

TABLES

EAST READING MRT
TABLE SUMMARISING SOIL RESULTS AND HIGHLIGHTING EXCEEDANCES ABOVE HUMAN HEALTH ASSESSMENT CRITERIA

SOM 2.5%		Assessment Criteria			Strata	Made Ground	Made Ground	Alluvium	Made Ground	Made Ground	Alluvium	Made Ground	Alluvium	Made Ground	Alluvium	Made Ground	Alluvium	Made Ground	Alluvium	Made Ground	Made Ground	Alluvium	Made Ground	Made Ground	Made Ground	Made Ground
		Allotments	RwHP	Commercial	BH1	BH1	BH1	BH2	BH2	BH2	BH3	BH3	HP1	HP1	HP2	HP2	HP2A	HP3	HP3	TP1	TP1	TP1	TP2	TP2	TP3	TP3
Analyte	Units				0.4	0.8	2.4	0.3	0.9	2.5	0.4	2.2	0.6	2.3	0.3	1.2	1.8	0.7	1.7	0.5	1.2	2.3	0.4	1.1	0.4	1.0
Stones BG 2.6/3.0	%	-	-	-																						
Moisture content at 30 C	%	-	-	-																						
Arsenic*	mg/kg	43	37	640	37		15		39	18	47	15	30	20	39		19	25	17		37	25	67		30	19
Cadmium	mg/kg	1.9	11	190	0.3		0.4		0.3	0.4	0.5	0.3	1.1	0.4	0.5		0.3	0.4	0.4		0.7	0.6	0.7		0.9	0.7
Chromium Trivalent	mg/kg	18000	910	8600																						
Chromium Hexavalant*	mg/kg	1.8	6	33	1		1		1	1	1	1	1	1	1		1	1	1		1	1	1		1	1
Copper	mg/kg	520	2400	68000	410		19		88	18	110	16	160	49	120		16	120	35		240	110	120		240	160
Lead*	mg/kg	80	200	2300	230		40		130	31	100	17	170	170	230		43	70	83		410	280	130		290	150
Mercury	mg/kg	19	1.2	58	12		5.6		0.34	0.08	0.21	0.07	1.7	43	0.61		3	0.08	0.16		3.6	39	0.58		0.13	6.1
Nickel	mg/kg	53	130	980	29		36		35	33	46	31	130	26	39		27	59	24		89	28	49		70	71
Selenium	mg/kg	88	250	12000	0.7		0.6		0.9	0.6	0.9	0.6	0.8	3.2	0.6		1.2	0.5	1.6		0.7	4	1		0.9	1
Zinc	mg/kg	620	3700	730000	100		94		77	90	94	84	320	100	140		81	120	76		260	160	120		140	240
Beryllium	mg/kg	35	1.7	12																						
Boron	mg/kg	45	290	240000																						
Vanadium	mg/kg	91	410	9000																						
Cyanide (Total)	mg/kg	-	-	-																						
Organic matter	%	-	-	-	11		2.3		2.9	2	5.3	1.8	7.4	5.8	4.5		1.8	8.7	4.9		6.4	5.9	8.1		6.2	8
Phenol, Total	mg/kg	42	200	690		0.1		0.1								0.1				0.1				0.1		
Sulphate (Total) as SO4	%	-	-	-									580	170	27		390	91	1100		1300	790	1400		200	410
pH	pH Units	-	-	-									7.3	7.8	8		7.9	7.9	7.7		7.4	7.6	7.4		6.5	7.5
>C5 to C6 Aliphatic	mg/kg	1700	78	5900	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
>C6 to C8 Aliphatic	mg/kg	5600	230	17000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
>C8 to C10 Aliphatic	mg/kg	770	65	4800	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
>C10 to C12 Aliphatic	mg/kg	4400	330	23000	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
>C12 to C16 Aliphatic	mg/kg	13000	2400	82000	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
>C16 to C21 Aliphatic	mg/kg	-	-	-	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
>C21 to C35 Aliphatic	mg/kg	-	-	-	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
>C16 to C35 Aliphatic	mg/kg	270000	92000	1700000	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
>C35 to C44 Aliphatic	mg/kg	270000	92000	1700000																						
Total Aliphatic C5-35	mg/kg	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
>C5 to C7 Aromatic	mg/kg	27	140	46000																						
>C7 to C8 Aromatic	mg/kg	51	290	110000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
>C8 to C10 Aromatic	mg/kg	21	83	8100	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
>C10 to C12 Aromatic	mg/kg	31	180	28000	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
>C12 to C16 Aromatic	mg/kg	57	330	37000	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	1.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5
>C16 to C21 Aromatic	mg/kg	110	540	28000	3	0.6	0.6	2.8	0.8	0.6	0.6	4.4	0.6	0.6	1	1.5	0.6	0.6	0.6	13	0.6	0.6	0.6	0.6	0.6	0.6
>C21 to C35 Aromatic	mg/kg	820	1500	28000	2.8	1.4	1.4	3.6	1.4	1.4	1.4	5.8	1.4	1.4	1.7	4.7	1.4	1.4	1.4	23	1.4	1.4	1.4	1.4	2.5	1.4
>C35 to C44 Aromatic	mg/kg	820	1500	28000																						
Total Aromatic C5-C35	mg/kg	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	38	10	10	10	10	10	10
TPH Ali/Aro	mg/kg	-	-	-	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	38	10	10	10	10	10	10
EPH (C10-C40)	mg/kg	-	-	-																						
Benzene*	mg/kg	0.034	0.17	47	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Ethylbenzene	mg/kg	39	110	13000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Toluene	mg/kg	51	290	110000	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Xylene	mg/kg	67	130	14000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
MTBE	mg/kg	-	-	-		0.01		0.01								0.01				0.01				0.01		
naphthalene	mg/kg	10	5.6	460	0.38	0.3	0.03	0.2	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.2	0.03	0.03	0.03	2.2	0.05	0.03	0.03	0.1	0.05	0.03
acenaphthylene	mg/kg	69	420	97000	0.04	0.1	0.03	0.2	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.2	0.03	0.03	0.03	1.2	0.04	0.03	0.03	0.1	0.06	0.03
acenaphthene	mg/kg	85	510	97000	0.03	0.1	0.03	0.1	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.1	0.03	0.03	0.03	0.05	0.03	0.03	0.03	0.1	0.2	0.03
fluorene	mg/kg	67	400	68000	0.03	0.1	0.03	0.1	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.1	0.03	0.03	0.03	0.2	0.03	0.03	0.03	0.1	0.14	0.03
phenanthrene	mg/kg	38	220	22000	0.55	0.3	0.03	1.2	0.15	0.03	0.03	0.03	0.08	0.03	0.48	0.4	0.03	0.03	0.03	4.7	0.26	0.03	0.09	0.3	1.8	0.1
anthracene	mg/kg	950	5400	540000	0.1	0.1	0.03	0.4	0.04	0.03	0.03	0.03	0.03	0.03	0.13	0.2	0.03	0.03	0.03	1	0.05	0.03	0.03	0.1	0.39	0.03
fluoranthene	mg/kg	130	560	23000	1	0.7	0.03	2.7	0.36	0.03	0.12	0.03	0.24	0.03	1.1	1.9	0.04	0.06	0.03	4.7	0.59	0.03	0.23	0.6	2.2	0.16
pyrene	mg/kg	270	1200	54000	1.1	0.9	0.03	2.4	0.33	0.03	0.11	0.03	0.24	0.03	0.96	1.9	0.04	0.06	0.03	4.2	0.59	0.03	0.21	0.6	1.9	0.14
benzo(a)anthracene	mg/kg	6.5	11	170	0.38	0.4	0.03	1.5	0.14	0.03	0.05	0.03	0.12	0.03	0.43	1.2	0.03	0.03	0.03	4.3	0.21	0.03	0.09	0.3	0.75	0.05
chrysene	mg/kg	9.4	22	350	0.42	0.5	0.03	1.6	0.15	0.03	0.06	0.03	0.14	0.03	0.49	1.2	0.03	0.03	0.03	5	0.28	0.03	0.11	0.3	0.82	0.08
benzo(b)fluoranthene	mg/kg	2.1	3.3	44	0.39	0.4	0.03	1.9	0.18	0.03	0.06	0.03	0.17	0.03	0.53	1.9	0.03	0.03	0.03	6.8	0.28	0.03	0.12	0.4	0.8	0.06
benzo(k)fluoranthene	mg/kg	75	93	1200	0.16	0.2	0.03	0.8	0.07	0.03	0.03	0.03	0.08	0.03	0.19	0.7	0.03	0.03	0.03	2.5	0.12	0.03	0.05	0.2	0.33	0.03
benzo(a)pyrene*	mg/kg	2	2																							

EAST READING MRT

TABLE SUMMARISING SOIL RESULTS AND HIGHLIGHTING EXCEEDANCES ABOVE HUMAN HEALTH ASSESSMENT CRITERIA

SOM 2.5%		Assessment Criteria			TP3	TP4	TP4
Analyte	Units	Allotments	RwHP	Commercial	1.9	0.5	1.0
Stones BG 2.6/3.0	%	-	-	-			
Moisture content at 30 C	%	-	-	-			
Arsenic*	mg/kg	43	37	640	25	37	22
Cadmium	mg/kg	1.9	11	190	0.6	1.6	1.3
Chromium Trivalent	mg/kg	18000	910	8600			
Chromium Hexavalant*	mg/kg	1.8	6	33	1	1	1
Copper	mg/kg	520	2400	68000	87	200	160
Lead*	mg/kg	80	200	2300	180	570	410
Mercury	mg/kg	19	1.2	58	3.7	3.9	160
Nickel	mg/kg	53	130	980	33	180	97
Selenium	mg/kg	88	250	12000	2.3	2.3	0.7
Zinc	mg/kg	620	3700	730000	150	320	490
Beryllium	mg/kg	35	1.7	12			
Boron	mg/kg	45	290	240000			
Vanadium	mg/kg	91	410	9000			
Cyanide (Total)	mg/kg	-	-	-			
Organic matter	%	-	-	-	6.2	7.7	5.7
Phenol, Total	mg/kg	42	200	690			
Sulphate (Total) as SO4	%	-	-	-	300	150	170
pH	pH Units	-	-	-	7.7	7.3	8
>C5 to C6 Aliphatic	mg/kg	1700	78	5900	0.01	0.01	0.01
>C6 to C8 Aliphatic	mg/kg	5600	230	17000	0.01	0.01	0.01
>C8 to C10 Aliphatic	mg/kg	770	65	4800	0.01	0.01	0.01
>C10 to C12 Aliphatic	mg/kg	4400	330	23000	1.5	1.5	1.5
>C12 to C16 Aliphatic	mg/kg	13000	2400	82000	1.2	1.2	1.2
>C16 to C21 Aliphatic	mg/kg	-	-	-	1.5	1.5	1.5
>C21 to C35 Aliphatic	mg/kg	-	-	-	3.4	3.4	3.4
>C16 to C35 Aliphatic	mg/kg	270000	92000	1700000	4.9	4.9	4.9
>C35 to C44 Aliphatic	mg/kg	270000	92000	1700000			
Total Aliphatic C5-35	mg/kg	-	-	-	10	10	10
>C5 to C7 Aromatic	mg/kg	27	140	46000			
>C7 to C8 Aromatic	mg/kg	51	290	110000	0.01	0.01	0.01
>C8 to C10 Aromatic	mg/kg	21	83	8100	0.01	0.01	0.01
>C10 to C12 Aromatic	mg/kg	31	180	28000	0.9	0.9	0.9
>C12 to C16 Aromatic	mg/kg	57	330	37000	0.5	0.5	0.5
>C16 to C21 Aromatic	mg/kg	110	540	28000	0.6	0.6	0.6
>C21 to C35 Aromatic	mg/kg	820	1500	28000	1.4	1.4	1.4
>C35 to C44 Aromatic	mg/kg	820	1500	28000			
Total Aromatic C5-C35	mg/kg	-	-	-	10	10	10
TPH Ali/Aro	mg/kg	-	-	-	10	10	10
EPH (C10-C40)	mg/kg	-	-	-			
Benzene*	mg/kg	0.034	0.17	47	0.01	0.01	0.01
Ethylbenzene	mg/kg	39	110	13000	0.01	0.01	0.01
Toluene	mg/kg	51	290	110000	0.01	0.01	0.01
Xylene	mg/kg	67	130	14000	0.01	0.01	0.01
MTBE	mg/kg	-	-	-			
naphthalene	mg/kg	10	5.6	460	0.03	0.03	0.03
acenaphthylene	mg/kg	69	420	97000	0.03	0.03	0.03
acenaphthene	mg/kg	85	510	97000	0.03	0.03	0.03
fluorene	mg/kg	67	400	68000	0.03	0.03	0.03
phenanthrene	mg/kg	38	220	22000	0.07	0.2	0.03
anthracene	mg/kg	950	5400	540000	0.03	0.03	0.03
fluoranthene	mg/kg	130	560	23000	0.28	0.28	0.03
pyrene	mg/kg	270	1200	54000	0.28	0.24	0.03
benzo(a)anthracene	mg/kg	6.5	11	170	0.09	0.09	0.03
chrysene	mg/kg	9.4	22	350	0.16	0.15	0.03
benzo(b)fluoranthene	mg/kg	2.1	3.3	44	0.16	0.18	0.03
benzo(k)fluoranthene	mg/kg	75	93	1200	0.07	0.07	0.03
benzo(a)pyrene*	mg/kg	2	2.7	35	0.09	0.07	0.03
indeno(1,2,3-c,d)pyrene	mg/kg	21	36	510	0.09	0.14	0.03
dibenzo(ah)anthracene	mg/kg	0.27	0.28	3.6	0.03	0.03	0.03
benzo(g,h,i)perylene	mg/kg	470	340	4000	0.09	0.2	0.03
Coal Tar (Bap as surrogate)	mg/kg	0.67	0.98	15	0.09	0.07	0.03
PCB (as Aroclors)	mg/kg	-	-	-			
1,2 Dichloroethane	mg/kg	0.89	3.4	550			
1,1,1 Trichloroethane (TCA)	mg/kg	110	18	1300			
1,1,1,2 Tetrachloroethane	mg/kg	1.9	2.8	250			
1,1,2,2 Tetrachloroethane	mg/kg	0.89	3.4	550			
Tetrachloroethene (PCE)	mg/kg	1.5	0.39	42			
Carbon Tetrachloride	mg/kg	1	0.056	6.3			
Trichloroethene (TCE)	mg/kg	0.091	0.034	2.6			
Trichloromethane (Chloroform)	mg/kg	0.091	0.034	2.6			
Vinyl Chloride (Chloroethene)	mg/kg	0.001	0.00087	0.077			
Asbestos	TEXT	-	-	-			
Fluoride	mg/kg	-	-	-			
Molybdenum	mg/kg	-	-	-			

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* Category 4 Screening Value @ 6% SOM



EAST READING MRT
TABLE SUMMARISING WATER RESULTS AND HIGHLIGHTING EXCEEDANCES ABOVE WATER
ASSESSMENT CRITERIA

		Assessment Criteria	BH1	BH2	BH3	HP1	HP3	SW1	SW2	SW3
Analyte	Units	Human Consumption	23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017
Arsenic	µg/l	10	3.4	2.1	1.2			0.6	0.81	0.89
Cadmium	µg/l	5	0.03	0.04	0.03			0.03	0.03	0.03
Chromium Trivalent	µg/l	-	1	1	1			5.1	5.7	5.8
Copper	µg/l	2000	0.4	1.9	1.2			5	3.8	3.1
Lead	µg/l	10	0.23	0.69	3.9			0.4	0.6	0.46
Mercury	µg/l	1	0.01	0.01	0.01			0.01	0.01	0.01
Nickel	µg/l	20	7.2	12	2.9			1.2	1.8	1.2
Selenium	µg/l	10	1.1	1.2	3.8			1	0.88	0.8
Zinc	µg/l	5000	6	110	10			5.2	5.4	8.3
Chloride	µg/l	250000	34	80	58			31	30	30
Sulphate	mg/l	250	320	540	200			41	49	56
pH	pH Units	-	7.1	7	7.2	7.1	7.3	8	8.2	8.2
>C5 to C6 Aliphatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C6 to C8 Aliphatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C8 to C10 Aliphatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C10 to C12 Aliphatic	µg/l	-	1	1	1	1	1	1	1	1
>C12 to C16 Aliphatic	µg/l	-	1	1	1	1	1	1	1	1
>C16 to C21 Aliphatic	µg/l	-	1	2.8	1	1	1	1	1	1
>C21 to C35 Aliphatic	µg/l	-	1	8.4	1	1	1	1	1	1
Total Aliphatic C5-35	µg/l	-	10	11	10	10	10	10	10	10
>C5 to C7 Aromatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C7 to C8 Aromatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C8 to C10 Aromatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C10 to C12 Aromatic	µg/l	-	1	1	1	1	1	1	1	1
>C12 to C16 Aromatic	µg/l	-	1	1	1	1	1	1	1	1
>C16 to C21 Aromatic	µg/l	-	1	1	1	1	1	1	1	1
>C21 TO C35 Aromatic	µg/l	-	1	1	1	1	1	1	1	1
Total Aromatic C5-C35	µg/l	-	10	10	10	10	10	10	10	10
TPH Ali/Aro	µg/l	10	10	11	10	10	10	10	10	10
Benzene	µg/l	1	1	1	1	1	1	1	1	1
Ethylbenzene	µg/l	300	1	1	1	1	1	1	1	1
Toluene	µg/l	700	1	1	1	1	1	1	1	1
Xylene	µg/l	500	1	1	1	1	1	1	1	1
naphthalene	µg/l	-	0.03	0.06	0.02	0.77	0.02	0.01	0.01	0.01
acenaphthylene	µg/l	-	0.01	0.02	0.02	0.06	0.01	0.01	0.01	0.01
acenaphthene	µg/l	-	0.01	0.02	0.38	0.02	0.01	0.01	0.01	0.01
fluorene	µg/l	-	0.01	0.03	0.01	0.05	0.01	0.01	0.01	0.01
phenanthrene	µg/l	-	0.01	0.09	0.01	0.09	0.01	0.01	0.01	0.01
anthracene	µg/l	-	0.01	0.02	0.01	0.02	0.01	0.01	0.01	0.01
fluoranthene	µg/l	-	0.02	0.07	0.01	0.03	0.03	0.01	0.02	0.01
pyrene	µg/l	-	0.05	0.17	0.04	0.03	0.06	0.01	0.02	0.01
benzo(a)anthracene	µg/l	-	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
chrysene	µg/l	-	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
benzo(b)fluoranthene	µg/l	0.1	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
benzo(k)fluoranthene	µg/l	-	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
benzo(a)pyrene	µg/l	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
benzo(g,h,i)perylene	µg/l	-	0.01	0.04	0.01	0.01	0.02	0.01	0.01	0.01
dibenzo(ah)anthracene	µg/l	-	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
indeno(1,2,3-c,d)pyrene	µg/l	-	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Total PAH	µg/l	0.1	0.11	0.62	0.48	1.1	0.12	0.04	0.07	0.04

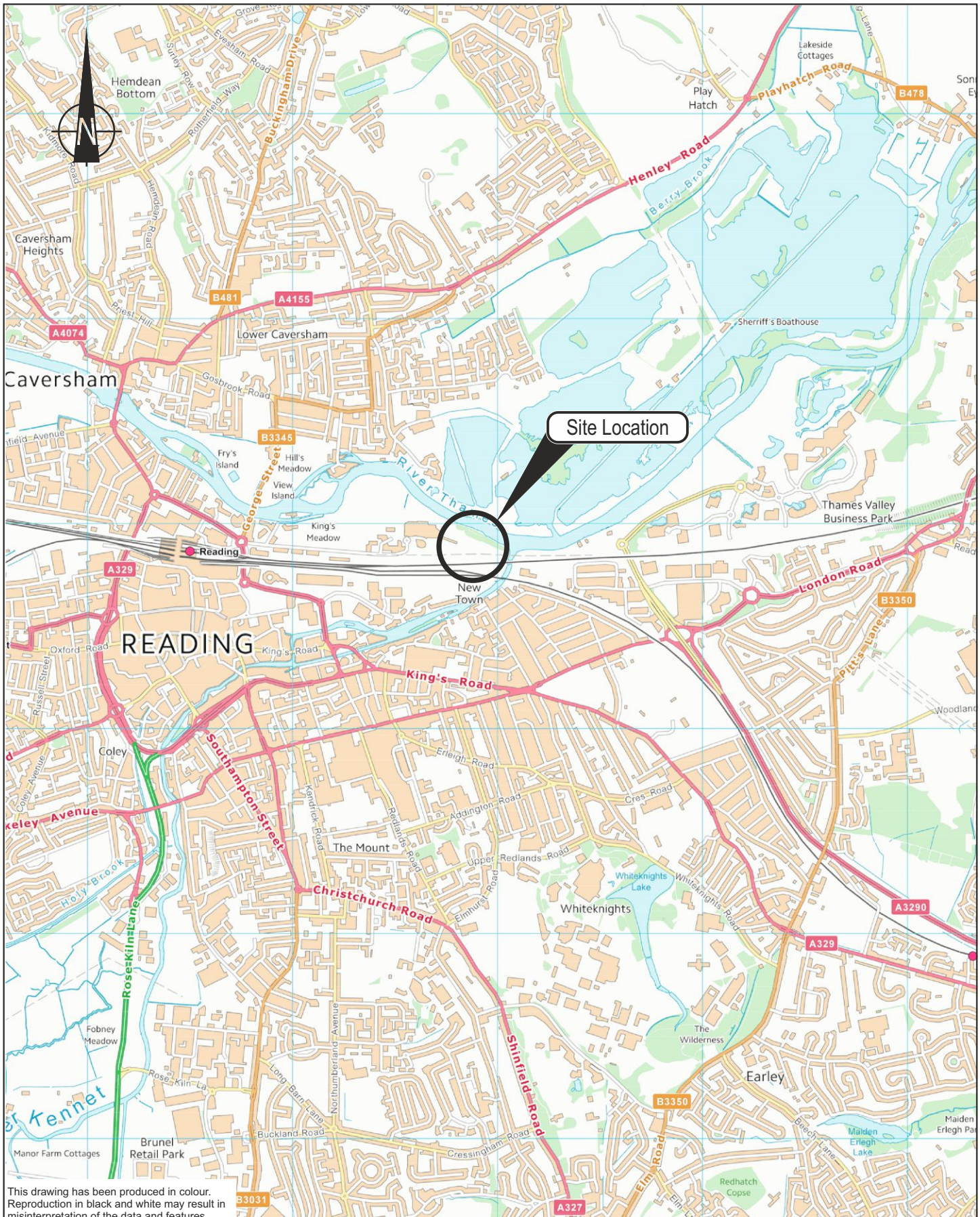


EAST READING MRT

TABLE SUMMARISING WATER RESULTS AND HIGHLIGHTING EXCEEDANCES ABOVE WATER ASSESSMENT CRITERIA

		Assessment Criteria	BH1	BH2	BH3	HP1	HP3	SW1	SW2	SW3
Analyte	Units	Fresh Water	23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017	23/03/2017
Arsenic	µg/l	20	3.4	2.1	1.2			0.6	0.81	0.89
Cadmium	µg/l	0.08	0.03	0.04	0.03			0.03	0.03	0.03
Chromium Trivalent	µg/l	4.7	1	1	1			5.1	5.7	5.8
Copper	µg/l	1	0.4	1.9	1.2			5	3.8	3.1
Lead	µg/l	1.2	0.23	0.69	3.9			0.4	0.6	0.46
Mercury	µg/l	0.07	0.01	0.01	0.01			0.01	0.01	0.01
Nickel	µg/l	4	7.2	12	2.9			1.2	1.8	1.2
Selenium	µg/l	-	1.1	1.2	3.8			1	0.88	0.8
Zinc	µg/l	10.9	6	110	10			5.2	5.4	8.3
Chloride	µg/l	-	34	80	58			31	30	30
Sulphate	mg/l	-	320	540	200			41	49	56
pH	pH Units	-	7.1	7	7.2	7.1	7.3	8	8.2	8.2
>C5 to C6 Aliphatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C6 to C8 Aliphatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C8 to C10 Aliphatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C10 to C12 Aliphatic	µg/l	-	1	1	1	1	1	1	1	1
>C12 to C16 Aliphatic	µg/l	-	1	1	1	1	1	1	1	1
>C16 to C21 Aliphatic	µg/l	-	1	2.8	1	1	1	1	1	1
>C21 to C35 Aliphatic	µg/l	-	1	8.4	1	1	1	1	1	1
Total Aliphatic C5-35	µg/l	-	10	11	10	10	10	10	10	10
>C5 to C7 Aromatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C7 to C8 Aromatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C8 to C10 Aromatic	µg/l	-	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
>C10 to C12 Aromatic	µg/l	-	1	1	1	1	1	1	1	1
>C12 to C16 Aromatic	µg/l	-	1	1	1	1	1	1	1	1
>C16 to C21 Aromatic	µg/l	-	1	1	1	1	1	1	1	1
>C21 TO C35 Aromatic	µg/l	-	1	1	1	1	1	1	1	1
Total Aromatic C5-C35	µg/l	-	10	10	10	10	10	10	10	10
TPH Ali/Aro	µg/l	-	10	11	10	10	10	10	10	10
Benzene	µg/l	10	1	1	1	1	1	1	1	1
Ethylbenzene	µg/l	-	1	1	1	1	1	1	1	1
Toluene	µg/l	74	1	1	1	1	1	1	1	1
Xylene	µg/l	30	1	1	1	1	1	1	1	1
naphthalene	µg/l	2	0.03	0.06	0.02	0.77	0.02	0.01	0.01	0.01
acenaphthylene	µg/l	-	0.01	0.02	0.02	0.06	0.01	0.01	0.01	0.01
acenaphthene	µg/l	-	0.01	0.02	0.38	0.02	0.01	0.01	0.01	0.01
fluorene	µg/l	-	0.01	0.03	0.01	0.05	0.01	0.01	0.01	0.01
phenanthrene	µg/l	-	0.01	0.09	0.01	0.09	0.01	0.01	0.01	0.01
anthracene	µg/l	0.1	0.01	0.02	0.01	0.02	0.01	0.01	0.01	0.01
fluoranthene	µg/l	0.0063	0.02	0.07	0.01	0.03	0.03	0.01	0.02	0.01
pyrene	µg/l	-	0.05	0.17	0.04	0.03	0.06	0.01	0.02	0.01
benzo(a)anthracene	µg/l	-	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
chrysene	µg/l	-	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
benzo(b)fluoranthene	µg/l	0.017	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
benzo(k)fluoranthene	µg/l	0.017	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
benzo(a)pyrene	µg/l	0.0017	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
benzo(g,h,i)perylene	µg/l	0.0082	0.01	0.04	0.01	0.01	0.02	0.01	0.01	0.01
dibenzo(ah)anthracene	µg/l	-	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
indeno(1,2,3-c,d)pyrene	µg/l	-	0.01	0.02	0.01	0.01	0.01	0.01	0.01	0.01
Total PAH	µg/l	-	0.11	0.62	0.48	1.1	0.12	0.04	0.07	0.04

