

APPENDIX G

Generic Health Risk Assessments

Table G1: Heavy Metals & Organics in Tested Samples of Made Ground (Residential with plant uptake (2.5% SOM))

Contaminant	Key statistics				S4UL*	
	Number of samples	Number of detects	Min. Value (mg/kg)	Max. Value (mg/kg)	S4UL (mg/kg)	No. Samples exceeding assessment criteria
Arsenic	8	8	7.5	11.4	37	0
Boron (water sol.)	8	8	0.38	1.26	290	0
Cadmium	8	6	<LOD	3.8	11	0
Chromium III	8	8	41	70.2	910	0
Chromium VI	8	0	<LOD	<LOD	6	0
Copper	8	8	11.5	49.5	2400	0
Lead	8	8	13.4	126	200	0
Mercury	8	8	0.051	0.512	40	0
Nickel	8	8	16.5	56.5	180	0
Selenium	8	0	<LOD	<LOD	250	0
Zinc	8	8	67.5	631	3700	0
Phenols (Mono)	8	0	<LOD	<LOD	550	0
Cyanide (free)	8	0	<LOD	<LOD	3.4	0
<i>Notes to Table</i>						
*	<i>Most appropriate screening values are Suitable 4 Use Level (S4UL) for a “Residential with plant uptake” end use, a sandy loam soil type, pH of 7 and a soil organic matter (SOM) of 2.5%.</i> <i>The soil guideline value (SGV) for lead has been withdrawn and the C4SL for lead is used by CGL directly as a first tier of assessment.</i>					

Table G2: PAHs, TPH and BTEX in tested samples of Made Ground (Residential with plant uptake (2.5% SOM))

Contaminant	Key statistics				S4UL* Residential with plant uptake (2.5% SOM)	
	Number of samples	Number of detects	Min. Value (mg/kg)	Max. Value (mg/kg)	S4UL (mg/kg)	No. Samples exceeding assessment criteria
Naphthalene	8	0	<LOD	<LOD	5.6	0
Acenaphthylene	8	3	<LOD	0.04	420	0
Acenaphthene	8	0	<LOD	<LOD	510	0
Fluorene	8	0	<LOD	<LOD	400	0
Phenanthrene	8	8	<LOD	0.33	220	0
Anthracene	8	5	<LOD	0.12	5400	0
Fluoranthene	8	8	0.07	0.95	560	0
Pyrene	8	8	0.06	0.81	1200	0
Benzo(a)Anthracene	8	8	0.04	0.49	11	0
Chrysene	8	8	0.04	0.47	22	0
Benzo(b)fluoranthene	8	8	0.05	0.57	3.3	0
Benzo(k)fluoranthene	8	8	<LOD	0.2	93	0
Benzo(a)Pyrene	8	8	0.05	0.47	2.7	0
Indeno(123-cd) Pyrene	8	8	0.03	0.31	36	0
Dibenzo(ah)Anthracene	8	4	<LOD	0.06	0.28	0
Benzo(ghi)Perylene	8	8	0.04	0.26	340	0
PCBs	8	0	<LOD	<LOD	0.39	0
Aliphatic C5-C6	8	0	<LOD	<LOD	78	0
Aliphatic C6-C8	8	0	<LOD	<LOD	230	0
Aliphatic C8-C10	8	0	<LOD	<LOD	65	0
Aliphatic C10-C12	8	0	<LOD	<LOD	330	0
Aliphatic C12-C16	8	0	<LOD	<LOD	2400	0
Aromatic C5-C7 (ben)	8	0	<LOD	<LOD	140	0
Aromatic C7-C8 (tol)	8	0	<LOD	<LOD	290	0
Aromatic C8-C10	8	0	<LOD	<LOD	83	0
Aromatic C10-C12	8	0	<LOD	<LOD	180	0
Aromatic C12-C16	8	0	<LOD	<LOD	330	0
Aromatic C16-C21	8	0	<LOD	<LOD	540	0
Aromatic C21-C35	8	3	<LOD	20.3	1500	0
Benzene	8	0	<LOD	<LOD	0.17	0
Toluene	8	0	<LOD	<LOD	290	0
Ethylbenzene	8	0	<LOD	<LOD	110	0

Contaminant	Key statistics				S4UL* Residential with plant uptake (2.5% SOM)	
	Number of samples	Number of detects	Min. Value (mg/kg)	Max. Value (mg/kg)	S4UL (mg/kg)	No. Samples exceeding assessment criteria
Xylene- p & m	8	0	<LOD	<LOD	130	0
Xylene-o	8	0	<LOD	<LOD	140	0
MTBE	8	0	<LOD	<LOD	84	0
Notes to Table						
*		Most appropriate screening values are Suitable 4 Use Level (S4UL) for a “Residential with plant uptake” end use, a sandy loam soil type, pH of 7 and a soil organic matter (SOM) of 2.5%. The soil guideline value (SGV) for lead has been withdrawn and the C4SL for lead is used by CGL directly as a first tier of assessment.				

