TP345		A	Amber Glass 60ml
1849337			TP345		A	Plastic Tub 500g
1849340			TP392		A	Amber Glass 250ml
1849340			TP392		A	Amber Glass 60ml
1849340			TP392		A	Plastic Tub 500g
1849341			TP392		A	Amber Glass 250ml
1849341			TP392		A	Amber Glass 60ml
1849341			TP392		A	Plastic Tub 500g
1849343			TP393		A	Amber Glass 250ml
1849343			TP393		A	Amber Glass 60ml
1849343			TP393		A	Plastic Tub 500g

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1849345			TP393		A	Amber Glass 250ml
1849345			TP393		A	Amber Glass 60ml
1849345			TP393		A	Plastic Tub 500g
1850277			TP309		A	Amber Glass 250ml
1850277			TP309		A	Amber Glass 60ml
1850277			TP309		A	Plastic Tub 1000g
1850280			TP311		A	Amber Glass 250ml
1850280			TP311		A	Amber Glass 60ml
1850280			TP311		A	Plastic Tub 1000g
1850285			TP325		A	Amber Glass 250ml
1850285			TP325		A	Amber Glass 60ml
1850285			TP325		A	Plastic Tub 500g
1850287			TP342		A	Amber Glass 250ml
1850287			TP342		A	Amber Glass 60ml
1850287			TP342		A	Plastic Tub 1000g
1850290			TP342		A	Amber Glass 250ml
1850290			TP342		A	Amber Glass 60ml
1850290			TP342		A	Plastic Tub 1000g
1850293			TP388		A	Amber Glass 250ml
1850293			TP388		A	Amber Glass 60ml
1850293			TP388		A	Plastic Tub 500g
1852980	1		BH326	#####	B	Amber Glass 250ml
1852980	1		BH326	#####	B	Amber Glass 60ml
1852980	1		BH326	#####	B	Plastic Tub 1000g

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1852981	1		BH327	#####	B	Amber Glass 250ml
1852981	1		BH327	#####	B	Amber Glass 60ml
1852981	1		BH327	#####	B	Plastic Tub 1000g
1852982	2		BH327	#####	B	Amber Glass 250ml
1852982	2		BH327	#####	B	Amber Glass 60ml
1852982	2		BH327	#####	B	Plastic Tub 1000g
1852984	1		TP3001	#####	B	Amber Glass 250ml
1852984	1		TP3001	#####	B	Amber Glass 60ml
1852984	1		TP3001	#####	B	Plastic Tub 500g
1852987	1		TP399	#####	B	Amber Glass 250ml
1852987	1		TP399	#####	B	Amber Glass 60ml
1852987	1		TP399	#####	B	Plastic Tub 500g
1852991	1		TP397	#####	B	Amber Glass 250ml
1852991	1		TP397	#####	B	Amber Glass 60ml
1852991	1		TP397	#####	B	Plastic Tub 1000g
1855529			TP376	#####	B	Amber Glass 250ml
1855529			TP376	#####	B	Amber Glass 60ml
1855529			TP376	#####	B	Plastic Tub 500g
1855532			TP375	#####	B	Amber Glass 250ml
1855532			TP375	#####	B	Amber Glass 60ml
1855532			TP375	#####	B	Plastic Tub 500g
1855534			TP374	#####	B	Amber Glass 250ml
1855534			TP374	#####	B	Amber Glass 60ml
1855534			TP374	#####	B	Plastic Tub 500g

Deviations

In accordance with UKAS Policy on Deviating Samples TPS 63. Chemtest have a procedure to ensure 'upon receipt of each sample a competent laboratory shall assess whether the sample is suitable with regard to the requested test(s)'. This policy and the respective holding times applied, can be supplied upon request. The reason a sample is declared as deviating is detailed below. Where applicable the analysis remains UKAS/MCERTs accredited but the results may be compromised.

Sample:	Sample Ref:	Sample ID:	Sample Location:	Sampled Date:	Deviation Code(s):	Containers Received:
1855536			TP341	#####	B	Amber Glass 250ml
1855536			TP341	#####	B	Amber Glass 60ml
1855536			TP341	#####	B	Plastic Tub 500g
1858447	ES4		BH305		A	Amber Glass 250ml
1858447	ES4		BH305		A	Amber Glass 60ml
1858447	ES4		BH305		A	Plastic Tub 1000g
1858448	ES1		BH303A		A	Amber Glass 250ml
1858448	ES1		BH303A		A	Amber Glass 60ml
1858448	ES1		BH303A		A	Plastic Tub 1000g
1858450	ES3		BH303A		A	Amber Glass 250ml
1858450	ES3		BH303A		A	Amber Glass 60ml
1858450	ES3		BH303A		A	Plastic Tub 1000g
1867652			TP3005		A	Amber Glass 250ml
1867652			TP3005		A	Amber Glass 60ml
1867652			TP3005		A	Plastic Tub 1000g
1867654			TP3005		A	Amber Glass 250ml
1867654			TP3005		A	Amber Glass 60ml
1867654			TP3005		A	Plastic Tub 1000g
1867656			BH318		A	Amber Glass 250ml
1867656			BH318		A	Amber Glass 60ml
1867656			BH318		A	Plastic Tub 1000g

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
2010	pH Value of Soils	pH at 20°C	pH Meter	
2030	Moisture and Stone Content of Soils(Requirement of MCERTS)	Moisture content	Determination of moisture content of soil as a percentage of its as received mass obtained at <30°C.	
2040	Soil Description(Requirement of MCERTS)	Soil description	As received soil is described based upon BS5930	
2120	Water Soluble Boron, Sulphate, Magnesium & Chromium	Boron; Sulphate; Magnesium; Chromium	Aqueous extraction / ICP-OES	
2192	Asbestos	Asbestos	Polarised light microscopy / Gravimetry	
2455	Acid Soluble Metals in Soils	Metals, including: Arsenic; Barium; Beryllium; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Vanadium; Zinc	Acid digestion followed by determination of metals in extract by ICP-MS.	
2490	Hexavalent Chromium in Soils	Chromium [VI]	Soil extracts are prepared by extracting dried and ground soil samples into boiling water. Chromium [VI] is determined by 'Aquakem 600' Discrete Analyser using 1,5-diphenylcarbazine.	
2690	EPH A/A Split	Aliphatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40 Aromatics: >C10–C12, >C12–C16, >C16–C21, >C21– C35, >C35– C40	Acetone/Heptane extraction / GCxGC FID detection	
2700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Diben[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)	
2760	Volatile Organic Compounds (VOCs) in Soils by Headspace GC-MS	Volatile organic compounds, including BTEX and halogenated Aliphatic/Aromatics.(cf. USEPA Method 8260)*please refer to UKAS schedule	Automated headspace gas chromatographic (GC) analysis of a soil sample, as received, with mass spectrometric (MS) detection of volatile organic compounds.	
2780	VPH A/A Split	Aliphatics: >C5–C6, >C6–C7,>C7–C8,>C8–C10 Aromatics: >C5–C7,>C7–C8,>C8–C10	Water extraction / Headspace GCxGC FID detection	
2790	Semi-Volatile Organic Compounds (SVOCs) in Soils by GC-MS	Semi-volatile organic compounds(cf. USEPA Method 8270)	Acetone/Hexane extraction / GC-MS	
2800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Soil by GC-MS	Acenaphthene*; Acenaphthylene; Anthracene*; Benzo[a]Anthracene*; Benzo[a]Pyrene*; Benzo[b]Fluoranthene*; Benzo[ghi]Perylene*; Benzo[k]Fluoranthene; Chrysene*; Diben[ah]Anthracene; Fluoranthene*; Fluorene*; Indeno[123cd]Pyrene*; Naphthalene*; Phenanthrene*; Pyrene*	Dichloromethane extraction / GC-MS	
2920	Phenols in Soils by HPLC	Phenolic compounds including Resorcinol, Phenol, Methylphenols, Dimethylphenols, 1-Naphthol and TrimethylphenolsNote: chlorophenols are excluded.	60:40 methanol/water mixture extraction, followed by HPLC determination using electrochemical detection.	

Report Information

Key

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M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

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Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

- DW - Drinking Water
- GW - Ground Water
- LE - Land Leachate
- NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

APPENDIX G

LABORATORY CERTIFICATES FOR GROUNDWATER WATER ANALYSIS

Final Report

Report No.: 24-25102-1

Initial Date of Issue: 13-Aug-2024

Re-Issue Details:

Client RSK Geosciences

Client Address: Battle Gate Road
Boxworth
Cambridge
CB23 4NN

Contact(s): James Bloore

Project 315531 Port Talbot

Quotation No.: Q24-35208

Date Received: 06-Aug-2024

Order No.: P02150967

Date Instructed: 06-Aug-2024

No. of Samples: 3

Turnaround (Wkdays): 5

Results Due: 12-Aug-2024

Date Approved: 13-Aug-2024

Approved By:



Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Water

Project: 315531 Port Talbot

Client: RSK Geosciences		Chemtest Job No.:				24-25102	24-25102	24-25102
Quotation No.: Q24-35208		Chemtest Sample ID.:				1846695	1846696	1846697
		Sample Location:				BH315	BH301	BH324
		Sample Type:				WATER	WATER	WATER
		Sample Sub Type:						
		Top Depth (m):				1.58	1.55	1.42
		Date Sampled:				02-Aug-2024	02-Aug-2024	02-Aug-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD			
pH at 20C		U	1010		4.0	8.4	8.5	8.6
Sulphate		U	1220	mg/l	1.0	63	34	84
Cyanide (Total)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050
Arsenic (Dissolved)		U	1455	µg/l	0.20	10	27	37
Boron (Dissolved)		U	1455	µg/l	10.0	140	83	320
Cadmium (Dissolved)		U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	0.67
Copper (Dissolved)		U	1455	µg/l	0.50	0.63	0.94	1.2
Mercury (Dissolved)		U	1455	µg/l	0.05	< 0.05	< 0.05	0.09
Nickel (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	1.2
Lead (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50
Zinc (Dissolved)		U	1455	µg/l	2.5	5.3	5.8	< 2.5
Total TPH >C6-C40	EH_1D_Total	U	1670	µg/l	10	< 10	< 10	< 10
Naphthalene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluorene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Chrysene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0
Total Phenols		U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	RE PW TE TS PL DW GW
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	RE PW PL LE DW GW
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.	GW
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1670	Total Petroleum Hydrocarbons (TPH) in Waters by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO	Pentane extraction / GC FID detection	
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44 Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection	
1700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Diben[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)	PL GW
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Diben[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection	PL GW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	PL GW

Report Information

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SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
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>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

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None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

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Sample Deviation Codes

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- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

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Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

- DW - Drinking Water
- GW - Ground Water
- LE - Land Leachate
- NA - Not Applicable

Report Information

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RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

Final Report

Report No.: 24-25105-1

Initial Date of Issue: 13-Aug-2024

Re-Issue Details:

Client RSK Geosciences

Client Address: Battle Gate Road
Boxworth
Cambridge
CB23 4NN

Contact(s): James Bloore

Project 315531 Port Talbot

Quotation No.: Q24-35208

Date Received: 06-Aug-2024

Order No.: P02150967

Date Instructed: 06-Aug-2024

No. of Samples: 3

Turnaround (Wkdays): 5

Results Due: 12-Aug-2024

Date Approved: 13-Aug-2024

Approved By:



Details: David Smith, Technical Director

For details about application of accreditation to specific matrix types, please refer to the Table at the back of this report

Results - Water

Project: 315531 Port Talbot

Client: RSK Geosciences		Chemtest Job No.:				24-25105	24-25105	24-25105
Quotation No.: Q24-35208		Chemtest Sample ID.:				1846705	1846706	1846707
		Sample Location:				BH331	BH322	BH317
		Sample Type:				WATER	WATER	WATER
		Sample Sub Type:						
		Top Depth (m):				3.82	3.50	1.37
		Date Sampled:				02-Aug-2024	02-Aug-2024	02-Aug-2024
Determinand	HWOL Code	Accred.	SOP	Units	LOD			
pH at 20C		U	1010		4.0	8.1	8.0	7.7
Sulphate		U	1220	mg/l	1.0	< 1.0	< 1.0	< 1.0
Cyanide (Total)		U	1300	mg/l	0.050	< 0.050	< 0.050	< 0.050
Arsenic (Dissolved)		U	1455	µg/l	0.20	6.7	3.3	6.6
Boron (Dissolved)		U	1455	µg/l	10.0	300	300	300
Cadmium (Dissolved)		U	1455	µg/l	0.11	< 0.11	< 0.11	< 0.11
Chromium (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50
Copper (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50
Mercury (Dissolved)		U	1455	µg/l	0.05	< 0.05	< 0.05	< 0.05
Nickel (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50
Lead (Dissolved)		U	1455	µg/l	0.50	< 0.50	< 0.50	< 0.50
Zinc (Dissolved)		U	1455	µg/l	2.5	7.2	5.0	7.0
Total TPH >C6-C40	EH_1D_Total	U	1670	µg/l	10	< 10	< 10	< 10
Naphthalene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Acenaphthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluorene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Phenanthrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Chrysene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[b]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene		U	1800	µg/l	0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's		U	1800	µg/l	2.0	< 2.0	< 2.0	< 2.0
Total Phenols		U	1920	mg/l	0.030	< 0.030	< 0.030	< 0.030

Test Methods

SOP	Title	Parameters included	Method summary	Water Accred.
1010	pH Value of Waters	pH at 20°C	pH Meter	RE PW TE TS PL DW GW
1220	Anions, Alkalinity & Ammonium in Waters	Fluoride; Chloride; Nitrite; Nitrate; Total; Oxidisable Nitrogen (TON); Sulfate; Phosphate; Alkalinity; Ammonium	Automated colorimetric analysis using 'Aquakem 600' Discrete Analyser.	RE PW PL LE DW GW
1300	Cyanides & Thiocyanate in Waters	Free (or easy liberatable) Cyanide; total Cyanide; complex Cyanide; Thiocyanate	Continuous Flow Analysis.	GW
1455	Metals in Waters by ICP-MS	Metals, including: Antimony; Arsenic; Barium; Beryllium; Boron; Cadmium; Chromium; Cobalt; Copper; Lead; Manganese; Mercury; Molybdenum; Nickel; Selenium; Tin; Vanadium; Zinc	Filtration of samples followed by direct determination by inductively coupled plasma mass spectrometry (ICP-MS).	RE PW PL SW DW GW
1670	Total Petroleum Hydrocarbons (TPH) in Waters by GC-FID	TPH (C6–C40); optional carbon banding, e.g. 3-band – GRO, DRO & LRO	Pentane extraction / GC FID detection	
1675	TPH Aliphatic/Aromatic split in Waters by GC-FID(cf. Texas Method 1006 / TPH CWG)	Aliphatics: >C5–C6, >C6–C8, >C8– C10, >C10–C12, >C12–C16, >C16–C21, >C21–C35, >C35– C44 Aromatics: >C5–C7, >C7–C8, >C8– C10, >C10–C12, >C12–C16, >C16– C21, >C21– C35, >C35– C44	Pentane extraction / GCxGC FID detection	
1700	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-FID	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Diben[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Dichloromethane extraction / GC-FID (GC-FID detection is non-selective and can be subject to interference from co-eluting compounds)	PL GW
1800	Speciated Polynuclear Aromatic Hydrocarbons (PAH) in Waters by GC-MS	Acenaphthene; Acenaphthylene; Anthracene; Benzo[a]Anthracene; Benzo[a]Pyrene; Benzo[b]Fluoranthene; Benzo[ghi]Perylene; Benzo[k]Fluoranthene; Chrysene; Diben[ah]Anthracene; Fluoranthene; Fluorene; Indeno[123cd]Pyrene; Naphthalene; Phenanthrene; Pyrene	Pentane extraction / GCMS detection	PL GW
1920	Phenols in Waters by HPLC	Phenolic compounds including: Phenol, Cresols, Xylenols, Trimethylphenols Note: Chlorophenols are excluded.	Determination by High Performance Liquid Chromatography (HPLC) using electrochemical detection.	PL GW

Report Information

Key

U	UKAS accredited
M	MCERTS and UKAS accredited
N	Unaccredited
S	This analysis has been subcontracted to a UKAS accredited laboratory that is accredited for this analysis
SN	This analysis has been subcontracted to a UKAS accredited laboratory that is not accredited for this analysis
T	This analysis has been subcontracted to an unaccredited laboratory
I/S	Insufficient Sample
U/S	Unsuitable Sample
N/E	not evaluated
<	"less than"
>	"greater than"
SOP	Standard operating procedure
LOD	Limit of detection

This report shall not be reproduced except in full, and only with the prior approval of the laboratory.

Any comments or interpretations are outside the scope of UKAS accreditation.

The Laboratory is not accredited for any sampling activities and reported results relate to the samples 'as received' at the laboratory.

Uncertainty of measurement for the determinands tested are available upon request .

None of the results in this report have been recovery corrected.

All results are expressed on a dry weight basis.

The following tests were analysed on samples 'as received' and the results subsequently corrected to a dry weight basis EPH, VPH, TPH, BTEX, VOCs, SVOCs, PCBs, Phenols.

For all other tests the samples were dried at $\leq 30^{\circ}\text{C}$ prior to analysis.

All Asbestos testing is performed at the indicated laboratory .

Issue numbers are sequential starting with 1 all subsequent reports are incremented by 1.

Sample Deviation Codes

- A - Date of sampling not supplied
- B - Sample age exceeds stability time (sampling to extraction)
- C - Sample not received in appropriate containers
- D - Broken Container
- E - Insufficient Sample (Applies to LOI in Trommel Fines Only)

Sample Retention and Disposal

All soil samples will be retained for a period of 30 days from the date of receipt.

All water samples will be retained for 14 days from the date of receipt.

Charges may apply to extended sample storage.

Water Sample Category Key for Accreditation

- DW - Drinking Water
- GW - Ground Water
- LE - Land Leachate
- NA - Not Applicable

Report Information

PL - Prepared Leachate
PW - Processed Water
RE - Recreational Water
SA - Saline Water
SW - Surface Water
TE - Treated Effluent
TS - Treated Sewage
UL - Unspecified Liquid

Clean Up Codes

NC - No Clean Up
MC - Mathematical Clean Up
FC - Florisil Clean Up

HWOL Acronym System

HS - Headspace analysis
EH - Extractable hydrocarbons – i.e. everything extracted by the solvent
CU - Clean-up – e.g. by Florisil, silica gel
1D - GC – Single coil gas chromatography
Total - Aliphatics & Aromatics
AL - Aliphatics only
AR - Aromatic only
2D - GC-GC – Double coil gas chromatography
#1 - EH_2D_Total but with humics mathematically subtracted
#2 - EH_2D_Total but with fatty acids mathematically subtracted
+ - Operator to indicate cumulative e.g. EH+EH_Total or EH_CU+HS_Total

If you require extended retention of samples, please email your requirements to:
customerservices@chemtest.com

APPENDIX H GAC HUMAN HEALTH

Generic assessment criteria for human health: commercial scenario

Background

RSK's generic assessment criteria (GAC) were initially prepared following the publication by the Environment Agency (EA) of soil guideline value (SGV) and toxicological (TOX) reports, and associated publications in 2009⁽¹⁾. RSK GAC were updated following the publication of GAC by LQM/CIEH in 2009⁽²⁾. RSK GAC are periodically revised when updated information on toxicological, land use or receptor parameters is published.

Updates to the RSK GAC

In 2014, the publication of Category 4 Screening Levels (C4SL)^(3,4), as part of the Defra-funded research project SP1010, included modifications to certain exposure assumptions documented within EA Science Report SC050221/SR3 (herein after referred to as SR3)⁽⁵⁾ used in the generation of SGVs.

C4SL were initially published for six substances (cadmium, arsenic, benzene, benzo(a)pyrene, chromium VI and lead) for a sandy loam soil type with 6% soil organic matter, based on a low level of toxicological concern (LLTC; see Section 2.3 of research project report SP1010⁽³⁾). Further C4SL were published in 2021 for vinyl chloride, tetrachloroethene (PCE) and trichloroethene (TCE). Where a C4SL has been published, the RSK GAC duplicates the C4SL using all input parameters within the SP1010 final project report⁽³⁾ and associated chemical specific reports⁽⁶⁾, and adopts them as GAC for these substances. Due to the use of decimal places rather than significant figures applied to the Contaminated Land Exposure Assessment (CLEA) tool outputs, the GAC presented may be marginally differently to the C4SL values, however any differences between the values are minimal and would not equate to an unacceptable risk.

For all other substances the only C4SL exposure modification relevant to a commercial end use are daily inhalation rates.

The RSK GAC have also been revised with updated toxicology published by LQM/CIEH in 2015⁽⁷⁾ or by the USEPA⁽¹⁴⁾, where a C4SL has not been published.

RSK GAC derivation for metals and organic compounds

Model selection

Soil assessment criteria (SAC) were calculated using the CLEA tool v1.071, supporting EA guidance^(5,8,9) and revised exposure scenarios published for the C4SL⁽³⁾. The SAC are also termed GAC.

Pathway selection

In accordance with SR3⁽⁵⁾ the commercial scenario considers risks to a female worker who works from the age of 16 to 65 years. It should be noted that this end use is not suitable for a workplace nursery but may be appropriate for a sports centre or shopping centre where children are present. In accordance with Box 3.5, SR3⁽⁵⁾ the pathways considered for production of the SAC in the commercial scenario are

- direct soil and dust ingestion

- dermal contact with soil both indoors and outdoors
- indoor air inhalation from soil and vapour and outdoor inhalation of soil and vapour.

With respect to volatilisation, the CLEA model assumes a simple linear partitioning of a chemical in the soil between the sorbed, dissolved and vapour phase⁽⁹⁾. The upper boundaries of this partitioning are represented by the maximum aqueous solubility and pure saturated vapour concentration of the chemical. The CLEA model estimates saturated soil concentrations where these limits are reached⁽⁹⁾. The CLEA software uses a traffic light system to identify when individual and/or combined assessment criteria exceed the lower of either the aqueous- or vapour-based soil saturation limits. Model output cells are flagged red where the saturated soil concentration has been exceeded and the contribution of the indoor and outdoor vapour pathway to total exposure is greater than 10%. In this case, further consideration of the following is required⁽⁹⁾:

- Free phase contamination may be present.
- Exposure from the vapour pathways will be over-predicted by the model, as in reality the vapour phase concentration will not increase at concentrations above saturation limits
- Where the vapour pathway contribution is greater than 90%, it is unlikely the relevant health criteria value (HCV) will be exceeded at soil concentrations at least a factor of ten higher than the relevant HCV.

Where the vapour pathway is the predominant pathway (contributes greater than 90% of exposure) or the only exposure route considered and the cell is highlighted red (SAC exceeds saturation limit), the risk based on the assumed conceptual model is likely to be negligible as the vapour risk is assumed to be tolerable at maximum possible soil concentrations. In such circumstances, the vapour pathway exposure should be considered based on the presence of free phase or non-aqueous phase liquid sources and the measured concentrations of volatile organic compounds (VOC) in the vapour phase. Screening could be considered based on setting the SAC as the modelled soil saturation limits. However, as stated within the CLEA handbook⁽⁹⁾, this is likely to not be practical in many cases because of the very low saturation limits and, in any case, is highly conservative.

It should also be noted that for mixtures of compounds, free phase may be present where soil (or groundwater) concentrations are well below saturation limits for individual compounds.

Where the vapour pathway is only one of the exposure pathways considered, an additional approach can then be utilised as detailed within Section 4.12 of the CLEA model handbook⁽⁹⁾, which explains how to calculate an effective assessment criterion manually.

SR3⁽⁵⁾ states that, as a general rule of thumb, it is recognised that estimating vapour phase concentrations from dissolved and sorbed phase contamination by petroleum hydrocarbons are at least a factor of ten higher than those likely to be measured on-site. RSK has therefore applied an empirical subsurface to indoor air correction factor of 10 into the CLEA model chemical database for all petroleum hydrocarbon fractions (including BTEX, trimethylbenzenes and the polycyclic aromatic hydrocarbons (PAH) naphthalene, acenaphthene and acenaphthylene) to reduce this conservatism.

Input selection

The most up-to-date published chemical and toxicological data was obtained from EA Report SC050021/SR7⁽¹⁰⁾, the EA TOX⁽¹⁾ reports, the C4SL SP1010 project report and associated chemical specific reports^(3,6), the 2015 LQM/CIEH report⁽⁷⁾ or the USEPA IRIS database⁽¹⁴⁾. Where a LLTC^(3,6) has been published for a substance, RSK has used these input parameters to derive the RSK GAC. Toxicological and specific chemical parameters for 1,2,4-trimethylbenzene, barium, methyl tertiary-butyl ether (MTBE), 1,1,2-trichloroethane, 1,1-dichloroethene, 1,2-dichloropropane, 2-chloronaphthalene, chloroethane, chloromethane, cis 1,2-dichloroethene, dichloromethane, hexachloroethane and trans 1,2-dichloroethene were obtained from the CL:AIRE Soil Generic Assessment Criteria report⁽¹¹⁾.

For TPH, aromatic hydrocarbons C₅–C₈ were not modelled, as this range comprises benzene (>EC5-EC7) and toluene (>EC7-EC8), which are modelled separately.

Physical parameters

For the commercial end use, the CLEA default pre-1970s three-storey office building was used. SR3⁽⁵⁾ notes this commercial building type to be the most conservative in terms of protection from vapour intrusion. The default input building parameters presented in Table 3.10 of SR3⁽⁵⁾ have been used.

The parameters for a sandy loam soil type were used in line with Table 4.4 of SR3⁽⁵⁾. This includes a value of 6% for the percentage of soil organic matter (SOM) within the soil. In RSK's experience, this is rather high for many sites. To avoid undertaking site-specific risk assessments for this SOM, RSK has produced an additional set of GAC for SOM of 1% and 2.5% for all substances using the CLEA tool.

Summary of modifications to the default CLEA SR3⁽⁵⁾ input parameters for a commercial land use

In summary, the RSK commercial GAC were produced using the default input parameters for soil properties, the air dispersion model, building properties and the vapour model detailed in SR3⁽⁵⁾. Modifications to the default SR3⁽⁵⁾ exposure scenarios based on the C4SL exposure scenarios⁽³⁾ are presented in Table 2 below. The sole modification to the default commercial input parameters is the updated inhalation rate.

The final selected GAC are presented by pathway in Table 3 with the combined GAC in Table 4.

Figure 1: Conceptual model for CLEA commercial scenario

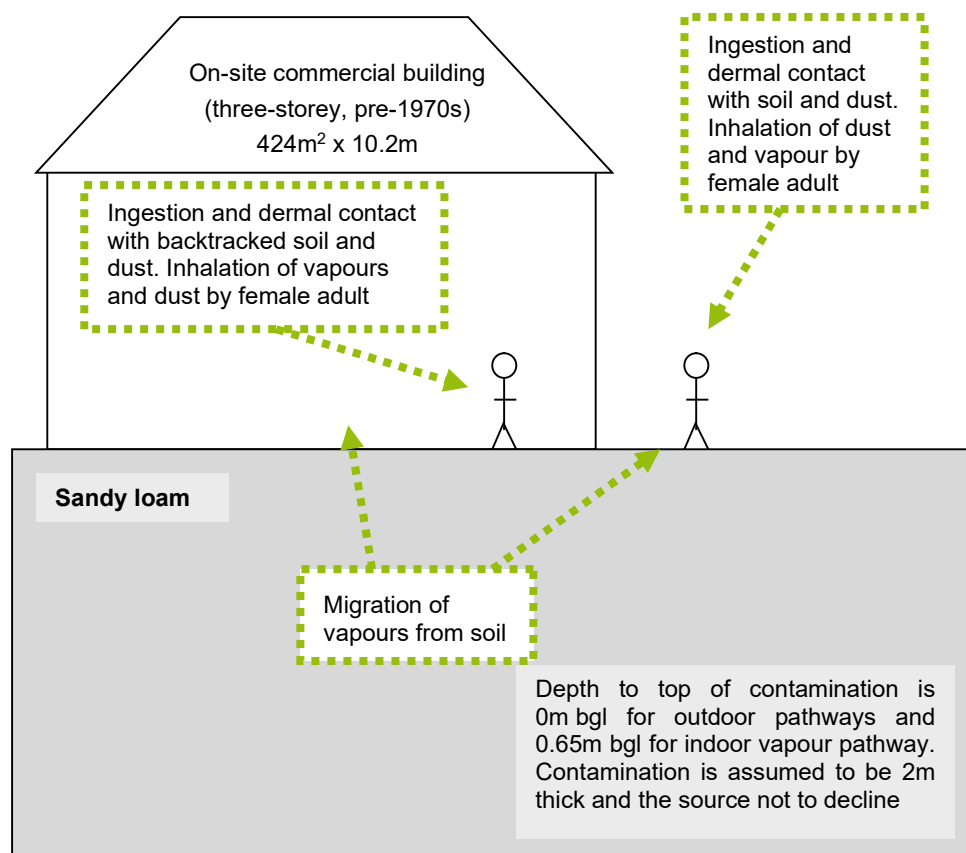


Table 1: Exposure assessment parameters for commercial scenario – inputs for CLEA model

Parameter	Value	Justification
Land use	Commercial	Chosen land use
Receptor	Female worker	Taken as female adult exposed over 49 years from age 16 to 65 years, Box 3.5, SR3 ⁽⁵⁾
Building	Office (pre-1970)	Key generic assumption given in Box 3.5, SR3 ⁽⁵⁾ . Pre-1970s three-storey office building chosen as it is the most conservative in terms of protection from vapour intrusion (Section 3.4.6, SR3 ⁽⁵⁾)
Soil type	Sandy loam	Most common UK soil type (Section 4.3.1, Table 4.4, SR3 ⁽⁵⁾)
Start age class (AC)	17	AC corresponding to key generic assumption that the critical receptor is a working female adult exposed over a 49-year period from age 16 to 65 years. Assumption given in Box 3.5, SR3 ⁽⁵⁾
End AC	17	
SOM (%)	6	Representative of sandy loam according to EA guidance note dated January 2009 entitled 'Changes We Have Made to the CLEA Framework Documents' ⁽¹³⁾
	1	To provide SAC for sites where SOM < 6% as often observed by RSK
	2.5	
pH	7	Model default

Table 2: Commercial – modified receptor inputs

Parameter	Unit	Value	Justification
Inhalation rate (AC17)	m ³ day ⁻¹	15.7	Mean value USEPA, 2011 ⁽¹²⁾ ; Table 3.2, SP1010 ⁽³⁾

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14. USEPA (2010). Hydrogen cyanide and cyanide salts. Integrated Risk Information Systems (IRIS) Chemical Assessment Summary. September 2010. <https://www.epa.gov/iris> (accessed 9 December 2015)