FIGURES



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Site Grid Ref: SU 730 738



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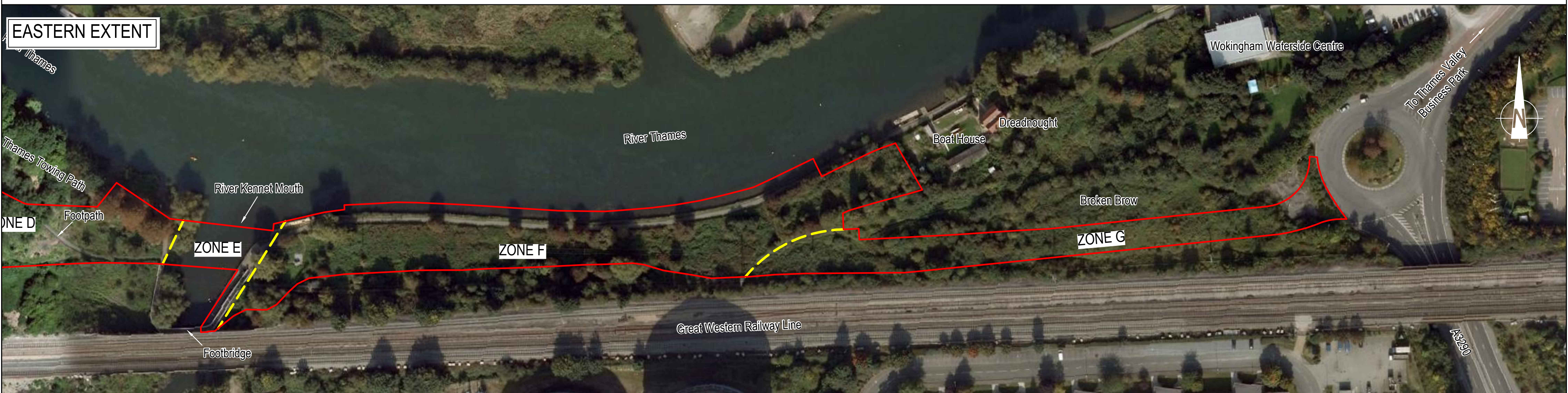
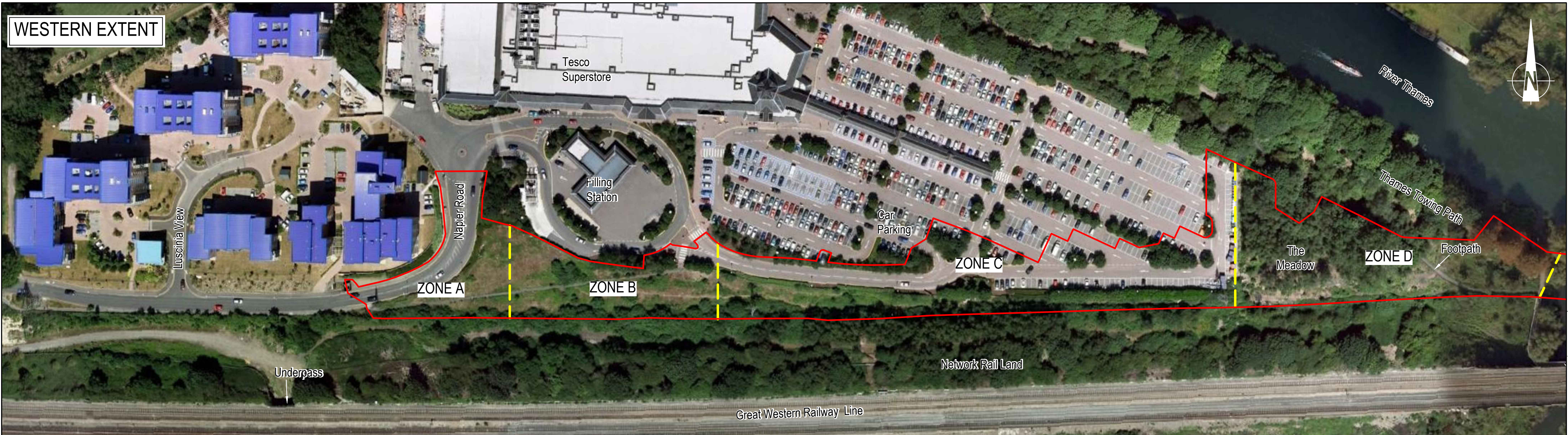
Client  **Reading**
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**PROPOSED MRT SCHEME,
EAST READING**

SITE LOCATION PLAN

Date	02.05.2017
A4 Scale	1:25 000
Drawn by	davco
Checked by	AZ
Revision	0
FIGURE 1	



Key

Approximate Site Boundary

Note:
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PROPOSED MRT SCHEME, EAST READING

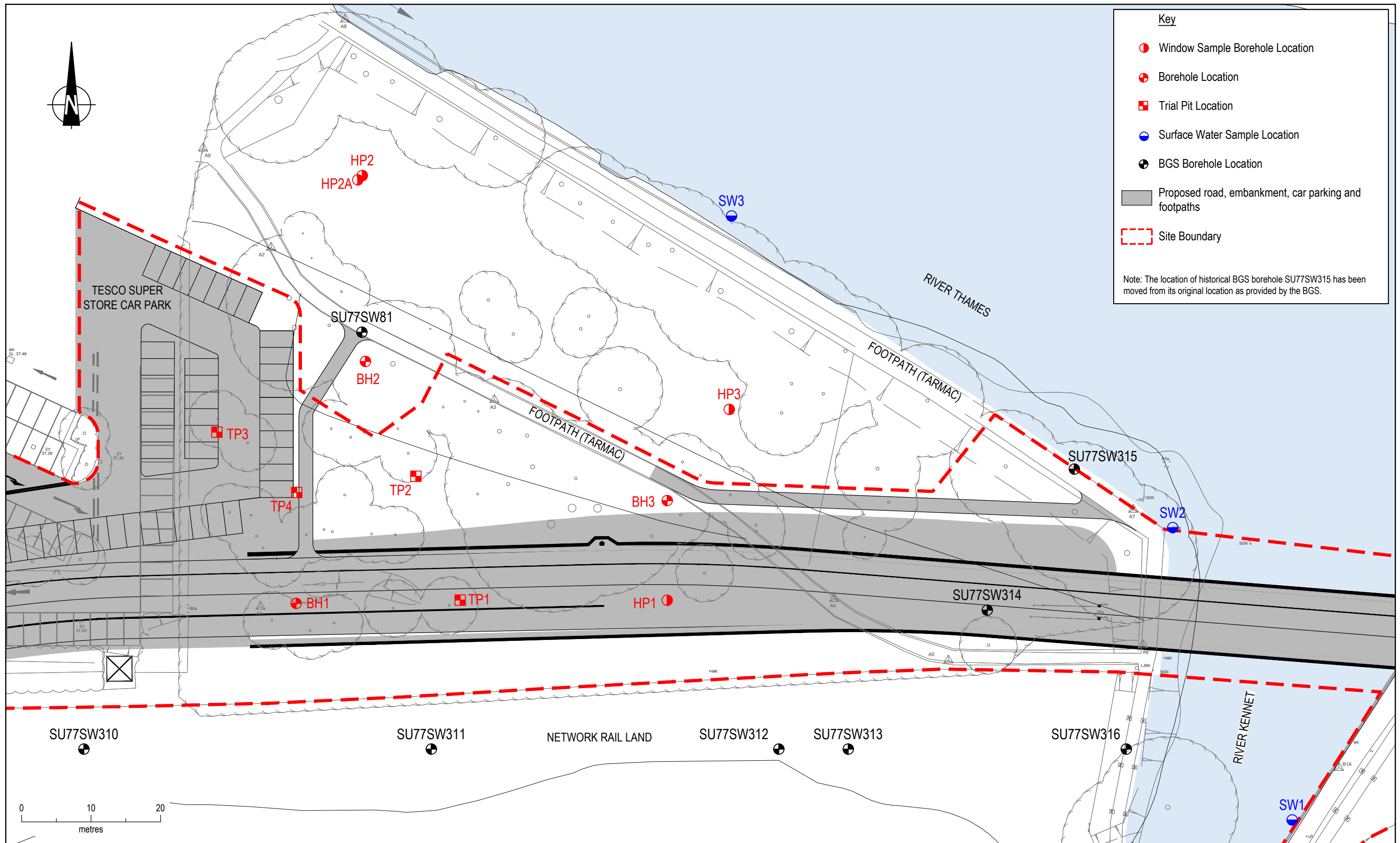
SITE LAYOUT PLAN

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Date of 1st Issue 02.05.2017	Drawn by davco
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2

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PROPOSED MRT SCHEME, EAST READING

EXPLORATORY HOLE LOCATION PLAN

Date 02.05.2017

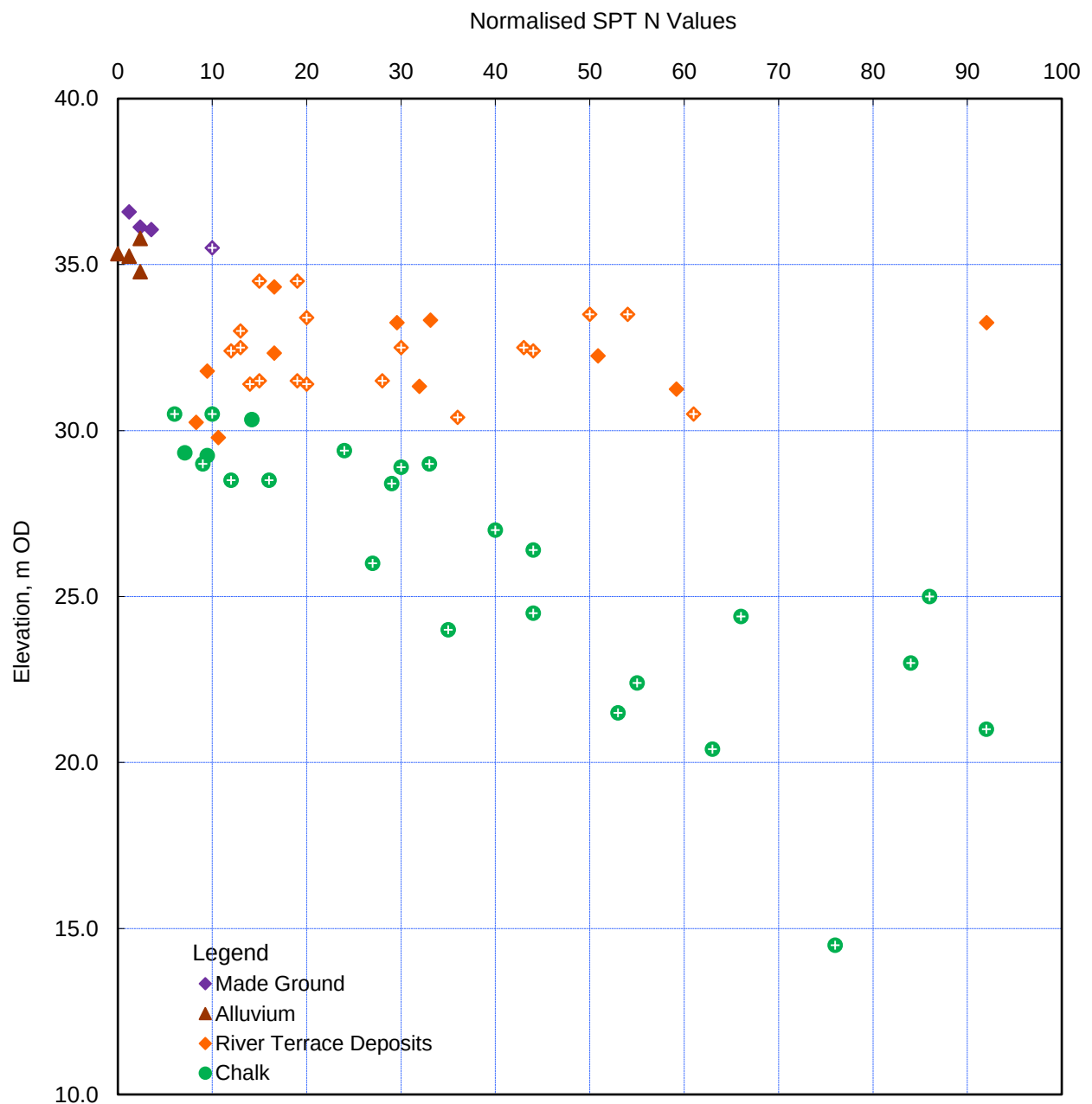
A3 Scale 1:500

Drawn by davco

Checked by AZ

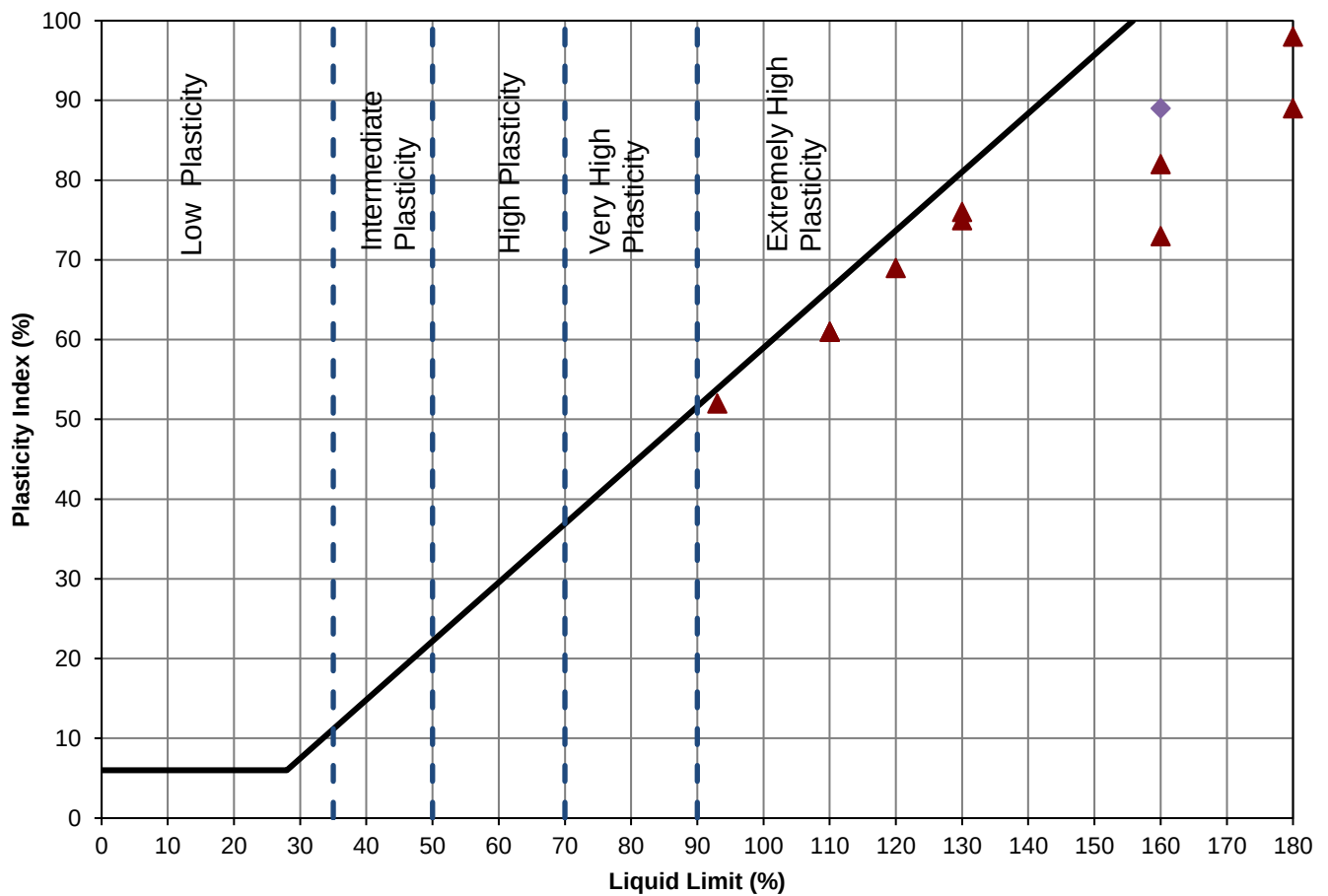
Figure Number

3



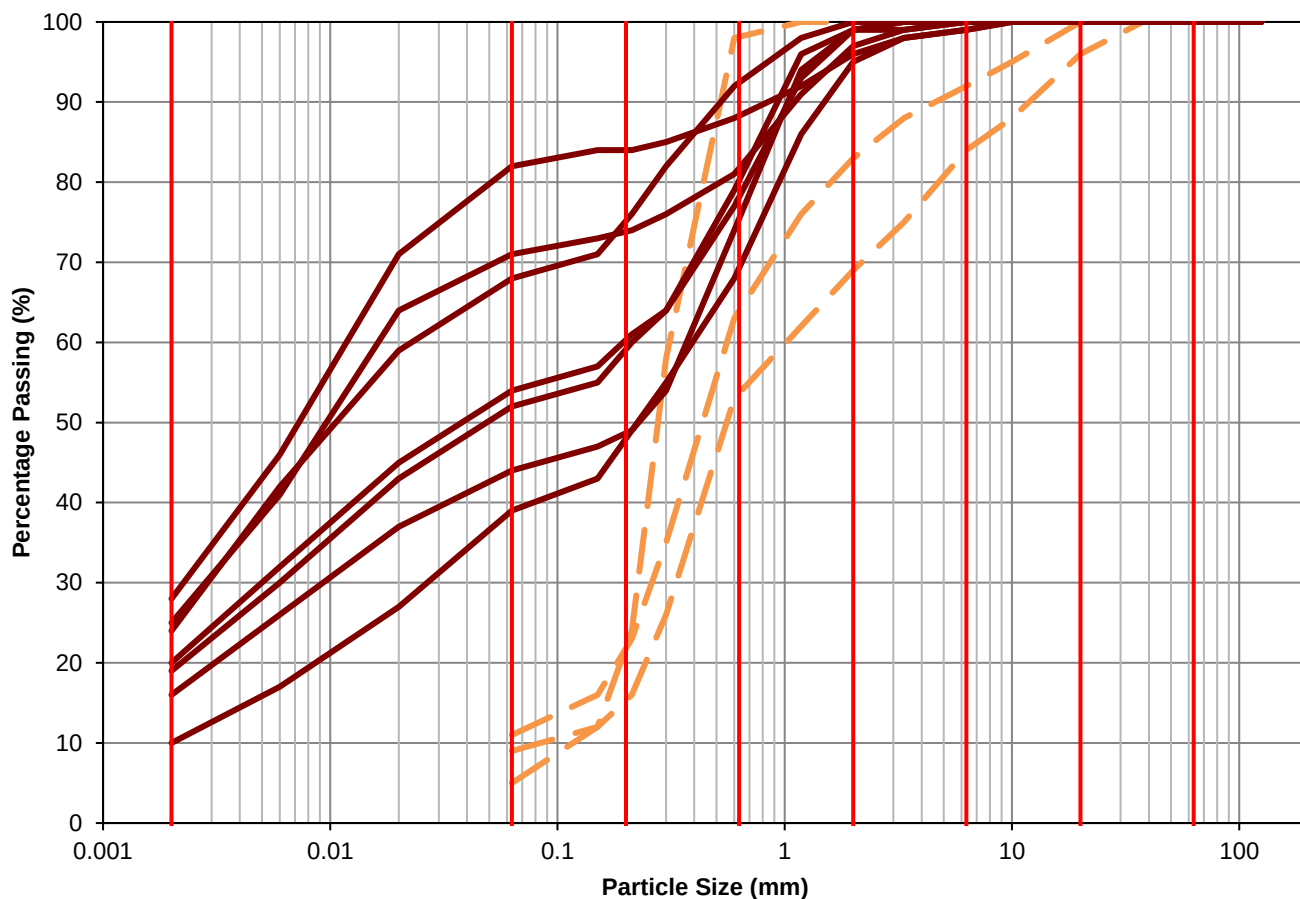
- Note: 1. SPT N values have been normalised for hammer efficiency
 2. Selected Data: Zone D only
 3. Symbols marked + denote data from historical ground investigations
 4. Values from historical ground investigations were normalised using an assumed hammer efficiency of 60%

 Caversham Bridge House, Waterman Place, Reading, RG1 8DN Tel 0118 950 0761 Fax 0118 959 7499	Client  Reading Borough Council Working better with you	NORMALISED SPT N VALUES PROPOSED MRT SCHEME, EAST READING	Date	May 2017
			A4 Scale	nts
			Drawn	az
			Checked	rht
			Figure	



▲ Alluvium ◆ Made Ground — A - Line

Clay	Silt	Fine	Med	Coarse	Fine	Med	Coarse	Cobbles
		Sand			Gravel			



— Alluvium - - - River Terrace Deposits

APPENDIX 1

1 Introduction

The aim of this document is to present an explanation for the selection of the assessment criteria routinely used by PBA when undertaking a Tier 2 contamination risk assessment. Any deviation from the routine criteria and/or selection of criteria for parameters not covered in this document will be described in the report text.

A Tier 2 assessment is a quantitative assessment using published criteria to screen the site-specific contamination testing data and identify potential hazards to specific receptors. Generic criteria are typically cautious in derivation and exceedance does not indicate that a site is statutorily contaminated and/or necessarily unsuitable for use in the planning context. These criteria are used to identify situations where further assessment and/or action may be required.

This document is divided into general introductory text and sections on soils, waters and gases.

2 General Notes

This document should be read in conjunction with another entitled "PBA Methodology for Assessment of Land Contamination" which summarises the legislative regime and our approach to ground contamination and risk assessment.

Any PBA interpretation of contamination test results is based on a scientific and engineering appraisal. The perceptions of, for example, banks, insurers, lay people etc are not taken into account.

Any tables included in this document are produced for ease of reference to the criteria, they do not in any way replace the documents of origin (which are fully referenced) and which should be read to ensure appropriate use and interpretation of the data.

Generic criteria provide an aid to decision-making, but they do not replace the need for sound professional judgement in risk assessment (EA, 2006b). The criteria are based on numerous and complex assumptions. The appropriateness of these assumptions in a site-specific context requires confirmation on a project by project basis. Our interpretative report will comment on the appropriateness of the routine criteria for project objectives or ground conditions. It is important to note that if the use of the published criteria is challenged, it may be necessary to carry out modelling to generate site-specific assessment criteria.

3 Criteria for Assessing Soil Results

3.1 Potential Harm to Human Health

The criteria routinely used by PBA as Tier 2 soil screening values for the protection of human health are:-

- Suitable 4 Use Levels (S4ULs) published in 2015 which adopt a minimal or tolerable risk as described in SR2 (EA 2009c).
- Category 4 Screening Levels (C4SLs) published in 2014 which adopt a "low level of toxicological concern" (LLTC) as the toxicological benchmark.

The criteria have been generated using the Contaminated Land Exposure Assessment model (CLEA) and supporting technical guidance (EA, 2009a, 2009b, 2009c). The CLEA model uses generic assumptions about the fate and transport of chemicals in the environment and a generic conceptual model for site conditions and human behaviour to estimate child and adult exposures to soil contaminants for those potentially living, working, and/or playing on contaminated sites over long time periods (EA, 2009b).

The handbook (EA 2009e) referring to version 1.05 is still valid for the 1.071 software. An update to the software (1.071) was published on 04/09/2015. The update includes the library data sets from the DEFRA research project SP1010 (Development of Category 4 Screening Levels for assessment of land affected by contamination). It also fixes a problem in version 1.07 with the adding of new chemicals.).

The CLEA model uses ten exposure pathways (Ingestion (outdoor soil, indoor dust, homegrown vegetables and soil attached to homegrown vegetables), Dermal Contact (outdoor soil and indoor dust) and Inhalation (outdoor dust, indoor dust, outdoor vapours and indoor vapours)). There are exposure pathways not included in the CLEA model such as the permeation of organics into plastic water supply pipes.

The presence and/or significance of each of the potential exposure pathways is dependent on the land use being considered. The model uses standard land use scenarios as follows:-

Residential – habitation of a dwelling up to two storeys high with various default material and design parameters, access to either private or nearby community open space with soil track back to form indoor dust. Assumes ingestion of homegrown produce.