Table G3: Heavy Metals and Organics in Tested Samples of London Clay (Residential with plant uptake (1% SOM))

Contaminant	Key statistics				S4UL* Residential with plant uptake (1% SOM)	
	Number of samples	Number of detects	Min. Value (mg/kg)	Max. Value (mg/kg)	S4UL (mg/kg)	No. Samples exceeding assessment criteria
Arsenic	2	2	10.6	11.4	37	0
Boron (water sol.)	2	2	0.642	0.733	290	0
Cadmium	2	0	<LOD	<LOD	11	0
Chromium III	2	2	48	70.2	910	0
Chromium VI	2	0	<LOD	<LOD	6	0
Copper	2	2	11.5	23.2	2400	0
Lead	2	2	13.4	14.2	200	0
Mercury	2	2	0.051	0.069	40	0
Nickel	2	2	17.3	56.5	180	0
Selenium	2	0	<LOD	<LOD	250	0
Zinc	2	2	67.5	82.6	3700	0
Phenols (Mono)	2	0	<LOD	<LOD	280	0
Cyanide (free)	2	0	<LOD	<LOD	3.4	0
Notes to Table						
*		Most appropriate screening values are Suitable 4 Use Level (S4UL) for a “Residential with plant uptake” end use, a sandy loam soil type, pH of 7 and a soil organic matter (SOM) of 1%.				

Contaminant	Key statistics				S4UL* Residential with plant uptake (1% SOM)	
	Number of samples	Number of detects	Min. Value (mg/kg)	Max. Value (mg/kg)	S4UL (mg/kg)	No. Samples exceeding assessment criteria
	The soil guideline value (SGV) for lead has been withdrawn and the C4SL for lead is used by CGL directly as a first tier of assessment.					

Table G4: PAHs, TPH and BTEX in tested samples of London Clay (Residential with plant uptake (1% SOM))

Table 8: PAHs, TPH and BTEX in tested samples in the London Clay (Residential with plant uptake (1% SOM)) Contaminant	Key statistics				S4UL* Residential with plant uptake (1% SOM)	
	Number of samples	Number of detects	Min. Value (mg/kg)	Max. Value (mg/kg)	S4UL (mg/kg)	No. Samples exceeding assessment criteria
Naphthalene	2	0	<LOD	<LOD	2.3	0
Acenaphthylene	2	0	<LOD	<LOD	170	0
Acenaphthene	2	0	<LOD	<LOD	210	0
Fluorene	2	0	<LOD	<LOD	170	0
Phenanthrene	2	0	<LOD	<LOD	95	0
Anthracene	2	0	<LOD	<LOD	2400	0
Fluoranthene	2	0	<LOD	<LOD	280	0
Pyrene	2	0	<LOD	<LOD	620	0
Benzo(a)Anthracene	2	0	<LOD	<LOD	7.2	0
Chrysene	2	0	<LOD	<LOD	15	0
Benzo(b)fluoranthene	2	0	<LOD	<LOD	2.6	0
Benzo(k)fluoranthene	2	0	<LOD	<LOD	77	0
Benzo(a)Pyrene	2	0	<LOD	<LOD	2.2	0
Indeno(123-cd) Pyrene	2	0	<LOD	<LOD	27	0
Dibenzo(ah)Anthracene	2	0	<LOD	<LOD	0.24	0
Benzo(ghi)Perylene	2	0	<LOD	<LOD	320	0
PCBs	2	0	<LOD	<LOD	0.39	0
Aliphatic C5-C6	2	0	<LOD	<LOD	42	0
Aliphatic C6-C8	2	0	<LOD	<LOD	100	0
Aliphatic C8-C10	2	0	<LOD	<LOD	27	0
Aliphatic C10-C12	2	0	<LOD	<LOD	130	0
Aliphatic C12-C16	2	0	<LOD	<LOD	1100	0

Table 8: PAHs, TPH and BTEX in tested samples in the London Clay (Residential with plant uptake (1% SOM)Contaminant	Key statistics				S4UL* Residential with plant uptake (1% SOM)	
	Number of samples	Number of detects	Min. Value (mg/kg)	Max. Value (mg/kg)	S4UL (mg/kg)	No. Samples exceeding assessment criteria
Aromatic C5-C7 (ben)	2	0	<LOD	<LOD	70	0
Aromatic C7-C8 (tol)	2	0	<LOD	<LOD	130	0
Aromatic C8-C10	2	0	<LOD	<LOD	34	0
Aromatic C10-C12	2	0	<LOD	<LOD	74	0
Aromatic C12-C16	2	0	<LOD	<LOD	140	0
Aromatic C16-C21	2	0	<LOD	<LOD	260	0
Aromatic C21-C35	2	0	<LOD	<LOD	1100	0
Benzene	2	0	<LOD	<LOD	0.087	0
Toluene	2	0	<LOD	<LOD	130	0
Ethylbenzene	2	0	<LOD	<LOD	47	0
Xylene- p & m	2	0	<LOD	<LOD	56	0
Xylene-o	2	0	<LOD	<LOD	60	0
MTBE	2	0	<LOD	<LOD	49	0
Notes to Table						
*	Most appropriate screening values are Suitable 4 Use Level (S4UL) for a “Residential with plant uptake” end use, a sandy loam soil type, pH of 7 and a soil organic matter (SOM) of 1%. The soil guideline value (SGV) for lead has been withdrawn and the C4SL for lead is used by CGL directly as a first tier of assessment.					