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - COMMERCIAL



Table 3

Human health generic assessment criteria by pathway for commercial scenario

Compound	Notes	SAC appropriate to pathway SOM 1% (mg/kg)			Soil saturation limit (mg/kg)	SAC appropriate to pathway SOM 2.5% (mg/kg)			Soil saturation limit (mg/kg)	SAC appropriate to pathway SOM 6% (mg/kg)			Soil saturation limit (mg/kg)
		Oral	Inhalation	Combined		Oral	Inhalation	Combined		Oral	Inhalation	Combined	
Metals													
Arsenic	(a,b)	6.35E+02	1.25E+03	NR	NR	6.35E+02	1.25E+03	NR	NR	6.35E+02	1.25E+03	NR	NR
Barium	(b)	2.21E+04	NR	NR	NR	2.21E+04	NR	NR	NR	2.21E+04	NR	NR	NR
Beryllium		3.97E+03	1.17E+01	NR	NR	3.97E+03	1.17E+01	NR	NR	3.97E+03	1.17E+01	NR	NR
Boron		2.38E+05	2.82E+07	NR	NR	2.38E+05	2.82E+07	NR	NR	2.38E+05	2.82E+07	NR	NR
Cadmium	(a)	7.73E+02	8.57E+02	4.10E+02	NR	7.73E+02	8.57E+02	4.10E+02	NR	7.73E+02	8.57E+02	4.10E+02	NR
Chromium (III) - trivalent	(c)	3.31E+05	8.57E+03	NR	NR	3.31E+05	8.57E+03	NR	NR	3.31E+05	8.57E+03	NR	NR
Chromium (VI) - hexavalent	(a,d)	9.62E+02	4.91E+01	NR	NR	9.62E+02	4.91E+01	NR	NR	9.62E+02	4.91E+01	NR	NR
Copper		1.89E+05	8.96E+04	6.83E+04	NR	1.89E+05	8.96E+04	6.83E+04	NR	1.89E+05	8.96E+04	6.83E+04	NR
Lead	(a)	2.32E+03	NR	NR	NR	2.32E+03	NR	NR	NR	2.32E+03	NR	NR	NR
Elemental Mercury (Hg ⁰)	(d)	NR	1.54E+01	NR	4.31E+00	NR	3.26E+01	NR	1.07E+01	NR	5.80E+01	NR	2.58E+01
Inorganic Mercury (Hg ²⁺)		1.18E+03	1.97E+04	1.12E+03	NR	1.18E+03	1.97E+04	1.12E+03	NR	1.18E+03	1.97E+04	1.12E+03	NR
Methyl Mercury (Hg ⁴⁺)		3.38E+02	2.13E+03	2.92E+02	7.33E+01	3.38E+02	3.87E+03	3.11E+02	1.42E+02	3.38E+02	7.33E+03	3.23E+02	3.04E+02
Nickel	(d)	3.06E+03	9.83E+02	NR	NR	3.06E+03	9.83E+02	NR	NR	3.06E+03	9.83E+02	NR	NR
Selenium	(b)	1.23E+04	NR	NR	NR	1.23E+04	NR	NR	NR	1.23E+04	NR	NR	NR
Vanadium		2.15E+04	9.03E+03	NR	NR	2.15E+04	9.03E+03	NR	NR	2.15E+04	9.03E+03	NR	NR
Zinc	(b)	7.35E+05	1.97E+08	NR	NR	7.35E+05	1.97E+08	NR	NR	7.35E+05	1.97E+08	NR	NR
Cyanide (free)		6.56E+02	7.51E+04	6.53E+02	NR	6.56E+02	7.51E+04	6.53E+02	NR	6.56E+02	7.51E+04	6.53E+02	NR
Volatile Organic Compounds													
Benzene	(a)	1.09E+03	2.79E+01	2.72E+01	1.22E+03	1.09E+03	5.19E+01	4.96E+01	2.26E+03	1.09E+03	1.08E+02	9.80E+01	4.71E+03
Toluene		4.24E+05	6.49E+04	5.63E+04	8.69E+02	4.24E+05	1.43E+05	1.07E+05	1.92E+03	4.24E+05	3.24E+05	1.84E+05	4.36E+03
Ethylbenzene		1.91E+05	5.89E+03	5.71E+03	5.18E+02	1.91E+05	1.38E+04	1.28E+04	1.22E+03	1.91E+05	3.21E+04	2.75E+04	2.84E+03
Xylene - m		3.43E+05	6.26E+03	6.15E+03	6.25E+02	3.43E+05	1.47E+04	1.41E+04	1.47E+03	3.43E+05	3.44E+04	3.12E+04	3.46E+03
Xylene - o		3.43E+05	6.73E+03	6.60E+03	4.78E+02	3.43E+05	1.57E+04	1.50E+04	1.12E+03	3.43E+05	3.65E+04	3.30E+04	2.62E+03
Xylene - p		3.43E+05	6.03E+03	5.92E+03	5.76E+02	3.43E+05	1.41E+04	1.36E+04	1.35E+03	3.43E+05	3.28E+04	3.00E+04	3.17E+03
Total xylene		3.43E+05	6.03E+03	5.92E+03	6.25E+02	3.43E+05	1.41E+04	1.36E+04	1.47E+03	3.43E+05	3.28E+04	3.00E+04	3.46E+03
Methyl tertiary-Butyl ether (MTBE)		5.72E+05	7.58E+03	7.48E+03	2.04E+04	5.72E+05	1.23E+04	1.21E+04	3.31E+04	5.72E+05	2.34E+04	2.24E+04	6.27E+04
1,1,1,2-Tetrachloroethane		1.10E+04	1.09E+02	1.08E+02	2.60E+03	1.10E+04	2.53E+02	2.47E+02	6.02E+03	1.10E+04	5.88E+02	5.59E+02	1.40E+04
1,1,2,2-Tetrachloroethane		1.10E+04	2.81E+02	2.74E+02	2.67E+03	1.10E+04	5.75E+02	5.46E+02	5.46E+03	1.10E+04	1.26E+03	1.13E+03	1.20E+04
1,1,1-Trichloroethane		1.14E+06	6.60E+02	6.60E+02	1.43E+03	1.14E+06	1.35E+03	1.35E+03	2.92E+03	1.14E+06	2.96E+03	2.95E+03	6.39E+03
1,1,2 Trichloroethane		7.62E+03	9.02E+01	8.91E+01	4.03E+03	7.62E+03	1.84E+02	1.80E+02	8.21E+03	7.62E+03	4.02E+02	3.82E+02	1.80E+04
1,1-Dichloroethene		8.76E+04	2.43E+01	2.43E+01	2.23E+03	8.76E+04	4.30E+01	4.30E+01	3.94E+03	8.76E+04	8.68E+01	8.67E+01	7.94E+03
1,2-Dichloroethane		2.29E+02	6.73E-01	6.71E-01	3.41E+03	2.29E+02	9.71E-01	9.67E-01	4.91E+03	2.29E+02	1.67E+00	1.65E+00	8.43E+03
1,2,4-Trimethylbenzene		NR	3.29E+02	NR	4.74E+02	NR	6.41E+02	NR	1.16E+03	NR	1.04E+03	NR	2.76E+03
1,3,5-Trimethylbenzene	(e)	NR	NR	NR	2.30E+02	NR	NR	NR	5.52E+02	NR	NR	NR	1.30E+03
1,2-Dichloropropane		2.57E+04	3.14E+00	3.13E+00	1.19E+03	2.57E+04	5.54E+00	5.54E+00	2.11E+03	2.57E+04	1.11E+01	1.11E+01	4.24E+03
Carbon Tetrachloride (tetrachloromethane)		7.62E+03	2.87E+00	2.87E+00	1.52E+03	7.62E+03	6.29E+00	6.28E+00	3.32E+03	7.62E+03	1.43E+01	1.42E+01	7.54E+03
Chloroethane		NR	9.01E+02	NR	2.61E+03	NR	1.22E+03	NR	3.54E+03	NR	1.97E+03	NR	5.71E+03
Chloromethane		NR	9.54E-01	NR	1.91E+03	NR	1.11E+00	NR	2.24E+03	NR	1.49E+00	NR	2.99E+03
Cis 1,2 Dichloroethene		1.36E+01	NR	NR	3.94E+03	2.29E+01	NR	NR	6.61E+03	4.44E+01	NR	NR	1.29E+04
Dichloromethane		9.04E+03	2.63E+02	2.57E+02	7.27E+03	9.04E+03	3.50E+02	3.39E+02	9.68E+03	9.04E+03	5.53E+02	5.26E+02	1.53E+04
Tetrachloroethene (PCE)		2.67E+04	2.45E+01	2.45E+01	4.24E+02	2.67E+04	5.49E+01	5.48E+01	9.51E+02	2.67E+04	1.26E+02	1.25E+02	2.18E+03
Trans 1,2 Dichloroethene		3.23E+04	2.07E+01	NR	3.42E+03	3.23E+04	3.74E+01	NR	6.17E+03	3.23E+04	7.63E+01	NR	1.26E+04
Trichloroethene (TCE)		7.30E-01	2.59E+00	NR	1.54E+03	1.53E+00	5.43E+00	NR	3.22E+03	3.38E+00	1.20E+01	NR	7.14E+03
Vinyl Chloride (chloroethene)		1.19E+02	1.13E+00	1.12E+00	1.36E+03	1.19E+02	1.46E+00	1.45E+00	1.76E+03	1.19E+02	2.24E+00	2.20E+00	2.69E+03
Semi-Volatile Organic Compounds													
2-Chloronaphthalene		1.53E+05	3.71E+02	3.70E+02	1.14E+02	1.53E+05	9.07E+02	9.02E+02	2.80E+02	1.53E+05	2.13E+03	2.10E+03	6.69E+02
Acenaphthene		1.10E+05	2.75E+06	1.06E+05	5.70E+01	1.10E+05	5.38E+06	1.08E+05	1.41E+02	1.10E+05	8.83E+06	1.08E+05	3.36E+02

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - COMMERCIAL



Table 3

Human health generic assessment criteria by pathway for commercial scenario

Compound	Notes	SAC appropriate to pathway SOM 1% (mg/kg)			Soil saturation limit (mg/kg)	SAC appropriate to pathway SOM 2.5% (mg/kg)			Soil saturation limit (mg/kg)	SAC appropriate to pathway SOM 6% (mg/kg)			Soil saturation limit (mg/kg)
		Oral	Inhalation	Combined		Oral	Inhalation	Combined		Oral	Inhalation	Combined	
Acenaphthylene		1.10E+05	2.68E+06	1.05E+05	8.61E+01	1.10E+05	5.23E+06	1.07E+05	2.12E+02	1.10E+05	8.65E+06	1.08E+05	5.06E+02
Anthracene		5.49E+05	1.13E+07	5.23E+05	1.17E+00	5.49E+05	2.35E+07	5.36E+05	2.91E+00	5.49E+05	4.13E+07	5.42E+05	6.96E+00
Benzo(a)anthracene		2.84E+02	4.08E+02	1.67E+02	1.71E+00	2.84E+02	4.47E+02	1.74E+02	4.28E+00	2.84E+02	4.67E+02	1.76E+02	1.03E+01
Benzo(a)pyrene	(a)	7.68E+01	2.04E+02	5.58E+01	9.11E-01	7.68E+01	2.09E+02	5.61E+01	2.28E+00	7.68E+01	2.11E+02	5.63E+01	5.46E+00
Benzo(b)fluoranthene		7.13E+01	1.17E+02	4.43E+01	1.22E+00	7.13E+01	1.20E+02	4.47E+01	3.04E+00	7.13E+01	1.21E+02	4.49E+01	7.29E+00
Benzo(g,h,i)perylene		6.29E+03	1.05E+04	3.93E+03	1.54E-02	6.29E+03	1.06E+04	3.95E+03	3.85E-02	6.29E+03	1.07E+04	3.96E+03	9.23E-02
Benzo(k)fluoranthene		1.88E+03	3.11E+03	1.17E+03	6.87E-01	1.88E+03	3.17E+03	1.18E+03	1.72E+00	1.88E+03	3.21E+03	1.19E+03	4.12E+00
Chrysene		5.67E+02	8.89E+02	3.46E+02	4.40E-01	5.67E+02	9.25E+02	3.52E+02	1.10E+00	5.67E+02	9.47E+02	3.55E+02	2.64E+00
Dibenzo(a,h)anthracene		5.67E+00	9.32E+00	3.53E+00	3.93E-03	5.67E+00	9.52E+00	3.55E+00	9.82E-03	5.67E+00	9.64E+00	3.57E+00	2.36E-02
Fluoranthene		2.29E+04	1.89E+06	2.26E+04	1.89E+01	2.29E+04	2.72E+06	2.27E+04	4.73E+01	2.29E+04	3.32E+06	2.27E+04	1.13E+02
Fluorene		7.31E+04	4.55E+05	6.30E+04	3.09E+01	7.31E+04	1.06E+06	6.84E+04	7.65E+01	7.31E+04	2.24E+06	7.08E+04	1.83E+02
Hexachloroethane		2.09E+01	NR	NR	8.17E+00	4.98E+01	NR	NR	2.01E+01	1.11E+02	NR	NR	4.81E+01
Indeno(1,2,3-cd)pyrene		8.10E+02	1.31E+03	5.01E+02	6.13E-02	8.10E+02	1.35E+03	5.06E+02	1.53E-01	8.10E+02	1.37E+03	5.09E+02	3.68E-01
Naphthalene		3.64E+04	1.87E+03	1.78E+03	7.64E+01	3.64E+04	4.39E+03	3.92E+03	1.83E+02	3.64E+04	9.94E+03	7.81E+03	4.32E+02
Phenanthrene		2.28E+04	5.35E+05	2.19E+04	3.60E+01	2.28E+04	1.09E+06	2.24E+04	8.96E+01	2.28E+04	1.86E+06	2.25E+04	2.14E+02
Pyrene		5.49E+04	4.47E+06	5.42E+04	2.20E+00	5.49E+04	6.46E+06	5.44E+04	5.49E+00	5.49E+04	7.91E+06	5.45E+04	1.32E+01
Phenol		1.10E+06	2.65E+04	2.59E+04	2.42E+04	1.10E+06	3.04E+04	2.96E+04	3.81E+04	1.10E+06	3.46E+04	3.35E+04	7.03E+04

Total petroleum hydrocarbons

Aliphatic hydrocarbons EC5-EC6		4.77E+06	3.19E+03	3.19E+03	3.04E+02	4.77E+06	5.86E+03	5.86E+03	5.58E+02	4.77E+06	1.21E+04	1.21E+04	1.15E+03
Aliphatic hydrocarbons >EC6-EC8		4.77E+06	7.79E+03	7.78E+03	1.44E+02	4.77E+06	1.74E+04	1.74E+04	3.22E+02	4.77E+06	3.97E+04	3.96E+04	7.36E+02
Aliphatic hydrocarbons >EC8-EC10		9.53E+04	2.02E+03	2.00E+03	7.77E+01	9.53E+04	4.91E+03	4.85E+03	1.90E+02	9.53E+04	1.17E+04	1.13E+04	4.51E+02
Aliphatic hydrocarbons >EC10-EC12		9.53E+04	9.97E+03	9.69E+03	4.75E+01	9.53E+04	2.47E+04	2.29E+04	1.18E+02	9.53E+04	5.89E+04	4.73E+04	2.83E+02
Aliphatic hydrocarbons >EC12-EC16		9.53E+04	8.26E+04	5.88E+04	2.37E+01	9.53E+04	2.04E+05	8.17E+04	5.91E+01	9.53E+04	4.81E+05	9.02E+04	1.42E+02
Aliphatic hydrocarbons >EC16-EC35	(b)	1.58E+06	NR	NR	8.48E+00	1.75E+06	NR	NR	2.12E+01	1.83E+06	NR	NR	5.09E+01
Aliphatic hydrocarbons >EC35-EC44	(b)	1.58E+06	NR	NR	8.48E+00	1.75E+06	NR	NR	2.12E+01	1.83E+06	NR	NR	5.09E+01
Aromatic hydrocarbons >EC8-EC10		3.81E+04	3.55E+03	3.46E+03	6.13E+02	3.81E+04	8.66E+03	8.11E+03	1.50E+03	3.81E+04	2.05E+04	1.70E+04	3.58E+03
Aromatic hydrocarbons >EC10-EC12		3.81E+04	1.92E+04	1.62E+04	3.64E+02	3.81E+04	4.69E+04	2.79E+04	8.99E+02	3.81E+04	1.10E+05	3.42E+04	2.15E+03
Aromatic hydrocarbons >EC12-EC16		3.81E+04	2.02E+05	3.62E+04	1.69E+02	3.81E+04	4.76E+05	3.73E+04	4.19E+02	3.81E+04	1.03E+06	3.78E+04	1.00E+03
Aromatic hydrocarbons >EC16-EC21	(b)	2.82E+04	NR	NR	5.37E+01	2.83E+04	NR	NR	1.34E+02	2.84E+04	NR	NR	3.21E+02
Aromatic hydrocarbons >EC21-EC35	(b)	2.84E+04	NR	NR	4.83E+00	2.84E+04	NR	NR	1.21E+01	2.84E+04	NR	NR	2.90E+01
Aromatic hydrocarbons >EC35-EC44	(b)	2.84E+04	NR	NR	4.83E+00	2.84E+04	NR	NR	1.21E+01	2.84E+04	NR	NR	2.90E+01

Notes:

EC - equivalent carbon. GrAC - groundwater screening value. SAC - soil screening value.

The CLEA model output is colour coded depending upon whether the soil saturation limit has been exceeded.

	Calculated SAC exceeds soil saturation limit and may significantly affect the interpretation of any exceedances as the contribution of the indoor and outdoor vapour pathway to total exposure is >10%.
	Calculated SAC exceeds soil saturation limit but the exceedance will not affect the SAC significantly as the contribution of the indoor and outdoor vapour pathway to total exposure is <10%.
	Calculated SAC does not exceed the soil saturation limit.

The SAC for organic compounds are dependant upon soil organic matter (SOM) (%) content. To obtain SOM from total organic carbon (TOC) (%) divide by 0.58. 1% SOM is 0.58% TOC. DL Rowell Soil Science: Methods and Applications, Longmans, 1994.

SAC for TPH fractions, PAHs naphthalene, acenaphthene and acenaphthylene, BTEX and trimethylbenzene compounds were produced using an attenuation factor for the indoor air inhalation pathway of 10 to reduce conservatism associated with the vapour inhalation pathway (Section 10.1.1, SR3)

(a) SAC for arsenic, benzene, benzo(a)pyrene, cadmium, chromium VI and lead are derived using the C4SL toxicology data.

(b) SAC for barium and selenium should not include the inhalation pathway as no expert group HCV has been derived; aliphatic and aromatic hydrocarbons >EC16 should not include inhalation pathway due to their non-volatile nature and inhalation exposure being minimal (oral, dermal and inhalation exposure is compared to the oral HCV); arsenic should only be based on oral contribution (rather than combined) owing to the relative small contribution from inhalation in accordance with the SGV report. The Oral SAC should be adopted for zinc and benzo(a)pyrene.

(c) SAC for CrIII should be based on the lower of the oral and inhalation SAC (see LQM/CIEH 2015 Section 6.8)

(d) SAC for elemental mercury, chromium VI and nickel should be based on the inhalation pathway only.

(e) SAC for 1,3,5-trimethylbenzene is not recorded owing to the lack of toxicological data, SAC for 1,2,4 trimethylbenzene may be used.

GENERIC ASSESSMENT CRITERIA FOR HUMAN HEALTH - COMMERCIAL



Table 4
Human Health Generic Assessment Criteria for Commercial Scenario

Compound	SAC for Soil SOM 1% (mg/kg)	SAC for Soil SOM 2.5% (mg/kg)	SAC for Soil SOM 6% (mg/kg)
Metals			
Arsenic	640	640	640
Barium	22,000	22,000	22,000
Beryllium	12	12	12
Boron	240,000	240,000	240,000
Cadmium	410	410	410
Chromium (III) - trivalent	8,600	8,600	8,600
Chromium (VI) - hexavalent	49	49	49
Copper	68,000	68,000	68,000
Lead	2,300	2,300	2,300
Elemental Mercury (Hg ⁰)	15 (4)	33 (11)	58 (26)
Inorganic Mercury (Hg ²⁺)	1,120	1,120	1,120
Methyl Mercury (Hg ⁴⁺)	290 (73)	310 (142)	320
Nickel	980	980	980
Selenium	12,000	12,000	12,000
Vanadium	9,000	9,000	9,000
Zinc	740,000	740,000	740,000
Cyanide (free)	650	650	650
Volatile Organic Compounds			
Benzene	27	50	98
Toluene	56,000 (869)	107,000 (1,916)	184,000 (4,357)
Ethylbenzene	6,000 (518)	13,000 (1,216)	27,000 (2,844)
Xylene - m	6,200 (625)	14,100 (1,474)	31,200 (3,457)
Xylene - o	6,600 (478)	15,000 (1,120)	33,000 (2,618)
Xylene - p	5,900 (576)	13,600 (1,353)	30,000 (3,167)
Total xylene	5,900 (625)	13,600 (1,474)	30,000 (3,457)
Methyl tertiary-Butyl ether (MTBE)	7,500	12,100	22,400
1,1,1,2 Tetrachloroethane	110	250	560
1,1,2,2-Tetrachloroethane	270	550	1,130
1,1,1-Trichloroethane	700	1,300	3,000
1,1,2 Trichloroethane	89	180	382
1,1-Dichloroethene	24	43	87
1,2-Dichloroethane	0.67	0.97	1.65
1,2,4-Trimethylbenzene	330	640	1,040
1,3,5-Trimethylbenzene	NR	NR	NR
1,2-Dichloropropane	3	6	11
Carbon Tetrachloride (tetrachloromethane)	2.9	6.3	14.2
Chloroethane	901	1,223	1,972
Chloromethane	1.0	1.1	1.5
Cis 1,2 Dichloroethene	14	23	44
Dichloromethane	257	339	526
Tetrachloroethene (PCE)	24	55	125
Trichloroethene (TCE)	0.7	1.5	3.4
Trans 1,2 Dichloroethene	21	37	76
Vinyl Chloride (chloroethene)	1.1	1.4	2.2
Semi-Volatile Organic Compounds			
2-Chloronaphthalene	370 (114)	902 (280)	2,098 (669)
Acenaphthene	110,000	110,000	110,000
Acenaphthylene	110,000	110,000	110,000
Anthracene	520,000	540,000	540,000
Benzo(a)anthracene	170	170	180
Benzo(a)pyrene	77	77	77
Benzo(b)fluoranthene	44	45	45
Benzo(g,h,i)perylene	3,900	3,900	4,000
Benzo(k)fluoranthene	1,200	1,200	1,200
Chrysene	350	350	350
Dibenzo(a,h)anthracene	3.5	3.6	3.6
Fluoranthene	23,000	23,000	23,000
Fluorene	63,000 (31)	68,000	71,000
Hexachloroethane	21 (8)	50 (20)	111 (48)
Indeno(1,2,3-cd)pyrene	500	510	510
Naphthalene	1,800 (76)	3,900 (183)	7,800 (432)
Phenanthrene	22,000	22,000	23,000
Pyrene	54,000	54,000	54,000
Phenol	440*	690*	1,300*
Total Petroleum Hydrocarbons			
Aliphatic hydrocarbons EC ₅ -EC ₆	3,200 (304)	5,900 (558)	12,100 (1,150)
Aliphatic hydrocarbons >EC ₅ -EC ₈	7,800 (144)	17,400 (322)	39,600 (736)
Aliphatic hydrocarbons >EC ₈ -EC ₁₀	2,000 (78)	4,800 (190)	11,300 (451)
Aliphatic hydrocarbons >EC ₁₀ -EC ₁₂	9,700 (48)	22,900 (118)	47,300 (283)
Aliphatic hydrocarbons >EC ₁₂ -EC ₁₆	59,000 (24)	82,000 (59)	90,000 (142)
Aliphatic hydrocarbons >EC ₁₆ -EC ₃₅	1,000,000**	1,000,000**	1,000,000**
Aliphatic hydrocarbons >EC ₃₅ -EC ₄₄	1,000,000**	1,000,000**	1,000,000**
Aromatic hydrocarbons >EC ₅ -EC ₁₀	3,500 (613)	8,100 (1,503)	17,000 (3,580)
Aromatic hydrocarbons >EC ₁₀ -EC ₁₂	16,000 (364)	28,000 (899)	34,000 (2,150)
Aromatic hydrocarbons >EC ₁₂ -EC ₁₆	36,000 (169)	37,000	38,000
Aromatic hydrocarbons >EC ₁₆ -EC ₂₁	28,000	28,000	28,000
Aromatic hydrocarbons >EC ₂₁ -EC ₃₅	28,000	28,000	28,000
Aromatic hydrocarbons >EC ₃₅ -EC ₄₄	28,000	28,000	28,000
Minerals			
Asbestos	Stage 1 test – No asbestos detected with ID; Stage 2 test - <0.001% dry weight (exceedance of either equates to an exceedance of the GAC) ¹		
Notes:			
* Generic assessment criteria not calculated owing to low volatility of substance and therefore no pathway, or an absence of toxicological data.			
NR - SAC for 1,3,5-trimethylbenzene is not recorded owing to the lack of toxicological data, SAC for 1,2,4 trimethylbenzene may be used			
EC - equivalent carbon. GRAC - groundwater assessment criteria. SAC - soil assessment criteria.			
* The GAC for Phenol is based on a threshold which is protective of direct contact (SC050021/Phenol SGV report)			
** Denoted SAC calculated exceeds 100% contaminant, hence 100% (1,000,000mg/kg) has been taken as SAC			
The SAC for organic compounds are dependent on Soil Organic Matter (SOM) (%) content. To obtain SOM from total organic carbon (TOC) (%) divide by 0.58. 1% SOM is 0.58% TOC. DL Rowell Soil Science: Methods and Applications, Longmans, 1994.			
SAC for TPH fractions, PAHs naphthalene, acenaphthene and acenaphthylene, BTEX and trimethylbenzene compounds were produced using an attenuation factor for the indoor air inhalation pathway of 10 to reduce conservatism associated with the vapour inhalation pathway, section 10.1.1, SR3.			
(VALUE IN BRACKETS)			
RSK has adopted an approach for petroleum hydrocarbons in accordance with LQM/CIEH whereby the concentration modelled for each petroleum hydrocarbon fraction has been tabulated as the SAC with the corresponding solubility or vapour saturation limits given in brackets.			

Generic groundwater assessment criteria (GrAC) for human health: commercial scenario (adult receptor)

Background

Volatile compounds in groundwater have the potential to pose risks to residential site end users via indoor and outdoor inhalation exposure. Due to significant dilution effects in outdoor air, risk from inhalation of volatile contaminants risk is generally dominated by indoor exposure. The GrAC conceptual site model (CSM) is shown in Figure 1 (not to scale).

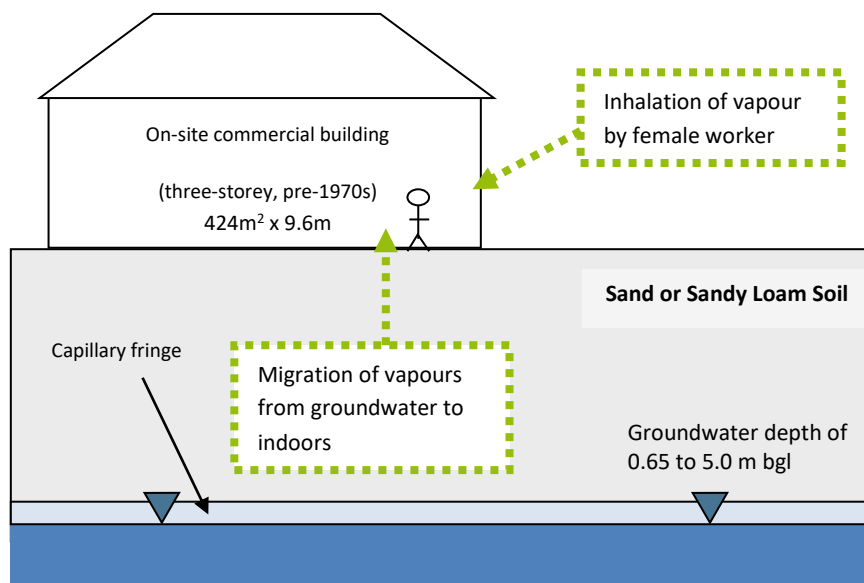


Figure 1: GrAC conceptual model for a generic commercial scenario

RSK GrAC derivation

Model selection

RSK GrAC have been calculated using the RBCA Toolkit for Chemical Releases (version 2.6) with the Johnson and Ettinger model, based on the CSM in Figure 1 for a pre-1970 three storey office building (as defined in SR3⁽³⁾, Table 4.21). The Johnson & Ettinger model is adopted in the Environment Agency Contaminated Land Exposure Assessment tool for assessing risk to human health from inhalation of volatile contaminants in indoor air. However, the RBCA toolkit implementation of Johnson & Ettinger model allows consideration of a capillary fringe and is designed to directly model vapour intrusion to buildings from VOC in groundwater.

Conceptual model

The pollutant linkage considered in production of the GrAC is the volatilisation of compounds from groundwater and subsequent vapour migration into buildings followed by indoor inhalation by the identified receptor. Although the outdoor air inhalation pathway is also valid, this contributes little to the overall risks owing to dilution in outdoor air.

In accordance with SR3⁽³⁾, the commercial scenario considers risk to an adult female worker who works from the age of 16 to 65 years. In line with updated exposure assumptions set out in C4SL

Project Methodology, it is assumed the receptors comprises an adult weighing 70kg and inhaling 15.7 m³/day.

The CLEA default pre-1970s three-storey office building was used in accordance with the standard commercial scenario described in the Environment Agency SR3 report. The building parameters used in the production of the RSK GACs are the default CLEA inputs presented in Table 3.3 of SR3⁽³⁾. Default indoor air exchange rates and soil gas ingress rates have also been adopted.

The RSK GrAC have been calculated for both Sand and Sandy Loam soils using parameters presented in Table 3.1 of SR3⁽³⁾. The RSK GrAC have been derived for groundwater depths of 0.65 m, 1.5 m, 2.5 m and 5.0 m below ground level, incorporating a capillary fringe.

In line with recommendations provided in Environment Agency SR3⁽³⁾ a sub-surface to indoor attenuation factor of 10 has been applied to RBCA derived target levels for all volatile petroleum hydrocarbon fractions.

It is also assumed that contamination is present in the dissolved phase only. RBCA highlights when the assessment criterion exceeds the solubility limit of the pure compound. The full physical input parameters utilised in RBCA are presented in **Annex A**.

Input selection – chemical and toxicological parameters

Key parameters used in the RBCA model are listed and justified in Table 1 of Annex A. The most up-to-date published chemical data was obtained from Environment Agency Report SC050021/SR7⁽²⁾ where available. Toxicological and chemical data was also obtained from third party published sources including the following:

- Environment Agency TOX reports;
- LQM/CIEH S4UL:s for Human Health Risk Assessment by Land Quality Press (2015);
- CL:AIRE/EIC/AGS Soil Generic Assessment Criteria (2010); and
- CL:AIRE & DeFRA Category 4 Screening Levels (2014) & (2020).

For volatile compounds with published C4SLs (benzene, TCE, tetrachloroethene, and vinyl chloride) the published Low Level of Toxicological Concern (LLTC) has been adopted. For all other constituents the toxicological input parameters are associated with minimal risk derived in accordance with Environment Agency Report SC050021/SR2 guidance.

For petroleum hydrocarbon fractions, aromatic hydrocarbons C5–C8 have been represented by benzene (>EC5-EC7) and toluene (>EC7-EC8), which are modelled separately. For the Commercial GrAC, the Health Criteria Values (HCV) used in the modelling were derived using the toxicological data discussed above, and adopting the following adjustments:

- An adult weighing 70kg and breathing 15.7m³ air per day in accordance with the revised exposure parameters used in the SP1010 final project report for the Category 4 Screening Levels (C4SL) (Table 3.2⁽⁸⁾) and USEPA data⁽⁹⁾; and
- For threshold compounds background inhalation (mean daily intake(MDI)) for an adult (Age Class 17) have been utilised in accordance with Environment Agency toxicological guidance.

The inhalation HCVs have been adjusted to account for the reduction in inhalation rate from 20m/day to 15.7m/day the inhalation health criterion values (HCV). The tolerable indoor air

concentrations based on derived HCV used in the derivation of the RSK GrAC are presented in **Annex A**.

Note on aqueous solubility and the RSK GrAC

Where the modelled assessment criteria, or the modelled assessment criteria with the correction factor applied to those contaminants specified below, exceed the aqueous solubility limit the assessment criteria defaults to this concentration and consequently the GrAC is set at the respective limit of solubility.

Where the GrAC exceeds the solubility limit the criteria area shaded red. In these circumstances there may not be a risk to human health in the dissolved phase. Consideration may need to be given to the potential for NAPL to be present at lower concentrations in mixtures in accordance with Raoult's Law.

RSK GrAC derivation outputs

The RSK GrACs are presented in Table 1.