Allotments – the model has default parameters for use and consumption of vegetables but not animals or their products (eggs).

Industrial/commercial – assumes office or light physical work in a permanent three storey structure with breaks taken outside and that the site is NOT covered in hardstanding.

The assessment criteria generated using CLEA can be used as a starting point for evaluating long-term risks to human health from chemicals in soil. It is important to note that the model does not assess all the potential exposure risks for example risk to workers in excavations (short term exposure), inhalation of vapours generated from contaminants in groundwater, diffusion of contaminants through drinking water pipes.

Recent guidance (DEFRA 2012) introduces a four stage classification system where Category 1 sites are obviously contaminated and Category 4 sites uncontaminated as defined by EPA 1990. Outside of these categories further specific risk assessment is required to determine if the site should fall into Category 2 contaminated or Category 3 uncontaminated. Category 4 screening values are considered to be more pragmatic than the current published SGV/GAC criteria but still strongly precautionary with the aim of allowing rapid identification of sites where the risk is above minimal but still low/acceptable (within the context of Part 2A).

At the end of 2013 technical guidance in support of DEFRA's revised Statutory Guidance (SG) was published (CL:AIRE 2013) which provided:

- A methodology for deriving C4SLs for the standard land-uses and two new public open space scenarios using the updated assumptions relating to the modelling of human exposure to soil contaminants; and
- A demonstration of the methodology, via the derivation of C4SLs for six substances – arsenic, benzene, benzo(a)pyrene, cadmium, chromium (VI) and lead.

Following issue of an Erratum in December 2014 a Policy Companion Document was published (DEFRA 2014B).

Soil Guideline Values (SGVs)

The first series of SGVs were generated using a probabilistic version of the CLEA model. However, on 22 July 2008 DEFRA announced the withdrawal of these SGVs and revised SGVs were calculated for all substances except lead using a deterministic version of the CLEA model (v1.05). Table 1 presents the SGVs which have not been withdrawn but it should be noted that they were developed using assumptions for body weight and inhalation rates that have been revised since publication.

Category 4 Screening Levels (C4SLs)

A letter from Lord de Mauley dated 3rd September 2014 provides more explicit direction to local authorities on the use of the C4SL in a planning context. The letter identifies four key points:

- 1) that the screening values were developed expressly with the planning regime in mind
- 2) their use is recommended in DCLG's planning guidance
- 3) soil concentrations below a C4SL limit are considered to be 'definitely not contaminated' under Part IIA of the 1990 Environmental Protection Act and pose at most a 'low level of toxicological concern' and
- 4) exceedance of a C4SL screening value does not mean that land is definitely contaminated, just that further investigation may be warranted. Table 6 summarises the C4SL (DEFRA 2014B) for each of the six substances. PBA uses the criterion for lead and may use the other criteria, depending on site specific conditions.

Suitable 4 Use Levels (S4ULs)

In July 2009, Generic Assessment Criteria (GACs) for 82 substances were published by the Chartered Institute of Environmental Health (CIEH) (LQM and CIEH, 2009) using the then current version of the CLEA software v1.04 and replacing those generated in 2006 using the original version of the model CLEA UK beta. In 2015 S4ULs were published by LQM/CIEH to replace the second edition GACs. Table 5 summarises the S4ULs.

Note on Mercury, Chromium and Arsenic Assessment The analytical testing routinely undertaken by PBA determines total concentration, however, the toxicity depends on the form of the contaminant.

If a source of Mercury, Chromium or Arsenic is identified or the total concentration exceeds the relevant worst case speciated criteria it will be desirable/necessary to undertake additional speciated testing and further assessment.

Note on Polycyclic Aromatic Hydrocarbons

Polycyclic Aromatic Hydrocarbons (PAHs) are a family of hundreds of different congeners whose chemical structures contain 2 or more fused aromatic rings. Whilst it is recognised that there is an ongoing debate on the most appropriate method to assess health effects of PAH mixtures in 2010 the Health Protection Agency recommended the use of benzo[a]pyrene (BaP) as a surrogate marker approach in the assessment of carcinogenic risks posed by PAHs in soils.

In most cases, BaP is chosen as the surrogate marker (SM) due to its ubiquitous nature and the vast amount of data available and has been used by various authoritative bodies to assess the carcinogenic risk of PAHs in food. The SM approach estimates the toxicity of a mixture of PAHs in an environmental matrix by using toxicity data for a PAH mixture for which the composition is known.

Exposure to the SM is assumed to represent exposure to all PAHs in that matrix therefore the toxicity of the SM represents the toxicity of the mixture. The SM approach relies on a number of assumptions (HPA 2010).

- The SM (BaP) must be present in all the samples.
- The profile of the different PAH relative to BaP should be similar in all samples.
- The PAH profile in the soil samples should be sufficiently similar to that used in the pivotal toxicity study on which HBGV was based i.e. the Culp study (Culp et al. (1998)).

In order to justify the use of a surrogate marker assessment criterion (C4SL for benzo(a)pyrene and S4UL coal tar) the LQM PAH Profiling Tool is used by PBA to assess the similarity of the PAH profile in a soil sample to that of the toxicity study. The spreadsheet that calculates the relative proportions of the genotoxic PAHs and plots them on the two charts relative to composition of the two coal mixtures used by Culp et al. (the plus/minus an order of magnitude limits suggested by HPA).

Note on Asbestos

Asbestos in soil and made ground is currently under review by a number of bodies. There are no current published guidance values for asbestos in soil other than the waste classification values given in the EA's Technical Guidance WM3, Hazardous Waste – Interpretation of the definition and classification of hazard waste (3d Edition, 2015). This guidance is only appropriate for soils that are being discarded as waste.

Testing for asbestos will be carried out on selected samples of made ground encountered during investigation, initially samples will be subjected to an asbestos screen and, if asbestos is found to be present, subjected to quantification depending on the project specific requirements. The reader is directed to the report text for guidance on the approach adopted in respect to any asbestos found to be present. Further guidance is also available in the 2014 CIRIA publication C733, Asbestos in soil and made ground: a guide to understanding and managing risks.

3.2 Potential Harm to the Built Environment

Land contamination can pose risks to buildings, building materials and services (BBM&S) in a number of ways. Volatile contaminants and gases can accumulate and cause explosion or fire. Foundations and buried services can be damaged by corrosive substances and contaminants such as steel slags can create unstable ground conditions through expansion causing structural damage.

PBA use the following primary guidance to assess the significance of soil chemistry with respect to its potential to harm the built environment.

- i) Approved Document C - Site Preparation and Resistance to Contaminants and Moisture. (DCLG 2010);
- ii) Concrete in aggressive ground SD1 (BRE 2005);
- iii) Guidance for the selection of water supply pipes to be used in brownfield sites (UKWIR 2011);
- iv) Protocols published by agreement between Water UK and the Home Builders Federation providing supplementary guidance which includes the Risk Assessment for Water Pipes (the 'RA') (Water UK 2014).
- v) Performance of Building Materials in Contaminated Land report BR255 (BRE 1994).
- vi) Risks of Contaminated Land to Buildings, Building Materials and Services. A Literature Review - Technical Report P331 (EA 2000).
- vii) Guidance on assessing and managing risks to buildings from land contamination - Technical Report P5 035/TR/01 (EA 2001).

3.3 Potential to Harm Ecosystems, Animals, Crops etc

The criteria routinely used by PBA as Tier 2 screening values to assess the potential of soil chemistry to harm ecosystems are taken from the following guidance and summarised in are given in Table 2.

- i) Ecological Risk Assessment (ERA) Science Report Series SC070009, published by the Environment Agency, Bristol (EA, 2008);
- ii) The Restoration and Aftercare of Metalliferous Mining Sites for Pasture and Grazing (ICRCL 70/90, 1990); and
- iii) Code of Practice for Agricultural Use of Sewage Sludge 2nd Edition (DOE, 2006).
- iv) BS 3882:2015 Specification for topsoil and requirements for use.

Unless stated in the report the assessment is solely for phytotoxic parameters and additional assessment is required to determine suitability as a growing medium.

4 Criteria for Assessing Liquid Results

4.1 Potential Harm to Human Health

The criteria routinely used by PBA as Tier 2 water screening values (Table 4) are taken from Statutory Instrument (S.I.) The Water Supply (Water Quality) Regulations (S.I. 2016/614).

It should be noted that some of the prescribed concentrations listed in the Water Supply Regulations have been set for reasons other than their potential to cause harm to human health. The concentrations of iron and manganese are controlled because they may taint potable water with an undesirable taste, odour or colour or may potentially deposit precipitates in water supply pipes.

4.2 Potential to Harm Controlled Waters

When assessing ground condition data and the potential to harm Controlled Waters PBA uses the approach presented in Groundwater Protection Policy and Practice (GP3) (EA 2013). Controlled Waters are rivers, estuaries, coastal waters, lakes and groundwaters. Water in the unsaturated zone is not groundwater but does come within the scope of the term “ground waters” as used and defined in the Water Resources Act 1991. It will continue to be a technical decision for the Environment Agency to determine what is groundwater in certain circumstances for the purposes of the Regulations.

The EU Water Framework Directive (WFD) 2000/60/EC provides for the protection of sub-surface, surface, coastal and territorial waters through a framework of river basin management.

The EU Updated Water Framework Standards Directive 2014/101/EU amended the EU WFD to update the international standards therein; it entered into force on 20 November 2014 and its provisions must be transposed in Member State law by 20 May 2016.

Member States are required under the EU WFD to update their river basin management plans every six years. The first river basin management plans for England and Wales, Scotland and Northern Ireland were published in December 2009, and the process of producing the second RBMPs is currently ongoing.

Other EU Directives in the European water management framework include:

- the EU Priority Substances Directive 2013/39/EU;
- EU Groundwater Pollutants Threshold Values Directive 2014/80/EU amending the EU Groundwater Directive 2006/118/EC; and
- the EU Biological Monitoring Directive 2014/101/EU.

The Priority Substances Directive set environmental quality standards (EQS) for the substances in surface waters (river, lake, transitional and coastal) and confirmed their designation as priority or priority hazardous substances (PS), the latter being a subset of particular concern. Environmental Quality Standards for PS are determined at the European level and apply to all Member States. Member States identify and develop standards for ‘Specific

Pollutants’. Specific Pollutants (SP) are defined as substances that can have a harmful effect on biological quality.

The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015 were issued by Defra to the Environment Agency as an associated document of the Water Environment (WFD) (England and Wales) Regulations 2015 (S.I. 2015/1623) and provide directions for the classification of surface water and groundwater bodies. Schedule 3 parts 2 and 3 relate to surface water standards for specific pollutants in fresh or salt water bodies and priority substances in inland (rivers, lakes and related modified/artificial bodies) or other surface waters respectively. Although Schedule 5 presents threshold values for groundwater the Direction specifically excludes their use as part of site specific investigations.

The criteria routinely used by PBA as Tier 2 screening values (Table 4). This table only presents a selection of the more commonly analysed parameters and the source documents should be consulted for other chemicals. For screening groundwater the criteria selected are the standards for surface water and/or human consumption as appropriate together with the following:-

For a **hazardous substance** PBA adopts the approach that, if the concentration in a discharge is less than the Minimum Reporting Value (MRV), the input is regarded as automatically meeting the Article 2 (b) ‘de-minimis’ requirement of exemption 6 (3) (b) of the GWDD. PBA has selected hazardous substances and associated MRV from those listed in Table 13 of UKTAG WFD River Basin Management 2015-21 Updated Recommendations on Environmental Standards (as referenced in Defra 2014). MRV is the lowest concentration of a substance that can be routinely determined with a known degree of confidence, and may not be equivalent to limit of detection.

For **non-hazardous substances** the GWDD requires that inputs be limited to avoid deterioration. UKTAG guidance equates deterioration with pollution. Non-hazardous substances are all substances not classified as hazardous.

5 Criteria for Assessing Gas Results

PBA use the following primary guidance on gas monitoring methods and strategy, the assessment of risk posed by soil gases (including Volatile Organic Compounds (VOCs)) and mitigation measures/risk reduction during site development.

- i) BS 8576:2013 – Guidance on Ground Gas Investigations: Permanent gases and Volatile Organic Compounds (VOCs) (BSI 2013);

PBA Rationale for Selection of Criteria Used in Tier 2 (Generic) Risk Assessment (England)

- ii) A pragmatic approach to Ground Gas Risk Assessment. CL:AIRE Research Bulletin RB17 (Card 2012);
- iii) The VOCs Handbook. C682 (CIRIA 2009).
- iv) Assessing risks posed by hazardous gases to buildings C665 (CIRIA 2007);
- v) Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present. (NHBC 2007); and
- vi) BS 8485:2015 - Code of practice for the design of protective measures for methane and carbon dioxide ground gases for new buildings (BSI 2015).

Gas and borehole flow data are used to obtain the gas screening value (GSV) for methane and carbon dioxide. The GSV is used to establish the characteristic situation and to make recommendations for gas protection measures for buildings if required.

Radon

PBA use the following primary guidance to assess the significance of the radon content of soil gas.

- i) Radon: guidance on protective measures for new dwellings. Report BR211 (BRE, 2015); and
- ii) Radon Atlas of England, R290 (NRPB, 1996).

6 References

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EA (2009b) Updated Technical Background to the CLEA model. Science Report SC050021/SR3 Introduction. Environment Agency, Bristol.

EA (2009c) Human health toxicological assessment of contaminants in soil. Science Report SC050021/SR2. Environment Agency, Bristol.

EA (2009d) Compilation data for priority organic contaminants for derivation of soil guideline values Science Report SC50021/SR7

EA (2009e) CLEA Software (Version 1.05) Handbook Science Report SC050021/SR4

EA (2013) Groundwater Protection Policy and Practice (GP3) August 2013 Version 1.1

EA (2015) Guidance on the classification and assessment of waste (3rd edition 2015) - Technical Guidance WM3

PBA Rationale for Selection of Criteria Used in Tier 2 (Generic) Risk Assessment (England)

- EA (2015) The Water Framework Directive (Standards and Classification) Directions (England and Wales) 2015.
- ICRCL (1990) The Restoration and Aftercare of Metalliferous Mining Sites for Pasture and Grazing 70/90. Interdepartmental Committee on the Redevelopment of Contaminated Land, London.
- LQM & CIEH (2015) The LQM/CIEH S4ULs for Human Health Risk Assessment. Land Quality Press, Nottingham.
- NRPB (1996) Radon Atlas of England. R290, National Radiological Protection Board, Didcot, Oxfordshire.
- NHBC (2007) Guidance on evaluation of development proposals on sites where methane and carbon dioxide are present. National House Building Council.
- S.I. (2016/614). Statutory Instrument 2016 No 614 The Water Supply (Water Quality) Regulations, 2016.
- S.I. (2015/1623). Statutory Instrument 2015 No 1623 The Water Environment (WFD) (England and Wales) Regulations, 2015.
- UKWIR (2011) Guidance for the selection of Water Pipes to be used in Brownfield Sites.
- Water UK 2014 Contaminated Land Assessment Guidance

Rationale for Generic Assessment Criteria Routinely Used by PBA

Table 1: Category 4 Screening Levels (C4SL) – Table taken from SP1010: Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination – Policy Companion Document (Department for Environment, Food and Rural Affairs December 2014)

	Residential (with home-grown produce)	Residential (without home-grown produce)	Allotments	Commercial	Public Open Space 1	Public Open Space 2
Arsenic	37	40	49	640	79	170
Benzene	0.87	3.3	0.18	98	140	230
Benzo(a)pyrene	5.0	5.3	5.7	77	10	21
Cadmium	22	150	3.9	410	220	880
Chromium VI	21	21	170	49	21	250
Lead	200	310	80	2300	630	1300

Units mg/kg

Public Open Space 1 – for grassed area adjacent to residential housing

Public Open Space 2 - Park Type Public Open Space Scenario

Table 2: Tier 2 Criteria for the Assessment of Soils – Protection of Ecological Systems

Parameter	ICRCL 70/90 ^a		Proposed SSVs ^b	Code of Practice for Agricultural Use of Sewage Sludge ^c	BS 3882:2015 Specification for topsoil and requirements for use
	Maximum				
	Livestock mg/kg	Crop Growth mg/kg			
Benzo(a)pyrene			0.15		
Arsenic	500	1000		50	
Cadmium	30	50	1.15	3	
Chromium			21.1	400	
Copper	500	250	88.4	80/ 100/ 135/ 200 ^d	<100/<135/<200 ^e
Fluoride	1000			500	
Lead	1000		167.9	300	
Mercury			0.06	1	
Molybdenum				4	
Nickel			25.1	50/ 60/ 75/ 110 ^d	<60/<75/<110 ^e
Pentachlorobenzene			0.029		
Pentachlorophenol			0.6		
Selenium				3	
Tetrachloroethene			0.01		
Toluene			0.3		
Zinc	3000	1000	90.1	200/200/200/300 ^d	<200/<200/<300 ^e

- Interdepartmental Committee on the Redevelopment of Contaminated Land (ICRCL) 70/90 Restoration and Aftercare of Metalliferous Mining Sites for Pasture and Grazing 1st edition 1990.
- Proposed Soil Screening Values (SSVs) – Consultation, Environment Agency 2008. Threshold which if exceeded prompts further assessment.
- Maximum permissible concentration of potentially toxic elements from the Code of Practice for Agricultural Use of Sewage Sludge. Second Edition. DOE 2006.
- Where four values are presented, concentrations are for soils with pH values 5.0-5.5/ 5.5-6.0/ 6.0-7.0/ >7.0
- Where three values are presented, concentrations are for soils with pH values <6.0/ 6.0-7.0/ >7.0

Rationale for Generic Assessment Criteria Routinely Used by PBA

Table 3: Suitable 4 Use Levels (S4UL) - units are mg/kg Dry Weight

Determinand	Allotment	R _{WH} P	R _{WO} HP	Commercial/ Industrial	POSresi	POSpark
Metals						
Arsenic (Inorganic) ^{a, b, c}	43	37	40	640	79	170
Beryllium ^{a, b, d, e}	35	1.7	1.7	12	2.2	63
Boron ^{a, b, d}	45	290	11000	240000	21000	46000
Cadmium (pH6-8) ^{a, b, d, f}	1.9	11	85	190	120	560
Chromium (trivalent) ^{a, b, d, g}	18000	910	910	8600	1500	33000
Chromium (hexavalent) ^{a, b, c}	1.8 ^h	6 ⁱ	6 ⁱ	33 ^j	7.7 ^j	220 ^j
Copper ^{a, b, c}	520	2400	7100	68000	12000	44000
Mercury (elemental) ^{a, b, c, j}	21	1.2	1.2	58 ^{vap} (25.8)	16	30 ^{vap} (25.8)
Mercury (inorganic) ^{a, b, c}	19	40	56	1100	120	240
Methylmercury ^{a, b, c}	6	11	15	320	40	68
Nickel ^{a, b, c}	53 ^k	130 ^e	180 ^e	980 ^e	230 ^e	800 ^k
Selenium ^{a, b, c}	88	250	430	12000	1100	1800
Vanadium ^{a, b, c, i, j}	91	410	1200	9000	2000	5000
Zinc ^{a, b, c}	620	3700	40000	730000	81000	170000
BTEX Compounds (SOM 1%/ 2.5%/ 6%)						
Benzene ^{a, b, l, m}	0.017/0.034/ 0.075	0.087/0.17/ 0.37	0.38/0.7/1.4	27 / 47 / 90	72 / 72 / 73	90 / 100 / 110
Toluene ^{a, b, l, m}	22 / 51 / 120	130 / 290 / 660	800 ^{vap} (869) /1900/3900	56000 ^{vap} (869) / 110000 ^{vap} (1920) / 180000 ^{vap} (4360)	56000 / 56000 / 56000	87000 ^{vap} (869) / 95000 ^{vap} (1920) / 100000 ^{vap} (4360)
Ethylbenzene ^{a, b, l, m}	16 / 39 / 91	47 / 110 / 260	83 / 190 / 440	5700 ^{vap} (518) / 13000 ^{vap} (1220) / 27000 ^{vap} (2840)	24000 / 24000 / 25000	17000 ^{vap} (518) / 22000 ^{vap} (1220) / 27000 ^{vap} (2840)
O – Xylene ^{a, b, l, m, n}	28 / 67 / 160	60 / 140 / 330	88 / 210 / 480	6600 ^{sol} (478) / 15000 ^{sol} (1120) / 33000 ^{sol} (2620)	41000 / 42000 / 43000	17000 ^{sol} (478) / 24000 ^{sol} (1120) / 33000 ^{sol} (2620)
M – Xylene ^{a, b, l, m, n}	31 / 74 / 170	59 / 140 / 320	82 / 190 / 450	6200 ^{vap} (625) / 14000 ^{vap} (1470) / 31000 ^{vap} (3460)	41000 / 42000 / 43000	17000 ^{vap} (625) / 24000 ^{vap} (1470) / 32000 ^{vap} (3460)
P – Xylene ^{a, b, l, m, n}	29 / 69 / 160	56 / 130 / 310	79 / 180 / 430	5900 ^{sol} (576) / 14000 ^{sol} (1350) / 30000 ^{sol} (3170)	41000 / 42000 / 43000	17000 ^{sol} (576) / 23000 ^{sol} (1350) / 31000 ^{sol} (3170)
Polycyclic Aromatic Hydrocarbons (SOM 1%/ 2.5%/ 6%)^{a, b, l, p}						
Acenaphthene	34 / 85 / 200	210 / 510 / 1100	3000 ^{sol} (57.0) / 4700 ^{sol} (141) / 6000 ^{sol} (336)	84000 ^{sol} (57.0) / 97000 ^{sol} (141) / 100000	15000 / 15000 / 15000	29000 / 30000 / 30000
Acenaphthylene	28 / 69 / 160	170 / 420 / 920	2900 ^{sol} (86.1) / 4600 ^{sol} (212) / 6000 ^{sol} (506)	83000 ^{sol} (86.1) / 97000 ^{sol} (212) / 100000	15000 / 15000 / 15000	29000 / 30000 / 30000
Anthracene	380 / 950 / 2200	2400 / 5400 / 11000	31000 ^{sol} (1.17 /35000/ 37000)	520000 / 540000 / 540000	74000 / 74000 / 74000	150000 / 150000 / 150000
Benzo(a)anthracene	2.9 / 6.5 / 13	7.2 / 11 / 13	11 / 14 / 15	170 / 170 / 180	29 / 29 / 29	49 / 56 / 62
Benzo(a)pyrene (Bap)	0.97 / 2.0 / 3.5	2.2 / 2.7 / 3.0	3.2 / 3.2 / 3.2	35 / 35 / 36	5.7 / 5.7 / 5.7	11 / 12 / 13
Benzo(b)fluoranthene	0.99 / 2.1 / 3.9	2.6 / 3.3 / 3.7	3.9 / 4.0 / 4.0	44 / 44 / 45	7.1 / 7.2 / 7.2	13 / 15 / 16
Benzo(g,h,i)perylene	290 / 470 / 640	320 / 340 / 350	360/360 / 360	3900/4000/ 4000	640/640/640	1400/1500/ 1600
Benzo(k)fluoranthene	37 / 75 / 130	77 / 93 / 100	110/ 110 / 110	1200/ 1200/1200	190/190/190	370 / 410 / 440
Chrysene	4.1 / 9.4 / 19	15 / 22 / 27	30 / 31 / 32	350 / 350 / 350	57 / 57 / 57	93 / 110 / 120
Dibenzo(ah)anthracene	0.14 / 0.27 / 0.43	0.24 / 0.28 / 0.3	0.31/0.32/ 0.32	3.5 / 3.6 / 3.6	0.57/0.57/0.58	1.1 / 1.3 / 1.4
Fluoranthene	52 / 130 / 290	280 / 560 / 890	1500/1600/ 1600	23000/23000/ 23000	3100/3100/ 3100	6300 / 6300 / 6400
Fluorene	27 / 67 / 160	170 / 400 / 860	2800 ^{sol} (30.9) /3800 ^{sol} (76.5) /4500 ^{sol} (183)	63000 ^{sol} (30.9) / 68000 / 71000	9900 / 9900 / 9900	20000 / 20000 / 20000
Indeno(1,2,3-cd)pyrene	9.5 / 21 / 39	27 / 36 / 41	45 / 46 / 46	500 / 510 / 510	82 / 82 / 82	150 / 170 / 180
Naphthalene ^q	4.1 / 10 / 24	2.3 / 5.6 / 13	2.3 / 5.6 / 13	190 ^{sol} (76.4) / 460 ^{sol} (183) / 1100 ^{sol} (432)	4900/ 4900/ 4900	1200 ^{sol} (76.4) / 1900 ^{sol} (183) / 3000
Phenanthrene	15 / 38 / 90	95 / 220 / 440	1300 ^{sol} (36.0) / 1500/1500	22000 / 22000 / 23000	3100 / 3100 / 3100	6200 / 6200 / 6300
Pyrene	110 / 270 / 620	620 / 1200 / 2000	3700 / 3800 / 3800	54000 / 54000 / 54000	7400 / 7400 / 7400	15000 / 15000 / 15000
Coal Tar (Bap as surrogate marker)	0.32 / 0.67 / 1.2	0.79 / 0.98 / 1.1	1.2 / 1.2 / 1.2	15 / 15 / 15	2.2 / 2.2 / 2.2	4.4 / 4.7 / 4.8
Explosives^{a, b, l, p}						
2, 4, 6 Trinitrotoluene	0.24 / 0.58 / 1.40	1.6 / 3.7 / 8.0	65 / 66 / 66	1000/1000/1000	130/130 / 130	260 / 270 / 270
RDX (Royal Demolition Explosive C ₃ H ₆ N ₆ O ₆)	17 / 38 / 85	120 / 250 / 540	13000 / 13000 / 13000	210000 / 210000 / 210000	26000/26000/ 27000	49000 ^{sol} (18.7) / 51000 / 53000
HMX (High Melting Explosive C ₄ H ₈ N ₈ O ₈)	0.86 / 1.9 / 3.9	5.7 / 13 / 26	6700 / 6700 / 6700	110000 / 110000 / 110000	13000 / 13000 / 13000	23000 ^{vap} (0.35) /23000 ^{vap} (0.39) /24000 ^{vap} (0.48)

Rationale for Generic Assessment Criteria Routinely Used by PBA

Determinand	Allotment	R _w HP	R _w HP	Commercial/ Industrial	POSresi	POSpark
Petroleum Hydrocarbons (SOM 1%/ 2.5%/ 6%)^{a, b, l, m}						
Aliphatic EC 5-6	730 / 1700 / 3900	42 / 78 / 160	42 / 78 / 160	3200 ^{sol} (304) / 5900 ^{sol} (558) / 12000 ^{sol} (1150)	570000 ^{sol} (304) / 590000 / 600000	95000 ^{sol} (304) / 130000 ^{sol} (558) / 180000 ^{sol} (1150)
Aliphatic EC >6-8	2300 / 5600 / 13000	100 / 230 / 530	100 / 230 / 530	7800 ^{sol} (144) / 17000 ^{sol} (322) / 40000 ^{sol} (736)	600000 / 610000 / 620000	150000 ^{sol} (144) / 220000 ^{sol} (322) / 320000 ^{sol} (736)
Aliphatic EC >8-10	320 / 770 / 1700	27 / 65 / 150	27 / 65 / 150	2000 ^{sol} (78) / 4800 ^{vap} (190) / 11000 ^{vap} (451)	13000 / 13000 / 13000	14000 ^{sol} (78) / 18000 ^{vap} (190) / 21000 ^{vap} (451)
Aliphatic EC >10-12	2200 / 4400 / 7300	130 ^{vap} (48) / 330 ^{vap} (118) / 760 ^{vap} (283)	130 ^{vap} (48) / 330 ^{vap} (118) / 770 ^{vap} (283)	9700 ^{sol} (48) / 23000 ^{vap} (118) / 47000 ^{vap} (283)	13000 / 13000 / 13000	21000 ^{sol} (48) / 23000 ^{vap} (118) / 24000 ^{vap} (283)
Aliphatic EC >12-16	11000 / 13000 / 13000	1100 ^{sol} (24) / 2400 ^{sol} (59) / 4300 ^{sol} (142)	1100 ^{sol} (24) / 2400 ^{sol} (59) / 4400 ^{sol} (142)	59000 ^{sol} (24) / 82000 ^{sol} (59) / 90000 ^{sol} (142)	13000 / 13000 / 13000	25000 ^{sol} (24) / 25000 ^{sol} (59) / 26000 ^{sol} (142)
Aliphatic EC >16-35 °	260000 / 270000 / 270000	65000 ^{sol} (8.48) / 92000 ^{sol} (21) / 110000	65000 ^{sol} (8.48) / 92000 ^{sol} (21) / 110000	1600000 / 1700000 / 1800000	250000 / 250000 / 250000	450000 / 480000 / 490000
Aliphatic EC >35-44 °	260000 / 270000 / 270000	65000 ^{sol} (8.48) / 92000 ^{sol} (21) / 110000	65000 ^{sol} (8.48) / 92000 ^{sol} (21) / 110000	1600000 / 1700000 / 1800000	250000 / 250000 / 250000	450000 / 480000 / 490000
Aromatic EC 5-7 (benzene)	13 / 27 / 57	70 / 140 / 300	370 / 690 / 1400	26000 ^{sol} (1220) / 46000 ^{sol} (2260) / 86000 ^{sol} (4710)	56000 / 56000 / 56000	76000 ^{sol} (1220) / 84000 ^{sol} (2260) / 92000 ^{sol} (4710)
Aromatic EC >7-8 (toluene)	22 / 51 / 120	130 / 290 / 660	860 / 1800 / 3900	56000 ^{vap} (869) / 110000 ^{sol} (1920) / 180000 ^{vap} (4360)	56000 / 56000 / 56000	87000 ^{vap} (869) / 95000 ^{sol} (1920) / 100000 ^{vap} (4360)
Aromatic EC >8-10	8.6 / 21 / 51	34 / 83 / 190	47 / 110 / 270	3500 ^{vap} (613) / 8100 ^{vap} (1500) / 17000 ^{vap} (3580)	5000 / 5000 / 5000	7200 ^{vap} (613) / 8500 ^{vap} (1500) / 9300 ^{vap} (3580)
Aromatic EC >10-12	13 / 31 / 74	74 / 180 / 380	250 / 590 / 1200	16000 ^{sol} (364) / 28000 ^{sol} (899) / 34000 ^{sol} (2150)	5000 / 5000 / 5000	9200 ^{sol} (364) / 9700 ^{sol} (899) / 10000
Aromatic EC >12-16	23 / 57 / 130	140 / 330 / 660	1800 / 2300 ^{sol} (419) / 2500	36000 ^{sol} (169) / 37000 / 38000	5100 / 5100 / 5000	10000 / 10000 / 10000
Aromatic EC >16-21 °	46 / 110 / 260	260 / 540 / 930	1900 / 1900 / 1900	28000 / 28000 / 28000	3800 / 3800 / 3800	7600 / 7700 / 7800
Aromatic EC >21-35 °	370 / 820 / 1600	1100 / 1500 / 1700	1900 / 1900 / 1900	28000 / 28000 / 28000	3800 / 3800 / 3800	7800 / 7800 / 7900
Aromatic EC >35-44 °	370 / 820 / 1600	1100 / 1500 / 1700	1900 / 1900 / 1900	28000 / 28000 / 28000	3800 / 3800 / 3800	7800 / 7800 / 7900
Aliphatic+Aromatic EC >44-70 °	1200 / 2100 / 3000	1600 / 1800 / 1900	1900 / 1900 / 1900	28000 / 28000 / 28000	3800 / 3800 / 3800	7800 / 7800 / 7900
Chloroalkanes & Chloroalkenes (SOM 1%/ 2.5%/ 6%)^{a, b, l, p}						
1,2-Dichloroethane	0.0046 / 0.0083 / 0.016	0.0071 / 0.011 / 0.019	0.0092 / 0.013 / 0.023	0.67 / 0.97 / 1.7	29 / 29 / 29	21 / 24 / 28
1,1,1 Trichloroethane (TCA)	48 / 110 / 240	8.8 / 18 / 39	9.0 / 18 / 40	660 / 1300 / 3000	140000 / 140000 / 140000	57000 ^{vap} (1425) / 76000 ^{vap} (2915) / 100000 ^{vap} (6392)
1,1,1,2 Tetrachloroethane	0.79 / 1.9 / 4.4	1.2 / 2.8 / 6.4	1.5 / 3.5 / 8.2	110 / 250 / 560	1400 / 1400 / 1400	1500 / 1800 / 2100
1,1,2,2 Tetrachloroethane	0.41 / 0.89 / 2.0	1.6 / 3.4 / 7.5	3.9 / 8.0 / 17	270 / 550 / 1100	1400 / 1400 / 1400	1800 / 2100 / 2300
Tetrachloroethene (PCE)	0.65 / 1.5 / 3.6	0.18 / 0.39 / 0.90	0.18 / 0.4 / 0.92	19 / 42 / 95	1400 / 1400 / 1400	810 ^{sol} (424) / 1100 ^{sol} (951) / 1500
Tetrachloromethane (Carbon Tetrachloride)	0.45 / 1.0 / 2.4	0.026 / 0.056 / 0.13	0.026 / 0.056 / 0.13	2.9 / 6.3 / 14	890 / 920 / 950	190 / 270 / 400
Trichloroethene (TCE)	0.041 / 0.091 / 0.21	0.016 / 0.034 / 0.075	0.017 / 0.036 / 0.080	1.2 / 2.6 / 5.7	120 / 120 / 120	70 / 91 / 120
Trichloromethane (Chloroform)	0.42 / 0.83 / 1.7	0.91 / 1.7 / 3.4	1.2 / 2.1 / 4.2	99 / 170 / 350	2500 / 2500 / 2500	2600 / 2800 / 3100
Chloroethene (Vinyl Chloride)	0.00055 / 0.001 / 0.0018	0.00064 / 0.00087 / 0.0014	0.00077 / 0.001 / 0.0015	0.059 / 0.077 / 0.12	3.5 / 3.5 / 3.5	4.8 / 5.0 / 5.4
Phenol & Chlorophenols^{a, b, l, p}						
Phenol	23 / 42 / 83	120 / 200 / 380	440 / 690 / 1200	440 ^{dir} (26000) / 690 ^{dir} (30000) / 1300 ^{dir} (34000)	440 ^{dir} (10000) / 690 ^{dir} (10000) / 1300 ^{dir} (10000)	440 ^{dir} (7600) / 690 ^{dir} (8300) / 1300 ^{dir} (93000)
Chlorophenols (excluding PCP) ^r	0.13 ^s / 0.3 / 0.7	0.87 ^s / 2.0 / 4.5	94 / 150 / 210	3500 / 4000 / 4300	620 / 620 / 620	1100 / 1100 / 1100
Pentachlorophenol (PCP)	0.03 / 0.08 / 0.19	0.22 / 0.52 / 1.2	27 ^{vap} (16.4) / 29 / 31	400 / 400 / 400	60 / 60 / 60	110 / 120 / 120
Other^{a, b, l, p}						
Carbon Disulphide	4.8 / 10 / 23	0.14 / 0.29 / 0.62	0.14 / 0.29 / 0.62	11 / 22 / 47	11000 / 11000 / 12000	1300 / 1900 / 2700
Hexachlorobutadiene (HCBD)	0.25 / 0.61 / 1.4	0.29 / 0.7 / 1.6	0.32 / 0.78 / 1.8	31 / 66 / 120	25 / 25 / 25	48 / 50 / 51

Rationale for Generic Assessment Criteria Routinely Used by PBA

Determinand	Allotment	R _w HP	R _w HP	Commercial/ Industrial	POSresi	POSpark
Pesticides (SOM 1%/ 2.5%/ 6%) ^{a, b, i, p}						
Aldrin	3.2 / 6.1 / 9.6	5.7/ 6.6 / 7.1	7.3 / 7.4 / 7.5	170 / 170 / 170	18 / 18 / 18	30 / 31 / 31
Atrazine	0.5 / 1.2 / 2.7	3.3/7.6/17.4	610/ 620 / 620	9300 / 9400 / 9400	1200/1200 / 1200	2300 / 2400 / 2400
Dichlorvos	0.0049/0.010/ 0.022	0.032/0.066 /0.14	6.4 / 6.5 / 6.6	140 / 140 / 140	16 / 16 / 16	26 / 26 / 27
Dieldrin	0.17/0.41/0.96	0.97/ 2 / 3.5	7.0 / 7.3 / 7.4	170 / 170 / 170	18 / 18 / 18	30 / 30 / 31
Alpha - Endosulfan	1.2 / 2.9 / 6.8	7.4 / 18 / 41	160 ^{vap} (0.003)/ 280 ^{vap} (0.007)/ 410 ^{vap} (0.016)	5600 ^{vap} (0.003) / 7400 ^{vap} (0.007) / 8400 ^{vap} (0.016)	1200 / 1200 / 1200	2400 / 2400 / 2500
Beta - Endosulfan	1.1 / 2.7 / 6.4	7.0 / 17 / 39	190 ^{vap} (0.00007) / 320 ^{vap} (0.0002) / 440 ^{vap} (0.0004)	6300 ^{vap} (0.00007) / 7800 ^{vap} (0.0002) / 8700	1200 / 1200 / 1200	2400 / 2400 / 2500
Alpha-Hexachlorocyclohexane	0.035/0.087/ 0.21	0.23/0.55 / 1.2	6.9 / 9.2 / 11	170 / 180 / 180	24 / 24 / 24	47 / 48 / 48
Beta - Hexachlorocyclohexane	0.013/0.032/ 0.077	0.085 / 0.2/ 0.46	3.7 / 3.8 / 3.8	65 / 65 / 65	8.1 / 8.1 / 8.1	15 / 15 / 16
Gamma – Hexachlorocyclohexane	0.0092 / 0.023 / 0.054	0.06/0.14/ 0.33	2.9 / 3.3 / 3.5	67 / 69 / 70	8.2 / 8.2 / 8.2	14 / 15 / 15
Chlorobenzenes ^{a, b, i, p}						
Chlorobenzene	5.9 / 14 / 32	0.46 / 1.0 / 2.4	0.46 / 1.0 / 2.4	56 / 130 / 290	11000 / 13000 / 14000	1300 ^{sol} (675)/ 2000 ^{sol} (1520)/ 2900
1,2-dichlorobenzene (1,2-DCB)	94 / 230 / 540	23 / 55 / 130	24 / 57 / 130	2000 ^{sol} (571) / 4800 ^{sol} (1370) / 11000 ^{sol} (3240)	90000 / 95000 / 98000	24000 ^{sol} (571) / 36000 ^{sol} (1370) / 51000 ^{sol} (3240)
1,3-dichlorobenzene (1,3-DCB)	0.25 / 0.6 / 1.5	0.4 / 1.0 / 2.3	0.44/1.1 / 2.5	30 / 73 / 170	300/ 300 / 300	390 / 440 / 470
1-4-dichlorobenzene (1,4-DCB)	15 ⁱ / 37 ⁱ / 88 ⁱ	61 ^q / 150 ^q / 350 ^q	61 ^q /150 ^q /350 ^q	4400 ^{vap,q} (224) / 10000 ^{vap,q} (540) / 25000 ^{vap,q} (1280)	17000 ⁱ / 17000 ⁱ / 17000 ⁱ	36000 ^{vap,i} (224) / 36000 ^{vap,i} (540) / 36000 ^{vap,i} (1280)
1,2,3-Trichlorobenzene	4.7 / 12 / 28	1.5 / 3.6 / 8.6	1.5 / 3.7 / 8.8	102 / 250 / 590	1800 / 1800 / 1800	770 ^{vap} (134) / 1100 ^{vap} (330) / 1600 ^{vap} (789)
1,2,4- Trichlorobenzene	55 / 140 / 320	2.6 / 6.4 / 15	2.6 / 6.4 / 15	220 / 530 / 1300	15000 / 17000 / 19000	1700 ^{vap} (318) / 2600 ^{vap} (786) / 4000 ^{vap} (1880)
1,3,5- Trichlorobenzene	4.7 / 12 / 28	0.33 / 0.81 / 1.9	0.33 / 0.81 / 1.9	23 / 55 / 130	1700 / 1700 / 1800	380 ^{vap} (36.7) / 580 ^{vap} (90.8) / 860 ^{vap} (217)
1,2,3,4-Tetrachlorobenzene	4.4 / 11 / 26	15 / 36 / 78	24 / 56 / 120	1700 ^{vap} (122) / 3080 ^{vap} (304) / 4400 ^{vap} (728)	830 / 830 / 830	1500 ^{vap} (122) / 1600 / 1600
1,2,3,5- Tetrachlorobenzene	0.38 / 0.90 / 2.2	0.66 / 1.6 / 3.7	0.75 / 1.9 / 4.3	49 ^{vap} (39.4) / 120 ^{vap} (98.1) / 240 ^{vap} (235)	78 / 79 / 79	110 ^{vap} (39) / 120 / 130
1,2,4,5- Tetrachlorobenzene	0.06 / 0.16 / 0.37	0.33 / 0.77 / 1.6	0.73 / 1.7 / 3.5	42 ^{sol} (19.7) / 72 ^{sol} (49.1) / 96	13 / 13 / 13	25 / 26 / 26
Pentachlorobenzene (P ₅ CB)	1.2 / 3.1 / 7.0	5.8 / 12 / 22	19 / 30 / 38	640 ^{sol} (43.0) / 770 ^{sol} (107) / 830	100 / 100 / 100	190 / 190 / 190
Hexachlorobenzene (HCB)	0.47 / 1.1 / 2.5	1.8 ^{vap} (0.20) / 3.3 ^{vap} (0.5) / 4.9	4.1 ^{vap} (0.20) / 5.7 ^{vap} (0.5) / 6.7 ^{vap} (1.2)	110 ^{vap} (0.20) / 120 / 120	16 / 16 / 16	30 / 30 / 30

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R_wHP Residential with homegrown produce

R_wHP Residential without homegrown produce

POSresi public open spaces near residential housing

POSpark public open space for recreational use but not dedicated sports pitches

SOM Soil Organic Matter – **the S4UL for all organic compounds will vary according to SOM**

a Based on a sandy loam soil as defined in SR3 (Environment Agency, 2009b) and 6% soil organic matter (SOM)

b Figures rounded to two significant figures

c Based only on a comparison of oral and dermal soil exposure with oral Index Dose

d The background ADE is limited to being no larger than the contribution from the relevant soil ADE

e Based on comparison of inhalation exposure with inhalation TDI only

f Based on a lifetime exposure via the oral, dermal and inhalation pathways

g Based on localised effects comparing inhalation exposure with inhalation ID only

h Based on comparison of inhalation exposure with inhalation ID

i Based on comparison of oral and dermal exposure with oral TDI

j Based on a comparison of oral, dermal and inhalation exposure with inhalation TDI

k Based on comparison of all exposure pathways with oral TDI

l S4ULs assume that free phase contamination is not present

m S4ULs based on a sub-surface soil to indoor air correction factor of 10

n The HCV applied is based on the intake of total Xylene and therefore exposure should not consider an isomer in isolation

o Oral, dermal and inhalation exposure compared with oral HCV

p S4ULs based on a sub-surface soil to indoor air correction factor of 1

q Based on a comparison of inhalation exposure with the inhalation TDI for localised effects

r Based on 2,4-dichlorophenol unless otherwise stated

s Based on 2,3,4,6-tetrachlorophenol

vap S4UL presented exceeded the vapour saturation limit, which is presented in brackets

sol S4UL presented exceeds the solubility saturation limit, which is presented in brackets

dir S4ULs based on a threshold protective of direct skin contact, guideline in brackets based on the health effects following long term exposure provided for illustration only

Rationale for Generic Assessment Criteria Routinely Used by PBA

Table 4: Tier 2 Criteria for Screening Liquids

	Screening Concentration (mg/l)			
	Minimum Reporting Value	Human Consumption	Fresh Water/Inland	Salt Water/Other
Metals				
Arsenic SP	-	0.01	0.05 ⁽²⁾	0.025 ⁽²⁾
Boron	-	1	-	-
Cadmium PS	0.0001	0.005	≤0.00008, 0.00008, 0.00009, 0.00015, 0.00025 ⁽¹⁴⁾	0.0002
Chromium (total)	-	0.05	-	-
Chromium (III) SP	-	-	0.0047	-
Chromium (VI) SP	-	-	0.0034	0.0006
Copper SP	-	2	0.001 bioavailable	0.00376 bioavailable
Iron SP	-	0.2	0.001	0.001
Lead PS	-	0.01	0.0012 bioavailable	0.0013 bioavailable
Mercury compounds PS	0.00001	0.001	0.00007 max	0.00007 max
Manganese SP	-	0.05	0.123 bioavailable	-
Nickel PS	-	0.02	0.004 bioavailable	0.0086 bioavailable
Selenium	-	0.01	-	-
Zinc SP	-	5 ⁽³⁾	0.0109 bioavailable ⁽¹³⁾	0.068 bioavailable ⁽¹³⁾
Chlorinated Compounds				
C10-13 chloroalkanes PS	-	-	0.0004	0.0004
Dichloromethane PS	-	-	0.02	0.02
1,2-Dichloroethane PS	0.001	0.003	0.01	0.01
Trichloroethene PS	0.0001	0.01 ⁽⁵⁾	0.01	0.01
1,1,1-Trichloroethane	0.0001	-	-	-
1,1,2-Trichloroethane	0.0001	-	-	-
Trichloromethanes PS	-	0.1 ⁽¹⁾	0.0025	0.0025
1, 2, 4-Trichlorobenzene	0.00001	-	-	-
Tetrachloroethene PS	0.0001	0.01 ⁽⁵⁾	0.01	0.01
Tetrachloromethane PS	0.0001	0.003	0.012	0.012
Tetrachloroethane SP	-	-	0.140	-
Vinyl chloride	-	0.00005	-	-
Trichlorobenzene (TCB) PS	0.00001	-	0.0004	0.0004
Chloroform	0.0001	-	-	-
Chloronitrotoluenes(CNT) ⁽¹¹⁾	0.001	-	-	-
Hexachlorobutadiene PS	0.000005	-	0.0006 max	0.0006 max
Hexachlorocyclohexanes (HCH) PS	0.000001	-	0.00002	0.000002
Polycyclic Aromatic Hydrocarbons				
Acenaphthene	-	-	-	-
Acenaphthylene	-	-	-	-
Anthracene PS	-	-	0.0001	0.0001
Benzo(a)anthracene	-	-	-	-
Benzo(b)fluoranthene PS	-	0.0001	0.000017 max ⁽¹²⁾	0.000017 max ⁽¹²⁾
Benzo(a)pyrene PS	-	0.00001	0.00000017	0.00000017
Benzo(k)fluoranthene PS	-	-	0.000017 max ⁽¹²⁾	0.000017 max ⁽¹²⁾
Benzo(g,h,i)perylene PS	-	-	0.0000082 max ⁽¹²⁾	0.00000082 max ⁽¹²⁾
Indeno(1,2,3-cd)pyrene PS	-	-	- ⁽¹²⁾	- ⁽¹²⁾
Chrysene	-	-	-	-
Dibenzo(a,h)anthracene	-	-	-	-
Fluoranthene PS	-	-	0.0000063	0.0000063
Fluorene	-	-	-	-
Phenanthrene	-	-	-	-
Pyrene	-	-	-	-
Naphthalene PS	-	-	0.002	0.002
Polycyclic Aromatic Hydrocarbons	-	0.0001 ⁽¹⁰⁾	-	-
Petroleum hydrocarbons				
Total petroleum hydrocarbons	-	0.01 ⁽³⁾	-	-
Benzene PS	0.001	0.001	0.01	0.008
Toluene SP	0.004	0.7 ⁽⁹⁾	0.074	0.074
Ethylbenzene	-	0.3 ⁽⁹⁾	-	-
Xylene	0.003 ⁽⁴⁾	0.5 ⁽⁹⁾	0.03	0.03
Methyl tert-butyl ether (MTBE)	-	0.015 ⁽⁷⁾	-	-

Rationale for Generic Assessment Criteria Routinely Used by PBA

	Screening Concentration (mg/l)			
	Minimum Reporting Value	Human Consumption	Fresh Water/Inland	Salt Water/Other
Pesticides and Herbicides				
Alachlor PS	-	-	0.0003	0.0003
Aldrin PS	0.000003	0.000013	0.00001 ⁽⁸⁾	0.000005 ⁽⁸⁾
Dieldrin PS	0.000003	0.00003		
Endrin PS	0.000003	0.0006 ⁽⁹⁾		
Isodrin	0.000003	-	-	-
2,4 dichlorophenol SP	0.0001	-	0.0042	0.0042
2,4 D ester SP	0.0001	-	0.0003	0.0003
op and pp DDT (each) PS		0.001 ⁽⁶⁾	0.000025	0.000025
op and pp DDE (each)				
op and pp TDE (each)				
Dimethoate SP	0.00001	-	0.00048	0.00048
Endosulfan PS	0.000005	-	0.000005	0.0000005
Hexachlorobenzene PS	0.000001		0.00005 max	0.00005 max
Permethrin SP		-	0.000001	0.0000002
Atrazine PS	0.00003	-	0.0006	0.0006
Simazine PS	0.00003	-	0.001	0.001
Linuron SP		-	0.0005	0.0005
Mecoprop SP		-	0.018	0.018
Trifluralin PS	0.00001	-	0.00003	0.00003
Miscellaneous				
Ammonium (as NH ₄ ⁺)	-	0.5	-	
Unionised Ammonia (NH ₃) SP	-	-	-	0.021
Chloride	-	250		
Chlorine SP			0.002	0.01 max
Cyanide SP (hydrogen cyanide)	-	0.05	0.001	0.001
Nitrate (as NO ₃)	-	50	-	-
Nitrite (as NO ₂)	-	0.1	-	-
Phenol SP	-	0.5	0.0077	0.0077
Pentachlorophenol PS	0.0001	-	0.0004	0.0004
PCBs (individual congeners)	0.000001	-	-	-
Sodium	-	200	-	-
Sulphate	-	250		
Tributyl and triphenyl tin compounds (each) PS	0.000001	-	0.0000002	0.0000002
Di(2-ethylhexyl)-phthalate (DEPH) PS	-	-	0.0013	0.0013

Notes:

PS = Priority Substances

SP = Specific Pollutants

'-' screening concentration is not available

'max' – maximum allowable concentration used where no annual average provided

- Concentration for trihalomethanes is the sum of chloroform, bromoform, dibromochloromethane and bromodichloromethane.
- Concentration is the dissolved fraction of a water sample obtained by filtration through a 0.45µm filter.
- Concentration is taken from Statutory Instrument 1989 No. 1147. The Water Supply (Water Quality) Regulations 1989, as amended.
- Concentration for xylenes is 0.003mg/l each for o-xylene and m/p xylene.
- Concentration is the Sum of TCE and PCE.
- Concentration is for Total DDT. Para DDT on its own has a target concentration of 0.00001mg/l.
- Concentration for MTBE is taken from Environment Agency guidance, dated 2006.
- Concentration is the sum of aldrin, dieldrin, endrin.
- Concentration is taken from WHO (2004) guidelines for drinking-water quality.
- Sum of benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, indeno(1,2,3-cd)pyrene
- Concentration is for 2,6-CNT, 4,2-CNT, 4,3-CNT, 2,4-CNT, 2,5-CNT
- BAP can be considered as a marker of the other PAHs for comparison with the annual average
- Concentration plus ambient background concentration (dissolved)
- 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).