Within the RSK GrAC the following should be noted:

- GrAC do not take account of outdoor inhalation exposure to VOC, which is considered to contribute minimally to overall inhalation exposure
- GrAC do not take account of other exposure routes potentially relevant to VOC in shallow groundwater such as direct contact or root uptake
- No biodegradation is assumed to occur in the unsaturated zone. Where aerobic conditions on site are known to exist the GrAC for hydrocarbons may therefore be conservative
- GrAC do not take account of preferential flow into buildings such as through unsealed service entries. In such circumstances GrAC may not be appropriate for use
- GrAC are based on a soil vapour intrusion CSM and are not appropriate for use when the foundation is in direct contact with contaminated groundwater
- GrAC assume that the capillary fringe is un-contaminated with VOC, which is unlikely, particularly where groundwater levels are variable
- GrAC set at the theoretical aqueous solubility limit are not considered to pose a risk to human health
- GrAC do not take into account the interaction between contaminants and the influence this may have on the theoretical aqueous solubility
- GrACs are only applicable to dissolved phase contaminants where the modelled assessment criteria is below the aqueous solubility limits

Table 1: RSK GrAC (µg/l)									
Land Use	COMMERCIAL								
Soil Type	SAND					SANDY LOAM			
GW Depth (m)	0.65	1.5	2.5	5		0.65	1.5	2.5	5
Metals									
Elemental mercury	56	56	56	56		56	56	56	56
Methyl mercury	100000	100000	100000	100000		100000	100000	100000	100000
Volatile Organic Compounds									
Benzene (C4SL)	30740	40200	51330	79160		158660	193720	234960	338070
Toluene	590000	590000	590000	590000		590000	590000	590000	590000
Ethylbenzene	180000	180000	180000	180000		180000	180000	180000	180000
Xylene - m	200000	200000	200000	200000		200000	200000	200000	200000
Xylene - o	173000	173000	173000	173000		173000	173000	173000	173000
Xylene - p	200000	200000	200000	200000		200000	200000	200000	200000
Total xylene	173000	173000	173000	173000		173000	173000	173000	173000
Methyl tertiary-Butyl ether (MTBE)	12068580	16013210	20653950	32255810		48000000	48000000	48000000	48000000
Trichloroethene (TCE) (C4SL)	1730	2290	2950	4590		9290	11360	13790	19880
Tetrachloroethene (PCE) (C4SL)	9790	13070	16940	26600		54230	66430	80780	116660
1,1,1-Trichloroethane	456280	604180	778170	1213140		1300000	1300000	1300000	1300000
1,1,1,2 Tetrachloroethane	35130	47100	61190	96410		180890	225050	277000	406880
1,1,2,2-Tetrachloroethane	231900	313430	409350	649150		844250	1131800	1470100	2315840
Carbon Tetrachloride	1200	1590	2050	3210		6600	8050	9760	14030
1,2-Dichloroethane	1290	1690	2160	3350		5860	7330	9060	13390
Vinyl Chloride (chloroethene) (C4SL)	1720	2200	2760	4150		8670	10440	12510	17690
1,2,4-Trimethylbenzene	55900	55900	55900	55900		55900	55900	55900	55900

Table 1: RSK GrAC (µg/l)									
Land Use	COMMERCIAL								
Soil Type	SAND					SANDY LOAM			
GW Depth (m)	0.65	1.5	2.5	5		0.65	1.5	2.5	5
Semi-Volatile Organic Compounds									
Acenaphthene	4100	4100	4100	4100		4100	4100	4100	4100
Acenaphthylene	7950	7950	7950	7950		7950	7950	7950	7950
Naphthalene	19000	19000	19000	19000		19000	19000	19000	19000
Petroleum Hydrocarbons									
Aliphatic hydrocarbons EC5-EC6	35900	35900	35900	35900		35900	35900	35900	35900
Aliphatic hydrocarbons >EC6-EC8	5370	5370	5370	5370		5370	5370	5370	5370
Aliphatic hydrocarbons >EC8-EC10	427	427	427	427		427	427	427	427
Aliphatic hydrocarbons >EC10-EC12	33.9	33.9	33.9	33.9		33.9	33.9	33.9	33.9
Aliphatic hydrocarbons >EC12-EC16	0.759	0.759	0.759	0.759		0.759	0.759	0.759	0.759
Aromatic hydrocarbons >EC8-EC10	64600	64600	64600	64600		64600	64600	64600	64600
Aromatic hydrocarbons >EC10-EC12	24500	24500	24500	24500		24500	24500	24500	24500
Aromatic hydrocarbons >EC12-EC16	5750	5750	5750	5750		5750	5750	5750	5750
Notes: Values less than 100 have not been rounded up or down; values greater than 100 have been rounded to the nearest 10. Red highlighted values exceed solubility limit for the pure compound in water (aqueous solubility); GrAC defaults to the limit of solubility. No vadose zone biodegradation considered Sub-surface to indoor air correction factor of 10 applied to all petroleum (non-chlorinated) hydrocarbons All GrAC are for 1% SOM (0.0058 FOC)									

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Annex A – Model Input Parameters

Table 1: Commercial scenario – RBCA input parameters

Parameter	Unit	Value	Justification
Receptor – female child			
Averaging time	Years	49	From Box 3.5, SR3 ⁽³⁾
Receptor weight	kg	70	Female adult, Table 4.6, SR3 ⁽³⁾
Exposure duration	Years	49	From Box 3.5, SR3 ⁽³⁾
Exposure frequency	Days yr ⁻¹	86.25	Weighted using occupancy period of 9 hours per day for 230 days of the year ((9hours x 230 days)/24 hours)
Soil type – sand			
Total porosity	-	0.54	CLEA value for sand. Parameters for sand from Table 4.4, SR3 ⁽³⁾ Volumetric water content in the vadose zone is a highly sensitive parameter within the model and potentially highly variable in the field.
Volumetric water content – unsaturated (vadose) zone	-	0.24	
Volumetric air content - unsaturated (vadose) zone	-	0.30	
Dry bulk density	g cm ⁻³ or kg L ⁻¹	1.18	
Volumetric water content – capillary zone	-	0.35	Calculated using SR3 Equation 4.1. Value taken as the average moisture content calculated for suction heads (cm H ₂ O); 0 (i.e. saturated), 10, 20, 30, 40, 50 (i.e. unsaturated soil at field capacity). This is a highly sensitive parameter within the model.
Volumetric air content - capillary zone	-	0.19	Calculated from total porosity and volumetric water content of capillary zone. This is a highly sensitive parameter within the model.
Vertical hydraulic conductivity	cm d ⁻¹	636	CLEA value for saturated conductivity of sandy loam, Table 4.4, SR3 ⁽³⁾ equivalent to 7.36 E-03 cm s ⁻¹
Vapour permeability	m ²	7.54 E-12	Calculated for sand using equations in Appendix 1, SR3 ⁽³⁾
Capillary zone thickness	m	0.25	Taken from C W Fetter, Applied Hydrogeology 4 th Ed, 1994 ⁽¹¹⁾ and R Heath, Basic groundwater hydrology 1992 ⁽¹²⁾ for a medium sand
Fraction organic carbon	%	0.0058	Equivalent to SOM = 1%. Note that GrAC are independent on FOC/SOM content since partitioning is assumed to be between aqueous and vapour phases only
Soil type – sandy loam			
Total porosity	-	0.53	CLEA value for sandy loam. Parameters for sandy loam from Table 4.4, SR3 ⁽³⁾ . Volumetric water content in the vadose zone is a highly sensitive parameter within the model and potentially highly variable in the field.
Volumetric water content – unsaturated (vadose) zone	-	0.33	
Volumetric air content - unsaturated (vadose) zone	-	0.20	
Dry bulk density	g cm ⁻³ or kg/L	1.21	
Volumetric water content – capillary zone	-	0.42	Calculated using SR3 Equation 4.1 ⁽³⁾ . Value taken as the average moisture content calculated for suction heads (cm H ₂ O); 0 (i.e. saturated), 10, 20, 30, 40, 50 (i.e. unsaturated soil at field capacity). This is a highly sensitive parameter within the model.
Volumetric air content - capillary zone	-	0.11	Calculated from total porosity and volumetric water content of capillary zone. This is a highly sensitive parameter within

Parameter	Unit	Value	Justification
			the model.
Vertical hydraulic conductivity	cm d ⁻¹	308	CLEA value for saturated conductivity of sandy loam, Table 4.4, SR3 ⁽³⁾ equivalent to 3.56E-3 cm s ⁻¹
Vapour permeability	m ²	3.05 E-12	Calculated for sandy loam using equations in Appendix 1, SR3 ⁽³⁾
Capillary zone thickness	m	0.4	Taken from R Heath, Basic Groundwater Hydrology 1992 ⁽¹²⁾ for a fine sand. Note: C W Fetter, Applied Hydrogeology 4 th Ed, 1994 ⁽¹¹⁾ value for fine sand is 0.5 m
Fraction organic carbon	%	0.0058	Equivalent to SOM = 1%. Note that GrAC are independent on FOC/SOM content since partitioning is assumed to be between aqueous and vapour phases only
Building – pre-1970 three storey office			
Building volume/area ratio	m	9.6	Table 3.10, SR3 ⁽³⁾
Foundation area	m ²	424	
Foundation perimeter	m	82.40	Based on square root of building area being 20.59m
Building air exchange rate	d ⁻¹	24	Table 3.10, SR3 ⁽³⁾ Building air exchange rate equivalent to 2.8 E-04 s ⁻¹
Depth to bottom of foundation slab	m	0.15	
Foundation thickness	m	0.15	
Foundation crack fraction	-	3.89E-04	Calculated from floor crack area of 0.165m ² and building footprint of 424m ² in Table 4.21, SR3 ⁽³⁾
Volumetric water content of cracks	-	0.24 / 0.33	For sand / sandy loam, assumed equal to underlying soil type in assumption that cracks become filled with unsaturated zone soil over time. Parameters for sand and sandy loam from Table 4.4, SR3 ⁽³⁾
Volumetric air content of cracks	-	0.30 / 0.20	
Indoor/outdoor differential pressure	Pa	4.4	From Table 3.3, SR3 ⁽³⁾ Equivalent to 44g/cm/s ²
Convective air flow through cracks (Q _{soil}) - Sand	m ³ s ⁻¹	1.95 E-04	Soil-specific calculated parameter in RBCA equivalent (and cross checked) with equations A1, A2, A3, A8, A9 in SR3 ⁽³⁾ . Equivalent to 195 cm³ s⁻¹
Convective air flow through cracks (Q _{soil}) – Sandy Loam	m ³ s ⁻¹	7.7 E-05	Soil-specific calculated parameter in RBCA equivalent (and cross checked) with equations A1, A2, A3, A8, A9 in SR3 ⁽³⁾ . Equivalent to 77 cm³ s⁻¹

Table 2: Tolerable Indoor Air Concentrations

Tolerable Indoor Air Concentration (mg/m ³) ¹	
VOC / SVOC	Adult (Commercial)
MTBE	3.2064
Benzene C4SL	0.0062
Toluene	6.2362
Ethylbenzene	0.3301
Xylenes	0.2609
Trimethylbenzenes*	0.0085
TPH_Aliphatic >EC5-EC6	11.1465
TPH_Aliphatic >EC6-EC8	11.1465
TPH_Aliphatic >EC8-EC10	0.6465
TPH_Aliphatic >EC10-EC12	0.6465
TPH_Aliphatic >EC12-EC16	0.6465
TPH_Aromatic >EC8-EC9 (styrene)	0.5350

Tolerable Indoor Air Concentration (mg/m ³) ¹	
VOC / SVOC	Adult (Commercial)
TPH_Aromatic >EC8-EC10	0.1338
TPH_Aromatic >EC10-EC12	0.1338
TPH_Aromatic >EC12-EC16	0.1338
Acenaphthene	0.2675
Acenaphthylene	0.2675
Naphthalene	0.0037
Vinyl chloride ^{C4SL}	0.0255
Dichloroethane-1,2	0.0005
Tetrachloroethene ^{C4SL}	0.0478
Carbon tetrachloride	0.0114
Trichloroethane-1,1,1	2.6752
Trichloroethene ^{C4SL}	0.0054
Tetrachloroethane 1,1,2,2 & 1,1,1,2	0.0257
1,1,2-Trichloroethane	0.0216
1,1-dichloroethane	0.8915
1,1-dichloroethene	0.2541
Chloroethane	12.7374
Chloromethane	0.0115
cis-1,2-dichloroethene	0.0264
Dichloromethane	0.5765
trans-1,2-dichloroethene	0.0754
Trichloromethane (chloroform)	0.1752
Mercury Elemental	0.00027
Mercury Methyl	0.0008
¹ Inhalation HCV has taken account of background inhalation for threshold compounds only ^{C4SL} denotes value based on published Lower Limit of Toxicological Concern * For trimethylbenzenes, the HCV incorporates a Mean Daily Intake of 0.309 ug m ⁻³ based on urban air quality data obtained by RSK for Eltham, Southeast London rather than higher values (2.46-5.66 ug m ⁻³) reported by CL:AIRE from a Dutch study. TPH aromatic >C5-C7 and TPH aromatic >C7-C8 are represented by benzene and toluene respectively.	

APPENDIX I GAC GROUNDWATER

GENERIC ASSESSMENT CRITERIA FOR CONTROLLED WATERS

Protection of the water environment

The water environment in the United Kingdom is protected under a number of regulatory regimes. The relevant environmental regulator is consulted where there may be a risk that pollution of 'controlled waters' may occur or may have occurred in the past.

The term 'controlled waters' refers to coastal waters, inland freshwaters and groundwater. The EU Water Framework Directive (WFD) (2000/60/EC) is implemented via domestic regulations and guidance, covering aspects of groundwater and surface water protection as well as drinking water supply policy. Domestic legislation and guidance will vary across the United Kingdom. Therefore, the relevant legislation for England, Wales, Northern Ireland and Scotland should be reviewed, alongside guidance provided by the Environment Agency (EA), Natural Resource Wales (NRW), the Scottish Environmental Protection Agency (SEPA) or the Northern Ireland Environment Agency (NIEA), as appropriate.

The main objectives of the protection and remediation of groundwater under threat from land contamination are set out within "The Environment Agency's approach to groundwater protection", version 1.0 (March 2017)⁽¹⁾ and the associated guidance "Land contamination groundwater compliance points: quantitative risk assessments (March 2017)^(1a) that have replaced the previous guidance document "Groundwater Principles and Practice (GP3)". When assessing risks to groundwater, the following need to be considered:

- Where pollutants have not yet entered groundwater, all necessary and reasonable measures must be taken to:
 - **prevent** the input of **hazardous** substances into groundwater (see description of hazardous substances below)
 - **limit** the entry of other (non-hazardous) pollutants into groundwater to avoid pollution, deterioration in the status of groundwater bodies and to prevent sustained, upward trends in pollutant concentrations in groundwater.
- Where pollutants have already entered groundwater, the priority is to take all necessary and reasonable measures to:
 - **minimise** further entry of "contaminants" where there is a defined source
 - **limit the pollution** of groundwater or any effect on the status of the groundwater body from the future expansion of the 'plume', if necessary, by actively reducing its extent.

Within the context of groundwater risk assessments on sites affected by land contamination, "reasonable" means feasible without involving disproportionate costs. What costs are "disproportionate" depends on site-specific circumstances, which may include:

- Considerations of technical feasibility such as identified by the remedial options appraisal, this may be due to the distribution or nature of the contamination and the available remedial methods to treat the identified contamination;
- Sustainability considerations.

DEFINITIONS AND SUBSTANCE CLASSIFICATIONS

Risks to surface waters:

When assessing risks to surface waters, the following list of definitions should be understood:

Priority substances (PS) are harmful substances originally identified under the Water Framework Directive (WFD) 2000/60/EC as substances ‘presenting a significant risk to or via the aquatic environment’ at a European level. Member States are required to incorporate the identified **PS** into their country-wide monitoring programmes. There are currently 33 **PS** defined within the Priority Substances Directive (2013/39/EU; Annex 1), with a further 12 additional substances due to come into force from 22 December 2018. Directive 2013/39/EU has been transposed into domestic legislation for England and Wales by The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.

Under the umbrella of **PS**, there is a sub-set of substances identified as being “hazardous”, and these are referred to as **Priority hazardous substances (PHS)**. The list of **PHS** is defined at EU level within the Priority Substances Directive (2013/39/EU). The WFD defines hazardous substances as ‘substances (or groups of substances) that are toxic, persistent and liable to bio-accumulate, and other substances or groups of substances that give rise to an equivalent level of concern.’ There are currently **21 PHS** (previously 15 PHS, with a further 6 substances added in 22 December 2018).

There is also another group of substances defined at EU level and which are referred to as **other pollutants (OP)** in Directive 2013/39/EU. These are additional substances which although not **priority substances**, have EQS which are identical to those laid down in the legislation which applied prior to 13 January 2009 (Directive 2008/105/EU). The **OP** are listed along with the **priority substance (PS)** within the Priority Substances Directive (2013/39/EU), and their associated EQS are also listed therein. There are 6 **OP** defined within the Priority Substances Directive (2013/39/EU).

In addition to the EU level substances, there are also a group of pollutants defined at a Member State level, referred to as **Specific pollutants (SP)**. These substances are pollutants which are released in significant quantities into water bodies in each of the individual European Member States. Under the WFD, Member States are required to set their own EQS for these substances. An indicative list of **SP** is given in Annex VIII of the WFD. Many of the substances categorised as **SP** in the UK were formerly List 2 substances under the old Groundwater Directive (80/68/EEC). The **SP** are defined within Part 2 (Table 1) of The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.

Risks to groundwater:

When assessing risks to groundwater, the following definitions should be understood:

Under the requirements of the Groundwater Daughter Directive (2006/118/EU), the UK has published a list of substances it considers to be **hazardous substances** with respect to groundwater. In their advisory capacity to the government, this list has been derived by the UK Joint Agencies Groundwater Directive Advisory Group (JAGDAG), of which the Environment Agency is a member. The latest JAGDAG list of **hazardous substances** was published in January 2019 and the Environment Agency will use the updated list of hazardous substances from this date for all new activities that may lead to the discharge of hazardous substances to groundwater. The list is extensive and can be found in full at:

<https://www.wfduk.org/stakeholders/jagdag>

Selecting the appropriate assessment criteria

When assessing the risks to controlled waters, various assessment criteria apply, depending on the nature of the assessment and the conceptual site model.

Where a surface water body is involved, then Environmental Quality Standards (EQS) are the relevant assessment criteria as they are designed to be protective of surface water ecology.

Where a public water supply or a Principal aquifer is involved, then the standards defined in The Water Supply (Water Quality) Regulations⁽²⁾ are the primary source of assessment criteria. The Private Water Supplies Regulations⁽³⁾ may also be applicable in some cases. For instances where there are no UK assessment criteria, then the World Health Organisation (WHO) drinking water guidelines⁽⁴⁾ may be used.

This appendix presents the generic assessment criteria (GAC) that RSK considers suitable for assessing risks to controlled waters for our most commonly encountered determinants. A full list of EQS for England and Wales are included in The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.

The RSK GAC for controlled waters are presented in **Table 1** and **Table 2**. In line with the Environment Agency's Remedial Targets Methodology, the GAC for controlled waters are termed 'target concentrations'.

The appropriate target concentrations should be selected with consideration to:

- the site conceptual model (i.e. the receptor at potential risk);
- whether the substance is already present in groundwater at the site;
- whether or not the substance is classified as a priority hazardous substance under the Priority Substances Directive (2013/39/EC) (see above), or as a hazardous substance according to the current list of JAGDAG determinations⁽⁵⁾; and
- background concentrations in the aquifer (if applicable).

It is important to remember that the WFD and Environment Agency guidance^(1 & 1a) support a sustainable, risk-based approach be applied to groundwater contamination. Exceedance of any target concentration does not necessarily imply that an unacceptable risk exists or that remediation is inevitably required.

Target concentrations shaded in green are <u>statutory values</u>	Target concentrations shaded in orange are <u>non-statutory values</u>
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Note: Units µg/l throughout (unless otherwise stated)

Table 1: Target concentrations for controlled waters (excluding TPH CWG fractions)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Metals & other inorganics						
Hazardous substance	Specific pollutant	Arsenic	-	10 ⁽²⁾	50 ^(6a)	25 ^(6a)
Non-hazardous pollutant	Priority substance	Cadmium	0.1 ⁽⁷⁾	5 ⁽²⁾	≤0.08, 0.08, 0.09, 0.15, 0.25 ^(6b)	0.2 ^(6a)
(Not determined)	-	Chromium (total)	-	50 ⁽²⁾	8.1 Sum values for chromium III and VI	-
(Not determined)	Specific pollutant	Chromium (III)	-	Use value for total chromium	4.7 ^(6a)	-
Hazardous substance	Specific pollutant	Chromium (VI)			3.4 ^(6a)	0.6 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
(Not determined)	Specific pollutant	Copper	-	2,000 ⁽²⁾	1 bioavailable ^(6a)	3.76 dissolved, where DOC ≤1mg/l ^(6a)
						3.76µg/l + (2.677µg/l x ((DOC/2) – 0.5µg/l)) dissolved, where DOC >1mg/l ^(6a)
Hazardous substance	Priority substance	Lead	-	10 ⁽²⁾	1.2 bioavailable ^(6a)	1.3 ^(6a)
Hazardous substance	Priority hazardous substance	Mercury	0.01 ⁽⁷⁾	1 ⁽²⁾	0.07 ^(6c)	0.07 ^(6c)
Non-hazardous pollutant	Priority substance	Nickel	-	20 ⁽²⁾	4.0 bioavailable ^(6a)	8.6 ^(6a)
Non-hazardous pollutant	-	Selenium	-	10 ⁽²⁾	-	-
Non-hazardous pollutant	Specific pollutant	Zinc	-	3,000 ⁽⁸⁾	10.9 bioavailable ^(6a)	6.8 dissolved ^(6a)
(Not determined)	Specific pollutant	Iron	-	200 ⁽²⁾	1000 ^(6a) *1	1000 ^(6a))*1
(Not determined)	Specific pollutant	Manganese	-	50 ⁽²⁾ (0.05mg/l)	123 bioavailable ^(6a) (0.123mg/l)	-
(Not determined)	-	Aluminium	-	200 ⁽²⁾	-	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Priority hazardous substance	Tributyltin compounds (Tributyltin-cation)	0.001 ⁽⁷⁾	-	0.0002 ^(6a)	0.0002 ^(6a)
(Not determined)	-	Sodium	-	200,000 ⁽²⁾ (200 mg/l)	-	-
Non-hazardous pollutant	Specific pollutant	Cyanide (Hydrogen cyanide)	-	50 ⁽²⁾ (0.05 mg/l)	1 ^(6a) (0.001 mg/l)	1 ^(6a) (0.001 mg/l)
Non-hazardous pollutant	-	Total ammoniacal nitrogen [§]	-	500 ⁽²⁾ (0.5 mg/l) as NH ₄ (472 expressed as NH ₃ ; 389 expressed as N)	300 ^(6f) (0.3 mg/l) as N (364 expressed as NH ₃ ; 386 expressed as NH ₄)	-
Non-hazardous pollutant	Specific pollutant	Ammonia un-ionised (equilibrium ratio calculated) (NH ₃)	-	-	-	21 ^(6a) (0.021 mg/l)
Non-hazardous pollutant	Specific pollutant	Chlorine	-	-	2 ^(6a) (0.002 mg/l)	10 ^(6d) (0.01 mg/l)
(Not determined)	-	Chloride	-	250,000 ⁽²⁾ (250 mg/l)	-	-
(Not determined)	-	Sulphate	-	250,000 ⁽²⁾ (250 mg/l)	-	-
(Not determined)	-	Nitrate (as NO ₃)	-	50,000 ⁽²⁾ (50 mg/l)	-	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
(Not determined)	-	Nitrite (as NO ₂)	-	500 ⁽²⁾ (0.5 mg/l)	10 ⁽⁹⁾ (0.01 mg/l)	-
Volatile organic compounds (VOC)						
Non-hazardous pollutant	Other pollutant	Tetrachloroethene (tetrachloroethylene; PCE)	0.1 ⁽⁷⁾	10 ⁽²⁾ sum of TCE and PCE	10 ^(6a)	10 ^(6a)
Hazardous substance	Other pollutant	Trichloroethene (trichloroethylene; TCE)	0.1 ⁽⁷⁾		10 ^(6a)	10 ^(6a)
Hazardous substance (1,1,2,2-tetra - chloroethane)	Specific pollutant	Tetrachloroethane	-	-	140 ^(6a)	-
Hazardous substance	Other pollutant	Carbon tetrachloride (tetrachloromethane)	0.1 ⁽⁷⁾	3.0 ⁽²⁾	12 ^(6a)	12 ^(6a)
Non-hazardous pollutant	Priority substance	1,2-Dichloroethane	1.0 ⁽⁷⁾	3.0 ⁽²⁾	10 ^(6a)	10 ^(6a)
Non-hazardous pollutant	-	1.2-Dichloroethene (DCE) sum of cis and trans	-	50.0 ⁽⁴⁾	-	-
Hazardous substance	-	Vinyl chloride (chloroethene, chloroethylene)	-	0.5 ⁽²⁾	-	-
Non-hazardous pollutant	Priority substance	Dichloromethane	-	20 ⁽⁴⁾	20 ^(6a)	20 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Non-hazardous pollutant	Priority substance	Trichlorobenzenes	0.01 ⁽⁷⁾	-	0.4 ^(6a)	0.4 ^(6a)
Hazardous substance	Priority substance	Trichloromethane (Chloroform)	0.1 ⁽⁷⁾	100 ^(2a) (sum of trihalomethanes – chloroform, bromform, dibromochloromethane, bromodichloromethane)	2.5 ^(6a)	2.5 ^(6a)
(Not determined)	-	Bromoform	-		-	-
(Not determined)	-	Dibromochloromethane	-		-	-
(Not determined)	-	Bromodichloromethane	-		-	-
Non-hazardous pollutant	Priority hazardous substance	Di(2-ethylhexyl) phthalate (bis(2-ethylhexyl) phthalate, DEHP)	-	8 ⁽⁴⁾	1.3 ^(6a)	1.3 ^(6a)
(Not determined)	Specific pollutant	Benzyl butyl phthalate	-	-	7.5 ^(6a)	0.75 ^(6e)
Hazardous substance	Priority hazardous substance	Hexachlorobutadiene (as a pesticide, but reported in a VOC suite)	0.005 ⁽⁷⁾	0.1 ⁽²⁾	0.6 ^(6c)	0.6 ^(6c)
Semi-volatile organic compounds (SVOC)						
(Not determined) Not to be confused with acenaphthene, which is a hazardous substance	-	Acenaphthylene (Aro EC12-EC16)	-	-	5.8 ⁽¹⁰⁾	
Hazardous substance	Priority hazardous substance	Anthracene (Aro EC16-EC21)	-	-	0.1 ^(6a)	0.1 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Non-hazardous pollutant	Priority substance	Naphthalene (Aro EC10-EC12)	-	-	2 ^(6a)	2 ^(6a)
Hazardous substance	Priority substance	Fluoranthene (Aro EC21-EC35) not used as an indicator for this EC band	-	-	0.0063 ^(6a)	0.0063 ^(6a)
Hazardous substance(s)	Priority hazardous substance(s)	Benzo(a)pyrene (Aro EC21-EC35)	-	0.01 ⁽²⁾	0.00017 ^(6a)	0.00017 ^(6a)
		Benzo(b)fluoranthene (Aro EC21-EC35)	-	0.1 ⁽²⁾ sum of the concentration of the four specified compounds	No EQS for these substances. B(a)P should be used as the indicator compound instead.	
		Benzo(k)fluoranthene (Aro EC21-EC35)	-			
		Benzo(g,h,i)perylene (Aro EC21-EC35)	-			
		Indeno(1,2,3-cd) pyrene (Aro EC21-EC35)	-			
Non-hazardous pollutant	Specific pollutant	Phenol	-	-	7.7 ^(6a)	7.7 ^(6a)
Hazardous substance	Specific pollutant	2,4-Dichlorophenol	0.1 ⁽⁷⁾	-	4.2 ^(6a)	0.42 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Priority substance	Pentachloro-phenol (PCP) (as a pesticide, but reported in an SVOC suite)	0.1 ⁽⁷⁾	0.1 ⁽²⁾	0.4 ^(6a)	0.4 ^(6a)
Petroleum hydrocarbons						
Hazardous substance	-	Total petroleum hydrocarbons	-	See Table 2 for individual (non-statutory) TPH CWG fractions with respect to drinking water receptors	See individual risk driving compounds (i.e. BTEX and PAH) for specific EQS	
Hazardous substance	Priority substance	Benzene (Aro EC5-EC7)	1 ⁽⁷⁾	1 ⁽²⁾	10 ^(6a)	8 ^(6a)
Hazardous substance	Specific pollutant	Toluene (Aro EC7-EC8)	4 ⁽⁷⁾	700 ⁽⁴⁾	74 ^(6a)	74 ^(6a)
Hazardous substance	-	Ethylbenzene (Aro EC8-EC10)	-	300 ⁽⁴⁾	300 ⁽¹¹⁾	-
Hazardous substance	-	Xylenes (Aro EC8-EC10)	3 ⁽⁷⁾	500 ⁽⁴⁾	30 ⁽¹¹⁾	-
Non-hazardous pollutant	-	Methyl tertiary butyl ether (MTBE)	-	15 ⁽¹²⁾	-	

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Pesticides, fungicides, insecticides and herbicides						
(Not determined) – assume to be Hazardous Substance as per below	-	Total pesticides	-	0.5 ⁽²⁾	-	-
(Not determined) - assume to be Hazardous Substance as per below	-	Other individual pesticides (unless otherwise detailed below)	-	0.1 ⁽²⁾	-	-
Hazardous substance(s)	Other pollutant (Cyclodiene pesticides)	Aldrin	0.003 ⁽⁷⁾	0.03 ⁽²⁾	0.01 ^(6a) (sum of all four)	0.005 ^(6a) (sum of all four)
		Dieldrin	0.003 ⁽⁷⁾	0.03 ⁽²⁾		
		Endrin	0.003 ⁽⁷⁾	0.1 ^(2b) ('other individual pesticide')		
		Isodrin*2	0.003 ⁽⁷⁾	0.1 ^(2b) ('other individual pesticide')		
Hazardous substance	Other pollutant	DDT (total)	0.002 ⁽⁷⁾	0.1 ⁽²⁾ ('other individual pesticide')	0.025 ^(6a)	0.025 ^(6a)
Hazardous substance	Specific pollutant	Carbendazim	-	0.1 ⁽²⁾ ('other individual pesticide')	0.15 ^(6a)	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Specific pollutant	Chlorothalonil	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.035 ^(6a)	-
Hazardous substance	Priority substance	Cypermethrin	-	0.1 ⁽²⁾ (‘other individual pesticide’)	8.0E ^{-5(6a)}	8.0E ^{-6(6a)}
Hazardous substance	Specific pollutant	Dimethoate	0.01 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.48 ^(6a)	0.48 ^(6a)
(Not determined)	Specific pollutant	Glyphosate	-	0.1 ⁽²⁾ (‘other individual pesticide’)	196 ^(6a)	196 ^(6a)
Hazardous substance	Specific pollutant	Linuron	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.5 ^(6a)	0.5 ^(6a)
Non-hazardous pollutant	Specific pollutant	Mecoprop	0.04 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	18 ^(6a)	18 ^(6a)
Non-hazardous pollutant	Specific pollutant	Methiocarb	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.01 ^(6a)	-
Non-hazardous pollutant	Specific pollutant	Pendimethalin	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.3 ^(6a)	-

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Specific pollutant	Permethrin	0.001 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.001 ^(6a)	0.0002 ^(6a)
Hazardous substance	Priority substance	Alachlor	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.3 ^(6a)	0.3 ^(6a)
Hazardous substance	Priority substance	Atrazine	0.03 ⁽⁷⁾	100 ⁽⁴⁾ (‘other individual pesticide’)	0.6 ^(6a)	0.6 ^(6a)
Hazardous substance	Priority substance	Diuron	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.2 ^(6a)	0.2 ^(6a)
Hazardous substance	Priority hazardous substance	Endosulphan	0.005 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.005 ^(6a)	0.0005 ^(6a)
Non-hazardous pollutant	Priority substance	Isoproturon	-	0.1 ⁽²⁾ (‘other individual pesticide’)	0.3 ^(6a)	0.3 ^(6a)
Hazardous substance	Priority substance	Simazine	0.03 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	1 ^(6a)	1 ^(6a)
Hazardous substance	Priority hazardous substance	Trifluralin	0.01 ⁽⁷⁾	0.1 ⁽²⁾ (‘other individual pesticide’)	0.03 ^(6a)	0.03 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Hazardous substance	Priority substance	Dichlorvos	-	0.1 ⁽²⁾ (‘other individual pesticide’)	6.0E ^{-4(6a)}	6.0E ^{-5(6a)}
Hazardous substance	Priority substance	Heptachlor and heptachlor epoxide	-	0.03 ⁽²⁾	2.0E ^{-7(6a)}	1.0E ^{-08(6a)}
Miscellaneous						
(Not determined)	Specific pollutant	Triclosan (antibacterial agent)	-	-	0.1 ^(6a)	0.1 ^(6a)
Hazardous substance	Priority hazardous substance	Perfluoro-octane sulfonic acid (and its derivatives) (PFOS)	-	-	6.5E ^{-4(6a)}	1.3E ^{-4(6a)}
Hazardous substance	Priority hazardous substance	Hexabromo cyclododecane (HBCDD)	-	-	0.0016 ^(6a)	0.0008 ^(6a)

Substance classification		Determinant	Target concentrations (µg/l)			
Groundwater receptors ⁽⁵⁾	Surface water receptors ⁽⁶⁾		Minimum reporting value	UK drinking water standard (or best equivalent)	EQS or best equivalent	
					Freshwater	Transitional (estuaries) and coastal waters
Notes: ‘-’ A target concentration is not available. \$Please note that total ammonia (NH ₄ ⁺ and NH ₃) is equivalent to ammoniacal nitrogen in laboratory reports * ¹ Please note that although iron is listed in the 2015 Direction as 1.000 µg/l, the EQS remains at 1mg/l in Scotland and it is assumed this is an error and should read either 1,000 or 1000µg/l. * ² Please note that although Isodrin is not listed in name within the group of “Cyclodiene pesticides” in Table 1 of Schedule 3 Part 3 of the 2015 Direction ⁽⁶⁾ , the CAS number for Isodrin (465-73-6) <u>is</u> listed and therefore it is assumed that it has been missed off the named list of substances. * ³ Total petroleum hydrocarbons is used for consistency, but is an analytical method-defined measurement for a mixture of hydrocarbons subject to environmental analysis ¹¹ . “Bioavailable” in relation to copper, zinc, nickel and manganese (but not lead) is the generic EQSbioavailable ^(6a) derived from the Metal Bioavailability Assessment Tool (M-BAT) developed by the Water Framework Directive UK Technical Advisory Group (WFDTAG). Exceedance of this value should prompt a site-specific assessment using the M-BAT with pH, DOC and Ca to derive a site-specific EQS termed the PNEC _{dissolved} . http://www.wfduk.org/resources/rivers-lakes-metal-bioavailability-assessment-tool-m-bat . For zinc, if there is an exceedance of the EQSbioavailable in an initial GQRA, Tier 2 required that the EQS for zinc should also have the ambient background concentration of zinc added as well						

Table 2: World Health Organization (WHO) guide values for TPH CWG fractions in drinking water⁽¹³⁾ (as referenced in CL:AIRE, 2017⁽¹¹⁾)

TPH CWG fraction	WHO guide value for drinking water ⁽¹³⁾ (µg/l)
Aliphatic fractions:	
Aliphatic EC5-EC6	15,000
Aliphatic >EC6-EC8	15,000
Aliphatic >EC8-EC10	300
Aliphatic >EC10-EC12	300
Aliphatic >EC12-EC16	300
Aliphatic >EC16-EC21	-
Aliphatic >EC21-EC35	-
Aromatic fractions:	
Aromatic EC5-EC6	10 (benzene)
Aromatic >EC6-EC8	700 (toluene)
Aromatic >EC8-EC10	300 (ethyl benzene) 500 (xylenes)
Aromatic >EC10-EC12	90
Aromatic >EC12-EC16	90
Aromatic >EC16-EC21	90
Aromatic >EC21-EC35	90
Reference: World Health Organisation (WHO), 2008. Petroleum products in drinking-water. Background document for development of WHO guidelines for drinking water quality. WHO/SDE/WSH/05.08/123. World Health Organisation, Geneva ⁽¹³⁾ .	