APPENDIX 2

Test Results

Mercury (mg/kg) F/T:20/20

Client/client ref: RBC

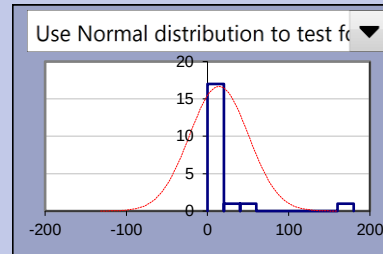
Site ref: 28791/3500

Date: 27-Apr-2017

Project ref: MRT East Reading Data description: Zone D

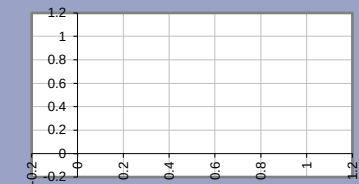
User details: Arie Zamler

Dataset:	Mercury (mg/kg) F/T:20/20
Sample mean (mg/kg), $\bar{X}$	14.193
Sample standard deviation, s	36.425
Sample size, n	20
Critical concentration, Cc (mg/kg)	58



Outliers & non-detects

Outliers present?	Yes
Significance level	5%
Outliers excluded	0
Non-detects	0

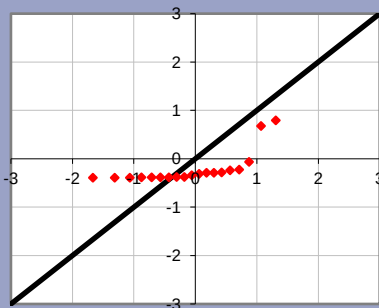


Normality test

Significance level: 5%

Non-normal distribution

Use: Auto: Chebychev

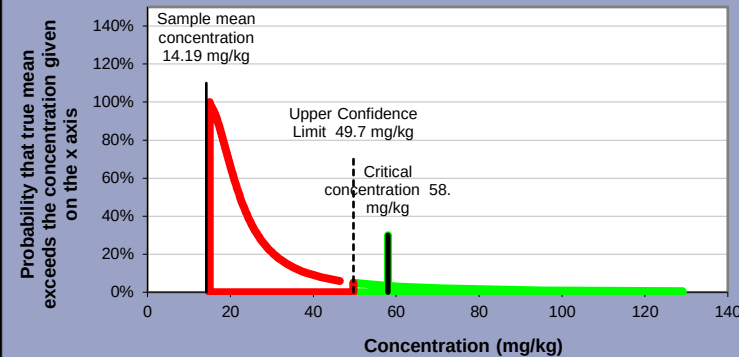


Test scenario:

Planning: is true mean lower than critical concentration ($\mu < C_c$)?

Null hypothesis: The true mean concentration is equal to or greater than the critical concentration: $\mu \geq C_c$

Alternative hypothesis: The true mean concentration is less than the critical concentration: $\mu < C_c$



Evidence against Null hypothesis:

97%

Base decision on: evidence level

Evidence level required: 95%

Balance of probability? N/A

Reject Null Hypothesis? Yes

$\mu < C_c$ (re this dataset)

Back to data

Back to summary

Go to outlier test

Go to normality test

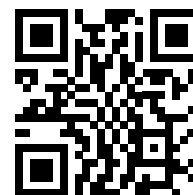
APPENDIX 3

TPH CWG	Assessment Criteria	Sample Reference												
Hydrocarbon Fraction	End Use & %SOM	BH1	BH1	BH1	BH2	BH2	BH2	BH3	BH3	HP1	HP1	HP2	HP2	HP2A
		0.4	0.8	2.4	0.3	0.9	2.5	0.4	2.2	0.6	2.3	0.3	1.2	1.8
>C5 to C6 Aliphatic	12000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
>C6 to C8 Aliphatic	40000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
>C8 to C10 Aliphatic	11000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
>C10 to C12 Aliphatic	47000	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
>C12 to C16 Aliphatic	90000	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
>C16 to C21 Aliphatic	-	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
>C21 to C35 Aliphatic	-	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
>C16 to C35 Aliphatic	1800000	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9
>C35 to C44 Aliphatic	1800000													
Total Aliphatic C5-35	-	10	10	10	10	10	10	10	10	10	10	10	10	10
>C5 to C7 Aromatic	86000													
>C7 to C8 Aromatic	180000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
>C8 to C10 Aromatic	17000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
>C10 to C12 Aromatic	34000	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
>C12 to C16 Aromatic	38000	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
>C16 to C21 Aromatic	28000	3	0.6	0.6	2.8	0.8	0.6	0.6	4.4	0.6	0.6	1	1.5	0.6
>C21 TO C35 Aromatic	28000	2.8	1.4	1.4	3.6	1.4	1.4	1.4	5.8	1.4	1.4	1.7	4.7	1.4
>C35 to C44 Aromatic	28000													
Total Aromatic C5-C35	-	10	10	10	10	10	10	10	10	10	10	10	10	10
HAZARD INDEX (HI)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
If the calculated HI exceeds unity then consideration is given to the potential for significant human health effects due to additive effects														
 Offices throughout the UK and continental Europe www.peterbrett.com	Client  Reading Borough Council Working better with you	Proposed MRT Scheme, East Reading Table Presenting the Calculated Individual Hydrocarbon Fraction Hazard Quotient and Hazard Index									Date	May 2017		
											Scale	NTS		
											Prepared by	az		
											Checked by	rht		
											Table:			
		1												

TPH CWG	Assessment Criteria	Sample Reference												
		HP3	HP3	TP1	TP1	TP1	TP2	TP2	TP3	TP3	TP3	TP4	TP4	
		0.65	1.7	0.5	1.2	2.3	0.4	1.1	0.4	1	1.9	0.5	1	
Hydrocarbon Fraction	End Use & %SOM													
>C5 to C6 Aliphatic	12000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
>C6 to C8 Aliphatic	40000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
>C8 to C10 Aliphatic	11000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
>C10 to C12 Aliphatic	47000	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
>C12 to C16 Aliphatic	90000	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	
>C16 to C21 Aliphatic	-	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	
>C21 to C35 Aliphatic	-	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	
>C16 to C35 Aliphatic	1800000	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	4.9	
>C35 to C44 Aliphatic	1800000													
Total Aliphatic C5-35	-	10	10	10	10	10	10	10	10	10	10	10	10	
>C5 to C7 Aromatic	86000													
>C7 to C8 Aromatic	180000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
>C8 to C10 Aromatic	17000	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	
>C10 to C12 Aromatic	34000	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	
>C12 to C16 Aromatic	38000	0.5	0.5	1.4	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	
>C16 to C21 Aromatic	28000	0.6	0.6	13	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	
>C21 TO C35 Aromatic	28000	1.4	1.4	23	1.4	1.4	1.4	1.4	2.5	1.4	1.4	1.4	1.4	
>C35 to C44 Aromatic	28000													
Total Aromatic C5-C35	-	10	10	38	10	10	10	10	10	10	10	10	10	
HAZARD INDEX (HI)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
If the calculated HI exceeds unity then consideration is given to the potential for significant human health effects due to additive effects														
 Offices throughout the UK and continental Europe www.peterbrett.com	 Reading Borough Council <i>Working better with you</i>		Proposed MRT Scheme, East Reading Table Presenting the Calculated Individual Hydrocarbon Fraction Hazard Quotient and Hazard Index								Date	May 2017		
											Scale	NTS		
											Prepared by	az		
											Checked by	rht		
											Table:	1		

APPENDIX 4

Waste Classification Report



S7GC4-JCBN5-6E8K4

Job name

Proposed MRT Scheme, East Reading

Description/Comments

Project

28791/3500

Site

Ground Investigation carried out by Endeavour Drilling Report No; END17-021 April 2017

Waste Stream Template

Example waste stream template for contaminated soils

Classified by

Name:
Gemma Bates
Date:
02/05/2017 14:14:40 UTC
Telephone:
01223 802929

Company:
Peter Brett Associates
Telford House
Fulbourn
Cambridge
CB21 5HB

Report

Created by: Gemma Bates
Created date: 02/05/2017 14:14 UTC

Job summary

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
1	BH1 0.4		Non Hazardous		3
2	BH1 0.8		Potentially Hazardous	HP 3(i)	5
3	BH1 2.4		Non Hazardous		7
4	BH2 0.3		Non Hazardous		9
5	BH2 0.9		Non Hazardous		11
6	BH2 2.5		Non Hazardous		13
7	BH3 0.4		Non Hazardous		15
8	BH3 2.2		Potentially Hazardous	HP 3(i)	17
9	HP1 0.6		Non Hazardous		19
10	HP1 2.3		Non Hazardous		21
11	HP2 0.3		Non Hazardous		23
12	HP2 1.2		Non Hazardous		25
13	HP2A 1.8		Non Hazardous		27
14	HP3 0.7		Non Hazardous		29
15	HP3 1.7		Non Hazardous		31
16	TP1 0.5		Potentially Hazardous	HP 3(i)	33
17	TP1 1.2		Non Hazardous		35
18	TP1 2.3		Non Hazardous		37
19	TP2 0.4		Non Hazardous		39
20	TP2 1.1		Non Hazardous		41

#	Sample Name	Depth [m]	Classification Result	Hazard properties	Page
21	TP3 0.4		Non Hazardous		43
22	TP3 1		Non Hazardous		45
23	TP3 1.9		Non Hazardous		47
24	TP4 0.5		Non Hazardous		49
25	TP4 1		Non Hazardous		51

Appendices	Page
Appendix A: Classifier defined and non CLP determinands	53
Appendix B: Rationale for selection of metal species	54
Appendix C: Version	55

Classification of sample: BH1 0.4

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
BH1 0.4	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				37 mg/kg	1.32	48.852	mg/kg	0.00489 %		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				0.3 mg/kg	1.14	0.343	mg/kg	0.000034 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923	mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				410 mg/kg	1.13	461.614	mg/kg	0.0462 %		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	230 mg/kg	1.56	358.757	mg/kg	0.023 %		
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				12 mg/kg	1.35	16.242	mg/kg	0.00162 %		
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel chromate }				29 mg/kg	2.98	86.312	mg/kg	0.00863 %		
	028-035-00-7	238-766-5	14721-18-7								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.7 mg/kg	2.55	1.788	mg/kg	0.000179 %		
	034-002-00-8										
9	zinc { zinc sulphate }				100 mg/kg	2.47	246.93	mg/kg	0.0247 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
11	confirm TPH has NOT arisen from diesel or petrol				☒						
12	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
13	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
14	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
15	xylene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
16	naphthalene	601-052-00-2	202-049-5	91-20-3	0.38 mg/kg		0.38 mg/kg	0.000038 %		
17	acenaphthylene	205-917-1	208-96-8		0.04 mg/kg		0.04 mg/kg	0.000004 %		
18	acenaphthene	201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
19	fluorene	201-695-5	86-73-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
20	phenanthrene	201-581-5	85-01-8		0.55 mg/kg		0.55 mg/kg	0.000055 %		
21	anthracene	204-371-1	120-12-7		0.1 mg/kg		0.1 mg/kg	0.00001 %		
22	fluoranthene	205-912-4	206-44-0		1 mg/kg		1 mg/kg	0.0001 %		
23	pyrene	204-927-3	129-00-0		1.1 mg/kg		1.1 mg/kg	0.00011 %		
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.38 mg/kg		0.38 mg/kg	0.000038 %		
25	chrysene	601-048-00-0	205-923-4	218-01-9	0.42 mg/kg		0.42 mg/kg	0.000042 %		
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.39 mg/kg		0.39 mg/kg	0.000039 %		
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.16 mg/kg		0.16 mg/kg	0.000016 %		
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.22 mg/kg		0.22 mg/kg	0.000022 %		
29	indeno[123-cd]pyrene	205-893-2	193-39-5		0.11 mg/kg		0.11 mg/kg	0.000011 %		
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		0.11 mg/kg		0.11 mg/kg	0.000011 %		
Total:								0.111 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH1 0.8

✱ **Potentially Hazardous Waste**
 Classified as **17 05 04** or **17 05 03 ***
 in the List of Waste

Sample details

Sample Name:	LoW Code:	
BH1 0.8	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 or 17 05 03 * (Soil and stones other than those mentioned in 17 05 03 or Soil and stones containing hazardous substances)
0 m		
Moisture content:		
0%		
(no correction)		

Hazard properties (substances considered hazardous until shown otherwise)

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Hazard Statements hit:

Flam. Liq. 2; H225 "Highly flammable liquid and vapour."

Because of determinand:

toluene: (conc.: 0.000002%)

Determinands

Moisture content: **0%** No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4								
4	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
5	toluene				0.02 mg/kg		0.02	mg/kg	0.000002 %		
	601-021-00-3	203-625-9	108-88-3								
6	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
7	xylene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
8	naphthalene				0.3 mg/kg		0.3	mg/kg	0.00003 %		
	601-052-00-2	202-049-5	91-20-3								
9	acenaphthylene				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		205-917-1	208-96-8								
10	acenaphthene				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-469-6	83-32-9								
11	fluorene				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		201-695-5	86-73-7								
12	phenanthrene				0.3 mg/kg		0.3	mg/kg	0.00003 %		
		201-581-5	85-01-8								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
13	anthracene	204-371-1	120-12-7		<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
14	fluoranthene	205-912-4	206-44-0		0.7 mg/kg		0.7 mg/kg	0.00007 %			
15	pyrene	204-927-3	129-00-0		0.9 mg/kg		0.9 mg/kg	0.00009 %			
16	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.4 mg/kg		0.4 mg/kg	0.00004 %			
17	chrysene	601-048-00-0	205-923-4	218-01-9	0.5 mg/kg		0.5 mg/kg	0.00005 %			
18	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.4 mg/kg		0.4 mg/kg	0.00004 %			
19	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.2 mg/kg		0.2 mg/kg	0.00002 %			
20	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.3 mg/kg		0.3 mg/kg	0.00003 %			
21	indeno[123-cd]pyrene	205-893-2	193-39-5		0.2 mg/kg		0.2 mg/kg	0.00002 %			
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
23	benzo[ghi]perylene	205-883-8	191-24-2		0.3 mg/kg		0.3 mg/kg	0.00003 %			
24	phenol	604-001-00-2	203-632-7	108-95-2	<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	1,1-dichloroethane and 1,2-dichloroethane (combined)	203-458-1, 200-863-5	107-06-2, 75-34-3		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
26	trichloroethylene; trichloroethene	602-027-00-9	201-167-4	79-01-6	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
27	vinyl chloride; chloroethylene	602-023-00-7	200-831-0	75-01-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
Total:									0.00152 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Potentially Hazardous result
■	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

Classification of sample: BH1 2.4

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
BH1 2.4	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				15 mg/kg	1.32	19.805 mg/kg	0.00198 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.4 mg/kg	1.14	0.457 mg/kg	0.000046 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				19 mg/kg	1.13	21.392 mg/kg	0.00214 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	40 mg/kg	1.56	62.393 mg/kg	0.004 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				5.6 mg/kg	1.35	7.58 mg/kg	0.000758 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				36 mg/kg	2.98	107.146 mg/kg	0.0107 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.6 mg/kg	2.55	1.532 mg/kg	0.000153 %		
	034-002-00-8									
9	zinc { zinc sulphate }				94 mg/kg	2.47	232.114 mg/kg	0.0232 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	acenaphthene	201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	fluorene	201-695-5	86-73-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	phenanthrene	201-581-5	85-01-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	anthracene	204-371-1	120-12-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
22	fluoranthene	205-912-4	206-44-0		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	pyrene	204-927-3	129-00-0		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
Total:									0.0442 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
●	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH2 0.3

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
BH2 0.3	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X 216-653-1 1634-04-4				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
4	benzene 601-020-00-8 200-753-7 71-43-2				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
5	toluene 601-021-00-3 203-625-9 108-88-3				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
6	ethylbenzene 601-023-00-4 202-849-4 100-41-4				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
7	xylene 601-022-00-9 202-422-2 [1] 95-47-6 [1] 203-396-5 [2] 106-42-3 [2] 203-576-3 [3] 108-38-3 [3] 215-535-7 [4] 1330-20-7 [4]				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
8	naphthalene 601-052-00-2 202-049-5 91-20-3				0.2 mg/kg		0.2	mg/kg	0.00002 %		
9	acenaphthylene 205-917-1 208-96-8				0.2 mg/kg		0.2	mg/kg	0.00002 %		
10	acenaphthene 201-469-6 83-32-9				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
11	fluorene 201-695-5 86-73-7				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
12	phenanthrene 201-581-5 85-01-8				1.2 mg/kg		1.2	mg/kg	0.00012 %		
13	anthracene 204-371-1 120-12-7				0.4 mg/kg		0.4	mg/kg	0.00004 %		
14	fluoranthene 205-912-4 206-44-0				2.7 mg/kg		2.7	mg/kg	0.00027 %		
15	pyrene 204-927-3 129-00-0				2.4 mg/kg		2.4	mg/kg	0.00024 %		
16	benzo[a]anthracene 601-033-00-9 200-280-6 56-55-3				1.5 mg/kg		1.5	mg/kg	0.00015 %		

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value		MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number										
17		chrysene				1.6	mg/kg		1.6	mg/kg	0.00016 %			
		601-048-00-0	205-923-4	218-01-9										
18		benzo[b]fluoranthene				1.9	mg/kg		1.9	mg/kg	0.00019 %			
		601-034-00-4	205-911-9	205-99-2										
19		benzo[k]fluoranthene				0.8	mg/kg		0.8	mg/kg	0.00008 %			
		601-036-00-5	205-916-6	207-08-9										
20		benzo[a]pyrene; benzo[def]chrysene				1.6	mg/kg		1.6	mg/kg	0.00016 %			
		601-032-00-3	200-028-5	50-32-8										
21	●	indeno[123-cd]pyrene				0.9	mg/kg		0.9	mg/kg	0.00009 %			
			205-893-2	193-39-5										
22		dibenz[a,h]anthracene				0.2	mg/kg		0.2	mg/kg	0.00002 %			
		601-041-00-2	200-181-8	53-70-3										
23	●	benzo[ghi]perylene				1.1	mg/kg		1.1	mg/kg	0.00011 %			
			205-883-8	191-24-2										
24		phenol				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD	
		604-001-00-2	203-632-7	108-95-2										
25	●	1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
			203-458-1, 200-863-5	107-06-2, 75-34-3										
26		trichloroethylene; trichloroethene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		602-027-00-9	201-167-4	79-01-6										
27		vinyl chloride; chloroethylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD	
		602-023-00-7	200-831-0	75-01-4										
Total:											0.00271 %			

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

Classification of sample: BH2 0.9

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
BH2 0.9	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				39 mg/kg	1.32	51.493 mg/kg	0.00515 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.3 mg/kg	1.14	0.343 mg/kg	0.000034 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				88 mg/kg	1.13	99.078 mg/kg	0.00991 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	130 mg/kg	1.56	202.776 mg/kg	0.013 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				0.34 mg/kg	1.35	0.46 mg/kg	0.000046 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				35 mg/kg	2.98	104.169 mg/kg	0.0104 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.9 mg/kg	2.55	2.298 mg/kg	0.00023 %		
	034-002-00-8									
9	zinc { zinc sulphate }				77 mg/kg	2.47	190.136 mg/kg	0.019 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	acenaphthene	201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	fluorene	201-695-5	86-73-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	phenanthrene	201-581-5	85-01-8		0.15 mg/kg		0.15 mg/kg	0.000015 %			
21	anthracene	204-371-1	120-12-7		0.04 mg/kg		0.04 mg/kg	0.000004 %			
22	fluoranthene	205-912-4	206-44-0		0.36 mg/kg		0.36 mg/kg	0.000036 %			
23	pyrene	204-927-3	129-00-0		0.33 mg/kg		0.33 mg/kg	0.000033 %			
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.14 mg/kg		0.14 mg/kg	0.000014 %			
25	chrysene	601-048-00-0	205-923-4	218-01-9	0.15 mg/kg		0.15 mg/kg	0.000015 %			
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.18 mg/kg		0.18 mg/kg	0.000018 %			
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.07 mg/kg		0.07 mg/kg	0.000007 %			
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.13 mg/kg		0.13 mg/kg	0.000013 %			
29	indeno[123-cd]pyrene	205-893-2	193-39-5		0.08 mg/kg		0.08 mg/kg	0.000008 %			
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		0.09 mg/kg		0.09 mg/kg	0.000009 %			
Total:									0.0592 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH2 2.5

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
BH2 2.5	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				18 mg/kg	1.32	23.766 mg/kg	0.00238 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.4 mg/kg	1.14	0.457 mg/kg	0.000046 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				18 mg/kg	1.13	20.266 mg/kg	0.00203 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	31 mg/kg	1.56	48.354 mg/kg	0.0031 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				0.08 mg/kg	1.35	0.108 mg/kg	0.000011 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				33 mg/kg	2.98	98.217 mg/kg	0.00982 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.6 mg/kg	2.55	1.532 mg/kg	0.000153 %		
	034-002-00-8									
9	zinc { zinc sulphate }				90 mg/kg	2.47	222.237 mg/kg	0.0222 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	acenaphthene	201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	fluorene	201-695-5	86-73-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	phenanthrene	201-581-5	85-01-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	anthracene	204-371-1	120-12-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
22	fluoranthene	205-912-4	206-44-0		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	pyrene	204-927-3	129-00-0		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
25	chrysene	601-048-00-0	205-923-4	218-01-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
Total:									0.041 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH3 0.4

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
BH3 0.4	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				47 mg/kg	1.32	62.055 mg/kg	0.00621 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.5 mg/kg	1.14	0.571 mg/kg	0.000057 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				110 mg/kg	1.13	123.848 mg/kg	0.0124 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	100 mg/kg	1.56	155.982 mg/kg	0.01 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				0.21 mg/kg	1.35	0.284 mg/kg	0.000028 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				46 mg/kg	2.98	136.908 mg/kg	0.0137 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.9 mg/kg	2.55	2.298 mg/kg	0.00023 %		
	034-002-00-8									
9	zinc { zinc sulphate }				94 mg/kg	2.47	232.114 mg/kg	0.0232 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
17	acenaphthylene	205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	acenaphthene	201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	fluorene	201-695-5	86-73-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	phenanthrene	201-581-5	85-01-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	anthracene	204-371-1	120-12-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
22	fluoranthene	205-912-4	206-44-0		0.12 mg/kg		0.12 mg/kg	0.000012 %			
23	pyrene	204-927-3	129-00-0		0.11 mg/kg		0.11 mg/kg	0.000011 %			
24	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.05 mg/kg		0.05 mg/kg	0.000005 %			
25	chrysene	601-048-00-0	205-923-4	218-01-9	0.06 mg/kg		0.06 mg/kg	0.000006 %			
26	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.06 mg/kg		0.06 mg/kg	0.000006 %			
27	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
28	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.04 mg/kg		0.04 mg/kg	0.000004 %			
29	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
30	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
31	benzo[ghi]perylene	205-883-8	191-24-2		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
Total:									0.0671 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
●	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: BH3 2.2

 **Potentially Hazardous Waste**
 Classified as **17 05 04** or **17 05 03 ***
 in the List of Waste

Sample details

Sample Name:	LoW Code:	
BH3 2.2	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 or 17 05 03 * (Soil and stones other than those mentioned in 17 05 03 or Soil and stones containing hazardous substances)
0 m		
Moisture content:		
0%		
(no correction)		

Hazard properties (substances considered hazardous until shown otherwise)

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.001%)

Determinands

Moisture content: **0%** No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				15 mg/kg	1.32	19.805 mg/kg	0.00198 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.3 mg/kg	1.14	0.343 mg/kg	0.000034 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				16 mg/kg	1.13	18.014 mg/kg	0.0018 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	17 mg/kg	1.56	26.517 mg/kg	0.0017 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				0.07 mg/kg	1.35	0.095 mg/kg	0.000009474 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				31 mg/kg	2.98	92.264 mg/kg	0.00923 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.6 mg/kg	2.55	1.532 mg/kg	0.000153 %		
	034-002-00-8									
9	zinc { zinc sulphate }				84 mg/kg	2.47	207.421 mg/kg	0.0207 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				10 mg/kg		10 mg/kg	0.001 %		
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
16	naphthalene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-052-00-2	202-049-5	91-20-3								
17	acenaphthylene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		205-917-1	208-96-8								
18	acenaphthene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		201-469-6	83-32-9								
19	fluorene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		201-695-5	86-73-7								
20	phenanthrene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		201-581-5	85-01-8								
21	anthracene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		204-371-1	120-12-7								
22	fluoranthene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		205-912-4	206-44-0								
23	pyrene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		204-927-3	129-00-0								
24	benzo[a]anthracene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-033-00-9	200-280-6	56-55-3								
25	chrysene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-048-00-0	205-923-4	218-01-9								
26	benzo[b]fluoranthene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-034-00-4	205-911-9	205-99-2								
27	benzo[k]fluoranthene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-036-00-5	205-916-6	207-08-9								
28	benzo[a]pyrene; benzo[def]chrysene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-032-00-3	200-028-5	50-32-8								
29	indeno[123-cd]pyrene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		205-893-2	193-39-5								
30	dibenz[a,h]anthracene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
31	benzo[ghi]perylene				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
		205-883-8	191-24-2								
Total:									0.0369 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Potentially Hazardous result
	Determinand defined or amended by HazWasteOnline (see Appendix A)
	Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
<LOD	Below limit of detection
CLP: Note 1	Only the metal concentration has been used for classification

Classification of sample: HP1 0.6

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
HP1 0.6	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				30 mg/kg	1.32	39.61 mg/kg	0.00396 %			
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				1.1 mg/kg	1.14	1.257 mg/kg	0.000126 %			
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				160 mg/kg	1.13	180.142 mg/kg	0.018 %			
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	170 mg/kg	1.56	265.169 mg/kg	0.017 %			
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				1.7 mg/kg	1.35	2.301 mg/kg	0.00023 %			
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel chromate }				130 mg/kg	2.98	386.914 mg/kg	0.0387 %			
	028-035-00-7	238-766-5	14721-18-7								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.8 mg/kg	2.55	2.043 mg/kg	0.000204 %			
	034-002-00-8										
9	zinc { zinc sulphate }				320 mg/kg	2.47	790.175 mg/kg	0.079 %			
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
11	confirm TPH has NOT arisen from diesel or petrol				☒						
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	● pH		PH		7.3 pH		7.3 pH	7.3 pH			
17	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	● acenaphthylene		205-917-1	208-96-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	● acenaphthene		201-469-6	83-32-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	● fluorene		201-695-5	86-73-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	● phenanthrene		201-581-5	85-01-8	0.08 mg/kg		0.08 mg/kg	0.000008 %			
22	● anthracene		204-371-1	120-12-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	● fluoranthene		205-912-4	206-44-0	0.24 mg/kg		0.24 mg/kg	0.000024 %			
24	● pyrene		204-927-3	129-00-0	0.24 mg/kg		0.24 mg/kg	0.000024 %			
25	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.12 mg/kg		0.12 mg/kg	0.000012 %			
26	chrysene	601-048-00-0	205-923-4	218-01-9	0.14 mg/kg		0.14 mg/kg	0.000014 %			
27	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.17 mg/kg		0.17 mg/kg	0.000017 %			
28	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.08 mg/kg		0.08 mg/kg	0.000008 %			
29	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.12 mg/kg		0.12 mg/kg	0.000012 %			
30	● indeno[123-cd]pyrene		205-893-2	193-39-5	0.12 mg/kg		0.12 mg/kg	0.000012 %			
31	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
32	● benzo[ghi]perylene		205-883-8	191-24-2	0.13 mg/kg		0.13 mg/kg	0.000013 %			
Total:									0.159 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
-  Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: HP1 2.3

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
HP1 2.3	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				20 mg/kg	1.32	26.407	mg/kg	0.00264 %		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				0.4 mg/kg	1.14	0.457	mg/kg	0.000046 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923	mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				49 mg/kg	1.13	55.169	mg/kg	0.00552 %		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	170 mg/kg	1.56	265.169	mg/kg	0.017 %		
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				43 mg/kg	1.35	58.2	mg/kg	0.00582 %		
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel chromate }				26 mg/kg	2.98	77.383	mg/kg	0.00774 %		
	028-035-00-7	238-766-5	14721-18-7								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				3.2 mg/kg	2.55	8.172	mg/kg	0.000817 %		
	034-002-00-8										
9	zinc { zinc sulphate }				100 mg/kg	2.47	246.93	mg/kg	0.0247 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
11	confirm TPH has NOT arisen from diesel or petrol				☒						
12	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
13	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
14	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
15	xylene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	● pH		PH		7.8 pH		7.8 pH	7.8 pH			
17	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	● acenaphthylene		205-917-1	208-96-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	● acenaphthene		201-469-6	83-32-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	● fluorene		201-695-5	86-73-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	● phenanthrene		201-581-5	85-01-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
22	● anthracene		204-371-1	120-12-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	● fluoranthene		205-912-4	206-44-0	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
24	● pyrene		204-927-3	129-00-0	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
25	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
26	chrysene	601-048-00-0	205-923-4	218-01-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
27	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
28	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
29	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
30	● indeno[123-cd]pyrene		205-893-2	193-39-5	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
31	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
32	● benzo[ghi]perylene		205-883-8	191-24-2	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
Total:									0.0655 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
-  Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: HP2 0.3

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
HP2 0.3	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				39 mg/kg	1.32	51.493 mg/kg	0.00515 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.5 mg/kg	1.14	0.571 mg/kg	0.000057 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				120 mg/kg	1.13	135.107 mg/kg	0.0135 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	230 mg/kg	1.56	358.757 mg/kg	0.023 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				0.61 mg/kg	1.35	0.826 mg/kg	0.000083 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				39 mg/kg	2.98	116.074 mg/kg	0.0116 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.6 mg/kg	2.55	1.532 mg/kg	0.000153 %		
	034-002-00-8									
9	zinc { zinc sulphate }				140 mg/kg	2.47	345.701 mg/kg	0.0346 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	● pH		PH		8 pH		8 pH	8pH			
17	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	● acenaphthylene		205-917-1	208-96-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	● acenaphthene		201-469-6	83-32-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	● fluorene		201-695-5	86-73-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	● phenanthrene		201-581-5	85-01-8	0.48 mg/kg		0.48 mg/kg	0.000048 %			
22	● anthracene		204-371-1	120-12-7	0.13 mg/kg		0.13 mg/kg	0.000013 %			
23	● fluoranthene		205-912-4	206-44-0	1.1 mg/kg		1.1 mg/kg	0.00011 %			
24	● pyrene		204-927-3	129-00-0	0.96 mg/kg		0.96 mg/kg	0.000096 %			
25	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.43 mg/kg		0.43 mg/kg	0.000043 %			
26	chrysene	601-048-00-0	205-923-4	218-01-9	0.49 mg/kg		0.49 mg/kg	0.000049 %			
27	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.53 mg/kg		0.53 mg/kg	0.000053 %			
28	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.19 mg/kg		0.19 mg/kg	0.000019 %			
29	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.35 mg/kg		0.35 mg/kg	0.000035 %			
30	● indeno[123-cd]pyrene		205-893-2	193-39-5	0.22 mg/kg		0.22 mg/kg	0.000022 %			
31	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.06 mg/kg		0.06 mg/kg	0.000006 %			
32	● benzo[ghi]perylene		205-883-8	191-24-2	0.24 mg/kg		0.24 mg/kg	0.000024 %			
Total:									0.0899 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
-  Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: HP2 1.2

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
HP2 1.2	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X 216-653-1 1634-04-4				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
4	benzene 601-020-00-8 200-753-7 71-43-2				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
5	toluene 601-021-00-3 203-625-9 108-88-3				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
6	ethylbenzene 601-023-00-4 202-849-4 100-41-4				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
7	xylene 601-022-00-9 202-422-2 [1] 95-47-6 [1] 203-396-5 [2] 106-42-3 [2] 203-576-3 [3] 108-38-3 [3] 215-535-7 [4] 1330-20-7 [4]				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
8	naphthalene 601-052-00-2 202-049-5 91-20-3				0.2 mg/kg		0.2	mg/kg	0.00002 %		
9	acenaphthylene 205-917-1 208-96-8				0.2 mg/kg		0.2	mg/kg	0.00002 %		
10	acenaphthene 201-469-6 83-32-9				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
11	fluorene 201-695-5 86-73-7				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
12	phenanthrene 201-581-5 85-01-8				0.4 mg/kg		0.4	mg/kg	0.00004 %		
13	anthracene 204-371-1 120-12-7				0.2 mg/kg		0.2	mg/kg	0.00002 %		
14	fluoranthene 205-912-4 206-44-0				1.9 mg/kg		1.9	mg/kg	0.00019 %		
15	pyrene 204-927-3 129-00-0				1.9 mg/kg		1.9	mg/kg	0.00019 %		
16	benzo[a]anthracene 601-033-00-9 200-280-6 56-55-3				1.2 mg/kg		1.2	mg/kg	0.00012 %		

Report created by Gemina Dates on 02/03/2017													
#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
17		chrysene				1.2	mg/kg		1.2	mg/kg	0.00012 %		
		601-048-00-0	205-923-4	218-01-9									
18		benzo[b]fluoranthene				1.9	mg/kg		1.9	mg/kg	0.00019 %		
		601-034-00-4	205-911-9	205-99-2									
19		benzo[k]fluoranthene				0.7	mg/kg		0.7	mg/kg	0.00007 %		
		601-036-00-5	205-916-6	207-08-9									
20		benzo[a]pyrene; benzo[def]chrysene				1.4	mg/kg		1.4	mg/kg	0.00014 %		
		601-032-00-3	200-028-5	50-32-8									
21	●	indeno[123-cd]pyrene				1	mg/kg		1	mg/kg	0.0001 %		
			205-893-2	193-39-5									
22		dibenz[a,h]anthracene				0.2	mg/kg		0.2	mg/kg	0.00002 %		
		601-041-00-2	200-181-8	53-70-3									
23	●	benzo[ghi]perylene				1.2	mg/kg		1.2	mg/kg	0.00012 %		
			205-883-8	191-24-2									
24		phenol				<0.1	mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
25	●	1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			203-458-1, 200-863-5	107-06-2, 75-34-3									
26		trichloroethylene; trichloroethene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-027-00-9	201-167-4	79-01-6									
27		vinyl chloride; chloroethylene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		602-023-00-7	200-831-0	75-01-4									
Total:											0.0024 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

Classification of sample: HP2A 1.8

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
HP2A 1.8	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				19 mg/kg	1.32	25.086 mg/kg	0.00251 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.3 mg/kg	1.14	0.343 mg/kg	0.000034 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				16 mg/kg	1.13	18.014 mg/kg	0.0018 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	43 mg/kg	1.56	67.072 mg/kg	0.0043 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				3 mg/kg	1.35	4.06 mg/kg	0.000406 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				27 mg/kg	2.98	80.359 mg/kg	0.00804 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.2 mg/kg	2.55	3.064 mg/kg	0.000306 %		
	034-002-00-8									
9	zinc { zinc sulphate }				81 mg/kg	2.47	200.013 mg/kg	0.02 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

Report created by Gemma Dates on 02/03/2017													
#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number									
			203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]									
16	●	pH				7.9	pH		7.9	pH	7.9 pH		
				PH									
17		naphthalene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
18	●	acenaphthylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-917-1	208-96-8									
19	●	acenaphthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-469-6	83-32-9									
20	●	fluorene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-695-5	86-73-7									
21	●	phenanthrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			201-581-5	85-01-8									
22	●	anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			204-371-1	120-12-7									
23	●	fluoranthene				0.04	mg/kg		0.04	mg/kg	0.000004 %		
			205-912-4	206-44-0									
24	●	pyrene				0.04	mg/kg		0.04	mg/kg	0.000004 %		
			204-927-3	129-00-0									
25		benzo[a]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-033-00-9	200-280-6	56-55-3									
26		chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-048-00-0	205-923-4	218-01-9									
27		benzo[b]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-034-00-4	205-911-9	205-99-2									
28		benzo[k]fluoranthene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-036-00-5	205-916-6	207-08-9									
29		benzo[a]pyrene; benzo[def]chrysene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-032-00-3	200-028-5	50-32-8									
30	●	indeno[123-cd]pyrene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-893-2	193-39-5									
31		dibenz[a,h]anthracene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
		601-041-00-2	200-181-8	53-70-3									
32	●	benzo[ghi]perylene				<0.03	mg/kg		<0.03	mg/kg	<0.000003 %		<LOD
			205-883-8	191-24-2									
Total:											0.0386 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- ⚗

 Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: HP3 0.7

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
HP3 0.7	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				25 mg/kg	1.32	33.008 mg/kg	0.0033 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.4 mg/kg	1.14	0.457 mg/kg	0.000046 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				120 mg/kg	1.13	135.107 mg/kg	0.0135 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	70 mg/kg	1.56	109.187 mg/kg	0.007 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				0.08 mg/kg	1.35	0.108 mg/kg	0.000011 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				59 mg/kg	2.98	175.6 mg/kg	0.0176 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				<0.5 mg/kg	2.55	<1.277 mg/kg	<0.000128 %		<LOD
	034-002-00-8									
9	zinc { zinc sulphate }				120 mg/kg	2.47	296.316 mg/kg	0.0296 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	pH PH				7.9 pH		7.9 pH	7.9 pH			
17	naphthalene 601-052-00-2 202-049-5 91-20-3				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	acenaphthylene 205-917-1 208-96-8				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	acenaphthene 201-469-6 83-32-9				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	fluorene 201-695-5 86-73-7				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	phenanthrene 201-581-5 85-01-8				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
22	anthracene 204-371-1 120-12-7				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	fluoranthene 205-912-4 206-44-0				0.06 mg/kg		0.06 mg/kg	0.000006 %			
24	pyrene 204-927-3 129-00-0				0.06 mg/kg		0.06 mg/kg	0.000006 %			
25	benzo[a]anthracene 601-033-00-9 200-280-6 56-55-3				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
26	chrysene 601-048-00-0 205-923-4 218-01-9				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
27	benzo[b]fluoranthene 601-034-00-4 205-911-9 205-99-2				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
28	benzo[k]fluoranthene 601-036-00-5 205-916-6 207-08-9				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
29	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3 200-028-5 50-32-8				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
30	indeno[123-cd]pyrene 205-893-2 193-39-5				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
31	dibenz[a,h]anthracene 601-041-00-2 200-181-8 53-70-3				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
32	benzo[ghi]perylene 205-883-8 191-24-2				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
Total:									0.0724 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: HP3 1.7

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
HP3 1.7	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				17 mg/kg	1.32	22.446	mg/kg	0.00224 %		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				0.4 mg/kg	1.14	0.457	mg/kg	0.000046 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923	mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				35 mg/kg	1.13	39.406	mg/kg	0.00394 %		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	83 mg/kg	1.56	129.465	mg/kg	0.0083 %		
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				0.16 mg/kg	1.35	0.217	mg/kg	0.000022 %		
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel chromate }				24 mg/kg	2.98	71.43	mg/kg	0.00714 %		
	028-035-00-7	238-766-5	14721-18-7								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.6 mg/kg	2.55	4.086	mg/kg	0.000409 %		
	034-002-00-8										
9	zinc { zinc sulphate }				76 mg/kg	2.47	187.667	mg/kg	0.0188 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
11	confirm TPH has NOT arisen from diesel or petrol				☒						
12	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
13	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
14	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
15	xylene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	● pH		PH		7.7 pH		7.7 pH	7.7 pH			
17	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	● acenaphthylene		205-917-1	208-96-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	● acenaphthene		201-469-6	83-32-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	● fluorene		201-695-5	86-73-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	● phenanthrene		201-581-5	85-01-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
22	● anthracene		204-371-1	120-12-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	● fluoranthene		205-912-4	206-44-0	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
24	● pyrene		204-927-3	129-00-0	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
25	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
26	chrysene	601-048-00-0	205-923-4	218-01-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
27	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
28	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
29	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
30	● indeno[123-cd]pyrene		205-893-2	193-39-5	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
31	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
32	● benzo[ghi]perylene		205-883-8	191-24-2	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
Total:									0.0421 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
-  Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP1 0.5

✱ **Potentially Hazardous Waste**
 Classified as **17 05 04** or **17 05 03 ***
 in the List of Waste

Sample details

Sample Name:	LoW Code:	
TP1 0.5	Chapter:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry:	17 05 04 or 17 05 03 * (Soil and stones other than those mentioned in 17 05 03 or Soil and stones containing hazardous substances)
0 m		
Moisture content:		
0%		
(no correction)		

Hazard properties (substances considered hazardous until shown otherwise)

HP 3(i): Flammable "flammable liquid waste: liquid waste having a flash point below 60°C or waste gas oil, diesel and light heating oils having a flash point > 55°C and <= 75°C"

Hazard Statements hit:

Flam. Liq. 3; H226 "Flammable liquid and vapour."

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.0038%)

Determinands

Moisture content: **0%** No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	TPH (C6 to C40) petroleum group				38 mg/kg		38 mg/kg		0.0038 %		
			TPH								
2	confirm TPH has NOT arisen from diesel or petrol				☒						
3	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
	603-181-00-X	216-653-1	1634-04-4								
4	benzene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
5	toluene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
6	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
7	xylene				<0.01 mg/kg		<0.01 mg/kg		<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2] 203-576-3 [3] 215-535-7 [4]	95-47-6 [1] 106-42-3 [2] 108-38-3 [3] 1330-20-7 [4]								
8	naphthalene				2.2 mg/kg		2.2 mg/kg		0.00022 %		
	601-052-00-2	202-049-5	91-20-3								
9	acenaphthylene				1.2 mg/kg		1.2 mg/kg		0.00012 %		
		205-917-1	208-96-8								
10	acenaphthene				0.05 mg/kg		0.05 mg/kg		0.000005 %		
		201-469-6	83-32-9								
11	fluorene				0.2 mg/kg		0.2 mg/kg		0.00002 %		
		201-695-5	86-73-7								
12	phenanthrene				4.7 mg/kg		4.7 mg/kg		0.00047 %		
		201-581-5	85-01-8								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
13	anthracene	204-371-1	120-12-7		1 mg/kg		1 mg/kg	0.0001 %			
14	fluoranthene	205-912-4	206-44-0		4.7 mg/kg		4.7 mg/kg	0.00047 %			
15	pyrene	204-927-3	129-00-0		4.2 mg/kg		4.2 mg/kg	0.00042 %			
16	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	4.3 mg/kg		4.3 mg/kg	0.00043 %			
17	chrysene	601-048-00-0	205-923-4	218-01-9	5 mg/kg		5 mg/kg	0.0005 %			
18	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	6.8 mg/kg		6.8 mg/kg	0.00068 %			
19	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	2.5 mg/kg		2.5 mg/kg	0.00025 %			
20	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	4.2 mg/kg		4.2 mg/kg	0.00042 %			
21	indeno[123-cd]pyrene	205-893-2	193-39-5		2.9 mg/kg		2.9 mg/kg	0.00029 %			
22	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.7 mg/kg		0.7 mg/kg	0.00007 %			
23	benzo[ghi]perylene	205-883-8	191-24-2		3.3 mg/kg		3.3 mg/kg	0.00033 %			
24	phenol	604-001-00-2	203-632-7	108-95-2	<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
25	1,1-dichloroethane and 1,2-dichloroethane (combined)	203-458-1, 200-863-5	107-06-2, 75-34-3		<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
26	trichloroethylene; trichloroethene	602-027-00-9	201-167-4	79-01-6	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
27	vinyl chloride; chloroethylene	602-023-00-7	200-831-0	75-01-4	<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
Total:									0.00861 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
	Potentially Hazardous result
■	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

Classification of sample: TP1 1.2

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP1 1.2	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				37 mg/kg	1.32	48.852 mg/kg	0.00489 %			
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				0.7 mg/kg	1.14	0.8 mg/kg	0.00008 %			
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %			<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				240 mg/kg	1.13	270.213 mg/kg	0.027 %			
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	410 mg/kg	1.56	639.524 mg/kg	0.041 %			
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				3.6 mg/kg	1.35	4.873 mg/kg	0.000487 %			
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel chromate }				89 mg/kg	2.98	264.888 mg/kg	0.0265 %			
	028-035-00-7	238-766-5	14721-18-7								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.7 mg/kg	2.55	1.788 mg/kg	0.000179 %			
	034-002-00-8										
9	zinc { zinc sulphate }				260 mg/kg	2.47	642.017 mg/kg	0.0642 %			
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %			<LOD
			TPH								
11	confirm TPH has NOT arisen from diesel or petrol				☑						
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-020-00-8	200-753-7	71-43-2								
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-021-00-3	203-625-9	108-88-3								
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-023-00-4	202-849-4	100-41-4								
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
16	● pH		PH		7.4 pH		7.4 pH	7.4 pH		
17	naphthalene	601-052-00-2	202-049-5	91-20-3	0.05 mg/kg		0.05 mg/kg	0.000005 %		
18	● acenaphthylene		205-917-1	208-96-8	0.04 mg/kg		0.04 mg/kg	0.000004 %		
19	● acenaphthene		201-469-6	83-32-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
20	● fluorene		201-695-5	86-73-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD
21	● phenanthrene		201-581-5	85-01-8	0.26 mg/kg		0.26 mg/kg	0.000026 %		
22	● anthracene		204-371-1	120-12-7	0.05 mg/kg		0.05 mg/kg	0.000005 %		
23	● fluoranthene		205-912-4	206-44-0	0.59 mg/kg		0.59 mg/kg	0.000059 %		
24	● pyrene		204-927-3	129-00-0	0.59 mg/kg		0.59 mg/kg	0.000059 %		
25	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.21 mg/kg		0.21 mg/kg	0.000021 %		
26	chrysene	601-048-00-0	205-923-4	218-01-9	0.28 mg/kg		0.28 mg/kg	0.000028 %		
27	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.28 mg/kg		0.28 mg/kg	0.000028 %		
28	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	0.12 mg/kg		0.12 mg/kg	0.000012 %		
29	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	0.18 mg/kg		0.18 mg/kg	0.000018 %		
30	● indeno[123-cd]pyrene		205-893-2	193-39-5	0.16 mg/kg		0.16 mg/kg	0.000016 %		
31	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	0.04 mg/kg		0.04 mg/kg	0.000004 %		
32	● benzo[ghi]perylene		205-883-8	191-24-2	0.18 mg/kg		0.18 mg/kg	0.000018 %		
Total:								0.166 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
-  Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP1 2.3

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP1 2.3	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				25 mg/kg	1.32	33.008 mg/kg	0.0033 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.6 mg/kg	1.14	0.685 mg/kg	0.000069 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				110 mg/kg	1.13	123.848 mg/kg	0.0124 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	280 mg/kg	1.56	436.748 mg/kg	0.028 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				39 mg/kg	1.35	52.786 mg/kg	0.00528 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				28 mg/kg	2.98	83.335 mg/kg	0.00833 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				4 mg/kg	2.55	10.214 mg/kg	0.00102 %		
	034-002-00-8									
9	zinc { zinc sulphate }				160 mg/kg	2.47	395.087 mg/kg	0.0395 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	● pH		PH		7.6 pH		7.6 pH	7.6 pH			
17	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	● acenaphthylene		205-917-1	208-96-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	● acenaphthene		201-469-6	83-32-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	● fluorene		201-695-5	86-73-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	● phenanthrene		201-581-5	85-01-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
22	● anthracene		204-371-1	120-12-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	● fluoranthene		205-912-4	206-44-0	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
24	● pyrene		204-927-3	129-00-0	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
25	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
26	chrysene	601-048-00-0	205-923-4	218-01-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
27	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
28	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
29	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
30	● indeno[123-cd]pyrene		205-893-2	193-39-5	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
31	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
32	● benzo[ghi]perylene		205-883-8	191-24-2	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
Total:									0.0991 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP2 0.4

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
TP2 0.4	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				67 mg/kg	1.32	88.462 mg/kg	0.00885 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.7 mg/kg	1.14	0.8 mg/kg	0.00008 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				120 mg/kg	1.13	135.107 mg/kg	0.0135 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	130 mg/kg	1.56	202.776 mg/kg	0.013 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				0.58 mg/kg	1.35	0.785 mg/kg	0.000079 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				49 mg/kg	2.98	145.837 mg/kg	0.0146 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1 mg/kg	2.55	2.554 mg/kg	0.000255 %		
	034-002-00-8									
9	zinc { zinc sulphate }				120 mg/kg	2.47	296.316 mg/kg	0.0296 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	pH				7.4 pH		7.4 pH	7.4 pH			
17	naphthalene 601-052-00-2 202-049-5 91-20-3				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	acenaphthylene 205-917-1 208-96-8				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	acenaphthene 201-469-6 83-32-9				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	fluorene 201-695-5 86-73-7				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	phenanthrene 201-581-5 85-01-8				0.09 mg/kg		0.09 mg/kg	0.000009 %			
22	anthracene 204-371-1 120-12-7				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	fluoranthene 205-912-4 206-44-0				0.23 mg/kg		0.23 mg/kg	0.000023 %			
24	pyrene 204-927-3 129-00-0				0.21 mg/kg		0.21 mg/kg	0.000021 %			
25	benzo[a]anthracene 601-033-00-9 200-280-6 56-55-3				0.09 mg/kg		0.09 mg/kg	0.000009 %			
26	chrysene 601-048-00-0 205-923-4 218-01-9				0.11 mg/kg		0.11 mg/kg	0.000011 %			
27	benzo[b]fluoranthene 601-034-00-4 205-911-9 205-99-2				0.12 mg/kg		0.12 mg/kg	0.000012 %			
28	benzo[k]fluoranthene 601-036-00-5 205-916-6 207-08-9				0.05 mg/kg		0.05 mg/kg	0.000005 %			
29	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3 200-028-5 50-32-8				0.07 mg/kg		0.07 mg/kg	0.000007 %			
30	indeno[123-cd]pyrene 205-893-2 193-39-5				0.09 mg/kg		0.09 mg/kg	0.000009 %			
31	dibenz[a,h]anthracene 601-041-00-2 200-181-8 53-70-3				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
32	benzo[ghi]perylene 205-883-8 191-24-2				0.09 mg/kg		0.09 mg/kg	0.000009 %			
Total:									0.0813 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- ⚗

 Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP2 1.1

✔ **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
TP2 1.1	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
2	confirm TPH has NOT arisen from diesel or petrol				☑						
3	tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane 603-181-00-X 216-653-1 1634-04-4				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
4	benzene 601-020-00-8 200-753-7 71-43-2				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
5	toluene 601-021-00-3 203-625-9 108-88-3				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
6	ethylbenzene 601-023-00-4 202-849-4 100-41-4				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
7	xylene 601-022-00-9 202-422-2 [1] 95-47-6 [1] 203-396-5 [2] 106-42-3 [2] 203-576-3 [3] 108-38-3 [3] 215-535-7 [4] 1330-20-7 [4]				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
8	naphthalene 601-052-00-2 202-049-5 91-20-3				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
9	acenaphthylene 205-917-1 208-96-8				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
10	acenaphthene 201-469-6 83-32-9				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
11	fluorene 201-695-5 86-73-7				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
12	phenanthrene 201-581-5 85-01-8				0.3 mg/kg		0.3	mg/kg	0.00003 %		
13	anthracene 204-371-1 120-12-7				<0.1 mg/kg		<0.1	mg/kg	<0.00001 %		<LOD
14	fluoranthene 205-912-4 206-44-0				0.6 mg/kg		0.6	mg/kg	0.00006 %		
15	pyrene 204-927-3 129-00-0				0.6 mg/kg		0.6	mg/kg	0.00006 %		
16	benzo[a]anthracene 601-033-00-9 200-280-6 56-55-3				0.3 mg/kg		0.3	mg/kg	0.00003 %		

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
17	chrysene				0.3 mg/kg		0.3 mg/kg	0.00003 %			
	601-048-00-0	205-923-4	218-01-9								
18	benzo[b]fluoranthene				0.4 mg/kg		0.4 mg/kg	0.00004 %			
	601-034-00-4	205-911-9	205-99-2								
19	benzo[k]fluoranthene				0.2 mg/kg		0.2 mg/kg	0.00002 %			
	601-036-00-5	205-916-6	207-08-9								
20	benzo[a]pyrene; benzo[def]chrysene				0.3 mg/kg		0.3 mg/kg	0.00003 %			
	601-032-00-3	200-028-5	50-32-8								
21	indeno[123-cd]pyrene				0.2 mg/kg		0.2 mg/kg	0.00002 %			
		205-893-2	193-39-5								
22	dibenz[a,h]anthracene				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	601-041-00-2	200-181-8	53-70-3								
23	benzo[ghi]perylene				0.3 mg/kg		0.3 mg/kg	0.00003 %			
		205-883-8	191-24-2								
24	phenol				<0.1 mg/kg		<0.1 mg/kg	<0.00001 %			<LOD
	604-001-00-2	203-632-7	108-95-2								
25	1,1-dichloroethane and 1,2-dichloroethane (combined)				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
		203-458-1, 200-863-5	107-06-2, 75-34-3								
26	trichloroethylene; trichloroethene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	602-027-00-9	201-167-4	79-01-6								
27	vinyl chloride; chloroethylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %			<LOD
	602-023-00-7	200-831-0	75-01-4								
Total:									0.00143 %		

Key

	User supplied data
	Determinand values ignored for classification, see column 'Conc. Not Used' for reason
•	Determinand defined or amended by HazWasteOnline (see Appendix A)
<LOD	Below limit of detection

Classification of sample: TP3 0.4

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
TP3 0.4	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				30 mg/kg	1.32	39.61	mg/kg	0.00396 %		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				0.9 mg/kg	1.14	1.028	mg/kg	0.000103 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923	mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				240 mg/kg	1.13	270.213	mg/kg	0.027 %		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	290 mg/kg	1.56	452.346	mg/kg	0.029 %		
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				0.13 mg/kg	1.35	0.176	mg/kg	0.000018 %		
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel chromate }				70 mg/kg	2.98	208.339	mg/kg	0.0208 %		
	028-035-00-7	238-766-5	14721-18-7								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.9 mg/kg	2.55	2.298	mg/kg	0.00023 %		
	034-002-00-8										
9	zinc { zinc sulphate }				140 mg/kg	2.47	345.701	mg/kg	0.0346 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
11	confirm TPH has NOT arisen from diesel or petrol				☒						
12	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
13	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
14	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
15	xylene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]							
16	pH PH				6.5 pH		6.5 pH	6.5 pH		
17	naphthalene 601-052-00-2 202-049-5 91-20-3				0.05 mg/kg		0.05 mg/kg	0.000005 %		
18	acenaphthylene 205-917-1 208-96-8				0.06 mg/kg		0.06 mg/kg	0.000006 %		
19	acenaphthene 201-469-6 83-32-9				0.2 mg/kg		0.2 mg/kg	0.00002 %		
20	fluorene 201-695-5 86-73-7				0.14 mg/kg		0.14 mg/kg	0.000014 %		
21	phenanthrene 201-581-5 85-01-8				1.8 mg/kg		1.8 mg/kg	0.00018 %		
22	anthracene 204-371-1 120-12-7				0.39 mg/kg		0.39 mg/kg	0.000039 %		
23	fluoranthene 205-912-4 206-44-0				2.2 mg/kg		2.2 mg/kg	0.00022 %		
24	pyrene 204-927-3 129-00-0				1.9 mg/kg		1.9 mg/kg	0.00019 %		
25	benzo[a]anthracene 601-033-00-9 200-280-6 56-55-3				0.75 mg/kg		0.75 mg/kg	0.000075 %		
26	chrysene 601-048-00-0 205-923-4 218-01-9				0.82 mg/kg		0.82 mg/kg	0.000082 %		
27	benzo[b]fluoranthene 601-034-00-4 205-911-9 205-99-2				0.8 mg/kg		0.8 mg/kg	0.00008 %		
28	benzo[k]fluoranthene 601-036-00-5 205-916-6 207-08-9				0.33 mg/kg		0.33 mg/kg	0.000033 %		
29	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3 200-028-5 50-32-8				0.57 mg/kg		0.57 mg/kg	0.000057 %		
30	indeno[123-cd]pyrene 205-893-2 193-39-5				0.35 mg/kg		0.35 mg/kg	0.000035 %		
31	dibenz[a,h]anthracene 601-041-00-2 200-181-8 53-70-3				0.08 mg/kg		0.08 mg/kg	0.000008 %		
32	benzo[ghi]perylene 205-883-8 191-24-2				0.37 mg/kg		0.37 mg/kg	0.000037 %		
Total:								0.118 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- ⚗

 Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP3 1

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
TP3 1	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
1	arsenic { arsenic trioxide }				19 mg/kg	1.32	25.086	mg/kg	0.00251 %		
	033-003-00-0	215-481-4	1327-53-3								
2	cadmium { cadmium oxide }				0.7 mg/kg	1.14	0.8	mg/kg	0.00008 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]								
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923	mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0								
4	copper { dicopper oxide; copper (I) oxide }				160 mg/kg	1.13	180.142	mg/kg	0.018 %		
	029-002-00-X	215-270-7	1317-39-1								
5	lead { lead chromate }			1	150 mg/kg	1.56	233.972	mg/kg	0.015 %		
	082-004-00-2	231-846-0	7758-97-6								
6	mercury { mercury dichloride }				6.1 mg/kg	1.35	8.256	mg/kg	0.000826 %		
	080-010-00-X	231-299-8	7487-94-7								
7	nickel { nickel chromate }				71 mg/kg	2.98	211.315	mg/kg	0.0211 %		
	028-035-00-7	238-766-5	14721-18-7								
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1 mg/kg	2.55	2.554	mg/kg	0.000255 %		
	034-002-00-8										
9	zinc { zinc sulphate }				240 mg/kg	2.47	592.631	mg/kg	0.0593 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]								
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10	mg/kg	<0.001 %		<LOD
			TPH								
11	confirm TPH has NOT arisen from diesel or petrol				☒						
12	benzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2								
13	toluene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3								
14	ethylbenzene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4								
15	xylene				<0.01 mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]								

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	● pH		PH		7.5 pH		7.5 pH	7.5 pH			
17	naphthalene	601-052-00-2	202-049-5	91-20-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	● acenaphthylene		205-917-1	208-96-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	● acenaphthene		201-469-6	83-32-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	● fluorene		201-695-5	86-73-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	● phenanthrene		201-581-5	85-01-8	0.1 mg/kg		0.1 mg/kg	0.00001 %			
22	● anthracene		204-371-1	120-12-7	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	● fluoranthene		205-912-4	206-44-0	0.16 mg/kg		0.16 mg/kg	0.000016 %			
24	● pyrene		204-927-3	129-00-0	0.14 mg/kg		0.14 mg/kg	0.000014 %			
25	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3	0.05 mg/kg		0.05 mg/kg	0.000005 %			
26	chrysene	601-048-00-0	205-923-4	218-01-9	0.08 mg/kg		0.08 mg/kg	0.000008 %			
27	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2	0.06 mg/kg		0.06 mg/kg	0.000006 %			
28	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
29	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
30	● indeno[123-cd]pyrene		205-893-2	193-39-5	0.04 mg/kg		0.04 mg/kg	0.000004 %			
31	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
32	● benzo[ghi]perylene		205-883-8	191-24-2	<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
Total:									0.118 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
-  Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP3 1.9

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP3 1.9	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				25 mg/kg	1.32	33.008 mg/kg	0.0033 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				0.6 mg/kg	1.14	0.685 mg/kg	0.000069 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				87 mg/kg	1.13	97.952 mg/kg	0.0098 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	180 mg/kg	1.56	280.767 mg/kg	0.018 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				3.7 mg/kg	1.35	5.008 mg/kg	0.000501 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				33 mg/kg	2.98	98.217 mg/kg	0.00982 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.3 mg/kg	2.55	5.873 mg/kg	0.000587 %		
	034-002-00-8									
9	zinc { zinc sulphate }				150 mg/kg	2.47	370.394 mg/kg	0.037 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

Report created by Gemma Bates on 02/03/2017												
#		Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		CLP index number	EC Number	CAS Number								
			203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	pH PH				7.7 pH		7.7 pH	7.7 pH				
17	naphthalene 601-052-00-2 202-049-5 91-20-3				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD		
18	acenaphthylene 205-917-1 208-96-8				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD		
19	acenaphthene 201-469-6 83-32-9				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD		
20	fluorene 201-695-5 86-73-7				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD		
21	phenanthrene 201-581-5 85-01-8				0.07 mg/kg		0.07 mg/kg	0.000007 %				
22	anthracene 204-371-1 120-12-7				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD		
23	fluoranthene 205-912-4 206-44-0				0.28 mg/kg		0.28 mg/kg	0.000028 %				
24	pyrene 204-927-3 129-00-0				0.28 mg/kg		0.28 mg/kg	0.000028 %				
25	benzo[a]anthracene 601-033-00-9 200-280-6 56-55-3				0.09 mg/kg		0.09 mg/kg	0.000009 %				
26	chrysene 601-048-00-0 205-923-4 218-01-9				0.16 mg/kg		0.16 mg/kg	0.000016 %				
27	benzo[b]fluoranthene 601-034-00-4 205-911-9 205-99-2				0.16 mg/kg		0.16 mg/kg	0.000016 %				
28	benzo[k]fluoranthene 601-036-00-5 205-916-6 207-08-9				0.07 mg/kg		0.07 mg/kg	0.000007 %				
29	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3 200-028-5 50-32-8				0.09 mg/kg		0.09 mg/kg	0.000009 %				
30	indeno[123-cd]pyrene 205-893-2 193-39-5				0.09 mg/kg		0.09 mg/kg	0.000009 %				
31	dibenz[a,h]anthracene 601-041-00-2 200-181-8 53-70-3				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %		<LOD		
32	benzo[ghi]perylene 205-883-8 191-24-2				0.09 mg/kg		0.09 mg/kg	0.000009 %				
Total:									0.0805 %			

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- ⚗

 Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP4 0.5

✔ **Non Hazardous Waste**
Classified as **17 05 04**
in the List of Waste

Sample details

Sample Name:	LoW Code:
TP4 0.5	Chapter:
Sample Depth:	17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
0 m	Entry:
Moisture content:	17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				37 mg/kg	1.32	48.852 mg/kg	0.00489 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				1.6 mg/kg	1.14	1.828 mg/kg	0.000183 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				200 mg/kg	1.13	225.178 mg/kg	0.0225 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	570 mg/kg	1.56	889.095 mg/kg	0.057 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				3.9 mg/kg	1.35	5.279 mg/kg	0.000528 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				180 mg/kg	2.98	535.728 mg/kg	0.0536 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				2.3 mg/kg	2.55	5.873 mg/kg	0.000587 %		
	034-002-00-8									
9	zinc { zinc sulphate }				320 mg/kg	2.47	790.175 mg/kg	0.079 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	pH PH				7.3 pH		7.3 pH	7.3 pH			
17	naphthalene 601-052-00-2 202-049-5 91-20-3				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	acenaphthylene 205-917-1 208-96-8				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	acenaphthene 201-469-6 83-32-9				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	fluorene 201-695-5 86-73-7				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	phenanthrene 201-581-5 85-01-8				0.2 mg/kg		0.2 mg/kg	0.00002 %			
22	anthracene 204-371-1 120-12-7				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	fluoranthene 205-912-4 206-44-0				0.28 mg/kg		0.28 mg/kg	0.000028 %			
24	pyrene 204-927-3 129-00-0				0.24 mg/kg		0.24 mg/kg	0.000024 %			
25	benzo[a]anthracene 601-033-00-9 200-280-6 56-55-3				0.09 mg/kg		0.09 mg/kg	0.000009 %			
26	chrysene 601-048-00-0 205-923-4 218-01-9				0.15 mg/kg		0.15 mg/kg	0.000015 %			
27	benzo[b]fluoranthene 601-034-00-4 205-911-9 205-99-2				0.18 mg/kg		0.18 mg/kg	0.000018 %			
28	benzo[k]fluoranthene 601-036-00-5 205-916-6 207-08-9				0.07 mg/kg		0.07 mg/kg	0.000007 %			
29	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3 200-028-5 50-32-8				0.07 mg/kg		0.07 mg/kg	0.000007 %			
30	indeno[123-cd]pyrene 205-893-2 193-39-5				0.14 mg/kg		0.14 mg/kg	0.000014 %			
31	dibenz[a,h]anthracene 601-041-00-2 200-181-8 53-70-3				<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
32	benzo[ghi]perylene 205-883-8 191-24-2				0.2 mg/kg		0.2 mg/kg	0.00002 %			
Total:									0.22 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- ⚗

 Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Classification of sample: TP4 1

 **Non Hazardous Waste**
 Classified as **17 05 04**
 in the List of Waste

Sample details

Sample Name:	LoW Code:
TP4 1	Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Sample Depth:	Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)
0 m	
Moisture content:	
0%	
(no correction)	

Hazard properties

None identified

Determinands

Moisture content: 0% No Moisture Correction applied (MC)

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number							
1	arsenic { arsenic trioxide }				22 mg/kg	1.32	29.047 mg/kg	0.0029 %		
	033-003-00-0	215-481-4	1327-53-3							
2	cadmium { cadmium oxide }				1.3 mg/kg	1.14	1.485 mg/kg	0.000149 %		
	048-002-00-0	231-152-8 [1] 215-146-2 [2]	7440-43-9 [1] 1306-19-0 [2]							
3	chromium in chromium(VI) compounds { chromium(VI) oxide }				<1 mg/kg	1.92	<1.923 mg/kg	<0.000192 %		<LOD
	024-001-00-0	215-607-8	1333-82-0							
4	copper { dicopper oxide; copper (I) oxide }				160 mg/kg	1.13	180.142 mg/kg	0.018 %		
	029-002-00-X	215-270-7	1317-39-1							
5	lead { lead chromate }			1	410 mg/kg	1.56	639.524 mg/kg	0.041 %		
	082-004-00-2	231-846-0	7758-97-6							
6	mercury { mercury dichloride }				160 mg/kg	1.35	216.558 mg/kg	0.0217 %		
	080-010-00-X	231-299-8	7487-94-7							
7	nickel { nickel chromate }				97 mg/kg	2.98	288.698 mg/kg	0.0289 %		
	028-035-00-7	238-766-5	14721-18-7							
8	selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				0.7 mg/kg	2.55	1.788 mg/kg	0.000179 %		
	034-002-00-8									
9	zinc { zinc sulphate }				490 mg/kg	2.47	1209.955 mg/kg	0.121 %		
	030-006-00-9	231-793-3 [1] 231-793-3 [2]	7446-19-7 [1] 7733-02-0 [2]							
10	TPH (C6 to C40) petroleum group				<10 mg/kg		<10 mg/kg	<0.001 %		<LOD
			TPH							
11	confirm TPH has NOT arisen from diesel or petrol				☒					
12	benzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-020-00-8	200-753-7	71-43-2							
13	toluene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-021-00-3	203-625-9	108-88-3							
14	ethylbenzene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-023-00-4	202-849-4	100-41-4							
15	xylene				<0.01 mg/kg		<0.01 mg/kg	<0.000001 %		<LOD
	601-022-00-9	202-422-2 [1] 203-396-5 [2]	95-47-6 [1] 106-42-3 [2]							

#	Determinand			CLP Note	User entered data	Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
	CLP index number	EC Number	CAS Number								
		203-576-3 [3] 215-535-7 [4]	108-38-3 [3] 1330-20-7 [4]								
16	pH PH				8 pH		8 pH	8pH			
17	naphthalene 601-052-00-2	202-049-5	91-20-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
18	acenaphthylene	205-917-1	208-96-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
19	acenaphthene	201-469-6	83-32-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
20	fluorene	201-695-5	86-73-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
21	phenanthrene	201-581-5	85-01-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
22	anthracene	204-371-1	120-12-7		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
23	fluoranthene	205-912-4	206-44-0		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
24	pyrene	204-927-3	129-00-0		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
25	benzo[a]anthracene 601-033-00-9	200-280-6	56-55-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
26	chrysene 601-048-00-0	205-923-4	218-01-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
27	benzo[b]fluoranthene 601-034-00-4	205-911-9	205-99-2		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
28	benzo[k]fluoranthene 601-036-00-5	205-916-6	207-08-9		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
29	benzo[a]pyrene; benzo[def]chrysene 601-032-00-3	200-028-5	50-32-8		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
30	indeno[123-cd]pyrene	205-893-2	193-39-5		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
31	dibenz[a,h]anthracene 601-041-00-2	200-181-8	53-70-3		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
32	benzo[ghi]perylene	205-883-8	191-24-2		<0.03 mg/kg		<0.03 mg/kg	<0.000003 %			<LOD
Total:									0.235 %		

Key

- User supplied data
- Determinand values ignored for classification, see column 'Conc. Not Used' for reason
- Determinand defined or amended by HazWasteOnline (see Appendix A)
- ⚗

 Speciated Determinand - Unless the Determinand is Note 1, the Conversion Factor is used to calculate the compound concentration
- <LOD** Below limit of detection
- CLP: Note 1 Only the metal concentration has been used for classification

Appendix A: Classifier defined and non CLP determinands

• **dicopper oxide; copper (I) oxide** (EC Number: 215-270-7, CAS Number: 1317-39-1)

CLP index number: 029-002-00-X

Data source: Regulation (EU) 2016/1179 of 19 July 2016 (ATP9)

Additional Risk Phrases: N R50/53 , N R50/53 >= 0.25 %

Additional Hazard Statement(s): None.

Reason for additional Hazards Statement(s)/Risk Phrase(s):

10/10/2016 - N R50/53 risk phrase sourced from: WM3 v1 still uses ecotoxic risk phrases

10/10/2016 - N R50/53 >= 0.25 % risk phrase sourced from: WM3 v1 still uses ecotoxic risk phrases

• **TPH (C6 to C40) petroleum group** (CAS Number: TPH)

Description/Comments: Hazard statements taken from WM3 1st Edition 2015; Risk phrases: WM2 3rd Edition 2013

Data source: WM3 1st Edition 2015

Data source date: 25/05/2015

Risk Phrases: R10 , R45 , R46 , R51/53 , R63 , R65

Hazard Statements: Flam. Liq. 3 H226 , Asp. Tox. 1 H304 , STOT RE 2 H373 , Muta. 1B H340 , Carc. 1B H350 , Repr. 2 H361d , Aquatic Chronic 2 H411

• **confirm TPH has NOT arisen from diesel or petrol**

Description/Comments: Chapter 3, section 4b requires a positive confirmation for benzo[a]pyrene to be used as a marker in evaluating Carc. 1B; H350 (HP 7) and Muta. 1B; H340 (HP 11)

Data source: WM3 1st Edition 2015

Data source date: 25/05/2015

Risk Phrases: None.

Hazard Statements: None.

• **ethylbenzene** (EC Number: 202-849-4, CAS Number: 100-41-4)

CLP index number: 601-023-00-4

Data source: Commission Regulation (EU) No 605/2014 – 6th Adaptation to Technical Progress for Regulation (EC) No 1272/2008. (ATP6)

Additional Risk Phrases: None.

Additional Hazard Statement(s): Carc. 2 H351

Reason for additional Hazards Statement(s)/Risk Phrase(s):

03/06/2015 - Carc. 2 H351 hazard statement sourced from: IARC Group 2B (77) 2000

• **acenaphthylene** (EC Number: 205-917-1, CAS Number: 208-96-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17/07/2015

Risk Phrases: R22 , R26 , R27 , R36 , R37 , R38

Hazard Statements: Acute Tox. 4 H302 , Acute Tox. 1 H330 , Acute Tox. 1 H310 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315

• **acenaphthene** (EC Number: 201-469-6, CAS Number: 83-32-9)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17/07/2015

Risk Phrases: R36 , R37 , R38 , N R50/53 , N R51/53

Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Aquatic Chronic 2 H411

• **fluorene** (EC Number: 201-695-5, CAS Number: 86-73-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06/08/2015

Risk Phrases: N R50/53

Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

• **phenanthrene** (EC Number: 201-581-5, CAS Number: 85-01-8)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06/08/2015

Risk Phrases: R22 , R36 , R37 , R38 , R40 , R43 , N R50/53

Hazard Statements: Acute Tox. 4 H302 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Carc. 2 H351 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410 , Skin Irrit. 2 H315

■ **anthracene** (EC Number: 204-371-1, CAS Number: 120-12-7)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 17/07/2015

Risk Phrases: R36 , R37 , R38 , R43 , N R50/53

Hazard Statements: Eye Irrit. 2 H319 , STOT SE 3 H335 , Skin Irrit. 2 H315 , Skin Sens. 1 H317 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

■ **fluoranthene** (EC Number: 205-912-4, CAS Number: 206-44-0)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21/08/2015

Risk Phrases: Xn R22 , N R50/53

Hazard Statements: Acute Tox. 4 H302 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

■ **pyrene** (EC Number: 204-927-3, CAS Number: 129-00-0)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 2014

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 21/08/2015

Risk Phrases: Xi R36/37/38 , N R50/53

Hazard Statements: Skin Irrit. 2 H315 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

■ **indeno[123-cd]pyrene** (EC Number: 205-893-2, CAS Number: 193-39-5)

Description/Comments: Data from C&L Inventory Database

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 06/08/2015

Risk Phrases: R40

Hazard Statements: Carc. 2 H351

■ **benzo[ghi]perylene** (EC Number: 205-883-8, CAS Number: 191-24-2)

Description/Comments: Data from C&L Inventory Database; SDS Sigma Aldrich 28/02/2015

Data source: <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>

Data source date: 23/07/2015

Risk Phrases: N R50/53

Hazard Statements: Aquatic Acute 1 H400 , Aquatic Chronic 1 H410

■ **1,1-dichloroethane and 1,2-dichloroethane (combined)** (EC Number: 203-458-1, 200-863-5, CAS Number: 107-06-2, 75-34-3)

Description/Comments: Combines the hazard statements and risk phrases for 1,1-dichloroethane and 1,2-dichloroethane

Data source: N/A

Data source date: 14/10/2016

Risk Phrases: F R11 , Xn R22 , Xi R36/37/38 , Carc Cat 2 R45 , R52/53

Hazard Statements: Flam. Liq. 2 H225 , Acute Tox. 4 H302 , Skin Irrit. 2 H315 , Eye Irrit. 2 H319 , STOT SE 3 H335 , Carc. 1B H350 , Aquatic Chronic 3 H412

■ **pH** (CAS Number: PH)

Description/Comments: Appendix C4

Data source: WM3 1st Edition 2015

Data source date: 25/05/2015

Risk Phrases: None.

Hazard Statements: None.

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Reasonable case CLP species based on hazard statements/molecular weight and most common (stable) oxide of arsenic. Industrial sources include: smelting; main precursor to other arsenic compounds (edit as required)

cadmium {cadmium oxide}

Reasonable case CLP species based on hazard statements/molecular weight, very low solubility in water. Industrial sources include: electroplating baths, electrodes for storage batteries, catalysts, ceramic glazes, phosphors, pigments and nematocides. (edit as required) Worst case compounds in CLP: cadmium sulphate, chloride, fluoride & iodide not expected as either very soluble and/or compound's industrial usage not related to site history (edit as required)

chromium in chromium(VI) compounds {chromium(VI) oxide}

Worst case CLP species based on hazard statements/molecular weight. Industrial sources include: production stainless steel, electroplating, wood preservation, anti-corrosion agents or coatings, pigments (edit as required)

copper {dicopper oxide; copper (I) oxide}

Reasonable case CLP species based on hazard statements/molecular weight and insolubility in water. Industrial sources include: oxidised copper metal, brake pads, pigments, antifouling paints, fungicide. (edit as required) Worst case copper sulphate is very soluble and likely to have been leached away if ever present and/or not enough soluble sulphate detected. (edit as required)

lead {lead chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

mercury {mercury dichloride}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

nickel {nickel chromate}

Worst case CLP species based on hazard statements/molecular weight (edit as required)

selenium {selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex}

Harmonised group entry used as most reasonable case. Pigment cadmium sulphoselenide not likely to be present in this soil. No evidence for the other CLP entries: sodium selenite, nickel II selenite and nickel selenide, to be present in this soil. (edit as required)

zinc {zinc sulphate}

Ashy made ground recorded on-site, zinc sulphate more representative of site conditions.