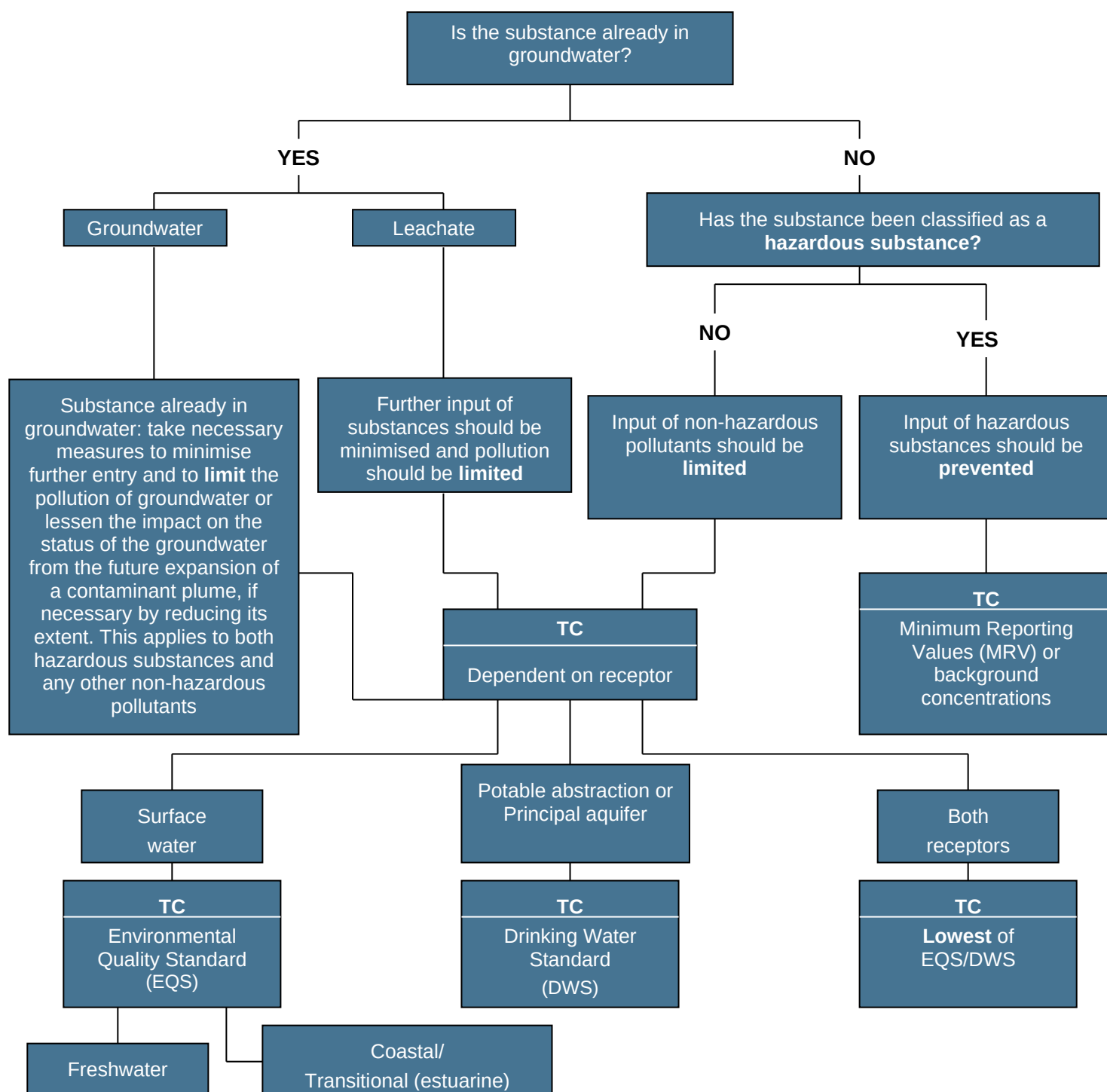
References

1. Environment Agency (2018), 'The Environment Agency's approach to groundwater protection', version 1.2, February 2018 (formerly contained within GP3).
<https://www.gov.uk/government/collections/groundwater-protection>
- 1a. Environment Agency (2017), 'Land contamination groundwater compliance points: quantitative risk assessments', March 2017 (formerly contained within GP3) [accessed 29 March 2017].
<https://www.gov.uk/government/collections/groundwater-protection>
2. The Water Supply (Water Quality) Regulations 2016 (SI 2016/619)
 - 2a. Sum of chloroform, bromoform, dibromochloromethane and bromodichloromethane
 - 2b. Standard applies to individual pesticides except aldrin, dieldrin, heptachlor and heptachlor epoxide, for which a separate standard is defined.
3. The Private Water Supplies (England) Regulations 2016. SI 2016 / 618
4. WHO (2011), *Guidelines for drinking-water quality*, 4th edn
5. JAGDAG hazard substance determinations (January 2019): This list contains substances that are determined to be hazardous substances or non-hazardous pollutants for the purposes of the groundwater directive 2006/118/EC. <https://www.wfduk.org/stakeholders/jagdag> [accessed 1 February 2021]
The absence of an assessment or substance from the list means an assessment has not been completed and is therefore presented as 'Not determined'. For further details on how substances are assessed, see the Joint Agencies Groundwater Directive Advisory Group (JAGDAG) 'Methodology for the determination of hazardous substances in groundwater for the purposes of the groundwater directive 2006/118/EC' which is available from the JAGDAG website. The methodology is a UK –wide framework that sets criteria for how to assess whether a substance is a hazardous substances in groundwater.
6. The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.
 - 6a. The EQS for these substances are based on a "long term mean" or an "annual average (AA)" EQS.
 - 6b. For cadmium and its compounds the EQS values vary depending on the hardness of the water as specified in five class categories (Class 1: < 40 mg CaCO₃/l, Class 2: 40 to < 50 mg CaCO₃/l, Class 3: 50 to < 100 mg CaCO₃/l, Class 4: 100 to < 200 mg CaCO₃/l and Class 5: ≥ 200 mg CaCO₃/l).
 - 6c. The EQS for Mercury and hexachlorobutadiene are based on a "maximum acceptable concentration (MAC)" EQS in absence of an "annual average (AA)" EQS.
 - 6d. The EQS for chlorine in saltwater is based on the 95th percentile concentration of total residual oxidant, which refers to the sum of all oxidising agents existing in water, expressed as available chlorine.
 - 6e. The recommended saltwater standard is derived using a safety factor of 100. Where the standard is failed, it is recommended that supporting evidence of ecological damage should be obtained before committing to expensive action.
 - 6f. EQS for total ammonia is as per Schedule 3, Part 1, Table 7 of of the above directions. EQS applies to river types 1, 2 and 4 and 6 (namely upland and low alkalinity). The EQS for a lowland and high alkalinity rivers (types 3, 5 and 7) is 600µg/l (0.6mg/l).

Additional information on the Metal Bioavailability Assessment Tool (M-BAT) is available at <http://www.wfduk.org/resources/rivers-lakes-metal-bioavailability-assessment-tool-m-bat>

7. Minimum reporting values listed at <https://www.gov.uk/government/publications/values-for-groundwater-risk-assessments/hazardous-substances-to-groundwater-minimum-reporting-values> (updated 13 January 2017; accessed 29 March 2017). Note target concentration for xylenes is 3 µg/l each for o-xylene and m/p xylene as it may not be possible to separate m- and p-xylene; 135 tcb, 124 tcb, 123 tcb each to 0.01 µg/l)
8. The Surface Waters (Abstraction for Drinking Water) (Classification) Regulations 1996 (as amended). SI 1996 / 3001
9. Council Directive on the Quality of Fresh Waters Needing Protection or Improvement in Order to Support Fish Life (Freshwater Fish Directive) (78/659/EEC)
10. WRc plc (2002), R&D Technical Report P45.
11. CL:AIRE, 2017. Petroleum Hydrocarbons in Groundwater: Guidance on assessing petroleum hydrocarbons using existing hydrogeological risk assessment methodologies. V1.1.
12. Drinking Water Inspectorate (London, UK). Environmental Information Request on MTBE in drinking water. Ref. DWI 1/10/18; dated 28 November 2006. Value is based on the odour threshold for MTBE, which is lower than a health-based guideline value
13. World Health Organisation (WHO), 2008. Petroleum products in drinking-water. Background document for development of WHO guidelines for drinking water quality. WHO/SDE/WSH/05.08/123. World Health Organisation, Geneva. [accessed 29 March 2017] http://www.who.int/water_sanitation_health/dwg/chemicals/petroleumproducts_2add_june2008.pdf

FLOW CHART TO ASSIST WITH SELECTION OF TARGET CONCENTRATIONS



TC = Target concentration

When leachate is being assessed the 'compliance point' is the groundwater body. Therefore dilution within the groundwater body may be applied with caution before comparing with the TC.

When directly assessing a receptor, e.g., a river, the appropriate TC should be selected.

APPENDIX J

GQRA DATA SCREENING TABLES – SOILS INCLUDING PROJECT CRONUS

COPC	Chemtest Job No.	24-18337	24-18337	24-18337	24-18337	24-18337	24-18337	24-18337	24-18339	24-18339	24-18339	24-18339	24-18339
	Chemtest Sample ID	1819250	1819251	1819252	1819253	1819254	1819255	1819256	1819263	1819264	1819265	1819266	1819267
	Client sample ref.												
	Sample location	BH323	BH317	BH317	BH317	BH317	BH317	BH317	BH322	BH322	BH322	BH322	BH322
	Top depth (m)	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top depth (m)	0.30	2.2	1.5	0.70	6.50	3.3	4.10	0.20	1.10	1.60	4.40	7.00
	Depth to bottom (m)												
	Date sampled	03/05/2024	07/06/2024	07/06/2024	07/06/2024	07/06/2024	07/06/2024	07/06/2024	07/05/2024	07/05/2024	07/05/2024	07/05/2024	07/05/2024
	RSK Commercial GAC 1% som (mg/kg)												
ACM Type	na	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	na	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	na												
Total Asbestos	na												
Moisture	na	2.4	16	8.6	7.5	18	27	20	6	12	11	19	57
Soil Colour	na	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	na	Stones	Stones	Stones	Stones	None	Stones	Stones	Stones	Stones	None	None	Stones and Wood
Soil Texture	na	Sand	Sand	Sand	Sand	Clay	Sand	Clay	Sand	Sand	Sand	Clay	Clay
pH at 20C	na	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	640	2.6	9	14	5.7	18	11	21	3.1	6.6	8.6	13	6.8
Cadmium	410	0.64	< 0.10	0.56	0.4	< 0.10	< 0.10	0.22	0.13	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	8600	200	29	1100	1400	36	43	18	680	270	37	40	15
Copper	68000	14	3.4	52	42	11	40	27	24	23	2.7	12	4.7
Mercury	1120	< 0.05	< 0.05	0.1	0.07	< 0.05	0.09	< 0.05	0.05	0.05	< 0.05	< 0.05	< 0.05
Nickel	980	7.3	4.5	34	20	33	36	20	14	8.7	4.5	34	14
Lead	2300	25	11	60	64	22	24	27	62	29	5.2	27	8.9
Selenium	12000	< 0.25	0.39	1.7	0.72	0.72	0.75	0.52	3.3	4.4	< 0.25	0.78	0.34
Zinc	760000	67	22	190	200	92	89	85	110	47	19	97	37
Chromium (Hexavalent)	49	< 0.50	< 0.50	< 0.50	0.66	< 0.50	< 0.50	< 0.50	-	-	-	-	-
Aliphatic VPH >C5-C6	3200	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C8-C9 (Sum)	7800	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C9-C10	2000	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	9700	4.4	5.6	7.4	5.9	3.3	9.4	6.4	2.7	4.4	2.5	3.2	7
Aliphatic EPH >C12-C16 MC	59000	3.1	6.3	12	6.1	1.2	6.1	4.8	< 1.0	1.1	< 1.0	1.1	3
Aliphatic EPH >C16-C21 MC	na	11	2.9	35	74	< 2.0	3.5	3.4	< 2.0	< 2.0	< 2.0	< 2.0	8.8
Aliphatic EPH >C21-C35 MC	1000000	180	< 3.0	280	880	< 3.0	< 3.0	10	< 3.0	3.6	3.1	32	32
Aliphatic EPH >C35-C40 MC	1000000	< 10	< 10	32	110	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	na	200	15	340	970	5.5	19	25	< 5.0	19	7.1	7.4	50
Total Aliphatic EPH >C10-C40 MC	na	200	15	370	1000	< 10	19	25	< 10	19	< 10	< 10	50
Aromatic VPH >C3-C7	27	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	6000	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	3500	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	16000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	36000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.2	< 1.0	< 1.0	< 1.0	< 1.0	2.8
Aromatic EPH >C16-C21 MC	28000	6.7	3	3.6	6.5	3.3	3.8	3.4	3.7	2.8	2.1	3.7	130
Aromatic EPH >C21-C35 MC	28000	5.9	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	19	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Aromatic EPH >C35-C40 MC	28000	2.5	1.1	16	42	< 1.0	1.2	33	< 1.0	< 1.0	< 1.0	< 1.0	94
Total Aromatic EPH >C10-C35 MC	na	13	< 5.0	< 5.0	6.5	< 5.0	< 5.0	24	< 5.0	< 5.0	< 5.0	< 5.0	140
Total Aromatic EPH >C10-C40 MC	na	15	< 10	16	49	< 10	< 10	57	< 10	< 10	< 10	< 10	230
Total VPH >C3-C10	na	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	na	210	18	340	980	< 10	24	49	< 10	< 10	< 10	11	190
Total EPH >C10-C40 MC	na	220	19	390	1100	< 10	25	82	< 10	< 10	< 10	11	280
Naphthalene	1800	< 0.10	< 0.10	< 0.10	0.59	< 0.10	2.3	< 0.10	-	-	-	-	-
Acenaphthylene	110000	< 0.10	< 0.10	< 0.10	0.18	< 0.10	0.41	< 0.10	-	-	-	-	-
Acenaphthene	110000	< 0.10	< 0.10	< 0.10	0.21	< 0.10	0.81	< 0.10	-	-	-	-	-
Fluorene	63000	< 0.10	< 0.10	< 0.10	0.23	< 0.10	1	< 0.10	-	-	-	-	-
Phenanthrene	23000	< 0.10	0.33	< 0.10	0.81	< 0.10	2.6	< 0.10	-	-	-	-	-
Anthracene	520000	< 0.10	< 0.10	< 0.10	0.15	< 0.10	0.15	< 0.10	-	-	-	-	-
Fluoranthene	23000	< 0.10	0.46	< 0.10	0.74	< 0.10	0.7	< 0.10	-	-	-	-	-
Pyrene	54000	< 0.10	0.46	< 0.10	1.2	< 0.10	0.69	< 0.10	-	-	-	-	-
Benzoanthracene	170	< 0.10	0.45	< 0.10	1.6	< 0.10	0.2	< 0.10	-	-	-	-	-
Chrysene	35												

Bis(2-Chloroisopropyl)Ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclohexane	21	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dimethylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1800	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	270	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	110000	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	110000	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Benzofuran	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	63000	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
6-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenyl ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	22000	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	520000	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	23000	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	54000	-	-	-	-	-	-	-	-	-	-	-	-	-
Butylbenzyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	170	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	350	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene]	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[3]fluoranthene	1300	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	77	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]Pyrene	500	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Benz[a,h]Anthracene	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	3900	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1800	-	-	-	-	-	-	-	-	0.33	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	110000	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	110000	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	63000	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	22000	-	-	-	-	-	-	-	-	0.36	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	520000	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	23000	-	-	-	-	-	-	-	-	0.39	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	54000	-	-	-	-	-	-	-	-	0.35	< 0.10	< 0.10	< 0.10	< 0.10
Benzoanthracene	170	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	350	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[fluoranthene]	44	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[3]fluoranthene	1300	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[pyrene]	77	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno[1,2,3-c,d]Pyrene	500	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
2-Benz[a,h]Anthracene	3.5	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	3900	-	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 56 PAH's	na	-	-	-	-	-	-	-	-	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC generic assessment criteria
- COPC not analysed
Measured concentration in excess of GAC

COPC	Chemtest Job No.	24-18339	24-19025	24-19025	24-19025	24-19025	24-19025	24-19025	24-19335	24-19335	24-19915	24-19915	24-19915
	Chemtest Sample ID	1819268	1821789	1821790	1821791	1821792	1821793	1821794	1822927	1822928	1825240	1825242	1825243
	Client sample ref.												
	Sample location	BH322	BH317	BH317	BH317	BH324	BH324	BH324	BH324	BH324	BH319	BH319	BH319
	Top depth (m)	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top depth (m)	12.00	10.50	14.00	17.50	0.20	0.70	3.50	4.80	7.00	0.50	2.50	450
	Depth to bottom (m)												
Date sampled	07/05/2024	12/06/2024	12/06/2024	12/06/2024	12/06/2024	12/06/2024	12/06/2024	12/06/2024	14/06/2024	14/06/2024	19/06/2024	19/06/2024	19/06/2024
RSK Commercial GAC 1% som (mg/kg)													
ACM Type	na	-	-	-	-	-	-	-	-	-	Fibres/Clumps	-	-
Asbestos Identification	na	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	Amount	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	na										0.004		
Total Asbestos	na										0.004		
Moisture	na	13	17	7.9	16	7.1	10	20	22	39	10	20	21
Soil Colour	na	Brown	Grey	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	na	Stones	None	Stones	None	Stones	None	None	None	Wood and Stones	Stones and Roots	None	None
Soil Texture	na	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Loam	Sand
pH at 20C	na	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	640	11	4.3	7.1	9.1	6	16	22	7.3	18	4.3	7.5	16
Cadmium	410	< 0.10	< 0.10	< 0.10	< 0.10	0.33	0.14	0.28	< 0.10	< 0.10	0.14	< 0.10	< 0.10
Chromium	8600	19	14	10	11	450	120	18	47	7.8	9.5	47	34
Copper	68000	14	5.6	14	9.3	24	36	42	3.5	7.3	7.4	1.3	12
Mercury	1120	< 0.05	< 0.05	< 0.05	< 0.05	0.06	0.05	< 0.05	< 0.05	< 0.05	1.9	0.05	< 0.05
Nickel	980	35	13	18	24	16	17	15	8.8	12	6.1	3	34
Lead	2300	14	7.6	11	8.8	49	46	40	6.6	11	57	4.5	23
Selenium	12000	0.5	< 0.25	< 0.25	0.3	1.2	1.6	0.76	< 0.25	0.32	1	< 0.25	< 0.25
Zinc	760000	82	18	65	83	140	79	92	36	43	130	9.8	88
Chromium (Hexavalent)	49	-	-	-	-	-	-	-	-	-	-	-	-
Aliphatic VPH >C5-C6	3200	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C8-C9 (Sum)	7800	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C9-C10	2000	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	9700	3.7	3	2.8	< 2.0	6.7	6.2	6.2	9.7	5.4	7.8	10	8.2
Aliphatic EPH >C12-C16 MC	59000	1.2	1.1	1	1.1	1.8	2.1	4.1	10	1.4	3.2	11	3.4
Aliphatic EPH >C16-C21 MC	na	< 2.0	< 2.0	< 2.0	< 2.0	4.5	2.1	< 2.0	7.2	9.7	< 2.0	18	< 2.0
Aliphatic EPH >C21-C35 MC	1000000	12	< 3.0	< 3.0	< 3.0	280	8.5	4.5	14	45	< 3.0	68	4.9
Aliphatic EPH >C35-C40 MC	1000000	< 10	< 10	< 10	< 10	10	< 10	< 10	< 10	< 10	< 10	17	< 10
Total Aliphatic EPH >C10-C35 MC	na	17	5.6	< 5.0	< 5.0	290	17	17	42	61	12	110	17
Total Aliphatic EPH >C10-C40 MC	na	17	< 10	< 10	< 10	300	17	17	42	61	12	120	17
Aromatic VPH >C5-C7	27	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	6000	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	3500	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	16000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2	1.2
Aromatic EPH >C12-C16 MC	36000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.3	< 1.0
Aromatic EPH >C16-C21 MC	28000	2.1	3.4	2.6	3.1	3.8	< 2.0	2.7	2.8	32	< 2.0	3.2	< 2.0
Aromatic EPH >C21-C35 MC	28000	< 2.0	2.1	< 2.0	< 2.0	2.8	< 2.0	7.4	< 2.0	< 2.0	< 2.0	24	< 2.0
Aromatic EPH >C35-C40 MC	28000	1.7	< 1.0	< 1.0	< 1.0	4.8	28	2.1	3.9	200	< 1.0	4.1	1.5
Total Aromatic EPH >C10-C35 MC	na	< 5.0	5.5	< 5.0	< 5.0	6.6	< 5.0	10	< 5.0	34	< 5.0	30	< 5.0
Total Aromatic EPH >C10-C40 MC	na	< 10	< 10	< 10	< 10	11	28	12	< 10	230	< 10	34	< 10
Total VPH >C3-C10	na	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50
Total EPH >C10-C35 MC	na	19	11	< 10	< 10	300	18	27	45	96	14	140	19
Total EPH >C10-C40 MC	na	20	11	< 10	< 10	310	46	29	49	100	14	160	20
Naphthalene	1800	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	110000	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	110000	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	63000	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	23000	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	520000	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	23000	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	54000	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	170	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	350	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]fluoranthene	44	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[b]fluoranthene	1200	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	77	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-cd]Pyrene	500	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]Anthracene	3.5	-	-	-	-	-	-	-	-	-	-	-	

Bis(2-Chloroisopropyl)Ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	21	-	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodimethylamine	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dimethylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1800	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	370	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	110000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	110000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenyl ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	63000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutene	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenyl Ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	22000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	520000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	23000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	54000	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Butylbenzyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	170	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene]	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[3]fluoranthene	1200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	77	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]Pyrene	500	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	3900	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1800	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.41	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.5	0.1	0.7
Acenaphthylene	110000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2	< 0.10	< 0.10
Acenaphthene	110000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.1	< 0.10	0.12
Fluorene	63000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.93	< 0.10	0.15
Phenanthrene	22000	0.17	< 0.10	< 0.10	< 0.10	< 0.10	0.42	< 0.10	0.59	< 0.10	< 0.10	< 0.10	2	< 0.10	0.82
Anthracene	520000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.67	< 0.10	0.19
Fluoranthene	23000	0.15	< 0.10	< 0.10	< 0.10	< 0.10	0.38	< 0.10	0.27	< 0.10	0.28	< 0.10	2.6	< 0.10	0.31
Pyrene	54000	0.14	< 0.10	< 0.10	< 0.10	< 0.10	0.3	< 0.10	0.25	< 0.10	0.26	< 0.10	1.9	< 0.10	0.22
Benzoanthracene	170	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3	< 0.10	0.16
Chrysene	350	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6	< 0.10	0.2
Benzo[fluoranthene]	44	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.6	< 0.10	0.24
Benzo[3]fluoranthene	1200	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.83	< 0.10	0.22
Benzo[a]pyrene	77	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.5	< 0.10	< 0.10
Indeno[1,2,3-c,d]Pyrene	500	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6	< 0.10	0.19
Dibenz[a,h]anthracene	3.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.33	< 0.10	< 0.10
Benzo[g,h,i]perylene	3900	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3	< 0.10	0.18
Total Of 56 PAH's	na	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	25	< 2.0	3.7

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC generic assessment criteria
- COPC not analysed
Measured concentration in excess of GAC

[illegible]

Bis(2-Chloroisopropyl)Ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	21	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dimethylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1800	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	270	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	110000	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	110000	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenyl ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	63000	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
6-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenyl Ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	22000	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	520000	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	23000	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	54000	-	-	-	-	-	-	-	-	-	-	-	-	-
Butylbenzyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	170	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	350	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene]	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[b]fluoranthene	1300	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	77	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno(1,2,3-c,d)Pyrene	500	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	3900	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1800	< 0.10	3.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Acenaphthylene	110000	< 0.10	0.16	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Acenaphthene	110000	< 0.10	0.49	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Fluorene	63000	< 0.10	0.74	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Phenanthrene	22000	0.47	5.4	< 0.10	< 0.10	< 0.10	< 0.10	0.15	0.24	< 0.10	-	-	-	-
Anthracene	520000	< 0.10	0.93	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Fluoranthene	23000	0.29	1.9	< 0.10	< 0.10	< 0.10	< 0.10	0.17	0.14	< 0.10	-	-	-	-
Pyrene	54000	0.26	1.3	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10	< 0.10	-	-	-	-
Benzoanthracene	170	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Chrysene	350	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Benzo[fluoranthene]	44	< 0.10	1.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Benzo[b]fluoranthene	1200	< 0.10	0.48	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Benzo[pyrene]	77	< 0.10	0.77	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Indeno(1,2,3-c,d)Pyrene	500	< 0.10	0.86	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Dibenz[a,h]Anthracene	3.5	< 0.10	0.17	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Benzo[g,h,i]perylene	3900	< 0.10	0.72	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-
Total Of 56 PAH's	na	< 2.0	21	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	-	-	-	-

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC generic assessment criteria
- COPC not analysed
Measured concentration in excess of GAC

[illegible]

Bis(2-Chloroisopropyl)Ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	21	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dimethylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1800	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	270	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	110000	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	110000	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Benzofuran	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenyl ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	63000	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenyl Ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	22000	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	520000	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	23000	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	54000	-	-	-	-	-	-	-	-	-	-	-	-	-
Butylbenzyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	170	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	350	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene]	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[3]fluoranthene	1300	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	77	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]Pyrene	500	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	3900	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1800	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	0.26
Acenaphthylene	110000	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	110000	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	63000	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	22000	-	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.26	< 0.10	0.94	0.56
Anthracene	520000	-	< 0.10	0.49	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	0.14
Fluoranthene	23000	-	< 0.10	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.42	< 0.10	0.82	1.2
Pyrene	54000	-	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.36	< 0.10	0.49	1.2
Benzoanthracene	170	-	< 0.10	0.73	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1
Chrysene	350	-	< 0.10	0.63	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.98
Benzo[fluoranthene]	44	-	< 0.10	0.76	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3
Benzo[3]fluoranthene	1200	-	< 0.10	0.55	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.87
Benzo[pyrene]	77	-	< 0.10	0.71	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.1
Indeno[1,2,3-c,d]Pyrene	500	-	< 0.10	0.67	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1
Dibenz[a,h]Anthracene	3.5	-	< 0.10	0.49	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.53
Benzo[g,h,i]perylene	3900	-	< 0.10	0.62	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.94
Total Of 56 PAH's	na	-	< 2.0	9.1	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.5	11

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC generic assessment criteria
- COPC not analysed
Measured concentration in excess of GAC

[illegible]

Bis(2-Chloroisopropyl)Ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorocyclopentadiene	21	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Isophorone	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dimethylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1800	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	270	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	110000	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	110000	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Benzofuran	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	63000	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Isobutene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenyl Ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	22000	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	520000	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	23000	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	54000	-	-	-	-	-	-	-	-	-	-	-	-	-
Butylbenzyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	170	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	350	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene]	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[3]fluoranthene	1300	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	77	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]Pyrene	500	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	3.5	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	3900	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	1800	0.12	< 0.10	< 0.10	0.78	1.4	0.73	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	110000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	110000	< 0.10	< 0.10	< 0.10	< 0.10	0.32	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	63000	< 0.10	< 0.10	< 0.10	< 0.10	0.4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	22000	0.54	< 0.10	< 0.10	1.1	1.2	0.45	< 0.10	< 0.10	< 0.10	< 0.10	0.59	0.93	0.76
Anthracene	520000	0.27	< 0.10	< 0.10	0.21	0.21	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.19	0.16
Fluoranthene	23000	1.6	< 0.10	< 0.10	1.2	0.76	0.88	0.22	< 0.10	< 0.10	< 0.10	0.41	1.1	1.8
Pyrene	54000	1.5	< 0.10	< 0.10	0.85	0.53	0.26	0.2	< 0.10	< 0.10	< 0.10	0.3	0.93	1.7
Benzoanthracene	170	1.8	< 0.10	< 0.10	0.72	0.46	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1
Chrysene	350	1.4	< 0.10	< 0.10	0.58	0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.7
Benzo[fluoranthene]	44	2.1	< 0.10	< 0.10	1.1	0.55	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.6
Benzo[3]fluoranthene	1200	1.6	< 0.10	< 0.10	0.4	0.24	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.95
Benzo[pyrene]	77	1.6	< 0.10	< 0.10	0.78	0.36	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.4
Indeno[1,2,3-c,d]Pyrene	500	1.8	< 0.10	< 0.10	0.49	0.27	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3
Dibenz[a,h]Anthracene	3.5	1.3	< 0.10	< 0.10	0.15	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[g,h,i]perylene	3900	1.7	< 0.10	< 0.10	0.41	0.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6
Total Of 56 PAH's	na	17	< 2.0	< 2.0	8.8	7.5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.2	15

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC generic assessment criteria
- COPC not analysed
Measured concentration in excess of GAC

COPC	Chemtest Job No.	24-25641	24-25641	24-25641	24-25641	24-25641	24-25641	24-25899	24-25899	24-25899	24-25899	24-25899	24-26534
	Chemtest Sample ID	1849337	1849340	1849341	1849343	1849345	1850277	1850280	1850285	1850287	1850290	1850293	1852980
	Client sample ref.												1
	Sample location	TP345	TP392	TP392	TP393	TP393	TP309	TP311	TP325	TP342	TP342	TP388	BH326
	Top depth (m)	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top depth (m)	0.50	0.50	2.00	0.50	3.00	0.4	0.5	2.0	0.5	3.0	2.5	4.5
	Depth to bottom (m)												5.5
Date sampled													15/08/2024
	RSK Commercial GAC 1% som (mg/kg)												
ACM Type	na	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	na	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	na												
Total Asbestos	na												
Moisture	na	3.1	5.8	14	16	22	6.1	4	7.2	11	7.2	6.5	69
Soil Colour	na	Brown	Brown	Brown	Brown	Brown	Black	Black	Black	Black	Black	Black	Black
Other Material	na	Stones	Stones	Stones	Stones and Roots	Stones	Stones	Stones	Stones	Stones	Stones	Stones	None
Soil Texture	na	Loam	Loam	Clay	Clay	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH at 30C	na	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	640	1.5	28	6.7	4.9	1.7	3.4	3	5.4	5.4	32	10	22
Cadmium	410	< 0.10	4.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.72	< 0.10	1.7
Chromium	9600	2050	2100	100	76	25	1300	590	1100	1100	4800	1750	250
Copper	68000	180	160	22	11	4.5	43	200	28	34	200	200	130
Mercury	1120	0.75	0.31	0.06	< 0.05	< 0.05	0.09	0.11	0.05	0.05	0.26	0.1	0.15
Nickel	980	77	95	17	21	9.1	38	58	43	36	110	35	59
Lead	7300	360	690	50	16	10	26	280	25	29	190	110	210
Selenium	12000	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	2.2
Zinc	760000	850	1600	150	77	38	260	1200	360	280	310	210	910
Chromium (Hexavalent)	49	< 0.50	1	< 0.50	< 0.50	< 0.50	0.58	0.84	< 0.50	2.6	0.76	0.59	< 0.50
Aliphatic VPH >C5-C6	3200	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C8-C8 (Sum)	7800	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C8-C10	2000	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.5
Total Aliphatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	1.5
Aliphatic EPH >C10-C12 MC	9700	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.4	2.1	9.7	77
Aliphatic EPH >C12-C16 MC	59000	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	12	< 1.0	76	830
Aliphatic EPH >C16-C21 MC	na	44	27	< 2.0	2.7	3.7	3.2	< 2.0	4	89	13	130	11000
Aliphatic EPH >C21-C35 MC	1000000	400	340	< 3.0	5.3	9.3	300	26	340	770	62	430	90000
Aliphatic EPH >C35-C40 MC	1000000	63	50	< 10	< 10	< 10	56	< 10	58	120	21	74	13000
Total Aliphatic EPH >C10-C35 MC	na	450	370	< 5.0	8	13	310	27	350	880	77	640	100000
Total Aliphatic EPH >C10-C40 MC	na	510	420	< 10	< 10	13	360	27	390	990	98	720	110000
Aromatic VPH >C5-C7	27	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.61
Aromatic VPH >C7-C8	6000	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	3500	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.61
Aromatic EPH >C10-C12 MC	16000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	36000	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	7.9	340
Aromatic EPH >C16-C21 MC	28000	8.4	3.4	4.3	6.3	5.1	3.3	3.6	3.8	5.1	4	6.2	3100
Aromatic EPH >C21-C35 MC	28000	2.5	< 2.0	< 2.0	9.8	10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	43
Aromatic EPH >C35-C40 MC	28000	1.6	1.2	< 1.0	5.8	6.3	1.5	< 1.0	1.1	4.7	< 1.0	2.2	4700
Total Aromatic EPH >C10-C35 MC	na	11	< 5.0	< 5.0	16	15	< 5.0	< 5.0	5.1	< 5.0	14	1000	1000
Total Aromatic EPH >C10-C40 MC	na	13	< 10	< 10	22	21	< 10	< 10	< 10	< 10	< 10	16	8000
Total VPH >C3-C10	na	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	2.1
Total EPH >C10-C35 MC	na	460	370	< 10	24	28	310	31	350	880	81	660	100000
Total EPH >C10-C40 MC	na	520	430	< 10	30	34	370	31	310	1000	100	730	120000
Naphthalene	1800	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	110000	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	110000	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	63000	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	23000	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	520000	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	23000	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	54000	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	170	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	350	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]anthracene	44	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[b]fluoranthene	1200	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	77	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]Pyrene	500	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	3.5	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	3900	-	-	-	-	-	-	-	-	-	-	-	-
Total Of 16 PAHs	na	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Chloromethane	1	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Vinyl Chloride	1.1	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Bromomethane	na	-	-	-	-	-	< 20	< 20	-	-	-	< 20	< 20
Chloroethane	901	-	-	-	-	-	< 2.0	< 2.0	-	-	-	< 2.0	< 2.0
Trichlorofluoromethane	-	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,1-Dichloroethane	24	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Dichloromethane	257	-	-	-	-	-	< 50	< 50	-	-	-	< 50	< 50
Trans-1,2-Dichloroethene	21	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,1-Dichloroethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
cis-1,2-Dichloroethene	14	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Bromochloromethane	na	-	-	-	-	-	< 5.0	< 5.0	-	-	-	< 5.0	< 5.0
Trichloromethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,1,1-Trichloroethane	300	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Tetrachloromethane	2.5	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,1-Dichloropropene	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Benzene	27	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,2-Dichloroethane	0.67	-	-	-	-	-	< 2.0	< 2.0	-	-	-	< 2.0	< 2.0
Trichloroethene	0.7	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,2-Dichloropropane	3	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Dibromomethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Bromodichloromethane	na	-	-	-	-	-	< 5.0	< 5.0	-	-	-	< 5.0	< 5.0
cis-1,3-Dichloropropene	na	-	-	-	-	-	< 10	< 10	-	-	-	< 10	< 10
Toluene	56000	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	12
Trans-1,3-Dichloropropene	na	-	-	-	-	-	< 10	< 10	-	-	-	< 10	< 10
1,1,2-Trichloroethane	89	-	-	-	-	-	< 10	< 10	-	-	-	< 10	< 10
Tetrachloroethene	24	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,3-Dichloropropane	na	-	-	-	-	-	< 2.0	< 2.0	-	-	-	< 2.0	< 2.0
Dibromochloromethane	na	-	-	-	-	-	< 10	< 10	-	-	-	< 10	< 10
1,2-Dibromoethane	na	-	-	-	-	-	< 5.0	< 5.0	-	-	-	< 5.0	< 5.0
Chlorobenzene	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	110	-	-	-	-	-	< 2.0	< 2.0	-	-	-	< 2.0	< 2.0
Ethylbenzene	6000	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
m & p-Xylene	5900	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	43
o-Xylene	6600	-	-	-	-								

Bis(2-Chloroisopropyl)ether	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Hexachlorocyclopentadiene	21	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
N-Nitrosodimethylamine	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Methylphenol	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Nitrobenzene	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Isophorone	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2-Nitrophenol	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,6-Dimethylphenol	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,4-Dichlorophenol	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Naphthalene	1800	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Chloroaniline	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Hexachlorobutadiene	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2-Methylnaphthalene	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Nitrophenol	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,4,5-Trichlorophenol	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2-Chloronaphthalene	270	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2-Nitroaniline	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Acenaphthylene	110000	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Dimethylphthalate	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,6-Dinitrotoluene	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Acenaphthene	110000	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
3-Nitroaniline	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Dibenzofuran	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Chlorophenylphenylether	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,6-Dinitrotoluene	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Fluorene	63000	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Diethyl Phthalate	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Nitroaniline	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Isobutene	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Bromophenylphenylether	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Hexachlorobenzene	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Phenanthrene	22000	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	1.7
Anthracene	520000	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Carbazole	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Di-N-Butyl Phthalate	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Fluoranthene	23000	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	3.4
Pyrene	54000	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	5.8
Butylbenzyl Phthalate	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Benzoanthracene	170	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	1.9
Chrysene	350	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	4.9
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	2.2
Di-N-Octyl Phthalate	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	2.1
Benzo(a)fluoranthene	na	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	3.3
Benzo(b)fluoranthene	1300	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Benzo(a)pyrene	77	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	1.8
Indeno(1,2,3-c,d)Pyrene	500	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Dibenz(a,h)anthracene	3.5	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Benzo(g,h,i)perylene	3900	-	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Naphthalene	1800	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	110000	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	110000	0.49	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	63000	0.44	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.13	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	22000	2.5	0.64	< 0.10	< 0.10	< 0.10	< 0.10	0.79	< 0.10	< 0.10	< 0.10	0.39	< 0.10	< 0.10
Anthracene	520000	0.36	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.69	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	23000	1.7	0.95	< 0.10	< 0.10	< 0.10	< 0.10	2.4	< 0.10	< 0.10	< 0.10	0.4	< 0.10	< 0.10
Pyrene	54000	1.3	0.81	< 0.10	< 0.10	< 0.10	< 0.10	2.5	< 0.10	< 0.10	< 0.10	0.28	< 0.10	< 0.10
Benzoanthracene	170	< 0.10	0.41	< 0.10	< 0.10	< 0.10	< 0.10	3.4	< 0.10	< 0.10	< 0.10	0.15	< 0.10	< 0.10
Chrysene	350	< 0.10	0.6	< 0.10	< 0.10	< 0.10	< 0.10	3.6	< 0.10	< 0.10	< 0.10	0.18	< 0.10	< 0.10
Benzo(a)fluoranthene	44	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(b)fluoranthene	1200	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.8	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	77	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.8	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	500	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	3.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(g,h,i)perylene	3900	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 56 PAH's	na	6.8	3.4	< 2.0	< 2.0	< 2.0	< 2.0	37	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC generic assessment criteria
- COPC not analysed
Measured concentration in excess of GAC

COPC	Chemtest Job No.	24-26534	24-26534	24-26534	24-26534	24-26534	24-26534	24-27128	24-27128	24-27128	24-27128	24-27793	24-27793	24-27793
	Chemtest Sample ID	1852981	1852982	1852984	1852987	1852991	1855529	1855532	1855534	1855536	1858447	1858448	1858450	
	Client sample ref.	1	2	1	1	1								
	Sample location	BH327	BH327	TP3001	TP399	TP397	TP376	TP375	TP374	TP341	BH305	BH303A	BH303A	
	Top depth (m)	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Top depth (m)	3.5	4.5	0.2	0.5	0.0	0.25	1.60	1.40	2.30	5.5	0.6	3.0	
	Depth to bottom (m)	4.5	5.5											
ACM Type	Date sampled	15/08/2024	15/08/2024	15/08/2024	15/08/2024	15/08/2024	19/08/2024	19/08/2024	19/08/2024	19/08/2024				
	RSK Commercial GAC 1% som (mg/kg)													
Asbestos Identification	na	-	-	-	-	-	-	Fibres/Cumps	-	-	-	-	-	
Asbestos by Gravimetry	na	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	Chrysotile	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	
Total Asbestos	na							<0.001						
Moisture	na	71	16	7.3	18	14	6.3	25	19	24	17	9.6	15	
Soil Colour	na	Black	Brown	Brown	Brown	Brown	Black	Black	Black	Black	Brown	Brown	Brown	
Other Material	na	None	None	Stones	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones	Stones	Stones	Stones	Stones	
Soil Texture	na	Sand	Sand	Sand	Loam	Sand	Sand	Clay	Clay	Clay	Sand	Sand	Sand	
pH at 30C	na	-	-	-	-	-	-	-	-	-	-	-	-	
Arsenic	640	18	5.5	4.4	4.3	13	< 0.5	11	7.5	14	< 0.5	0.9	1.6	
Cadmium	410	5.2	0.16	0.38	0.31	0.14	0.58	< 0.10	< 0.10	< 0.10	0.51	< 0.10	< 0.10	
Chromium	9600	440	9.6	140	33	95	70	48	30	51	15	1400	510	
Copper	68000	360	7.3	56	27	20	20	66	300	92	2.6	140	20	
Mercury	1120	0.22	< 0.05	0.05	0.37	0.08	0.2	0.13	0.09	0.15	< 0.05	0.08	< 0.05	
Nickel	980	36	4	170	14	43	11	16	43	64	4.7	28	21	
Lead	7300	330	13	40	140	29	68	100	87	130	5.3	50	10	
Selenium	12000	1.1	< 0.25	0.69	0.33	1.7	1.1	1.8	1.6	2.4	< 0.25	0.77	0.57	
Zinc	740000	2100	140	210	190	100	390	29	45	52	17	190	74	
Chromium (Hexavalent)	49	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Aliphatic VPH >C5-C6	3200	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic VPH >C6-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic VPH >C7-C8	na	0.35	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic VPH >C8-C8 (Sum)	7800	0.35	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Aliphatic VPH >C8-C10	2000	2.7	0.17	< 0.05	< 0.05	< 0.05	< 0.05	0.17	0.27	0.21	< 0.05	< 0.05	0.14	
Total Aliphatic VPH >C5-C10	na	3.1	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	
Aliphatic EPH >C10-C12 MC	9700	290	13	12	33	78	< 2.0	76	120	230	2.6	3.5	< 2.0	
Aliphatic EPH >C12-C16 MC	59000	890	14	18	48	3800	7.1	360	410	720	3.9	12	30	
Aliphatic EPH >C16-C21 MC	na	4000	170	23	120	3200	8.6	8300	1800	4700	14	44	26	
Aliphatic EPH >C21-C35 MC	1000000	130000	2600	150	940	1300	32	44000	7100	21000	85	120	53	
Aliphatic EPH >C35-C40 MC	1000000	20000	400	54	140	740	13	5500	1200	5100	14	37	16	
Total Aliphatic EPH >C10-C35 MC	na	130000	2800	200	1100	8400	48	53000	9400	36000	110	180	100	
Total Aliphatic EPH >C10-C40 MC	na	140000	3200	250	1300	9000	61	58000	11000	31000	120	220	120	
Aromatic VPH >C5-C7	27	0.88	< 0.05	< 0.05	0.2	0.21	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aromatic VPH >C7-C8	6000	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aromatic VPH >C8-C10	3500	< 0.05	< 0.05	< 0.05	< 0.05	0.21	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Total Aromatic VPH >C5-C10	na	0.88	< 0.25	< 0.25	< 0.25	0.41	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	
Aromatic EPH >C10-C12 MC	16000	< 1.0	< 1.0	15	48	100000	< 1.0	72	95	120	1.2	< 1.0	< 1.0	
Aromatic EPH >C12-C16 MC	36000	170	1.5	9.1	140	20000	< 1.0	470	300	500	< 1.0	< 1.0	3.2	
Aromatic EPH >C16-C21 MC	28000	520	19	11	180	27000	5.2	1200	600	1500	3	< 2.0	20	
Aromatic EPH >C21-C35 MC	28000	350	2.2	3.5	100	13000	15	33	11	210	22	2.7	6.8	
Aromatic EPH >C35-C40 MC	28000	660	190	14	30	1400	12	110	260	150	190	7.5	7	
Total Aromatic EPH >C10-C35 MC	na	1000	23	31	480	220000	30	1800	1000	2300	26	5.6	30	
Total Aromatic EPH >C10-C40 MC	na	1700	210	46	500	220000	33	1900	1300	2400	220	13	57	
Total VPH >C3-C10	na	4	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Total EPH >C10-C35 MC	na	120000	2900	230	1400	230000	68	54000	10000	29000	130	190	130	
Total EPH >C10-C40 MC	na	140000	3500	300	1800	230000	93	60000	12000	34000	340	230	150	
Naphthalene	1800	-	-	-	-	-	-	-	-	-	-	-	-	
Acenaphthylene	110000	-	-	-	-	-	-	-	-	-	-	-	-	
Acenaphthene	110000	-	-	-	-	-	-	-	-	-	-	-	-	
Fluorene	63000	-	-	-	-	-	-	-	-	-	-	-	-	
Phenanthrene	23000	-	-	-	-	-	-	-	-	-	-	-	-	
Anthracene	520000	-	-	-	-	-	-	-	-	-	-	-	-	
Fluoranthene	23000	-	-	-	-	-	-	-	-	-	-	-	-	
Pyrene	54000	-	-	-	-	-	-	-	-	-	-	-	-	
Benzoanthracene	170	-	-	-	-	-	-	-	-	-	-	-	-	
Chrysene	350	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo[a]anthracene	44	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo[b]fluoranthene	1200	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo[k]fluoranthene	77	-	-	-	-	-	-	-	-	-	-	-	-	
Indeno[1,2,3-cd]Pyrene	500	-	-	-	-	-	-	-	-	-	-	-	-	
Dibenz[a,h]anthracene	3.5	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo[g,h,i]perylene	3900	-	-	-	-	-	-	-	-	-	-	-	-	
Total Of 16 PAHs	na	-	-	-	-	-	-	-	-	-	-	-	-	
Dichlorodifluoromethane	na	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
Chloromethane	1	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
Vinyl Chloride	1.1	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
Bromomethane	na	< 20	< 20	-	-	< 20	< 20	-	-	-	< 20	-	-	
Chloroethane	901	< 2.0	< 2.0	-	-	< 2.0	< 2.0	-	-	-	< 2.0	-	-	
Trichlorofluoromethane	-	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
1,1-Dichloroethane	24	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
Dichloromethane	257	< 50	< 50	-	-	< 50	< 50	-	-	-	< 50	-	-	
Trans 1,2-Dichloroethene	21	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
1,1-Dichloroethene	na	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
cis 1,2-Dichloroethene	14	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
Bromochloromethane	na	< 5.0	< 5.0	-	-	< 5.0	< 5.0	-	-	-	< 5.0	-	-	
Trichloromethane	na	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
1,1,1-Trichloroethane	200	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
Tetrachloromethane	2.5	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
1,1-Dichloropropene	na	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
Benzene	27	< 1.0	< 1.0	-	-	43	< 1.0	-	-	-	< 1.0	-	-	
1,2-Dichloroethane	0.67	< 2.0	< 2.0	-	-	< 2.0	< 2.0	-	-	-	< 2.0	-	-	
Trichloroethene	0.7	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
1,2-Dichloropropane	3	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
Dibromomethane	na	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
Bromodichloromethane	na	< 5.0	< 5.0	-	-	< 5.0	< 5.0	-	-	-	< 5.0	-	-	
cis 1,3-Dichloropropene	na	< 10	< 10	-	-	< 10	< 10	-	-	-	< 10	-	-	
Toluene	56000	< 1.0	< 1.0	-	-	31	< 1.0	-	-	-	< 1.0	-	-	
Trans-1,3-Dichloropropene	na	< 10	< 10	-	-	< 10	< 10	-	-	-	< 10	-	-	
1,1,2-Trichloroethane	89	< 10	< 10	-	-	< 10	< 10	-	-	-	< 10	-	-	
Tetrachloroethene	24	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
1,3-Dichloropropane	na	< 2.0	< 2.0	-	-	< 2.0	< 2.0	-	-	-	< 2.0	-	-	
Dibromochloromethane	na	< 10	< 10	-	-	< 10	< 10	-	-	-	< 10	-	-	
1,2-Dibromoethane	na	< 5.0	< 5.0	-	-	< 5.0	< 5.0	-	-	-	< 5.0	-	-	
Chlorobenzene	na	< 1.0	< 1.0	-	-	< 1.0	< 1.0	-	-	-	< 1.0	-	-	
1,1,1,2-Tetrachloroethane	110	< 2.0	< 2.0	-	-	< 2.0	< 2.0	-	-	-	< 2.0	-	-	
Ethylbenzene	6000	20	< 1.0	-	-	4.1	< 1.0	-	-	-	< 1.0	-	-	
m & p-Xylene	5900	43	< 1.0	-	-	14	< 1.0							

Bis(2-Chloroisopropyl)Ether	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Heachloroethane	21	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
N-Nitrosod n-propylamine	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
4-Methylphenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Nitrobenzene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Isophorone	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2-Nitrophenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,6-Dimethylphenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Bis(2-Chloroethoxy)Methane	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,4-Dichlorophenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
1,2,4-Trichlorobenzene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Naphthalene	1800	< 0.50	< 0.50	-	-	> 5800	< 0.50	-	-	-	< 0.50	-	-
4-Chloroaniline	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Hexachlorobutadiene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
4-Chloro-3-Methylphenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2-Methylnaphthalene	na	< 0.50	< 0.50	-	-	470	< 0.50	-	-	-	< 0.50	-	-
4-Nitrophenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,4,6-Trichlorophenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,4,5-Trichlorophenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2-Chloronaphthalene	270	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2-Nitroaniline	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Azomaphthylene	110000	< 0.50	< 0.50	-	-	180	< 0.50	-	-	-	< 0.50	-	-
Dimethylphthalate	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,6-Dinitrotoluene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Azomaphthene	110000	< 0.50	< 0.50	-	-	1600	< 0.50	-	-	-	< 0.50	-	-
3-Nitroaniline	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Diethyltoluene	na	< 0.50	< 0.50	-	-	890	< 0.50	-	-	-	< 0.50	-	-
4-Chlorophenylphenyl ether	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,6-Dinitrotoluene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Fluorene	63000	< 0.50	< 0.50	-	-	540	< 0.50	-	-	-	< 0.50	-	-
Diethyl Phthalate	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
4-Nitroaniline	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Isobutene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
4-Bromophenylphenyl ether	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Hexachlorobenzene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Phenanthrene	22000	1.7	< 0.50	-	-	910	< 0.50	-	-	-	< 0.50	-	-
Anthracene	520000	< 0.50	< 0.50	-	-	450	< 0.50	-	-	-	< 0.50	-	-
Carbazole	na	< 0.50	< 0.50	-	-	3500	< 0.50	-	-	-	< 0.50	-	-
Di-N-Butyl Phthalate	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Fluoranthene	23000	3.3	< 0.50	-	-	700	0.64	-	-	-	< 0.50	-	-
Pyrene	54000	4.5	< 0.50	-	-	480	0.57	-	-	-	< 0.50	-	-
Butylbenzyl Phthalate	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Benzoanthracene	170	< 0.50	< 0.50	-	-	310	< 0.50	-	-	-	< 0.50	-	-
Chrysene	350	< 0.50	< 0.50	-	-	310	< 0.50	-	-	-	< 0.50	-	-
Bis(2-Ethylhexyl)Phthalate	na	9.6	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Di-N-Octyl Phthalate	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Benzoofluoranthene	na	2	< 0.50	-	-	380	1.1	-	-	-	< 0.50	-	-
Benzo(b)fluoranthene	1300	< 0.50	< 0.50	-	-	91	< 0.50	-	-	-	< 0.50	-	-
Benzo(a)pyrene	77	< 0.50	< 0.50	-	-	180	0.62	-	-	-	< 0.50	-	-
Indeno(1,2,3-c,d)Pyrene	500	< 0.50	< 0.50	-	-	160	0.69	-	-	-	< 0.50	-	-
Dibenz(a,h)anthracene	3.5	< 0.50	< 0.50	-	-	47	< 0.50	-	-	-	< 0.50	-	-
Benzo(g,h,i)perylene	3900	< 0.50	< 0.50	-	-	160	0.88	-	-	-	< 0.50	-	-
Naphthalene	1800	11	< 0.10	0.42	16	380	3.5	66	< 0.10	12	< 0.10	0.15	< 0.10
Azomaphthylene	110000	1.8	< 0.10	0.11	1.2	6.7	2.4	< 0.10	0.65	< 0.10	< 0.10	< 0.10	< 0.10
Azomaphthene	110000	1.9	< 0.10	< 0.10	3.4	41	1	13	< 0.10	3.1	< 0.10	0.19	< 0.10
Fluorene	63000	2	< 0.10	0.11	2	21	1.4	7.3	< 0.10	3.1	< 0.10	0.3	< 0.10
Phenanthrene	22000	2.4	< 0.10	0.78	11	38	2.8	9.2	< 0.10	6.9	0.2	1.6	< 0.10
Anthracene	520000	< 0.10	< 0.10	0.15	2.9	22	1.2	1.6	< 0.10	0.93	< 0.10	0.49	< 0.10
Fluoranthene	23000	3.4	< 0.10	0.87	9.4	32	4.4	2.4	< 0.10	1.9	0.24	1.4	< 0.10
Pyrene	54000	4.3	< 0.10	0.66	7.4	21	3.4	2.5	< 0.10	2.3	0.19	1	< 0.10
Benzoanthracene	170	< 0.10	< 0.10	< 0.10	3.4	12	2.1	< 0.10	< 0.10	0.8	< 0.10	0.28	< 0.10
Chrysene	350	< 0.10	< 0.10	< 0.10	4.1	11	3.1	< 0.10	< 0.10	2.1	< 0.10	0.25	< 0.10
Benzoofluoranthene	44	< 0.10	< 0.10	< 0.10	4.9	< 0.10	6.5	< 0.10	< 0.10	1.1	< 0.10	< 0.10	< 0.10
Benzo(b)fluoranthene	1200	< 0.10	< 0.10	< 0.10	1.4	< 0.10	1.9	< 0.10	< 0.10	0.28	< 0.10	< 0.10	< 0.10
Benzo(g,h,i)perylene	77	< 0.10	< 0.10	< 0.10	2.9	< 0.10	3.8	< 0.10	< 0.10	0.77	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-c,d)Pyrene	500	< 0.10	< 0.10	< 0.10	2.1	< 0.10	3.1	< 0.10	< 0.10	0.35	< 0.10	< 0.10	< 0.10
Dibenz(a,h)Anthracene	3.5	< 0.10	< 0.10	< 0.10	0.53	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(g,h,i)perylene	3900	< 0.10	< 0.10	< 0.10	2.1	< 0.10	4.8	< 0.10	< 0.10	0.67	< 0.10	< 0.10	< 0.10
Total Of 56 PAH's	na	27	< 2.0	3.1	75	580	49	100	< 2.0	37	< 2.0	5.7	< 2.0

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC generic assessment criteria
- COPC not analysed
Measured concentration in excess of GAC

COPC	Chemtest Job No.	24-29969	24-29969	24-29969	Maximum concentration detected in soil (mg/kg)	Total No. of soil samples analysed	Number of detects in soil above the RTV
	Chemtest Sample ID	1867652	1867654	1867656			
	Client sample ref.						
	Sample location	TP3005	TP3005	BH318			
	Top depth (m)	SOIL	SOIL	SOIL			
	Top depth (m)	1.50	0.70	0.30			
	Depth to bottom (m)						
	Date sampled						
	RSK Commercial GAC 1% som (mg/kg)						
ACM Type	na	-	-	-	0	3	0
Asbestos Identification	na	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	0	87	84
Asbestos by Gravimetry	na				0.004	82	0
Total Asbestos	na				0.004	82	0
Moisture	na	3.7	3.6	11	71	87	0
Soil Colour	na	Brown	Brown	Brown	0	87	0
Other Material	na	Roots and Stones	Stones and Roots	Stones	0	87	87
Soil Texture	na	Sand	Sand	Sand	0	87	62
pH at 20C	na	9.7	9.9	9.3	9.9	3	0
Arsenic	640	7.3	2.8	18	92	87	0
Cadmium	450	0.58	0.11	1.9	5.2	87	0
Chromium	8000	14	14	14	1900	87	0
Copper	68000	21	6	74	470	87	0
Mercury	1120	0.13	< 0.05	0.12	1.9	87	0
Nickel	980	6.8	5.3	30	170	87	0
Lead	2300	70	16	500	690	87	0
Selenium	12000	2.9	2.5	1.2	5.5	87	0
Zinc	740000	200	45	800	2100	87	0
Chromium (Hexavalent)	49	< 0.50	< 0.50	< 0.50	3.5	62	0
Aliphatic VPH <C5-C6	3200	< 0.05	< 0.05	< 0.05	0	87	0
Aliphatic VPH <C6-C7	na	< 0.05	< 0.05	< 0.05	0	87	0
Aliphatic VPH <C7-C8	na	< 0.05	< 0.05	< 0.05	0.35	87	0
Aliphatic VPH <C6-C8 (Sum)	7800	< 0.10	< 0.10	< 0.10	0.35	87	0
Aliphatic VPH <C8-C10	2000	< 0.05	< 0.05	< 0.05	2.7	87	0
Total Aliphatic VPH <C5-C10	na	< 0.25	< 0.25	< 0.25	3.1	87	0
Aliphatic EPH <C10-C12 MC	9700	3	< 2.0	2.5	290	87	0
Aliphatic EPH <C12-C16 MC	59000	< 1.0	< 1.0	< 1.0	1800	87	0
Aliphatic EPH <C16-C21 MC	na	< 2.0	< 2.0	< 2.0	11000	87	0
Aliphatic EPH <C21-C31 MC	1000000	< 3.0	5.5	7.3	110000	87	0
Aliphatic EPH <C35-C40 MC	1000000	< 10	< 10	< 10	20000	87	0
Total Aliphatic EPH <C10-C35 MC	na	< 5.0	7.7	10	120000	87	0
Total Aliphatic EPH <C10-C40 MC	na	< 10	< 10	< 10	140000	87	0
Aromatic VPH <C5-C7	27	< 0.05	< 0.05	< 0.05	0.88	87	0
Aromatic VPH <C7-C8	6000	< 0.05	< 0.05	< 0.05	0	87	0
Aromatic VPH <C8-C10	3500	< 0.05	< 0.05	< 0.05	0.21	87	0
Total Aromatic VPH <C5-C10	na	< 0.25	< 0.25	< 0.25	0.88	87	0
Aromatic EPH <C10-C12 MC	16000	< 1.0	< 1.0	< 1.0	150000	87	1
Aromatic EPH <C12-C16 MC	98000	< 1.0	< 1.0	< 1.0	29000	87	0
Aromatic EPH <C16-C21 MC	28000	5.2	6	8.6	27000	87	0
Aromatic EPH <C21-C35 MC	28000	< 2.0	3.5	6	13000	87	0
Aromatic EPH <C35-C40 MC	28000	< 1.0	< 1.0	14	4700	87	0
Total Aromatic EPH <C10-C35 MC	na	6.1	9.7	15	220000	87	0
Total Aromatic EPH <C10-C40 MC	na	< 10	< 10	29	220000	87	0
Total VPH <C5-C10	na	< 0.50	< 0.50	< 0.50	4	87	0
Total EPH <C10-C35 MC	na	11	17	25	210000	87	0
Total EPH <C10-C40 MC	na	11	17	39	210000	87	0
Naphthalene	1800	-	-	-	2.3	12	0
Acenaphthylene	110000	-	-	-	0.41	12	0
Acenaphthene	110000	-	-	-	0.81	12	0
Fluorene	63000	-	-	-	1	12	0
Phenanthrene	22000	-	-	-	2.6	12	0
Anthracene	520000	-	-	-	0.26	12	0
Fluoranthene	23000	-	-	-	1.4	12	0
Pyrene	54000	-	-	-	1.3	12	0
Benzoanthracene	170	-	-	-	1.6	12	0
Chrysene	350	-	-	-	3.2	12	0
Benzo[fluoranthene	44	-	-	-	1.5	12	0
Benzo[ghi]fluoranthene	1200	-	-	-	0.47	12	0
Benzo[a]pyrene	77	-	-	-	0.86	12	0
Indeno[1,2,3-cd]Pyrene	500	-	-	-	0.64	12	0
Dibenz[a,h]Anthracene	3.5	-	-	-	0.19	12	0
Benzo[ghi]perylene	3900	-	-	-	0.76	12	0
Total Of 16 PAH's	na	-	-	-	11	12	0
Dichlorodifluoromethane	na	< 1.0	< 1.0	-	0	11	0
Chloromethane	1	< 1.0	< 1.0	-	0	11	0
Vinyl Chloride	1.1	< 1.0	< 1.0	-	0	11	0
Bromomethane	na	< 20	< 20	-	0	11	0
Chloroethane	901	< 2.0	< 2.0	-	0	11	0
Trichlorofluoromethane		< 1.0	< 1.0	-	0	11	0
1,1-Dichloroethene	24	< 1.0	< 1.0	-	0	11	0
Dichloromethane	257	< 50	< 50	-	0	11	0
Trans 1,2-Dichloroethene	21	< 1.0	< 1.0	-	0	11	0
1,1-Dichloroethane	na	< 1.0	< 1.0	-	0	11	0
cis 1,2-Dichloroethane	14	< 1.0	< 1.0	-	0	11	0
Bromochloromethane	na	< 5.0	< 5.0	-	0	11	0
Trichloromethane	na	< 1.0	< 1.0	-	1.2	11	0
1,1,1-Trichloroethane	700	< 1.0	< 1.0	-	0	11	0
Tetrachloromethane	2.9	< 1.0	< 1.0	-	0	11	0
1,1-Dichloropropene	na	< 1.0	< 1.0	-	0	11	0
Benzene	27	< 1.0	< 1.0	-	43	11	1
1,2-Dichloroethane	0.67	< 2.0	< 2.0	-	0	11	0
Trichloroethene	0.7	< 1.0	< 1.0	-	0	11	0
1,2-Dichloropropene	3	< 1.0	< 1.0	-	0	11	0
Dibromomethane	na	< 1.0	< 1.0	-	0	11	0
Bromodichloromethane	na	< 5.0	< 5.0	-	0	11	0
cis-1,3-Dichloropropene	na	< 10	< 10	-	0	11	0
Toluene	56000	< 1.0	< 1.0	-	31	11	0
Trans 1,3-Dichloropropene	na	< 10	< 10	-	0	11	0
1,1,2-Trichloroethane	89	< 10	< 10	-	0	11	0
Tetrachloroethene	24	< 1.0	< 1.0	-	0	11	0
1,3-Dichloropropene	na	< 2.0	< 2.0	-	0	11	0
Dibromochloromethane	na	< 10	< 10	-	0	11	0
1,2-Dibromoethane	na	< 5.0	< 5.0	-	0	11	0
Chlorobenzene	na	< 1.0	< 1.0	-	0	11	0
1,1,1,2-Tetrachloroethane	110	< 2.0	< 2.0	-	0	11	0
Ethylbenzene	6000	< 1.0	< 1.0	-	20	11	0
m & p-Xylene	5900	< 1.0	< 1.0	-	43	11	0
o-Xylene	6600	< 1.0	< 1.0	-	180	11	0
Styrene	na	< 1.0	< 1.0	-	50	11	0
Tribromomethane	na	< 1.0	< 1.0	-	0	11	0
Isopropylbenzene	na	< 1.0	< 1.0	-	0	11	0
Bromobenzene	na	< 1.0	< 1.0	-	0	11	0
1,2,3-Trichloropropene	na	< 50	< 50	-	0	11	0
N-Propylbenzene	na	< 1.0	< 1.0	-	0	11	0
2-Chlorotoluene	na	< 1.0	< 1.0	-	0	11	0
1,3,5-Trimethylbenzene	na	< 1.0	< 1.0	-	5.2	11	0
4-Chlorotoluene	na	< 1.0	< 1.0	-	0	11	0
Tert-Butylbenzene	na	< 1.0	< 1.0	-	0	11	0
1,2,4-Trimethylbenzene	330	< 1.0	< 1.0	-	6.3	11	0
Sec-Butylbenzene	na	< 1.0	< 1.0	-	0	11	0
1,3-Dichlorobenzene	na	< 1.0	< 1.0	-	0	11	0
4-Isopropyltoluene	na	< 1.0	< 1.0	-	0	11	0
1,4-Dichlorobenzene	na	< 1.0	< 1.0	-	0	11	0
N-Butylbenzene	na	< 1.0	< 1.0	-	0	11	0
1,2-Dichlorobenzene	na	< 1.0	< 1.0	-	0	11	0
1,2-Dibromo-3-Chloropropene	na	< 50	< 50	-	0	11	0
1,2,4-Trichlorobenzene	na	< 1.0	< 1.0	-	0	11	0
Hexachlorobutadiene	na	< 1.0	< 1.0	-	0	11	0
1,2,3-Trichlorobenzene	na	< 2.0	< 2.0	-	0	11	0
Methyl Tert-Butyl Ether	7500	< 1.0	< 1.0	-	0	11	0
N-Nitrosodimethylamine	na	< 0.50	< 0.50	-	0	11	0
Phenol	440	< 0.50	< 0.50	-	0	11	0
2-Chlorophenol	na	< 0.50	< 0.50	-	0	11	0
Bis-(2-Chloroethyl)Ether	na	< 0.50	< 0.50	-	0	11	0
1,3-Dichlorobenzene	na	< 0.50	< 0.50	-	0	11	0
1,4-Dichlorobenzene	na	< 0.50	< 0.50	-	0	11	0
1,2-Dichlorobenzene	na	< 0.50	< 0.50	-	0	11	0
2-Methylphenol	na	< 0.50	< 0.50	-	0	11	0

Bis(2-Chloroisopropyl)Ether	na	< 0.50	< 0.50	-	0	11	0
Hexachloroethane	21	< 0.50	< 0.50	-	0	11	0
N-Nitrosodi-n-propylamine	na	< 0.50	< 0.50	-	0	11	0
4-Methylphenol	na	< 0.50	< 0.50	-	0	11	0
Nitrobenzene	na	< 0.50	< 0.50	-	0	11	0
Isophenone	na	< 0.50	< 0.50	-	0	11	0
2-Nitrophenol	na	< 0.50	< 0.50	-	0	11	0
2,6-Dimethylphenol	na	< 0.50	< 0.50	-	0	11	0
Bis(2-Chloroethoxy)Methane	na	< 0.50	< 0.50	-	0	11	0
2,4-Dichlorophenol	na	< 0.50	< 0.50	-	0	11	0
1,2,4-Trichlorobenzene	na	< 0.50	< 0.50	-	0	11	0
Naphthalene	1800	< 0.50	< 0.50	-	0	11	0
4-Chloroaniline	na	< 0.50	< 0.50	-	0	11	0
Hexachlorobutadiene	na	< 0.50	< 0.50	-	0	11	0
4-Chloro-3-Methylphenol	na	< 0.50	< 0.50	-	0	11	0
2-Methylnaphthalene	na	< 0.50	< 0.50	-	470	11	0
4-Nitrophenol	na	< 0.50	< 0.50	-	0	11	0
2,4,6-Trichlorophenol	na	< 0.50	< 0.50	-	0	11	0
2,4,5-Trichlorophenol	na	< 0.50	< 0.50	-	0	11	0
2-Chloronaphthalene	370	< 0.50	< 0.50	-	0	11	0
3-Nitroaniline	na	< 0.50	< 0.50	-	0	11	0
Acenaphthylene	110000	< 0.50	< 0.50	-	180	11	0
Dimethylphthalate	na	< 0.50	< 0.50	-	0	11	0
2,6-Dinitrotoluene	na	< 0.50	< 0.50	-	0	11	0
Acenaphthene	110000	< 0.50	< 0.50	-	1600	11	0
3-Nitroaniline	na	< 0.50	< 0.50	-	0	11	0
Dibenzofuran	na	< 0.50	< 0.50	-	890	11	0
4-Chlorophenylphenyl Ether	na	< 0.50	< 0.50	-	0	11	0
2,4-Dinitrotoluene	na	< 0.50	< 0.50	-	0	11	0
Fluorene	63000	< 0.50	< 0.50	-	540	11	0
Diethyl Phthalate	na	< 0.50	< 0.50	-	0	11	0
4-Nitroaniline	na	< 0.50	< 0.50	-	0	11	0
Acetbenzene	na	< 0.50	< 0.50	-	0	11	0
4-Bromophenylphenyl Ether	na	< 0.50	< 0.50	-	0	11	0
Hexachlorobenzene	na	< 0.50	< 0.50	-	0	11	0
Phenanthrene	22000	< 0.50	0.7	-	910	11	0
Anthracene	520000	< 0.50	< 0.50	-	450	11	0
Carbazole	na	< 0.50	< 0.50	-	3500	11	0
Di-N-Butyl Phthalate	na	< 0.50	< 0.50	-	0	11	0
Fluoranthene	23000	< 0.50	1.4	-	700	11	0
Pyrene	54000	< 0.50	0.96	-	480	11	0
Butylbenzyl Phthalate	na	< 0.50	< 0.50	-	0	11	0
Benzoanthracene	170	< 0.50	0.82	-	310	11	1
Chrysene	350	< 0.50	0.85	-	310	11	0
Bis(2-Ethylhexyl)phthalate	na	< 0.50	< 0.50	-	9.6	11	0
Di-N-Octyl Phthalate	na	< 0.50	< 0.50	-	2.1	11	0
Benzofluoranthene	na	< 0.50	1.1	-	380	11	0
Benzo[b]fluoranthene	1200	< 0.50	< 0.50	-	91	11	0
Benzo[a]pyrene	77	< 0.50	0.63	-	180	11	1
Indeno[1,2,3-c,d]Pyrene	500	< 0.50	< 0.50	-	160	11	0
Dibenzo[a,h]Anthracene	3.5	< 0.50	< 0.50	-	67	11	1
Benzo[g,h,i]perylene	3900	< 0.50	< 0.50	-	150	11	0
Naphthalene	1800	< 0.10	< 0.10	0.8	380	75	0
Acenaphthylene	110000	< 0.10	< 0.10	0.12	6.7	75	0
Acenaphthene	110000	< 0.10	< 0.10	< 0.10	41	75	0
Fluorene	63000	< 0.10	< 0.10	0.14	21	75	0
Phenanthrene	22000	< 0.10	< 0.10	1.5	38	75	0
Anthracene	520000	< 0.10	< 0.10	0.29	22	75	0
Fluoranthene	23000	< 0.10	< 0.10	1.9	32	75	0
Pyrene	54000	< 0.10	< 0.10	1.2	21	75	0
Benzoanthracene	170	< 0.10	< 0.10	1.2	12	75	0
Chrysene	350	< 0.10	< 0.10	1.7	11	75	0
Benzofluoranthene	44	< 0.10	< 0.10	2.1	6.5	75	0
Benzo[b]fluoranthene	1200	< 0.10	< 0.10	0.49	3.8	75	0
Benzo[a]pyrene	77	< 0.10	< 0.10	0.99	3.8	75	0
Indeno[1,2,3-c,d]Pyrene	500	< 0.10	< 0.10	0.83	5.1	75	0
Dibenzo[a,h]Anthracene	3.5	< 0.10	< 0.10	0.31	3.9	75	1
Benzo[g,h,i]perylene	3900	< 0.10	< 0.10	0.9	4.8	75	0
Total Of 16 PAH's	na	< 2.0	< 2.0	15	580	75	0

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC generic assessment criteria
- COPC not analysed
Measured concentration in excess of GAC

COPC	Chemtest Job No.	24-18337	24-18337	24-18337	24-18337	24-18337	24-18337	24-18337	24-18337	24-18339	24-18339	24-18339	24-18339
	Chemtest Sample ID	1819250	1819251	1819252	1819253	1819254	1819255	1819256	1819263	1819264	1819265	1819266	1819267
	Client sample ref.												
	Sample location	BH323	BH317	BH317	BH317	BH317	BH317	BH317	BH322	BH322	BH322	BH322	BH322
	Top depth (m)	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top depth (m)	0.30	2.2	1.5	0.70	6.50	3.3	4.10	0.20	1.10	1.60	4.40	7.00
	Depth to bottom (m)												
	Date sampled	03/05/2024	07/06/2024	07/06/2024	07/06/2024	07/06/2024	07/06/2024	07/06/2024	07/05/2024	07/05/2024	07/05/2024	07/05/2024	07/05/2024
	RSK Commercial Tier 1 values (mg/kg)												
Asbestos Type	na	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	na	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	na												
Total Asbestos	na												
Moisture	na	2.4	16	8.6	7.5	18	27	20	6	12	11	19	57
Soil Colour	na	Black	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	na	Stones	Stones	Stones	Stones	None	Stones	Stones	Stones	Stones	None	None	Stones and Wood
Soil Texture	na	Sand	Sand	Sand	Sand	Clay	Sand	Clay	Sand	Sand	Sand	Clay	Clay
pH at 20C	na	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	na	2.6	9	14	5.7	18	11	21	3.1	6.6	8.6	13	6.8
Cadmium	na	0.64	< 0.10	0.16	0.4	< 0.10	< 0.10	0.22	0.13	< 0.10	< 0.10	< 0.10	< 0.10
Chromium	na	200	29	1100	1400	36	43	18	680	270	17	40	15
Copper	na	14	34	52	42	11	40	27	24	23	2.7	12	4.7
Mercury	na	< 0.05	< 0.05	0.1	0.07	< 0.05	0.09	< 0.05	0.05	0.05	< 0.05	< 0.05	< 0.05
Nickel	na	7.3	4.5	34	20	33	36	30	14	8.7	4.5	34	14
Lead	na	25	11	64	64	22	64	28	27	29	5.2	27	8.9
Selenium	na	< 0.25	0.39	1.7	0.72	0.72	0.75	0.52	3.3	4.4	< 0.25	0.78	0.34
Zinc	na	67	22	390	200	92	89	85	110	47	19	97	37
Chromium (Hexavalent)	na	< 0.10	< 0.10	< 0.10	0.66	< 0.10	< 0.10	< 0.10	-	-	-	-	-
Aliphatic VPH >C5-C6	304	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C8-C9 (Sum)	144	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C9-C10	78	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C3-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	48	4.4	5.6	7.4	5.9	3.3	9.4	6.4	2.7	4.4	2.5	3.2	7
Aliphatic EPH >C12-C16 MC	24	3.1	6.3	12	6.1	1.2	6.1	4.8	< 1.0	1.1	< 1.0	1.1	2
Aliphatic EPH >C16-C21 MC	na	11	2.9	35	74	< 2.0	3.4	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	8.8
Aliphatic EPH >C21-C35 MC	na	180	< 3.0	280	880	< 3.0	< 3.0	30	< 3.0	13	3.6	3.1	32
Aliphatic EPH >C35-C40 MC	na	< 10	< 10	12	110	< 10	< 10	< 10	< 10	< 10	< 10	< 10	< 10
Total Aliphatic EPH >C10-C35 MC	na	200	15	340	970	5.5	19	25	< 5.0	19	7.1	7.4	50
Total Aliphatic EPH >C10-C40 MC	na	200	15	370	1100	< 10	19	25	< 10	19	< 10	< 10	50
Aromatic VPH >C5-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	518	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	613	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	364	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	109	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.2	< 1.0	< 1.0	< 1.0	< 1.0	2.8
Aromatic EPH >C16-C21 MC	na	6.7	3	3.6	6.5	3.3	3.8	3.4	3.7	2.8	2.1	3.7	130
Aromatic EPH >C21-C35 MC	na	5.9	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	19	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Aromatic EPH >C35-C40 MC	na	2.5	1.1	16	42	< 1.0	1.2	33	< 1.0	< 1.0	< 1.0	< 1.0	94
Total Aromatic EPH >C10-C35 MC	na	13	< 5.0	< 5.0	6.5	< 5.0	< 5.0	24	< 5.0	< 5.0	< 5.0	< 5.0	140
Total Aromatic EPH >C10-C40 MC	na	15	< 10	16	49	< 10	< 10	57	< 10	< 10	< 10	< 10	280
Total VPH >C3-C10	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total EPH >C10-C35 MC	na	210	18	340	980	< 10	24	49	< 10	22	< 10	11	190
Total EPH >C10-C40 MC	na	220	19	390	1100	< 10	25	82	< 10	22	< 10	11	280
Naphthalene	76	< 0.10	< 0.10	< 0.10	0.10	< 0.10	2.3	< 0.10	-	-	-	-	-
Acenaphthylene	na	< 0.10	< 0.10	< 0.10	0.18	< 0.10	0.41	< 0.10	-	-	-	-	-
Acenaphthene	na	< 0.10	< 0.10	< 0.10	0.21	< 0.10	0.81	< 0.10	-	-	-	-	-
Fluorene	31	< 0.10	< 0.10	< 0.10	0.23	< 0.10	1	< 0.10	-	-	-	-	-
Phenanthrene	na	< 0.10	0.33	< 0.10	0.81	< 0.10	2.6	< 0.10	-	-	-	-	-
Anthracene	na	< 0.10	< 0.10	< 0.10	0.15	< 0.10	0.15	< 0.10	-	-	-	-	-
Fluoranthene	na	< 0.10	0.46	< 0.10	0.74	< 0.10	0.7	< 0.10	-	-	-	-	-
Pyrene	na	< 0.10	0.46	< 0.10	1.2	< 0.10	0.69	< 0.10	-	-	-	-	-
Benzoanthracene	na	< 0.10	0.45	< 0.10	1.6	< 0.10	0.2	< 0.10	-	-	-	-	-
Chrysene	na	< 0.10	0.75	< 0.10	3.2	< 0.10	0.71	< 0.10	-	-	-	-	-
Benzo[fluoranthene]	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-	-
Benzo[fluoranthene]	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-	-
Benzo[a]pyrene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-	-
Indeno[1,2,3-c,d]pyrene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-	-
Dibenz[a,h]anthracene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-	-
Benzo[ghi]perylene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-	-	-
Total Of 16 PAHs	na	< 2.0	2.5	< 2.0	8.8	< 2.0	9.5	< 2.0	-	-	-	-	-
Dichlorodifluoromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	na	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Trans 1,2-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Is 1,2-Dichloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Bromochloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Trichloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Bromochloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Is 1,3-Dichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	869	-	-	-	-	-	-	-	-	-	-	-	-
Trans 1,3-Dichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromomethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	518	-	-	-	-	-	-	-	-	-	-	-	-
m & p-Xylene	na	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Tribromomethane	na	-	-										

1,2-Dichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)ether	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	8	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphorene	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	76	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	114	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	na	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	31	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Asobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenyl Ether	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis-N-Butyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
ButylBenzyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis-N-Octyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-cd]Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[ghi]perylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	76	-	-	-	-	-	-	-	0.33	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	31	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	na	-	-	-	-	-	-	-	0.36	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	na	-	-	-	-	-	-	-	0.39	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	na	-	-	-	-	-	-	-	0.35	< 0.10	< 0.10	< 0.10	< 0.10
Benzoanthracene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[fluoranthene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno[1,2,3-cd]Pyrene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz[a,h]Anthracene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[ghi]perylene	na	-	-	-	-	-	-	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	na	-	-	-	-	-	-	-	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC Generic assessment criteria
- COPC not analysed
Measured concentration in excess of Tier 1 value

COPC	Chemtest Job No.	24-18339	24-19025	24-19025	24-19025	24-19025	24-19025	24-19025	24-19025	24-19335	24-19335	24-19915	24-19915	24-19915
	Chemtest Sample ID	1819268	1821789	1821790	1821791	1821792	1821793	1821794	1822927	1822928	1825240	1825242	1825243	
	Client sample ref.													
	Sample location	BH322	BH317	BH317	BH317	BH324	BH324	BH324	BH324	BH324	BH319	BH319	BH319	
	Top depth (m)	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	
	Top depth (m)	12.00	10.50	14.00	17.50	0.20	0.70	3.50	4.80	7.00	0.50	2.50	450	
	Depth to bottom (m)													
Date sampled	07/05/2024	12/06/2024	12/06/2024	12/06/2024	12/06/2024	12/06/2024	12/06/2024	12/06/2024	14/06/2024	14/06/2024	19/06/2024	19/06/2024	19/06/2024	
RSK Commercial Tier 1 values (mg/kg)														
ACM Type	na	-	-	-	-	-	-	-	-	-	Fibres/Clumps	-	-	
Asbestos Identification	na	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	Annoate	No Asbestos Detected	No Asbestos Detected	
Asbestos by Gravimetry	na										0.004			
Total Asbestos	na										0.004			
Moisture	na	13	17	7.9	16	7.1	10	20	22	39	10	20	21	
Soil Colour	na	Brown	Grey	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	
Other Material	na	Stones	None	Stones	None	Stones	Stones	Stones	None	None	Wood and Stones	Stones and Roots	None	
Soil Texture	na	Sand	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Loam	Sand	Clay	
pH at 20C	na	-	-	-	-	-	-	-	-	-	-	-	-	
Arsenic	na	11	4.3	7.1	9.1	6	16	22	7.3	18	4.3	7.5	16	
Cadmium	na	< 0.10	< 0.10	< 0.10	< 0.10	0.33	0.14	0.28	< 0.10	< 0.10	0.14	< 0.10	< 0.10	
Chromium	na	19	14	10	11	450	120	18	7.8	17	47	9.5	34	
Copper	na	14	5.6	14	9.3	24	36	42	3.5	7.3	42	1.3	12	
Mercury	na	< 0.05	< 0.05	< 0.05	< 0.05	0.06	0.05	< 0.05	< 0.05	< 0.05	1.9	0.05	< 0.05	
Nickel	na	35	18	13	24	16	17	15	6.8	12	6.1	3	34	
Lead	na	14	7.6	11	8.8	49	46	40	6.6	11	57	4.5	23	
Selenium	na	0.5	< 0.25	< 0.25	0.3	1.2	1.6	0.76	< 0.25	0.32	1	< 0.25	< 0.25	
Zinc	na	82	38	63	83	140	79	92	26	43	110	9.8	88	
Chromium (Hexavalent)	na	-	-	-	-	-	-	-	-	-	-	-	-	
Aliphatic VPH >C5-C6	304	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic VPH >C6-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic VPH >C7-C8	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aliphatic VPH >C6-C8 (Sum)	144	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	
Aliphatic VPH >C8-C10	78	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Total Aliphatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	
Aliphatic EPH >C10-C12 MC	48	3.7	3	2.8	< 2.0	6.7	6.2	6.2	9.7	5.4	7.8	10	8.2	
Aliphatic EPH >C12-C16 MC	24	1.2	1.1	1	1.1	1.8	2.1	4.1	10	1.4	3.2	11	3.4	
Aliphatic EPH >C16-C21 MC	na	< 2.0	< 2.0	< 2.0	< 2.0	4.5	2.1	< 2.0	7.2	9.7	< 2.0	18	< 2.0	
Aliphatic EPH >C21-C35 MC	na	12	< 3.0	< 3.0	< 3.0	280	6.5	4.5	14	45	< 3.0	68	4.9	
Aliphatic EPH >C35-C40 MC	na	< 10	< 10	< 10	< 10	10	< 10	< 10	< 10	< 10	< 10	17	< 10	
Total Aliphatic EPH >C10-C35 MC	na	17	5.6	< 5.0	< 5.0	290	17	17	42	61	12	110	17	
Total Aliphatic EPH >C10-C40 MC	na	17	< 10	< 10	< 10	300	17	17	42	61	12	120	17	
Aromatic VPH >C5-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aromatic VPH >C7-C8	518	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Aromatic VPH >C8-C10	613	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	
Total Aromatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	
Aromatic EPH >C10-C12 MC	364	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2	1.2	
Aromatic EPH >C12-C16 MC	169	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	1.5	< 1.0	1.3	< 1.0	
Aromatic EPH >C16-C21 MC	na	2.1	3.4	2.6	3.1	3.8	< 2.0	2.7	2.8	32	< 2.0	3.2	< 2.0	
Aromatic EPH >C21-C35 MC	na	< 2.0	2.1	< 2.0	< 2.0	2.8	< 2.0	7.4	< 2.0	< 2.0	< 2.0	24	< 2.0	
Aromatic EPH >C35-C40 MC	na	1.7	< 1.0	< 1.0	< 1.0	4.8	28	2.1	3.9	200	< 1.0	4.1	1.5	
Total Aromatic EPH >C10-C35 MC	na	< 5.0	5.5	< 5.0	< 5.0	6.6	< 5.0	10	< 5.0	34	< 5.0	30	< 5.0	
Total Aromatic EPH >C10-C40 MC	na	< 10	< 10	< 10	< 10	11	28	12	< 10	230	< 10	34	< 10	
Total VPH >C5-C10	na	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	
Total EPH >C10-C35 MC	na	19	11	< 10	< 10	300	18	27	45	96	14	140	19	
Total EPH >C10-C40 MC	na	20	11	< 10	< 10	310	46	29	49	300	14	160	20	
Naphthalene	76	-	-	-	-	-	-	-	-	-	-	-	-	
Acenaphthylene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Acenaphthene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Fluorene	11	-	-	-	-	-	-	-	-	-	-	-	-	
Phenanthrene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Benzoanthracene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Chrysene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(b)fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(k)fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(a)pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Indeno(1,2,3-c,d)Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Dibenz(a,h)Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Benzo(g,h)Perylene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Total 16 PAHs	na	-	-	-	-	-	-	-	-	-	-	-	-	
Dichlorodifluoromethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Chloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Vinyl Chloride	na	-	-	-	-	-	-	-	-	-	-	-	-	
Bromomethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Chloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Trichlorofluoromethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,1-Dichloroethene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Dichloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Trans-1,2-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,1-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
cis-1,2-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Bromochloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Trichloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,1,1-Trichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Tetrachloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,1-Dichloropropene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Benzene	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Trichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,3-Dichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Dibromomethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Bromodichloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
cis-1,3-Dichloropropene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Toluene	869	-	-	-	-	-	-	-	-	-	-	-	-	
Trans-1,3-Dichloropropene	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,1,2-Trichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Tetrachloroethene	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,3-Dichloropropene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Dibromochloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,2-Dibromoethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Chlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,1,1,2-Tetrachloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Ethylbenzene	518	-	-	-	-	-	-	-	-	-	-	-	-	
m & p-Xylene	na	-	-	-	-	-	-	-	-	-	-	-	-	
o-Xylene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Styrene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Tribromomethane	na	-	-	-	-	-	-	-	-	-	-	-	-	
Isopropylbenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Bromobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,2,3-Trichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-	
N-Propylbenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	
2-Chlorotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,3,5-Trimethylbenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	
4-Chlorotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Tert-Butylbenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,2,4-Trimethylbenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	
Sec-Butylbenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	
1,3-Dichlorobenzene	na	-	-	-	-	-	-	-	-	-</				

1,2-Dichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	8	-	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	76	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	114	-	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	31	-	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Azobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenyl Ether	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Butylbenzyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[ghi]perylene	na	-	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	76	< 0.10	< 0.10	< 0.10	< 0.10	0.41	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.5	0.1	0.7
Acenaphthylene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.2	< 0.10	< 0.10
Acenaphthene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.1	< 0.10	0.12
Fluorene	31	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.98	< 0.10	0.15
Phenanthrene	na	0.17	< 0.10	< 0.10	< 0.10	0.42	< 0.10	0.59	< 0.10	< 0.10	< 0.10	2	< 0.10	0.82
Anthracene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.67	< 0.10	0.19
Fluoranthene	na	0.15	< 0.10	< 0.10	< 0.10	0.38	< 0.10	0.27	< 0.10	< 0.10	< 0.10	2.6	< 0.10	0.31
Pyrene	na	0.14	< 0.10	< 0.10	< 0.10	0.3	< 0.10	0.25	< 0.10	< 0.10	< 0.10	0.26	< 0.10	0.22
Benzoanthracene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3	< 0.10	0.16
Chrysene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6	< 0.10	0.2
Benzo[fluoranthene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.6	< 0.10	0.24
Benzo[k]fluoranthene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.83	< 0.10	0.22
Benzo[a]pyrene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.5	< 0.10	< 0.10
Indeno[1,2,3-c,d]Pyrene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6	< 0.10	0.19
Dibenz[a,h]anthracene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.33	< 0.10	< 0.10
Benzo[ghi]perylene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3	< 0.10	0.18
Total Of 16 PAH's	na	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	25	< 2.0	3.7

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC Generic assessment criteria
- COPC not analysed
Measured concentration in excess of Tier 1 value

[illegible]

1,2-Dichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)ether	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	8	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphorene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphorene	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	76	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,3,5-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	114	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	na	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	31	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Acobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenyl Ether	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	na	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
ButylBenzyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[ghi]perylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	76	< 0.10	3.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Acenaphthylene	na	< 0.10	0.16	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Acenaphthene	na	< 0.10	0.49	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Fluorene	31	< 0.10	0.74	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Phenanthrene	na	0.47	5.4	< 0.10	< 0.10	< 0.10	0.15	0.24	< 0.10	< 0.10	-	-	-
Anthracene	na	< 0.10	0.93	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Fluoranthene	na	0.29	1.9	< 0.10	< 0.10	< 0.10	0.17	0.14	< 0.10	< 0.10	-	-	-
Pyrene	na	0.26	1.3	< 0.10	< 0.10	< 0.10	0.13	< 0.10	< 0.10	< 0.10	-	-	-
Benzoanthracene	na	< 0.10	1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Chrysene	na	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Benzo[fluoranthene	na	< 0.10	1.7	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Benzo[k]fluoranthene	na	< 0.10	0.48	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Benzo[a]pyrene	na	< 0.10	0.77	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Indeno[1,2,3-c,d]Pyrene	na	< 0.10	0.86	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Dibenz[a,h]Anthracene	na	< 0.10	0.17	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Benzo[ghi]perylene	na	< 0.10	0.72	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	-	-	-
Total Of 16 PAH's	na	< 2.0	21	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	-	-	-

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC Generic assessment criteria
- COPC not analysed
Measured concentration in excess of Tier 1 value

[illegible]

1,2-Dichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)ether	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	8	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphorene	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	76	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,3,5-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	114	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	na	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenyl ether	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	31	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Acobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenyl Ether	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	na	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
ButylBenzyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[ghi]perylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	76	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	0.26
Acenaphthylene	na	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	na	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	31	-	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	na	-	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.94	0.56
Anthracene	na	-	< 0.10	0.49	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.14	0.14
Fluoranthene	na	-	< 0.10	1.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.42	< 0.10	0.82
Pyrene	na	-	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.36	< 0.10	0.49
Benzoanthracene	na	-	< 0.10	0.73	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1
Chrysene	na	-	< 0.10	0.63	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.88
Benzo[fluoranthene	na	-	< 0.10	0.76	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3
Benzo[k]fluoranthene	na	-	< 0.10	0.55	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.87
Benzo[a]pyrene	na	-	< 0.10	0.71	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.1
Indeno[1,2,3-c,d]Pyrene	na	-	< 0.10	0.67	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1
Dibenz[a,h]Anthracene	na	-	< 0.10	0.49	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.55
Benzo[ghi]perylene	na	-	< 0.10	0.62	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.94
Total Of 16 PAH's	na	-	< 2.0	9.1	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	2.5	11

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC Generic assessment criteria
- COPC not analysed
Measured concentration in excess of Tier 1 value

COPC	Chemtest Job No.	24-24075	24-24075	24-24075	24-24075	24-24075	24-24075	24-24075	24-25386	24-25386	24-25386	24-25641	24-25641
	Chemtest Sample ID	1842402	1842403	1842404	1842405	1842406	1842407	1842408	1848064	1848065	1848066	1849334	1849335
	Client sample ref.	E51	E52	E53	E52	E53	E54	E55					
	Sample location	BH304	BH304	BH304	BH315	BH315	BH315	BH315	TP302	TP303	TP387	TP391	TP391
	Top depth (m)	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top depth (m)	0.5	1.0	2.5	2.0	3.0	4.0	5.0	0.50	1.50	0.50	0.50	1.50
	Depth to bottom (m)												
	Date sampled	25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024	25/07/2024					
	RSK Commercial Tier 1 values (mg/kg)												
PCM Type	na	Fibrous/Clumps	-	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	na	Amosite Chrysotile	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	na	0.002											
Total Asbestos	na	0.002											
Moisture	na	4.8	17	19	13	16	19	19	8.1	8.3	8.8	5.9	7.1
Soil Colour	na	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown	Brown
Other Material	na	Stones	None	None	Stones	Stones	None	None	Stones and Roots	Stones	Stones	Stones and Roots	Stones
Soil Texture	na	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Sand	Loam	Loam
pH at 20C	na	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	na	9.4	7.6	7.6	92	15	32	12	9.7	4	13	0.9	< 0.5
Cadmium	na	0.38	< 0.10	< 0.10	0.28	< 0.10	< 0.10	0.11	< 0.10	< 0.10	0.11	< 0.10	< 0.10
Chromium	na	2500	4.2	14	19	2.3	9.2	5.8	4000	5900	800	880	540
Copper	na	58	1.5	3.6	470	38	230	22	160	64	55	300	36
Mercury	na	0.1	< 0.05	< 0.05	0.16	< 0.05	0.05	< 0.05	0.1	0.13	0.36	0.09	0.07
Nickel	na	26	3.3	4	47	3.4	11	6.1	50	20	73	84	16
Lead	na	70	2.9	4.6	72	23	27	12	22	20	96	60	42
Selenium	na	0.92	< 0.25	< 0.25	0.79	< 0.25	< 0.25	0.42	0.52	0.5	0.35	< 0.25	< 0.25
Zinc	na	340	13	22	120	42	50	29	77	50	440	1600	260
Chromium (Hexavalent)	na	3.5	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	< 0.50	1	0.6	< 0.50	2.2	2.2
Aliphatic VPH >C6-C8	304	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C8-C9 (Sum)	144	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C9-C10	78	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aliphatic VPH >C3-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aliphatic EPH >C10-C12 MC	48	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	6.4	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0
Aliphatic EPH >C12-C16 MC	24	< 1.0	< 1.0	< 1.0	< 1.0	13	1.1	2.2	210	< 1.0	< 1.0	17	19
Aliphatic EPH >C16-C21 MC	na	3.6	< 2.0	< 2.0	< 2.0	36	4.9	8.6	420	< 2.0	5.3	120	110
Aliphatic EPH >C21-C35 MC	na	45	< 3.0	< 3.0	51	180	110	150	490	25	79	1100	978
Aliphatic EPH >C35-C40 MC	na	15	< 10	< 10	19	25	26	30	32	< 10	< 10	130	170
Total Aliphatic EPH >C10-C35 MC	na	49	< 5.0	< 5.0	51	230	160	160	1100	26	84	1100	1100
Total Aliphatic EPH >C10-C40 MC	na	63	< 10	< 10	70	250	150	190	1200	26	84	1400	1300
Aromatic VPH >C5-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C7-C8	518	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	613	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C3-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25
Aromatic EPH >C10-C12 MC	364	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	2.4	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	109	< 1.0	< 1.0	< 1.0	1.1	19	2.6	3.9	35	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C16-C21 MC	na	< 2.0	< 2.0	< 2.0	23	23	4.9	6.7	30	5.7	4.3	4.2	4.4
Aromatic EPH >C21-C35 MC	na	12	< 2.0	< 2.0	40	2.5	6.4	6.4	4.2	< 2.0	< 2.0	3	4.8
Aromatic EPH >C35-C40 MC	na	17	1.3	< 1.0	1.8	68	1.7	< 1.0	< 1.8	< 1.0	< 1.0	6	9.7
Total Aromatic EPH >C10-C35 MC	na	13	< 5.0	< 5.0	< 5.0	82	10	17	71	6.5	5	7.2	9.6
Total Aromatic EPH >C10-C40 MC	na	30	< 10	< 10	< 10	100	12	17	71	< 10	< 10	13	19
Total VPH >C3-C10	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total EPH >C10-C35 MC	na	61	< 10	< 10	54	310	130	180	1200	33	89	1100	1100
Total EPH >C10-C40 MC	na	93	< 10	< 10	75	400	160	210	1200	33	89	1400	1300
Naphthalene	76	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	31	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[b]fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[g,h,i]perylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Total Of 16 PAH's	na	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Chloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl Chloride	na	-	-	-	-	-	-	-	-	-	-	-	-
Bromomethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Dichloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Trans 1,2-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
cis 1,2-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Bromochloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Trichloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1-Dichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzene	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibromomethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Bromodichloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,3-Dichloropropene	na	-	-	-	-	-	-	-	-	-	-	-	-
Toluene	869	-	-	-	-	-	-	-	-	-	-	-	-
Trans 1,3-Dichloropropene	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1,2-Trichloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibromochloromethane	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dibromomethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1,2-Tetrachloroethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Ethylbenzene	518	-	-	-	-	-	-	-	-	-	-	-	-
m & p-Xylene	na	-	-	-	-	-	-	-	-	-	-	-	-
o-Xylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Styrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Tribromomethane	na	-	-	-	-	-	-	-	-	-	-	-	-
Isopropylbenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Bromobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2,3-Trichloropropane	na	-	-	-	-	-	-	-	-	-	-	-	-
N-Propylbenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Chlorotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-
1,3,5-Trimethylbenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-
Tert-Butylbenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trimethylbenzene	na	-											

1,2-Dichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
1-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroisopropyl)ether	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachloroethane	8	-	-	-	-	-	-	-	-	-	-	-	-
N-Nitrosodi-n-propylamine	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Nitrobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphorene	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dimethylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
1,2,4-Trichlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	76	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobutadiene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Chloro-3-Methylphenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Methylnaphthalene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitrophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4,6-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4,5-Trichlorophenol	na	-	-	-	-	-	-	-	-	-	-	-	-
2-Chloronaphthalene	114	-	-	-	-	-	-	-	-	-	-	-	-
2-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dimethylphthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
2,6-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	na	-	-	-	-	-	-	-	-	-	-	-	-
3-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenzofuran	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Chlorophenylphenylether	na	-	-	-	-	-	-	-	-	-	-	-	-
2,4-Dinitrotoluene	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	31	-	-	-	-	-	-	-	-	-	-	-	-
Diethyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Nitroaniline	na	-	-	-	-	-	-	-	-	-	-	-	-
Acobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
4-Bromophenylphenyl Ether	na	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	na	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Carbazole	na	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Butyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
ButylBenzyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	na	-	-	-	-	-	-	-	-	-	-	-	-
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Di-N-Octyl Phthalate	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[k]fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[ghi]perylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Naphthalene	76	0.12	< 0.10	< 0.10	0.78	1.4	0.73	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	na	< 0.10	< 0.10	< 0.10	< 0.10	0.52	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	31	< 0.10	< 0.10	< 0.10	< 0.10	0.4	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	na	0.54	< 0.10	< 0.10	1.1	1.2	0.45	< 0.10	< 0.10	< 0.10	0.48	0.93	0.76
Anthracene	na	0.27	< 0.10	< 0.10	0.21	0.21	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.19	0.16
Fluoranthene	na	1.6	< 0.10	< 0.10	1.2	0.76	0.38	0.22	< 0.10	< 0.10	0.41	1.1	1.8
Pyrene	na	1.5	< 0.10	< 0.10	0.85	0.53	0.26	0.2	< 0.10	< 0.10	0.3	0.93	1.7
Benzoanthracene	na	1.8	< 0.10	< 0.10	0.72	0.46	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1
Chrysene	na	1.4	< 0.10	< 0.10	0.58	0.5	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.7
Benzo[fluoranthene	na	2.1	< 0.10	< 0.10	1.1	0.55	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.6
Benzo[k]fluoranthene	na	1.6	< 0.10	< 0.10	0.4	0.24	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.95
Benzo[a]pyrene	na	1.6	< 0.10	< 0.10	0.78	0.36	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.4
Indeno[1,2,3-c,d]Pyrene	na	1.8	< 0.10	< 0.10	0.49	0.27	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.3
Dibenz[a,h]Anthracene	na	1.5	< 0.10	< 0.10	0.15	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[ghi]perylene	na	1.7	< 0.10	< 0.10	0.41	0.3	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	1.6
Total Of 16 PAH's	na	17	< 2.0	< 2.0	8.8	7.5	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.2	15

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC Generic assessment criteria
- COPC not analysed
Measured concentration in excess of Tier 1 value

COPC	Chemtest Job No.	24-25641	24-25641	24-25641	24-25641	24-25641	24-25899	24-25899	24-25899	24-25899	24-25899	24-25899	24-26334
	Chemtest Sample ID	1849337	1849340	1849341	1849343	1849345	1850277	1850280	1850285	1850287	1850290	1850293	1852980
	Client sample ref.												1
	Sample location	TP345	TP392	TP392	TP393	TP393	TP309	TP311	TP325	TP342	TP342	TP388	BH326
	Top depth (m)	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top depth (m)	0.50	0.50	2.00	0.50	3.00	0.4	0.5	2.0	0.5	3.0	2.5	4.5
	Depth to bottom (m)												5.5
	Date sampled												15/08/2024
	RSK Commercial Tier 1 values (mg/kg)												
Asbestos Type	na	-	-	-	-	-	-	-	-	-	-	-	-
Asbestos Identification	na	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	na												
Total Asbestos	na												
Moisture	na	5.1	5.8	14	16	22	6.1	4	7.2	11	7.2	6.5	69
Soil Colour	na	Brown	Brown	Brown	Brown	Brown	Black	Black	Black	Black	Black	Black	Black
Other Material	na	Stones	Stones	Stones	Stones and Roots	Stones	Stones	Stones	Stones	Stones	Stones	Stones	None
Soil Texture	na	Loam	Loam	Clay	Clay	Clay	Sand	Sand	Sand	Sand	Sand	Sand	Sand
pH at 20C	na	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	na	1.5	28	6.7	4.9	1.7	3.4	3	5.4	5.4	32	10	22
Cadmium	na	< 0.10	4.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.72	< 0.10	1.7
Chromium	na	2000	2100	100	76	25	1300	530	1100	1100	4800	1700	250
Copper	na	160	160	22	11	4.5	43	200	28	34	200	65	130
Mercury	na	0.75	0.31	0.06	< 0.05	< 0.05	0.09	0.11	0.05	0.05	0.36	0.1	0.15
Nickel	na	77	95	17	21	9.1	38	58	42	36	110	35	59
Lead	na	960	696	90	16	10	26	280	25	29	189	110	219
Selenium	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	2.2
Zinc	na	650	1600	350	77	38	260	1200	160	280	350	210	930
Chromium (Hexavalent)	na	< 0.10	1	< 0.10	< 0.10	< 0.10	0.58	0.64	< 0.10	2.6	0.76	0.59	< 0.10
Aliphatic VPH >C6-C8	304	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C6-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C7-C8	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aliphatic VPH >C8-C9 (Sum)	144	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Aliphatic VPH >C9-C10	78	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	1.5
Total Aliphatic VPH >C3-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	1.5
Aliphatic EPH >C10-C12 MC	46	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	3.4	2.1	9.7	77
Aliphatic EPH >C12-C16 MC	24	1	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	12	< 1.0	76	830
Aliphatic EPH >C16-C21 MC	na	44	27	< 2.0	2.7	3.7	< 2.0	4	< 2.0	89	13	130	11000
Aliphatic EPH >C21-C35 MC	na	400	340	< 3.0	5.3	9.3	300	26	140	770	62	430	90000
Aliphatic EPH >C35-C40 MC	na	63	50	< 10	< 10	< 10	56	< 10	58	120	21	74	13000
Total Aliphatic EPH >C10-C35 MC	na	450	370	< 5.0	8	13	310	150	880	77	640	100000	
Total Aliphatic EPH >C10-C40 MC	na	510	420	< 10	< 10	13	360	27	200	990	88	720	110000
Aromatic VPH >C5-C7	na	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	0.61
Aromatic VPH >C7-C8	518	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aromatic VPH >C8-C10	613	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Total Aromatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	< 0.25	0.61
Aromatic EPH >C10-C12 MC	364	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0
Aromatic EPH >C12-C16 MC	109	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	< 1.0	140
Aromatic EPH >C16-C21 MC	na	8.4	3.4	4.2	6.3	5.1	3.3	3.6	3.8	5.1	4	6.2	3100
Aromatic EPH >C21-C35 MC	na	2.5	< 2.0	< 2.0	9.8	10	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	43
Aromatic EPH >C35-C40 MC	na	1.6	1.2	< 1.0	5.8	6.3	1.5	< 1.0	1.1	4.7	< 1.0	2.2	4700
Total Aromatic EPH >C10-C35 MC	na	11	< 5.0	< 5.0	16	15	< 5.0	< 5.0	< 5.0	5.1	< 5.0	14	3200
Total Aromatic EPH >C10-C40 MC	na	13	< 10	< 10	22	21	< 10	< 10	< 10	< 10	< 10	16	8000
Total VPH >C5-C10	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	2.1
Total EPH >C10-C35 MC	na	460	370	< 10	24	28	310	31	150	880	81	660	100000
Total EPH >C10-C40 MC	na	520	430	< 10	30	34	370	31	210	1000	100	730	120000
Naphthalene	76	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	31	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene]	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[ghi]perylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Total Of 16 PAHs	na	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Chloromethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Vinyl Chloride	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Bromomethane	na	-	-	-	-	-	< 20	< 20	-	-	-	< 20	< 20
Chloroethane	na	-	-	-	-	-	< 2.0	< 2.0	-	-	-	< 2.0	< 2.0
Trichlorofluoromethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,1-Dichloroethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Dichloromethane	na	-	-	-	-	-	< 50	< 50	-	-	-	< 50	< 50
Trans 1,2-Dichloroethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,1-Dichloroethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
cis 1,2-Dichloroethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Bromochloromethane	na	-	-	-	-	-	< 5.0	< 5.0	-	-	-	< 5.0	< 5.0
Trichloromethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,1,1-Trichloroethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Tetrachloromethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,1-Dichloropropane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Benzene	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,2-Dichloroethane	na	-	-	-	-	-	< 2.0	< 2.0	-	-	-	< 2.0	< 2.0
Trichloroethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,2-Dichloropropane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Dibromomethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Bromodichloromethane	na	-	-	-	-	-	< 5.0	< 5.0	-	-	-	< 5.0	< 5.0
cis-1,3-Dichloropropene	na	-	-	-	-	-	< 10	< 10	-	-	-	< 10	< 10
Toluene	869	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	12
Trans 1,3-Dichloropropene	na	-	-	-	-	-	< 10	< 10	-	-	-	< 10	< 10
1,1,2-Trichloroethane	na	-	-	-	-	-	< 10	< 10	-	-	-	< 10	< 10
Tetrachloroethane	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,3-Dichloropropane	na	-	-	-	-	-	< 2.0	< 2.0	-	-	-	< 2.0	< 2.0
Dibromochloromethane	na	-	-	-	-	-	< 10	< 10	-	-	-	< 10	< 10
1,2-Dibromomethane	na	-	-	-	-	-	< 5.0	< 5.0	-	-	-	< 5.0	< 5.0
Chlorobenzene	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
1,1,1,2-Tetrachloroethane	na	-	-	-	-	-	< 2.0	< 2.0	-	-	-	< 2.0	< 2.0
Ethylbenzene	518	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
m & p-Xylene	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	43
o-Xylene	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	74
Styrene	na	-	-	-	-	-	< 1.0	< 1.0	-	-	-	< 1.0	< 1.0
Tri bromomethane	na	-	-	-	-	-	< 1.0	< 1.0	-</				

1,2-Dichlorobenzene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2-Methylphenol	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Bis(2-Chloroisopropyl)ether	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Hexachloroethane	8	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
N-Nitrosdi-n-propylamine	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Methylphenol	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Nitrobenzene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Naphorene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2-Nitrophenol	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,4-Dimethylphenol	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Bis(2-Chloroethoxy)Methane	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,4-Dichlorophenol	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
1,2,4-Trichlorobenzene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Naphthalene	76	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Chloroaniline	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Hexachlorobutadiene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Chloro-3-Methylphenol	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2-Methylnaphthalene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Nitrophenol	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,4,6-Trichlorophenol	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,4,5-Trichlorophenol	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2-Chloronaphthalene	114	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2-Nitroaniline	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Acenaphthylene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Dimethylphthalate	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,6-Dinitrotoluene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Acenaphthene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
3-Nitroaniline	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Dibenzofuran	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Chlorophenylphenyl ether	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
2,4-Dinitrotoluene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Fluorene	31	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Diethyl Phthalate	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Nitroaniline	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Acobenzene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
4-Bromophenylphenyl Ether	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Hexachlorobenzene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Phenanthrene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	1.7
Anthracene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Carbazole	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Di-N-Butyl Phthalate	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Fluoranthene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	3.4
Pyrene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	5.8
ButylBenzyl Phthalate	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Benzoanthracene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	1.9
Chrysene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	4.9
Bis(2-Ethylhexyl)Phthalate	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	2.2
Di-N-Octyl Phthalate	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	2.1
Benzofluoranthene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	3.3
Benzo[k]fluoranthene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Benzo[a]pyrene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	1.8
Indeno[1,2,3-c,d]Pyrene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Dibenz[a,h]Anthracene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Benzo[ghi]perylene	na	-	-	-	-	-	< 0.50	< 0.50	-	-	-	< 0.50	< 0.50
Naphthalene	76	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	0.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	na	0.49	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	31	0.44	< 0.10	< 0.10	< 0.10	< 0.10	0.11	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	na	2.5	0.64	< 0.10	< 0.10	< 0.10	0.79	< 0.10	< 0.10	< 0.10	< 0.10	0.32	< 0.10
Anthracene	na	0.36	< 0.10	< 0.10	< 0.10	< 0.10	0.63	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	na	1.7	0.95	< 0.10	< 0.10	< 0.10	2.4	< 0.10	< 0.10	< 0.10	< 0.10	0.4	< 0.10
Pyrene	na	1.3	0.81	< 0.10	< 0.10	< 0.10	2.5	< 0.10	< 0.10	< 0.10	< 0.10	0.28	< 0.10
Benzoanthracene	na	< 0.10	0.41	< 0.10	< 0.10	< 0.10	3.4	< 0.10	< 0.10	< 0.10	< 0.10	0.15	< 0.10
Chrysene	na	< 0.10	0.6	< 0.10	< 0.10	< 0.10	3.6	< 0.10	< 0.10	< 0.10	< 0.10	0.18	< 0.10
Benzo[fluoranthene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.8	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.8	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno[1,2,3-c,d]Pyrene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	4.2	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz[a,h]Anthracene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[ghi]perylene	na	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	3.9	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	na	6.8	3.4	< 2.0	< 2.0	< 2.0	37	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0	< 2.0

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC Generic assessment criteria
- COPC not analysed
Measured concentration in excess of Tier 1 value

COPC	Chemtest Job No.	24-26534	24-26534	24-26534	24-26534	24-26534	24-27128	24-27128	24-27128	24-27128	24-27793	24-27793	24-27793
	Chemtest Sample ID	1852981	1852982	1852984	1852987	1852991	1855529	1855532	1855534	1855536	1858447	1858448	1858450
	Client sample ref.	1	2	1	1	1					ES4	ES3	ES3
	Sample location	BH327	BH327	TP3001	TP399	TP397	TP376	TP375	TP374	TP341	BH305	BH303A	BH303A
	Top depth (m)	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL	SOIL
	Top depth (m)	3.5	4.5	0.2	0.5	0.0	0.25	1.60	1.40	2.30	5.5	0.6	3.0
	Depth to bottom (m)	4.5	5.5										
	Date sampled	15/08/2024	15/08/2024	15/08/2024	15/08/2024	15/08/2024	19/08/2024	19/08/2024	19/08/2024	19/08/2024			
	RSK Commercial Tier 1 values (mg/kg)												
PCM Type	na	-	-	-	-	-	-	Fibrous Clumps	-	-	-	-	-
Asbestos Identification	na	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	Chrysotile	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected
Asbestos by Gravimetry	na							<0.001					
Total Asbestos	na							<0.001					
Moisture	na	71	16	7.3	18	14	6.3	25	19	24	17	9.6	15
Soil Colour	na	Black	Brown	Brown	Brown	Brown	Black	Black	Black	Black	Brown	Brown	Brown
Other Material	na	None	None	Stones	Stones	Stones and Roots	Stones and Roots	Stones and Roots	Stones	Stones	Stones	Stones	Stones
Soil Texture	na	Sand	Sand	Sand	Sand	Loam	Sand	Clay	Clay	Clay	Sand	Sand	Sand
pH at 20C	na	-	-	-	-	-	-	-	-	-	-	-	-
Arsenic	na	18	5.5	8.4	4.3	13	<0.5	11	7.5	14	<0.5	0.9	1.6
Cadmium	na	5.2	0.16	0.18	0.31	0.14	0.58	<0.10	<0.10	<0.10	<0.10	0.51	<0.10
Chromium	na	440	9.6	140	33	95	70	48	30	51	15	1400	510
Copper	na	360	7.3	56	27	20	2.3	66	100	92	2.6	140	20
Mercury	na	0.22	<0.05	0.05	0.37	0.08	0.2	0.13	0.09	0.35	<0.05	0.08	<0.05
Nickel	na	36	4	170	14	43	11	16	42	64	4.7	28	21
Lead	na	530	13	40	140	29	48	100	87	130	5.3	50	10
Selenium	na	1.1	<0.25	0.69	0.33	1.7	1.1	1.8	1.6	2.4	<0.25	0.77	0.57
Zinc	na	2100	140	230	190	300	390	29	45	52	17	190	74
Chromium (Hexavalent)	na	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aliphatic VPH >C6-C8	304	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aliphatic VPH >C6-C7	na	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aliphatic VPH >C7-C8	na	0.35	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aliphatic VPH >C8 (Sum)	144	0.35	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Aliphatic VPH >C9-C10	78	2.7	0.17	<0.05	<0.05	<0.05	<0.05	0.17	0.27	0.31	<0.05	<0.05	0.14
Total Aliphatic VPH >C3-C10	na	3.1	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	0.27	<0.25	<0.25	<0.25	<0.25
Aliphatic EPH >C10-C12 MC	48	290	13	12	33	78	<2.0	76	120	230	2.6	3.5	<2.0
Aliphatic EPH >C12-C16 MC	24	690	14	18	48	3800	7.1	360	410	720	3.9	12	20
Aliphatic EPH >C16-C21 MC	na	4000	170	23	120	3200	8.6	8300	1800	4700	14	44	26
Aliphatic EPH >C21-C35 MC	na	110000	2600	190	940	1300	32	44000	7100	21000	85	120	58
Aliphatic EPH >C35-C40 MC	na	20000	405	54	165	740	13	5500	1205	5100	14	37	16
Total Aliphatic EPH >C10-C35 MC	na	120000	2800	200	1100	8400	48	52000	9400	26000	110	180	100
Total Aliphatic EPH >C10-C40 MC	na	140000	3200	250	1300	9200	61	58000	11000	31000	120	220	120
Aromatic VPH >C5-C7	na	0.88	<0.05	<0.05	0.2	0.21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aromatic VPH >C7-C8	518	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Aromatic VPH >C8-C10	613	<0.05	<0.05	<0.05	<0.05	0.21	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Total Aromatic VPH >C5-C10	na	0.88	<0.25	<0.25	<0.25	0.41	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25	<0.25
Aromatic EPH >C10-C12 MC	364	<1.0	<1.0	15	48	150000	<1.0	73	95	120	1.2	<1.0	<1.0
Aromatic EPH >C12-C16 MC	109	170	1.5	3.1	140	29000	<1.0	470	305	500	<1.0	<1.0	3.2
Aromatic EPH >C16-C21 MC	na	520	11	180	180	27000	5.2	1200	600	1500	3	<2.0	20
Aromatic EPH >C21-C35 MC	na	350	2.2	3.5	100	13000	3.5	33	11	210	22	2.7	6.8
Aromatic EPH >C35-C40 MC	na	660	190	14	20	1400	12	110	260	190	190	7.5	7
Total Aromatic EPH >C10-C35 MC	na	1000	23	33	480	22000	20	1800	1200	2300	25	5.6	30
Total Aromatic EPH >C10-C40 MC	na	1700	210	46	505	22000	33	1900	1300	2400	220	13	37
Total VPH >C5-C10	na	4	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Total EPH >C10-C35 MC	na	120000	2900	230	1600	23000	68	54000	10000	29000	130	190	130
Total EPH >C10-C40 MC	na	140000	3500	300	1800	23000	93	60000	12000	34000	340	230	150
Naphthalene	76	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Acenaphthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluorene	31	-	-	-	-	-	-	-	-	-	-	-	-
Phenanthrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Fluoranthene	na	-	-	-	-	-	-	-	-	-	-	-	-
Pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzoanthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Chrysene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[fluoranthene]	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[a]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Indeno[1,2,3-c,d]pyrene	na	-	-	-	-	-	-	-	-	-	-	-	-
Dibenz[a,h]anthracene	na	-	-	-	-	-	-	-	-	-	-	-	-
Benzo[ghi]perylene	na	-	-	-	-	-	-	-	-	-	-	-	-
Total Of 16 PAHs	na	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Chloromethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Vinyl Chloride	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Bromomethane	na	<20	<20	-	-	<20	<20	-	-	-	<20	-	-
Chloroethane	na	<2.0	<2.0	-	-	<2.0	<2.0	-	-	-	<2.0	-	-
Trichlorofluoromethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
1,1-Dichloroethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Dichloromethane	na	<50	<50	-	-	<50	<50	-	-	-	<50	-	-
Trans 1,2-Dichloroethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
1,1-Dichloroethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Is 1,2-Dichloroethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Bromochloromethane	na	<5.0	<5.0	-	-	<5.0	<5.0	-	-	-	<5.0	-	-
Trichloromethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
1,1,1-Trichloroethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Tetrachloromethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
1,1-Dichloropropene	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Benzene	na	<1.0	<1.0	-	-	43	<1.0	-	-	-	<1.0	-	-
1,2-Dichloroethane	na	<2.0	<2.0	-	-	<2.0	<2.0	-	-	-	<2.0	-	-
Trichloroethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
1,2-Dichloropropane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Dibromomethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Bromodichloromethane	na	<5.0	<5.0	-	-	<5.0	<5.0	-	-	-	<5.0	-	-
Is 1,3-Dichloropropene	na	<10	<10	-	-	<10	<10	-	-	-	<10	-	-
Toluene	869	<1.0	<1.0	-	-	31	<1.0	-	-	-	<1.0	-	-
Trans 1,3-Dichloropropene	na	<10	<10	-	-	<10	<10	-	-	-	<10	-	-
1,1,2-Trichloroethane	na	<10	<10	-	-	<10	<10	-	-	-	<10	-	-
Tetrachloroethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
1,3-Dichloropropane	na	<2.0	<2.0	-	-	<2.0	<2.0	-	-	-	<2.0	-	-
Dibromochloromethane	na	<10	<10	-	-	<10	<10	-	-	-	<10	-	-
1,2-Dibromomethane	na	<5.0	<5.0	-	-	<5.0	<5.0	-	-	-	<5.0	-	-
Chlorobenzene	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
1,1,1,2-Tetrachloroethane	na	<2.0	<2.0	-	-	<2.0	<2.0	-	-	-	<2.0	-	-
Ethylbenzene	518	20	<1.0	-	-	4.1	<1.0	-	-	-	<1.0	-	-
m & p-Xylene	na	43	<1.0	-	-	14	<1.0	-	-	-	<1.0	-	-
o-Xylene	na	120	3.2	-	-	11	<1.0	-	-	-	<1.0	-	-
Styrene	na	<1.0	<1.0	-	-	90	<1.0	-	-	-	<1.0	-	-
Tri bromomethane	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Isopropylbenzene	na	<1.0	<1.0	-	-	<1.0	<1.0	-	-	-	<1.0	-	-
Bromobenzene	na	<1.0	<1.0	-									

1,2-Dichlorobenzene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2-Methylphenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Bis(2-Chloroisopropyl)ether	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Hexachloroethane	8	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
N-Nitrosodi-n-propylamine	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
4-Methylphenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Nitrobenzene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Naphorene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2-Nitrophenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,4-Dimethylphenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Bis(2-Chloroethoxy)Methane	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
1,4-Dichlorophenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
1,2,4-Trichlorobenzene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Naphthalene	76	< 0.50	< 0.50	-	-	> 5800	< 0.50	-	-	-	< 0.50	-	-
4-Chloroaniline	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Hexachlorobutadiene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
4-Chloro-3-Methylphenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2-Methylnaphthalene	na	< 0.50	< 0.50	-	-	470	< 0.50	-	-	-	< 0.50	-	-
4-Nitrophenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,4,6-Trichlorophenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,4,5-Trichlorophenol	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2-Chloronaphthalene	114	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2-Nitroaniline	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Acenaphthylene	na	< 0.50	< 0.50	-	-	180	< 0.50	-	-	-	< 0.50	-	-
Dimethylphthalate	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,6-Dinitrotoluene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Acenaphthene	na	< 0.50	< 0.50	-	-	1600	< 0.50	-	-	-	< 0.50	-	-
3-Nitroaniline	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Dibenzofuran	na	< 0.50	< 0.50	-	-	890	< 0.50	-	-	-	< 0.50	-	-
4-Chlorophenylphenyl ether	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
2,4-Dinitrotoluene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Fluorene	31	< 0.50	< 0.50	-	-	540	< 0.50	-	-	-	< 0.50	-	-
Diethyl Phthalate	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
4-Nitroaniline	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Acobenzene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
4-Bromophenylphenyl Ether	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Hexachlorobenzene	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Phenanthrene	na	1.7	< 0.50	-	-	910	< 0.50	-	-	-	< 0.50	-	-
Anthracene	na	< 0.50	< 0.50	-	-	450	< 0.50	-	-	-	< 0.50	-	-
Carbazole	na	< 0.50	< 0.50	-	-	3000	< 0.50	-	-	-	< 0.50	-	-
Bis-N-Butyl Phthalate	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Fluoranthene	na	3.3	< 0.50	-	-	700	0.64	-	-	-	< 0.50	-	-
Pyrene	na	4.5	< 0.50	-	-	480	0.57	-	-	-	< 0.50	-	-
Butylbenzyl Phthalate	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Benzoanthracene	na	< 0.50	< 0.50	-	-	310	< 0.50	-	-	-	< 0.50	-	-
Chrysene	na	< 0.50	< 0.50	-	-	310	< 0.50	-	-	-	< 0.50	-	-
Bis(2-Ethylhexyl)Phthalate	na	9.6	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Bis-N-Octyl Phthalate	na	< 0.50	< 0.50	-	-	< 5.80	< 0.50	-	-	-	< 0.50	-	-
Benzo[fluoranthene	na	2	< 0.50	-	-	380	1.1	-	-	-	< 0.50	-	-
Benzo[k]fluoranthene	na	< 0.50	< 0.50	-	-	91	< 0.50	-	-	-	< 0.50	-	-
Benzo[a]pyrene	na	< 0.50	< 0.50	-	-	180	0.62	-	-	-	< 0.50	-	-
Indeno[1,2,3-c,d]Pyrene	na	< 0.50	< 0.50	-	-	160	0.69	-	-	-	< 0.50	-	-
Dibenz[a,h]Anthracene	na	< 0.50	< 0.50	-	-	47	< 0.50	-	-	-	< 0.50	-	-
Benzo[ghi]perylene	na	< 0.50	< 0.50	-	-	150	0.88	-	-	-	< 0.50	-	-
Naphthalene	76	11	< 0.10	0.42	16	380	3.5	66	< 0.10	12	< 0.10	0.15	< 0.10
Acenaphthylene	na	1.8	< 0.10	0.11	1.2	6.7	2.4	< 0.10	< 0.10	0.65	< 0.10	< 0.10	< 0.10
Acenaphthene	na	1.9	< 0.10	< 0.10	3.4	41	1	13	< 0.10	3.1	< 0.10	0.19	< 0.10
Fluorene	31	2	< 0.10	0.11	2	21	1.4	7.3	< 0.10	3.1	< 0.10	0.3	< 0.10
Phenanthrene	na	2.4	< 0.10	0.78	11	38	2.8	9.2	< 0.10	6.9	0.2	1.6	< 0.10
Anthracene	na	< 0.10	< 0.10	0.15	2.9	22	1.2	1.6	< 0.10	0.93	< 0.10	0.49	< 0.10
Fluoranthene	na	3.4	< 0.10	0.87	9.4	32	4.4	2.4	< 0.10	1.9	0.24	1.4	< 0.10
Pyrene	na	4.3	< 0.10	0.66	7.4	21	3.4	2.5	< 0.10	2.3	0.19	1	< 0.10
Benzoanthracene	na	< 0.10	< 0.10	< 0.10	3.4	12	2.1	< 0.10	< 0.10	0.8	< 0.10	0.28	< 0.10
Chrysene	na	< 0.10	< 0.10	< 0.10	4.1	11	3.1	< 0.10	< 0.10	2.1	< 0.10	0.25	< 0.10
Benzo[fluoranthene	na	< 0.10	< 0.10	< 0.10	4.9	< 0.10	6.5	< 0.10	< 0.10	1.1	< 0.10	< 0.10	< 0.10
Benzo[k]fluoranthene	na	< 0.10	< 0.10	< 0.10	1.4	< 0.10	1.9	< 0.10	< 0.10	0.28	< 0.10	< 0.10	< 0.10
Benzo[a]pyrene	na	< 0.10	< 0.10	< 0.10	2.9	< 0.10	3.8	< 0.10	< 0.10	0.77	< 0.10	< 0.10	< 0.10
Indeno[1,2,3-c,d]Pyrene	na	< 0.10	< 0.10	< 0.10	2.1	< 0.10	5.1	< 0.10	< 0.10	0.35	< 0.10	< 0.10	< 0.10
Dibenz[a,h]Anthracene	na	< 0.10	< 0.10	< 0.10	0.53	< 0.10	1.1	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo[ghi]perylene	na	< 0.10	< 0.10	< 0.10	2.1	< 0.10	4.8	< 0.10	< 0.10	0.67	< 0.10	< 0.10	< 0.10
Total Of 16 PAH's	na	27	< 2.0	3.1	75	580	49	100	< 2.0	37	< 2.0	5.7	< 2.0

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC Generic assessment criteria
- COPC not analysed
Measured concentration in excess of Tier 1 value

COPC	Chemtest Job No.	24-29969	24-29969	24-29969	Maximum concentration detected in soil (mg/kg)	Total No. of soil samples analysed	Number of detects in soil above the Tier 1
	Chemtest Sample ID	1867652	1867654	1867656			
	Client sample ref.						
	Sample location	TP3005	TP3005	BH318			
	Top depth (m)	SOIL	SOIL	SOIL			
	Top depth (m)	1.50	0.70	0.30			
	Depth to bottom (m)						
	Date sampled						
	RSK Commercial Tier 1 values (mg/kg)						
ACM Type	na	-	-	-	0	3	0
Asbestos Identification	na	No Asbestos Detected	No Asbestos Detected	No Asbestos Detected	0	87	84
Asbestos by Gravimetry	na				0.004	82	0
Total Asbestos	na				0.004	82	0
Moisture	na	3.7	3.6	11	71	87	0
Soil Colour	na	Brown	Brown	Brown	0	87	0
Other Material	na	Roots and Stones	Stones and Roots	Stones	0	87	87
Soil Texture	na	Sand	Sand	Sand	0	87	62
pH at 20C	na	9.7	9.9	9.3	9.9	3	0
Arsenic	na	7.3	2.8	18	92	87	0
Calcium	na	0.16	0.11	1.9	5.2	87	0
Chromium	na	14	14	54	3900	87	0
Copper	na	21	6	74	470	87	0
Mercury	na	0.13	< 0.05	0.12	1.9	87	0
Nickel	na	6.8	5.3	30	170	87	0
Lead	na	70	16	500	490	87	0
Selenium	na	2.9	2.5	1.2	5.5	87	0
Zinc	na	200	45	800	2100	87	0
Chromium (Hexavalent)	na	< 0.50	< 0.50	< 0.50	3.5	62	0
Aliphatic VPH <C5-C6	304	< 0.05	< 0.05	< 0.05	0	87	0
Aliphatic VPH >C6-C7	na	< 0.05	< 0.05	< 0.05	0	87	0
Aliphatic VPH >C7-C8	na	< 0.05	< 0.05	< 0.05	0.35	87	0
Aliphatic VPH <C5-C8 (Sum)	344	< 0.10	< 0.10	< 0.10	0.35	87	0
Aliphatic VPH >C8-C10	78	< 0.05	< 0.05	< 0.05	2.7	87	0
Total Aliphatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	9.1	87	0
Aliphatic EPH >C10-C12 MC	48	2	< 2.0	2.5	290	87	6
Aliphatic EPH >C12-C16 MC	24	< 1.0	< 1.0	< 1.0	3800	87	10
Aliphatic EPH >C16-C21 MC	na	< 2.0	< 2.0	< 2.0	11000	87	0
Aliphatic EPH >C21-C25 MC	na	< 9.0	5.5	7.3	110000	87	0
Aliphatic EPH >C35-C40 MC	na	< 10	< 10	< 10	20000	87	0
Total Aliphatic EPH >C10-C35 MC	na	< 5.0	7.7	10	120000	87	0
Total Aliphatic EPH >C10-C40 MC	na	< 10	< 10	< 10	140000	87	0
Aromatic VPH <C5-C7	na	< 0.05	< 0.05	< 0.05	0.88	87	0
Aromatic VPH >C7-C8	518	< 0.05	< 0.05	< 0.05	0	87	0
Aromatic VPH >C8-C10	613	< 0.05	< 0.05	< 0.05	0.21	87	0
Total Aromatic VPH >C5-C10	na	< 0.25	< 0.25	< 0.25	0.88	87	0
Aromatic EPH >C10-C12 MC	364	< 1.0	< 1.0	< 1.0	150000	87	1
Aromatic EPH >C12-C16 MC	169	< 1.0	< 1.0	< 1.0	26000	87	5
Aromatic EPH >C16-C21 MC	na	5.2	6	8.6	27000	87	0
Aromatic EPH >C21-C35 MC	na	< 2.0	3.5	6	13000	87	0
Aromatic EPH >C35-C40 MC	na	< 1.0	< 1.0	14	4700	87	0
Total Aromatic EPH >C10-C35 MC	na	6.1	9.7	15	220000	87	0
Total Aromatic EPH >C10-C40 MC	na	< 10	< 10	29	220000	87	0
Total VPH >C5-C10	na	< 0.50	< 0.50	< 0.50	4	87	0
Total EPH >C10-C35 MC	na	11	17	25	230000	87	0
Total EPH >C10-C40 MC	na	11	17	39	230000	87	0
Naphthalene	76	-	-	-	2.3	12	0
Acenaphthylene	na	-	-	-	0.41	12	0
Acenaphthene	na	-	-	-	0.81	12	0
Fluorene	31	-	-	-	1	12	0
Phenanthrene	na	-	-	-	2.6	12	0
Anthracene	na	-	-	-	0.26	12	0
Fluoranthene	na	-	-	-	1.4	12	0
Pyrene	na	-	-	-	1.3	12	0
Benzoanthracene	na	-	-	-	1.6	12	0
Chrysene	na	-	-	-	3.2	12	0
Benzo(a)fluoranthene	na	-	-	-	1.5	12	0
Benzo(b)fluoranthene	na	-	-	-	0.47	12	0
Benzo(a)pyrene	na	-	-	-	0.86	12	0
Indeno(1,2,3-cd)Pyrene	na	-	-	-	0.64	12	0
Dibenz(a,h)anthracene	na	-	-	-	0.19	12	0
Benzo(g,h,i)perylene	na	-	-	-	0.76	12	0
Total Of 16 PAH's	na	-	-	-	11	12	0
Dichlorodifluoromethane	na	< 1.0	< 1.0	-	0	11	0
Chloromethane	na	< 1.0	< 1.0	-	0	11	0
Vinyl Chloride	na	< 1.0	< 1.0	-	0	11	0
Bromomethane	na	< 20	< 20	-	0	11	0
Chloroethane	na	< 2.0	< 2.0	-	0	11	0
Trichlorofluoromethane	na	< 1.0	< 1.0	-	0	11	0
1,1-Dichloroethene	na	< 1.0	< 1.0	-	0	11	0
Dichloromethane	na	< 50	< 50	-	0	11	0
Trans 1,2-Dichloroethene	na	< 1.0	< 1.0	-	0	11	0
1,1-Dichloroethane	na	< 1.0	< 1.0	-	0	11	0
cis 1,2-Dichloroethene	na	< 1.0	< 1.0	-	0	11	0
Bromochloromethane	na	< 5.0	< 5.0	-	0	11	0
Trichloromethane	na	< 1.0	< 1.0	-	1.2	11	0
1,1,1-Trichloroethane	na	< 1.0	< 1.0	-	0	11	0
Tetrachloromethane	na	< 1.0	< 1.0	-	0	11	0
1,2-Dichloropropene	na	< 1.0	< 1.0	-	0	11	0
Benzene	na	< 1.0	< 1.0	-	43	11	0
1,2-Dichloroethane	na	< 2.0	< 2.0	-	0	11	0
Trichloroethene	na	< 1.0	< 1.0	-	0	11	0
1,2-Dichloropropane	na	< 1.0	< 1.0	-	0	11	0
Dibromomethane	na	< 1.0	< 1.0	-	0	11	0
Bromodichloromethane	na	< 5.0	< 5.0	-	0	11	0
cis-1,3-Dichloropropene	na	< 10	< 10	-	0	11	0
Toluene	869	< 1.0	< 1.0	-	31	11	0
Trans-1,3-Dichloropropene	na	< 10	< 10	-	0	11	0
1,1,2-Trichloroethane	na	< 10	< 10	-	0	11	0
Tetrachloroethene	na	< 1.0	< 1.0	-	0	11	0
1,3-Dichloropropane	na	< 2.0	< 2.0	-	0	11	0
Dibromochloromethane	na	< 10	< 10	-	0	11	0
1,2-Dibromoethane	na	< 5.0	< 5.0	-	0	11	0
Chlorobenzene	na	< 1.0	< 1.0	-	0	11	0
1,1,1,2-Tetrachloroethane	na	< 2.0	< 2.0	-	0	11	0
Ethylbenzene	518	< 1.0	< 1.0	-	20	11	0
m & p-Xylene	na	< 1.0	< 1.0	-	43	11	0
o-Xylene	na	< 1.0	< 1.0	-	120	11	0
Styrene	na	< 1.0	< 1.0	-	50	11	0
Tribromomethane	na	< 1.0	< 1.0	-	0	11	0
Isopropylbenzene	na	< 1.0	< 1.0	-	0	11	0
Bromobenzene	na	< 1.0	< 1.0	-	0	11	0
1,2,3-Trichloropropane	na	< 50	< 50	-	0	11	0
N-Propylbenzene	na	< 1.0	< 1.0	-	0	11	0
2-Chlorotoluene	na	< 1.0	< 1.0	-	0	11	0
1,3,5-Trimethylbenzene	na	< 1.0	< 1.0	-	5.2	11	0
4-Chlorotoluene	na	< 1.0	< 1.0	-	0	11	0
Tert-Butylbenzene	na	< 1.0	< 1.0	-	0	11	0
1,2,4-Trimethylbenzene	na	< 1.0	< 1.0	-	6.3	11	0
Sec-Butylbenzene	na	< 1.0	< 1.0	-	0	11	0
1,3-Dichlorobenzene	na	< 1.0	< 1.0	-	0	11	0
4-Isopropyltoluene	na	< 1.0	< 1.0	-	0	11	0
1,4-Dichlorobenzene	na	< 1.0	< 1.0	-	0	11	0
N-Butylbenzene	na	< 1.0	< 1.0	-	0	11	0
1,2-Dichlorobenzene	na	< 1.0	< 1.0	-	0	11	0
1,2-Dibromo-3-Chloropropane	na	< 50	< 50	-	0	11	0
1,2,4-Trichlorobenzene	na	< 1.0	< 1.0	-	0	11	0
Hexachlorobutadiene	na	< 1.0	< 1.0	-	0	11	0
1,2,3-Trichlorobenzene	na	< 2.0	< 2.0	-	0	11	0
Methyl Tert-Butyl Ether	na	< 1.0	< 1.0	-	0	11	0
N-Nitrosodimethylamine	na	< 0.50	< 0.50	-	0	11	0
Phenol	na	< 0.50	< 0.50	-	0	11	0
2-Chlorophenol	na	< 0.50	< 0.50	-	0	11	0
Bis (2-Chloroethyl)ether	na	< 0.50	< 0.50	-	0	11	0
1,3-Dichlorobenzene	na	< 0.50	< 0.50	-	0	11	0
1,4-Dichlorobenzene	na	< 0.50	< 0.50	-	0	11	0

1,2-Dichlorobenzene	na	< 0.50	< 0.50	-	0	11	0
2-Methylphenol	na	< 0.50	< 0.50	-	0	11	0
Bis(2-Chloroisopropyl)ether	na	< 0.50	< 0.50	-	0	11	0
Hexachloroethane	8	< 0.50	< 0.50	-	0	11	0
N-Nitrosodi-n-propylamine	na	< 0.50	< 0.50	-	0	11	0
4-Methylphenol	na	< 0.50	< 0.50	-	0	11	0
Nitrobenzene	na	< 0.50	< 0.50	-	0	11	0
Naphthalene	na	< 0.50	< 0.50	-	0	11	0
2-Nitrophenol	na	< 0.50	< 0.50	-	0	11	0
2,4-Dimethylphenol	na	< 0.50	< 0.50	-	0	11	0
Bis(2-Chloroethoxy)Methane	na	< 0.50	< 0.50	-	0	11	0
2,4-Dichlorophenol	na	< 0.50	< 0.50	-	0	11	0
1,2,4-Trichlorobenzene	na	< 0.50	< 0.50	-	0	11	0
Naphthalene	76	< 0.50	< 0.50	-	0	11	0
4-Chloroaniline	na	< 0.50	< 0.50	-	0	11	0
Hexachlorobutadiene	na	< 0.50	< 0.50	-	0	11	0
4-Chloro-3-Methylphenol	na	< 0.50	< 0.50	-	0	11	0
2-Methylnaphthalene	na	< 0.50	< 0.50	-	470	11	0
4-Nitrophenol	na	< 0.50	< 0.50	-	0	11	0
2,4,6-Trichlorophenol	na	< 0.50	< 0.50	-	0	11	0
2,4,5-Trichlorophenol	na	< 0.50	< 0.50	-	0	11	0
2-Chloronaphthalene	114	< 0.50	< 0.50	-	0	11	0
2-Nitroaniline	na	< 0.50	< 0.50	-	0	11	0
Acenaphthylene	na	< 0.50	< 0.50	-	180	11	0
Dimethylphthalate	na	< 0.50	< 0.50	-	0	11	0
2,6-Dinitrotoluene	na	< 0.50	< 0.50	-	0	11	0
Acenaphthene	na	< 0.50	< 0.50	-	1600	11	0
3-Nitroaniline	na	< 0.50	< 0.50	-	0	11	0
Dibenzofuran	na	< 0.50	< 0.50	-	890	11	0
4-Chlorophenylphenyl ether	na	< 0.50	< 0.50	-	0	11	0
2,4-Dinitrotoluene	na	< 0.50	< 0.50	-	0	11	0
Fluorene	31	< 0.50	< 0.50	-	540	11	1
Diethyl Phthalate	na	< 0.50	< 0.50	-	0	11	0
4-Nitroaniline	na	< 0.50	< 0.50	-	0	11	0
Azobenzene	na	< 0.50	< 0.50	-	0	11	0
4-Bromophenylphenyl Ether	na	< 0.50	< 0.50	-	0	11	0
Hexachlorobenzene	na	< 0.50	< 0.50	-	0	11	0
Phenanthrene	na	< 0.50	0.7	-	910	11	0
Anthracene	na	< 0.50	< 0.50	-	450	11	0
Carbazole	na	< 0.50	< 0.50	-	3500	11	0
Di-N-Butyl Phthalate	na	< 0.50	< 0.50	-	0	11	0
Fluoranthene	na	< 0.50	1.4	-	700	11	0
Pyrene	na	< 0.50	0.96	-	480	11	0
ButylBenzyl Phthalate	na	< 0.50	< 0.50	-	0	11	0
Benzoanthracene	na	< 0.50	0.82	-	310	11	0
Chrysene	na	< 0.50	0.81	-	310	11	0
Bis(2-Ethylhexyl)Phthalate	na	< 0.50	< 0.50	-	9.6	11	0
Di-N-Octyl Phthalate	na	< 0.50	< 0.50	-	2.1	11	0
Benzo[fluoranthene	na	< 0.50	1.1	-	380	11	0
Benzo[k]fluoranthene	na	< 0.50	< 0.50	-	91	11	0
Benzo[a]pyrene	na	< 0.50	0.63	-	180	11	0
Indeno[1,2,3-c,d]Pyrene	na	< 0.50	< 0.50	-	160	11	0
Dibenzo[a,h]Anthracene	na	< 0.50	< 0.50	-	47	11	0
Benzo[ghi,perylene	na	< 0.50	< 0.50	-	150	11	0
Naphthalene	76	< 0.10	< 0.10	0.8	380	75	1
Acenaphthylene	na	< 0.10	< 0.10	0.12	6.7	75	0
Acenaphthene	na	< 0.10	< 0.10	< 0.10	41	75	0
Fluorene	31	< 0.10	< 0.10	0.14	21	75	0
Phenanthrene	na	< 0.10	< 0.10	1.5	38	75	0
Anthracene	na	< 0.10	< 0.10	0.29	22	75	0
Fluoranthene	na	< 0.10	< 0.10	1.9	32	75	0
Pyrene	na	< 0.10	< 0.10	1.2	21	75	0
Benzoanthracene	na	< 0.10	< 0.10	1.2	12	75	0
Chrysene	na	< 0.10	< 0.10	1.7	11	75	0
Benzo[fluoranthene	na	< 0.10	< 0.10	2.1	6.5	75	0
Benzo[k]fluoranthene	na	< 0.10	< 0.10	0.49	3.8	75	0
Benzo[a]pyrene	na	< 0.10	< 0.10	0.99	3.8	75	0
Indeno[1,2,3-c,d]Pyrene	na	< 0.10	< 0.10	0.83	5.1	75	0
Dibenzo[a,h]Anthracene	na	< 0.10	< 0.10	0.31	3.9	75	0
Benzo[ghi,perylene	na	< 0.10	< 0.10	0.9	4.8	75	0
Total Of 16 PAH's	na	< 2.0	< 2.0	15	580	75	0

Notes:
LMDL Laboratory method detection limit
< Result less than the LMDL
GAC Generic assessment criteria
- COPC not analysed
Measured concentration in excess of Tier 1 value

Project / Site name: 315531 EAF Meltshop

Lab Sample Number									1846695	1846696	1846697	1846705	1846706	1846707
Sample Reference									BH315	BH301	BH324	BH331	BH322	BH317
Sample Number									(WATER)	(WATER)	(WATER)	(WATER)	(WATER)	(WATER)
Depth (m)									1.58	1.55	1.42	3.82	3.50	1.37
Date Sampled									02-Aug-2024	02-Aug-2024	02-Aug-2024	02-Aug-2024	02-Aug-2024	02-Aug-2024
Time Taken														
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	RSK GRAC - sand 0.55m depth to groundwater	No. > GAC	Maximum	Minimum (excluding LMDL)							

General Inorganics

pH	pH Units	N/A	ISO 17025	-	-	8.6	7.7	8.4	8.5	8.6	8.1	8.0	7.7
Total Cyanide	µg/l	10	ISO 17025	-	-	0	0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate as SO3	µg/l	45	ISO 17026	-	-	84	34	63	34	84	<1	<1	<1

Total Phenols

Total Phenols (HPLC)	µg/l	3.5	NONE	-	-	0	0	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	19000	0	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthylene	µg/l	0.01	ISO 17025	7950	0	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Acenaphthene	µg/l	0.01	ISO 17025	4100	0	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluorene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Phenanthrene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Anthracene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Fluoranthene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Pyrene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)anthracene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Chrysene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(a)pyrene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	-	-	0	0	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10	< 0.10

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	-	-	0	0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
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Arsenic (dissolved)	µg/l	0.15	ISO 17025	-	-	37	3.3	10	27	37	6.7	3.3	6.6
Boron	µg/l	10	ISO 17025	-	-	320	83	140	83	320	300	300	300
Cadmium (dissolved)	µg/l	0.02	ISO 17025	-	-	0	0	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Chromium (dissolved)	µg/l	0.2	ISO 17025	-	-	0.67	0.67	<0.5	<0.5	0.67	<0.5	<0.5	<0.5
Cobalt (dissolved)	µg/l	0.2	ISO 17025	-	-	0	0	-	-	-	-	-	-
Copper (dissolved)	µg/l	0.5	ISO 17025	-	-	1.2	0.63	0.63	0.94	1.2	<0.5	<0.5	<0.5
Lead (dissolved)	µg/l	0.2	ISO 17025	-	-	0.5	0.5	0.5	0.5	0.5	<0.5	<0.5	<0.5
Mercury (dissolved)	µg/l	0.05	ISO 17025	56	0	0.09	0.09	<0.05	<0.05	0.09	<0.05	<0.05	<0.05
Molybdenum (dissolved)	µg/l	0.05	ISO 17025	-	-	0	0	-	-	-	-	-	-
Nickel (dissolved)	µg/l	0.5	ISO 17025	-	-	1.2	0.5	0.5	0.5	1.2	<0.5	<0.5	<0.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	-	-	0	0	-	-	-	-	-	-
Vanadium (dissolved)	µg/l	0.2	ISO 17025	-	-	0	0	-	-	-	-	-	-
Zinc (dissolved)	µg/l	0.5	ISO 17025	-	-	7.2	5	5.3	5.8	<2.5	7.2	5.0	7.0

Petroleum Hydrocarbons

Total TPH >C6-C40	µg/l	10	NONE	-	-	<10	<10	<10	<10	<10	<10	<10	<10
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U/S = Unsuitable Sample I/S = Insufficient Sample

APPENDIX K
GQRA DATA SCREENING TABLES – WATERS INCLUDING
PROJECT CRONUS

Project / Site name: 315531 EAF Meltshop

Lab Sample Number									1846695	1846696	1846697	1846705	1846706	1846707
Sample Reference									BH315	BH301	BH324	BH331	BH322	BH317
Sample Number									(WATER)	(WATER)	(WATER)	(WATER)	(WATER)	(WATER)
Depth (m)									1.58	1.55	1.42	3.82	3.50	1.37
Date Sampled									02-Aug-2024	02-Aug-2024	02-Aug-2024	02-Aug-2024	02-Aug-2024	02-Aug-2024
Time Taken														
Analytical Parameter (Water Analysis)	Units	Limit of detection	Accreditation Status	RSK EQS or relevant DWS	No. > GAC	Maximum	Minimum (excluding LMDL)							

General Inorganics

pH	pH Units	N/A	ISO 17025	-	-	8.6	7.7	8.4	8.5	8.6	8.1	8.0	7.7
Total Cyanide	µg/l	10	ISO 17025	-	-	0	0	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Sulphate as SO3	µg/l	45	ISO 17026	-	-	84	34	63	34	84	<1	<1	<1

Total Phenols

Total Phenols (HPLC)	µg/l	3.5	NONE	7.7	0	0	0	<0.03	<0.03	<0.03	<0.03	<0.03	<0.03
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Speciated PAHs

Naphthalene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthylene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Acenaphthene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fluorene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Phenanthrene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Anthracene	µg/l	0.01	ISO 17025	-	6	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Fluoranthene	µg/l	0.01	ISO 17025	-	6	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Pyrene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)anthracene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Chrysene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(b)fluoranthene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(k)fluoranthene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(a)pyrene	µg/l	0.01	ISO 17025	0.00017	0	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Indeno(1,2,3-cd)pyrene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Dibenz(a,h)anthracene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
Benzo(ghi)perylene	µg/l	0.01	ISO 17025	-	-	0	0	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Total PAH

Total EPA-16 PAHs	µg/l	0.16	ISO 17025	-	-	0	0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
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Arsenic (dissolved)	µg/l	0.15	ISO 17025	25	2	37	3.3	10	27	37	6.7	3.3	6.6
Boron	µg/l	10	ISO 17025	-	-	320	83	140	83	320	300	300	300
Cadmium (dissolved)	µg/l	0.02	ISO 17025	0.2	0	0	0	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
Chromium (dissolved)	µg/l	0.2	ISO 17025	8.1	0	0.67	0.67	<0.5	<0.5	0.67	<0.5	<0.5	<0.5
Cobalt (dissolved)	µg/l	0.2	ISO 17025	-	-	0	0	-	-	-	-	-	-
Copper (dissolved)	µg/l	0.5	ISO 17025	1	1	1.2	0.63	0.63	0.94	1.2	<0.5	<0.5	<0.5
Lead (dissolved)	µg/l	0.2	ISO 17025	1.3	0	0.5	0.5	0.5	0.5	0.5	<0.5	<0.5	<0.5
Mercury (dissolved)	µg/l	0.05	ISO 17025	0.07	1	0.09	0.09	<0.05	<0.05	0.09	<0.05	<0.05	<0.05
Molybdenum (dissolved)	µg/l	0.05	ISO 17025	-	-	0	0	-	-	-	-	-	-
Nickel (dissolved)	µg/l	0.5	ISO 17025	8.6	0	1.2	0.5	0.5	0.5	1.2	<0.5	<0.5	<0.5
Selenium (dissolved)	µg/l	0.6	ISO 17025	10	-	0	0	-	-	-	-	-	-
Vanadium (dissolved)	µg/l	0.2	ISO 17025	-	-	0	0	-	-	-	-	-	-
Zinc (dissolved)	µg/l	0.5	ISO 17025	6.8	2	7.2	5	5.3	5.8	<2.5	7.2	5.0	7.0

Petroleum Hydrocarbons

Total TPH >C6-C40	µg/l	10	NONE	-	-	<10	<10	<10	<10	<10	<10	<10	<10
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U/S = Unsuitable Sample I/S = Insufficient Sample

Measured concentration in excess of GAC

Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects	# exceeding GAC
Metals									
Arsenic (dissolved)	µg/l	25		222	<1	47	42	5	13
Cadmium (dissolved)	µg/l	0.2		<1	<0.2	47	0	47	6
Chromium (dissolved)	µg/l		0.6	19	<1	47	40	7	
Chromium (hexavalent) (w)	µg/l	0.6		<20	<10	47	0	47	47
Copper (dissolved)	µg/l		3.76	60	<1	47	32	15	
Lead (dissolved)	µg/l	1.3		6	<1	47	10	37	7
Mercury (dissolved)	µg/l	0.07		0.6	<0.1	47	7	40	4
Nickel (dissolved)	µg/l	8.6		30	<1	47	32	15	4
Zinc (dissolved)	µg/l	6.8		17	<1	47	42	5	12
Volatile organic compounds									
1,2,3-Trichlorobenzene	µg/l	0.4		<15	<3	47	0	47	47
1,2,4-Trichlorobenzene	µg/l	0.4		<10	<1	17	0	17	17
1,2,4-Trichlorobenzene	µg/l	0.4		<15	<3	47	0	47	47
1,2-Dichloroethane	µg/l	10		13	<2	47	1	46	1
Chloroform	µg/l	2.5		<5	<1	47	0	47	1
Dichloromethane	µg/l	20		<25	<5	47	0	47	1
Hexachlorobutadiene	µg/l	0.6		<10	<1	17	0	17	17
Hexachlorobutadiene	µg/l	0.6		<5	<1	47	0	47	47
Polycyclic aromatic hydrocarbons (16)									
Acenaphthylene (w)	µg/l	5.8*		121	<0.01	47	37	10	8
Anthracene	µg/l	0.1		<1	<1	5	0	5	5
Anthracene (w)	µg/l	0.1		13.9	<0.01	47	30	17	19
Benzo(a)pyrene	µg/l	0.00017		<1	<1	5	0	5	5
Benzo(a)pyrene (w)	µg/l	0.00017		0.44	<0.01	47	10	37	10
Fluoranthene	µg/l	0.0063		<1	<1	5	0	5	5

Analyte	Unit	GAC	T1	Max	Min	Count	# Detects	# Non-detects	# exceeding
									GAC
Fluoranthene (w)	µg/l	0.0063		14.7	<0.01	47	32	15	32
Naphthalene	µg/l	2		36	<1	5	2	3	2
Naphthalene (w)	µg/l	2		4380	<0.01	47	40	7	15
Semi-volatile organic compounds									
Bis(2-ethylhexyl)phthalate	µg/l	1.3		<100	<10	46	0	46	46
Butylbenzyl phthalate	µg/l	0.75		<10	<1	46	0	46	46
Petroleum hydrocarbons									
Aro >C5-C7 (w)	µg/l	8		4701	<1	47	18	29	12
Aro >C7-C8 (w)	µg/l	74		304	<1	47	12	35	4
Benzene	µg/l	8		3317	<1	47	17	30	12
BTEX - Benzene (w)	µg/l	8		4701	<1	47	18	29	12
Toluene	µg/l	74		270	<1	47	12	35	4
BTEX - Toluene (w)	µg/l	74		304	<1	47	12	35	4
Phenols									
2,4-Dichlorophenol	µg/l	0.42		<10	<1	46	0	46	46
Pentachlorophenol (SVOC)	µg/l	0.4		<10	<1	46	0	46	46
Phenol	µg/l	7.7		668	<1	46	10	36	7
Phenol (w)	µg/l	7.7		960	<10	47	8	39	8
Phenols - Total by HPLC (w)	µg/l	7.7		9150	<10	47	9	38	9

exceeding Max sample (ID, depth and
T1 date)



BH2 (Deep): 4.8-7 (01/21/2022)

47 BH1 (Deep): 3.19 (01/24/2022)

28 BH2 (Deep): 4.8-7 (01/21/2022)
BH206: (30/06/2022)

BH202: (06/15/2022)
BH202: 2.5 (07/21/2022)
BH8: 2.96 (01/24/2022)
BH204: 3 (07/21/2022)



BH202: (06/15/2022)



BH202: 2.5 (07/21/2022)

BH204: 3 (07/21/2022)

BH204: 3 (07/21/2022)

exceeding Max sample (ID, depth and

T1 date)

BH204: 3 (07/21/2022)

BH5 (Shallow): 4.13 (02/16/2022)

BH4 (Shallow): 3.24 (02/15/2022)

BH202: (06/15/2022)

BH202: 2.5 (07/21/2022)

BH202: (06/15/2022)

BH202: (06/15/2022)

BH202: (06/15/2022)

BH202: 2.5 (07/21/2022)

BH202: 2.5 (07/21/2022)

BH202: (06/15/2022)

BH202: (06/15/2022)

APPENDIX L

GQRA DATA SCREENING TABLES

Calculations of borehole hazardous gas flow rate in accordance with BS8485

Project No.: 315531
Client: Tata Steel
Site: EAF Project

In accordance with BS8485 Section 6.3.1 the data presented below are calculations of borehole hazardous gas flow rates (Q_{hg}).

The Q_{hg} can then be used, along with a robust conceptual site model and review of the data collected, to designate a site characteristic (or zone) gas screening value (GSV).

GSVs are used to characterise the potential risk and inform mitigation measures where appropriate.

The assessment below presents calculated Q_{hg} values and compares them directly to Characteristic Situations as presented in BS8485 Table 2.

The ultimate site characteristic GSV (for the site or for individual zones) to inform risk assessment and mitigation measures is detailed in the body of the report, and may be different to the individual calculations below.

The calculations below use peak concentrations and steady state flow to calculate the Q_{hg} .

Characteristic Situation	Hazard potential	GSV
1	Very Low	<0.07
2	Low	<0.7
3	Moderate	<3.5
4	Moderate to High	<15
5	High	<70
6	Very High	>=70

British Standard Institution (BSI) (2019), 'BS 8485:2015+A1:2019. Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings'.

KEY	
Q_{hg}	Borehole hazardous gas flow rate (steady state flow * (peak concentration / 100))
GSV	Gas Screening Value
	GSV / Q_{hg} indicates very low hazard potential
	GSV / Q_{hg} indicates low to moderate hazard potential
	GSV / Q_{hg} indicates moderate or greater hazard potential
	Data exceeds either 1% CH ₄ , 5% CO ₂ or 70 L/hr flow (see BS8485 Table 2)

SUMMARY OF Q_{hg} VALUES PER BOREHOLE, PER MONITORING ROUND

BH NO.	DATE	CH ₄ peak	CH ₄ SS	CO ₂ peak	CO ₂ SS	O ₂ min	Flow SS	Baro	Q_{hg}		CS No.
		%v/v	%v/v	%v/v	%v/v	%v/v	l/hr	mbar	CH ₄	CO ₂	
BH311	01/08/2024	9.7	9.7	0.1	0.1	15.5	0.4	1011	0.04	0.00	CS1
	09/08/2024	9.1	9.1	0.1	0.1	16.2	0.4	1014	0.04	0.00	CS1
BH322	01/08/2024	0.8	0.8	0	0	16.8	0.7	1011	0.01	0.00	CS1
	09/08/2024	0.5	0.5	0	0	17.8	0.6	1014	0.00	0.00	CS1
	30/09/2024	0.1	0.1	0	0	20.1	0	886	0.00	0.00	CS1
	14/11/2024	4.5	4.5	0.1	0.1	15	0	1032	0.00	0.00	CS1
BH324	01/08/2024	0.2	0.2	0.1	0.1	19.5	0.5	1011	0.00	0.00	CS1
	09/08/2024	0.2	0.2	0.1	0.1	19.5	0.4	1014	0.00	0.00	CS1
	30/09/2024	0	0	0.1	0.1	20.1	0	886	0.00	0.00	CS1
	14/11/2024	0.4	0	0.1	0	20.7	0	1032	0.00	0.00	CS1
BH328	01/08/2024	0.1	0.1	0.1	0.1	19.8	0.2	1011	0.00	0.00	CS1
	09/08/2024	0.1	0.1	0	0	19.5	0.2	1014	0.00	0.00	CS1
	30/09/2024	0	0	0.1	0.1	20.3	0.2	867	0.00	0.00	CS1
	29/10/2024	27.2	27	10.8	10.8	0	0	1023	0.00	0.00	CS1
	14/11/2024	25	24.9	9.6	9.6	0.1	0	1032	0.00	0.00	CS1
BH329	01/08/2024	3.2	3.2	0	0	17.2	0.7	1011	0.02	0.00	CS1
	09/08/2024	3.2	3.2	0	0	17.4	0.4	1014	0.01	0.00	CS1
	30/09/2024	0	0	0.1	0.1	20.3	0	886	0.00	0.00	CS1
	29/10/2024	3.5	3.3	0.2	0.2	16.9	0	1023	0.00	0.00	CS1
	14/11/2024	8	3.3	0.2	0.2	16.7	0	1031	0.00	0.00	CS1

WORST-CASE Q_{hg} VALUES PER BOREHOLE

BH NO.	DATE	Maximum CH ₄		Maximum CO ₂		Min O ₂	Max SS Flow	Baro mbar	Maximum Q_{hg}		CS No.
		CH ₄ peak	CH ₄ SS	CO ₂ peak	CO ₂ SS				CH ₄	CO ₂	
		%v/v	%v/v	%v/v	%v/v						
BH311		9.7	9.7	0.1	0.1	15.5	0.4		0.04	0.00	CS1
BH322		4.5	4.5	0.1	0.1	15	0.7		0.03	0.00	CS1
BH324		0.4	0.2	0.1	0.1	19.5	0.5		0.00	0.00	CS1
BH328		27.2	27	10.8	10.8	0	0.2		0.05	0.02	CS1
BH329		8	3.3	0.2	0.2	16.7	0.7		0.06	0.00	CS1

WORST-CASE Q_{hg} CHECK FOR SITE (BS8485 Section 6.3.7.4)

BH NO.	DATE	Maximum CH ₄		Maximum CO ₂		Min O ₂	Max SS Flow	Baro mbar	Maximum Q_{hg}		CS No.
		CH ₄ peak	CH ₄ SS	CO ₂ peak	CO ₂ SS				CH ₄	CO ₂	
		%v/v	%v/v	%v/v	%v/v						
ALL		27.2	27	10.8	10.8	0	0.7		0.19	0.08	CS2

This is a summary of the maximum reported concentrations per borehole (or min for oxygen) EXCLUDING data from entirely flooded response zones															
Exploratory position ID	Response zone top (mbgl)	Response zone base (mbgl)	Response zone geological unit	Number of monitoring rounds	Peak methane max (%/vol)	Steady-state methane max (%/vol)	Peak carbon dioxide max (%/vol)	Carbon dioxide steady-state max (%/vol)	Oxygen min (%/vol)	Peak gas flow max (l/hr)	Steady-state gas flow max (l/hr)	Depth to water min (mbgl)	Depth to water max (mbgl)	Atmospheric pressure min (mb)	Atmospheric pressure max (mb)
BH311	10.5	36.5		2	9.7	9.7	0.1	0.1	15.5	0.4	0.4	DRY	DRY	1011	1014
BH322	1	21		4	4.5	4.5	0.1	0.1	15	0.7	0.7	3.12	3.38	886	1032
BH324	1	23		4	0.4	0.2	0.1	0.1	19.5	0.5	0.5	1.26	1.43	886	1032
BH328	8	38		5	27.2	27	10.8	10.8	0	0.2	0.2	10.3	10.6	867	1032
BH329	5	37.5		5	8	3.3	0.2	0.2	16.7	0.7	0.7	10.03	11.18	886	1031