Appendix C: VersionHazWasteOnline Classification Engine: **WM3 1st Edition, May 2015**

HazWasteOnline Classification Engine Version: 2017.114.3285.6593 (24 Apr 2017)

HazWasteOnline Database: 2017.114.3285.6593 (24 Apr 2017)

This classification utilises the following guidance and legislation:

WM3 - Waste Classification - May 2015**CLP Regulation** - Regulation 1272/2008/EC of 16 December 2008**1st ATP** - Regulation 790/2009/EC of 10 August 2009**2nd ATP** - Regulation 286/2011/EC of 10 March 2011**3rd ATP** - Regulation 618/2012/EU of 10 July 2012**4th ATP** - Regulation 487/2013/EU of 8 May 2013**Correction to 1st ATP** - Regulation 758/2013/EU of 7 August 2013**5th ATP** - Regulation 944/2013/EU of 2 October 2013**6th ATP** - Regulation 605/2014/EU of 5 June 2014**WFD Annex III replacement** - Regulation 1357/2014/EU of 18 December 2014**Revised List of Wastes 2014** - Decision 2014/955/EU of 18 December 2014**7th ATP** - Regulation 2015/1221/EU of 24 July 2015**8th ATP** - Regulation (EU) 2016/918 of 19 May 2016**9th ATP** - Regulation (EU) 2016/1179 of 19 July 2016**POPs Regulation 2004** - Regulation 850/2004/EC of 29 April 2004**1st ATP to POPs Regulation** - Regulation 756/2010/EU of 24 August 2010**2nd ATP to POPs Regulation** - Regulation 757/2010/EU of 24 August 2010

APPENDIX 5

PBA Methodology for Assessing Land Contamination in England

1 Introduction

This document defines the approach adopted by PBA in relation to the assessment of land contamination in England. The aim is for the approach to (i) be systematic and objective, (ii) provide for the assessment of uncertainty and (iii) provide a rational, consistent, transparent framework.

When preparing our methodology we have made reference to various technical guidance documents and legislation referenced in Section 7 of which the principal documents are (i) Contaminated Land Statutory Guidance (Defra 2012), (ii) the Model Procedures for the Management of Contamination (CLR 11) (EA 2004), (iii) Contaminated land risk assessment: A guide to good practice (C552) (CIRIA 2001) and (iv) National Planning Policy Framework (DCLG 2012).

2 Dealing with Land Contamination

Government policy on land contamination aims to prevent new contaminated land from being created and promotes a risk based approach to addressing historical contamination. With regard to historical contamination, regulatory intervention is held in reserve for land that meets the legal definition and cannot be dealt with through any other means, including through planning. Land is only considered to be "contaminated land" in the legal sense if it poses an unacceptable risk.

UK legislation on contaminated land is principally contained in Part 2A of the Environmental Protection Act, 1990 (which was inserted into the 1990 Act by section 57 of the Environment Act 1995). Part 2A was introduced in England on 1 April 2000 and provides a risk-based approach to the identification and remediation of land where contamination poses an unacceptable risk to human health or the environment. In 2004 the Model Procedures for the Management of Contamination (CLR 11) were published providing guidance on how the statutory requirements were to be delivered. The approach, concepts and principles for land contamination management promoted by CLR 11 are applied to the determination of planning applications.

Other legislative regimes may also provide a means of dealing with land contamination issues, such as the regimes for waste, water, environmental permitting, and environmental damage. Further, the law of statutory nuisance may result in contaminants being unacceptable to third parties whilst not attracting action under Part 2A or other environmental legislation.

2.1 Part 2A

The Regulations and Statutory Guidance that accompanied the Act, including the Contaminated Land (England) Regulations 2006, has been revised with the issue of The Contaminated Land (England) (Amendment) Regulations 2012 (SI 2012/263) and the Contaminated Land Statutory Guidance for England 2012.

Part 2A defines contaminated land as "*land which appears to the Local Authority in whose area it is situated to be in such a condition that, by reason of substances in, on or under the land that significant harm is being caused, or there is a significant*

possibility that such harm could be caused, or pollution of controlled waters is being, or likely to be, caused".

Harm is defined as "*harm to the health of living organisms or other interference with the ecological systems of which they form part, and in the case of man, includes harm to his property*".

For the purposes of Part 2A, land is contaminated if it poses a significant possibility of significant harm (SPOSH).

Part 2A provides a means of dealing with unacceptable risks posed by land contamination to human health and the environment, and under the guidance enforcing authorities should seek to find and deal with such land. It states that "*under Part 2A the starting point should be that land is not contaminated land unless there is reason to consider otherwise. Only land where unacceptable risks are clearly identified, after a risk assessment has been undertaken in accordance with the Guidance, should be considered as meeting the Part 2A definition of contaminated land*". Further the guidance makes it clear that "*regulatory decisions should be based on what is reasonably likely, not what is hypothetically possible*".

The overarching objectives of the Government's policy on contaminated land and the Part 2A regime are:

- "(a) To identify and remove unacceptable risks to human health and the environment.
- (a) To seek to ensure that contaminated land is made suitable for its current use.
- (b) To ensure that the burdens faced by individuals, companies and society as a whole are proportionate, manageable and compatible with the principles of sustainable development".

The enforcing authority may need to decide whether and how to act in situations where decisions are not straight forward, and where there is uncertainty. "*In so doing, the authority should use its judgement to strike a reasonable balance between: (a) dealing with risks raised by contaminants in land and the benefits of remediating land to remove or reduce those risks; and (b) the potential impacts of regulatory intervention including financial costs to whoever will pay for remediation, health and environmental impacts of taking action, property blight, and burdens on affected people*". The authority is required to "*take a precautionary approach to the risks raised by contamination, whilst avoiding a disproportionate approach given the circumstances of each case*". The aim is "*that the regime produces net benefits, taking account of local circumstances*".

The guidance recognises that "*normal levels of contaminants in soils should not be considered to cause land to qualify as contaminated land, unless there is a particular reason to consider otherwise*".

Normal levels are quoted as:

- "a) natural presence of contaminants' such as from underlying geology 'that have not been shown to pose an unacceptable risk to health and the environment
- b) ...low level diffuse pollution, and common human activity..."

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Similarly the guidance states that significant pollution of controlled waters is required for land to be considered contaminated and the *"fact that substances are merely entering water"* or *"where discharge from land is not discernible at a location immediately downstream"* does not constitute contaminated land.

To help achieve a more targeted approach to identifying and managing contaminated land in relation to the risk (or possibility) of harm to human health, the revised Statutory Guidance presented a new four category system for considering land under Part 2A, ranging from Category 4, where there is no risk that land poses a significant possibility of significant harm (SPOSH), or the level of risk is low, to Category 1, where the risk that land poses a significant possibility of significant harm (SPOSH) is unacceptably high.

For land that cannot be readily placed into Categories 1 or 4 further assessment is required. If there is a sufficiently strong case that the risks are of sufficient concern to cause significant harm/pollution or have the significant possibility of significant harm/pollution the land is to be placed into Category 2. If the concern is not met land is considered Category 3.

The technical guidance clearly states that the currently published SGV and GAC's represent *"cautious estimates of level of contaminants in soils"* which should be considered *"no risk to health or, at most, a minimal risk"*. These values do not represent the boundary between categories 3 and 4 and *"should be considered to be comfortably within Category 4"*.

At the end of 2013 technical guidance in support of Defra's revised Statutory Guidance (SG) was published (CL:AIRE 2013) which provided:

- A methodology for deriving C4SLs for four generic land-uses comprising residential, commercial, allotments and public open space; and
- A demonstration of the methodology, via the derivation of C4SLs for six substances – arsenic, benzene, benzo(a)pyrene, cadmium, chromium (VI) and lead.

2.2 Planning

The Local Planning Authority (LPA) is responsible for the control of development, and in doing so it has a duty to take account of all material considerations, including contamination.

Section 11, Paragraph 109 of the National Planning Policy Framework (NPPF) (DCLG 2012) states the planning system should contribute to and enhance the natural and local environment by *"preventing both new and existing developments from contributing to or being put at unacceptable risk from, or being adversely affected by unacceptable levels of soil, air, water pollution"* and *"remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate"*. Paragraphs 120 and 121 describe the policy considerations the Government expects LPA to have in regard to land affected by contamination when preparing policies for development plans and in taking decisions on applications.

For planning purposes, the NPPF requires that the assessment of risks arising from contamination and remediation requirements should be considered on the

basis of the current environmental setting, the current land use, and the circumstances of its proposed new use. The NPPF stipulates that planning policies and decisions should ensure that *"the site is suitable for its new use taking account of ground conditions and land instability, including from natural hazards or former activities from previous uses and any proposals for mitigation including land remediation or impacts on the natural environment arising from that remediation"*; and that *"after remediation, as a minimum, land should not be capable of being determined as contaminated land under Part 2A of the Environmental Protection Act 1990; and adequate site investigation information, prepared by a competent person, is presented."*

The level at which contamination is deemed to be unacceptable, or, gives rise to adverse effects under a planning context has not been identified but is envisaged to be more precautionary than the level required to determine land as contaminated under Part 2A.

In paragraph 121 the developer is required to ensure that land, after development, is not capable of being determined as contaminated land under Part 2A of the EPA 1990.

The principal planning objective is to ensure that any unacceptable risks to human health, buildings and other property and the natural and historical environment from the contaminated condition of the land are identified so that appropriate action can be considered and taken to address those risks. In order to grant a planning permission the Local Planning Authority (LPA) has to be satisfied that there is sufficient information about the condition of the land, its impacts and the availability of viable remedial options. NPPF Paragraph 21 states that *"planning policies and decisions should also ensure that adequate site investigation information, prepared by a competent person, is presented"*. Site investigation information is further defined in the NPPF Glossary page 56 and that also states that investigations should be carried out in accordance with established procedures, including BS10175 (BSI 2011) that in turn links procedure to the requirements of CLR11.

A key distinction between the Soil Guideline Values (SGVs) and the C4SLs is the level of risk that they describe. As described by the Environment Agency (2009a):

"SGVs are guidelines on the level of long-term human exposure to individual chemicals in soil that, unless stated otherwise, are tolerable or pose a minimal risk to human health."

A letter from Lord de Mauley dated 3rd September 2014 provides more explicit direction to local authorities on the use of the C4SL in a planning context. The letter identifies four key points:

- 1) that the screening values were developed expressly with the planning regime in mind
- 2) their use is recommended in DCLG's planning guidance
- 3) soil concentrations below a C4SL limit are considered to be 'definitely not contaminated' under Part IIA of the 1990 Environmental Protection Act and pose at most a 'low level of toxicological concern' and
- 4) exceedance of a C4SL screening value does not mean that land is definitely contaminated, just that further investigation may be warranted.

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2.3 Building Control

The building control department of the local authority or private sector approved inspectors are responsible for the operation and enforcement of the Building Regulations (DCLG 2010) to protect the health, safety and welfare of people in and around buildings. Approved Document C requires the protection of buildings and associated land from the effects of contamination, to be applied (non-exclusively) in all changes of use from commercial or industrial premises, to residential property.

3 Approach

CLR 11 recommends a phased or tiered approach to risk assessment with the three tiers being:-

- Tier 1 - preliminary – a qualitative assessment forming part of a Phase 1 report,
- Tier 2 - generic - a quantitative assessment using published criteria to screen site specific ground condition data forming part of a Phase 2 report
- Tier 3 - detailed – a quantitative assessment involving the generation of site specific assessment criteria

Each tier of risk assessment comprises the following four stages:-

1. Hazard Identification – identifying potential contaminant sources on and off site;
2. Hazard Assessment – assessing the potential for unacceptable risks by identifying what pathways and receptors could be present, and what pollutant linkages could result (forming the Conceptual Site Model (CSM));
3. Risk Estimation – estimating the magnitude and probability of the possible consequences (what degree of harm might result to a defined receptor and how likely); and
4. Risk Evaluation – evaluating whether the risk needs to be, and can be, managed.

A PBA Phase 1 report normally comprises a desk study, walkover and Tier 1 risk assessment (the project specific offer defines the actual scope of work). This is the minimum requirement as defined by the NPPF, pp56. At Tier 1 the PBA approach to risk estimation involves identifying the magnitude of the potential consequence (taking into account both the potential severity of the hazard and the sensitivity of the receptor) and the magnitude of the likelihood i.e. the probability (taking into account the presence of the hazard and the receptor and the integrity of the pathway). This approach is promoted in current guidance such as R&D 66 (NHBC 2008).

The PBA approach is that if a pollution linkage is identified then it represents a potential risk which requires further consideration and either (1) remediation / direct risk management or (2) further tiers of assessment.

A PBA preliminary Phase 2 report comprises an intrusive investigation to collect site specific information, a Tier 2 quantitative generic risk assessment and a refinement of the CSM using the site specific data. Depending on the findings further investigation and/or progression to Tier 3 risk assessment and the generation of site specific assessment criteria may be required.

The PBA methodology provides an estimate of the level of risk, it does not identify a risk level at which the risk is considered “significant” and/or “unacceptable” as this is dependant on the view of the individual / stakeholder. For example; to a risk adverse stakeholder even a risk level of “very low” may be considered unacceptable and as such this stakeholder may require risk management options to be implemented.

4 Identification of Pollutant Linkages and Conceptual Site Model (CSM)

For all Tiers the underlying principle to ground condition assessment is the identification of *pollutant linkages* in order to evaluate whether the presence of a source of contamination could potentially lead to harmful consequences. A pollutant linkage consists of the following three elements:-

- A source/hazard – a substance or situation which has the potential to cause harm or pollution;
- A pathway – a means by which the hazard moves along / generates exposure; and
- A receptor/target – an entity which is vulnerable to the potential adverse effects of the hazard.

The *Conceptual Site Model* identifies the types and locations of potential contaminant sources/hazards and potential receptors and potential migration/transportation pathway(s). The CSM is refined as the assessment progresses through the Tiers.

4.1 Hazard Identification

A hazard is a substance or situation that has the potential to cause harm. Hazards may be chemical, biological or physical (e.g. explosive gases).

At Tier 1 the potential for hazards to be present is determined from consideration of the previous or ongoing activities on or near to the site in accordance with the criteria presented in the **Table 1**.

Based on the land use information Potential Contaminants of Concern (PCOC) are identified. The PCOC direct the scope of the collection of site specific data and the analytical testing selected for subsequent Tiers.

At Tier 2 the site specific data is screened using published assessment criteria (refer to PBA document entitled Rationale for the Selection of Tier 2 Assessment Criteria). In general, published criteria have been developed using highly conservative assumptions and therefore if the screening criterion is not exceeded then the PCOC is eliminated as a potential Hazard. It should be noted that exceedance does not necessarily indicate that a site is contaminated and/or unsuitable for use only that the PCOC is retained as a potential Hazard. Published criteria are generated using models based on numerous and complex assumptions. Whether or not these assumptions are appropriate in a site-specific context requires confirmation on a project by project basis and would form part of a Tier 3 assessment.

When reviewing or assessing site specific data PBA utilise published guidance on comparing contamination

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data with a critical concentration (CL:AIRE/CIEH 2008) which presents a structured process for employing statistical techniques for data assessment purposes. The benefit of the statistical tool is uncertainty is quantified and decisions are made knowing the strength of the evidence. Correct decision probability is a function of sample size, difference in the mean and the critical concentration, variation in measured values and the significance level.

4.2 Receptor and Pathway Identification

For all Tiers the potential receptors (for both on site and adjoining land) that will be considered are:

- Human Health – including current and future occupiers, construction and future maintenance workers, and neighbouring properties/third parties;
- Ecological systems; ^{*1}
- Controlled waters ^{*2} – including surface water and groundwater;
- Property, Animal or Crop (existing or proposed) - including buildings, service lines and pipes, crops, livestock, pets, woodland; and
- Archaeological sites and ancient monuments.

^{*1} International or nationally designated sites (as defined in the statutory guidance (Defra Circular 04/12)) “in the local area” will be identified as potential ecological receptors. A search radius of 1, 2 or 5km will be utilised depending on the site specific circumstances (see also pathway identification). The Environment Agency has published an ecological risk assessment framework (EA 2008) which promotes (as opposed to statutorily enforces) consideration of additional receptors to include locally protected sites and protected or notable species. These additional potential receptors will only be considered if a Phase 1 habitat survey, undertaken in accordance with guidance (JNCC 1993), is commissioned and the data provided to PBA. It should be noted that without such a survey the Tier 1 risk assessment may conclude that the identification of potential ecological receptors is inconclusive (refer to PBA Specification for Phase 1).

^{*2} the definition of “pollution of controlled water” was amended by the introduction of Section 86 of the Water Act 2003. For the purposes of Part 2A groundwater does not include waters above the saturated zone and our assessment does not therefore address perched water other than where development causes a pathway to develop.

If a receptor is taken forward for further assessment it will be classified in terms of its sensitivity, the criteria for which are presented in **Table 2**. Table 2 has been generated using descriptions of environmental receptor importance/value given in various guidance documents including R&D 66 (NHBC 2008) and Transport Analysis Guidance (based on DETR 2000). Human health and buildings classifications have been generated by PBA using the attribute description for each class.

The exposure pathway and modes of transport that will be considered are presented in **Table 3**.

4.3 Note regarding Ecological Systems

The Environment Agency (EA) has developed an ecological risk assessment framework which aims to provide a structured approach for assessing the risks to ecology from chemical contaminants in soils (EA 2008). In circumstances where contaminants in water represent a potential risk to aquatic ecosystems then risk assessors will need to consider this separately.

The framework consists of a three tiered process:-

- Tier 1 is a screening step where the site soils chemical data is compared to a soil screening value (SSV)
- Tier 2 uses various tools (including surveys and biological testing) to gather evidence for any harm to the ecological receptors
- Tier 3 seeks to attribute the harm to the chemical contamination

Tier 1 is preceded by a desk study to collate information about the site and the nature of the contamination to assess whether pollutant linkages are feasible. The framework presents ten steps for ecological desk studies and development of a conceptual site model as follows.

- 1 Establish Regulatory Context
- 2 Collate and Assess Documentary Information
- 3 Summarise Documentary Information
- 4 Identify Potential Contaminants of Concern
- 5 Identify Likely Fate Transport of Contaminants
- 6 Identify Potential Receptors of Concern
- 7 Identify Potential Pathways of Concern
- 8 Create a Conceptual Site Model
- 9 Identify Assessment and Measurement Endpoints
- 10 Identify Gaps and Uncertainties

The information in a standard PBA Phase 1 report covers Steps 1 to 4 inclusive. Step 5 considers fate and transport of contaminants and it should be noted that our standard report adopts a simplified approach considering only transport mechanisms. A simplified approach has also been adopted in respect of Steps 6 and 7 receptors (a detailed review of the ecological attributes has not been undertaken) and pathways (a food chain assessment has not been undertaken). Step 9 is outside the scope of our standard Phase 1 report.

It should be noted that the Tier 1 assessment for ecological systems (i.e. where designated sites are identified) as part of a Phase 1 report will assess the viability of the mode of transport given the site specific circumstances not specific pathways.

The Tier 1 risk assessment may conclude that the risk to potential ecological receptors is inconclusive (see PBA Specification for Phase 1).

4.4 Note regarding Controlled Waters

Controlled Waters are rivers, estuaries, coastal waters, lakes and groundwaters, but not perched waters.

The EU Water Framework Directive (WFD) 2000/60/EC provides for the protection of sub-surface, surface, coastal and territorial waters through a framework of river basin management. The EU Updated Water Framework Standards Directive 2014/101/EU amended the EU WFD to update the international standards therein; it enters into force on 20 November 2014 and its provisions must be transposed in Member State law by 20 May 2016. Other EU Directives in the European water management framework include:

- the EU Priority Substances Directive 2013/39/EU;

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- EU Groundwater Pollutants Threshold Values Directive 2014/80/EU amending the EU Groundwater Directive 2006/118/EC; and
- EU Biological Monitoring Directive 2014/101/EU.

The Ground Water Daughter Directive (GWDD) was enacted by the Groundwater Regulations (2009), which were subsumed by the Environmental Permitting Regulations (2010) which provide essential clarification including on the four objectives specifically for groundwater quality in the WFD:-

- Achieve 'Good' groundwater chemical status by 2015, commonly referred to as 'status objective';
- Achieve Drinking Water Protected Area Objectives;
- Implement measures to reverse any significant and sustained upward trend in groundwater quality, referred to as 'trend objective'; and
- Prevent or limit the inputs of pollutants into groundwater, commonly referred to as 'prevent or limit' objectives

The Water Act 2003 (Commencement No.11) Order 2012 amends the test for 'contaminated land' which relates to water pollution so that pollution of controlled waters must now be "significant" to meet the definition of contaminated land.

River Basin Management Plans (RBMP) have been developed for the 11 River Basin Districts in England and Wales. These were released by Defra in 2009 (Defra 2009).

These RBMP's establish the current status of waters within the catchments of the respective Districts and the current status of adjoining waters identified. As part of a Tier 2 risk assessment water quality data is screened against the WFD assessment criteria. Compare to the RBMP's current status of waters for the catchment under consideration would form part of a Tier 3 assessment.

5 Risk Estimation

Risk estimation classifies what degree of harm might result to a receptor (defined as consequence) and how likely it is that such harm might arise (probability).

At Tier 1 the consequence classification is generated by multiplying the hazard classification score and the receptor sensitivity score. This approach follows that presented in the republished R&D 66 (NHBC 2008).

The criteria for classifying probability are set out in **Table 4** and have been taken directly from Table 6.4 CIRIA C552 (CIRIA 2001). Probability considers the integrity of the exposure pathway.

The consequence classifications detailed in **Table 5** have been adapted from Table 6.3 presented in C552 and R&D 66 (Annex 4 Table A4.3).

The Tier 1 risk classification is estimated for each pollutant linkage using the matrix given in **Table 6** which is taken directly from C552 (Table 6.5). Subsequent Tiers refine the CSM through retention or elimination of potential hazards and pollutant linkages.

6 Risk Evaluation

In order to put the Tier 1 risk classification into context the likely actions are described in **Table 7** which is taken directly from C552 (Table 6.6). Subsequent Tiers identify potential risk management options through remediation and/or mitigation measures.

7 References

BSI 2007 BS 8485 Code of Practice for characterisation and remediation from ground gas in affected developments.

BSI 2011 BS 10175 (2011) Code of practice - Investigation of potentially contaminated sites

CIRIA 2001: Contaminated land risk assessment – a guide to good practice C552.

CIRIA 2008: Assessing risks posed by hazardous ground gases to buildings C655

CL:AIRE/EIH 2008 Guidance on Company Soil Contamination Data with a Critical Concentration. Published by Contaminated Land: Applications in Real Environments (CL:AIRE)

CL:AIRE 2013 SP1010 – Development of Category 4 Screening Levels for Assessment of Land Affected by Contamination. Final Project Report published by Contaminated Land: Applications in Real Environments (CL:AIRE) 20th December 2013

DCLG 2010 Building Regulations 2010 Approved Document C Site preparation and resistance to contaminants and moisture.

DCLG 2012 National Planning Policy Framework.

DETR 2000 Methodology for Multi Modal Studies. Volume 2 Section 4. The Environmental Objective.

Defra Circular 01/2006

Defra Circular 04/2012 Environmental Protection Act 1990: Part 2A. Contaminated Land Statutory Guidance.

DEFRA, 2006 The Contaminated Land (England) Regulations 2006.

DEFRA, 2012 The Contaminated Land (England) (Amendment) Regulations 2012 (SI2012/263).

DEFRA, 2012 Environmental Protection Act 1990: Part 2A. Contaminated Land Statutory Guidance. April 2012.

DEFRA, 2013 Environmental Damage (Prevention and Remediation) Regulations 2009: Guidance for England and Wales

Defra '2009 Water for Life and Livelihoods. River Basin Management Plan. (11 Districts: Anglia, Dee, Humber, Northumbria, Northwest, Severn, Solway and Tweed, Southeast, Thames, Western Wales) December 2009

EA 2004: The Model Procedures for the Management of Land Contamination CRL 11 published by the Environment Agency (EA).

EA 2008 Ecological Risk Assessment Science Report Series SC070009 published by the Environment Agency (EA).

JNCC 1993 Handbook for Phase 1 Habitat Survey – A Technical for Environmental Audit prepared by the Joint Nature Conservancy Council (JNCC)

NHBC/EA/CIEH 2008: R&D Publication 66 Guidance for the safe development of housing on land affected by contamination.

Table 1: Criteria for Classifying Hazards / Potential for Generating Contamination

Classification/Score	Potential for generating contamination/gas based on land use
Very Low 1	Land Use: greenfield Contamination: None. Gas generation potential : Inert Made Ground
Low 2	Land Use: residential, retail or office use, recent small scale industrial. Contamination: None or locally slightly elevated concentrations. Gas generation potential : Shallow thickness of Alluvium
Moderate 3	Land Use: railway yards, collieries, scrap yards, light industry, engineering works. Contamination: Locally elevated concentrations. Gas generation potential : Dock silt and substantial thickness of organic alluvium/peat
High 4	Land Use: gas works, chemical works, heavy industry, non-hazardous landfills. Contamination: Possible widespread elevated concentrations. Gas generation potential : Shallow mine workings Pre 1960's landfill
Very High 5	Land Use: hazardous waste landfills. Contamination: Likely widespread elevated concentrations. Gas generation potential: Domestic landfill post 1960

"Greenfield" is land which has not been developed including not used for crop production or animal husbandry and no contamination source therefore no pollutant linkages.

Table 2: Criteria for Classifying Receptor Sensitivity/Value

Classification/Score	Definition
Very Low 1	Receptor of limited importance Groundwater: Non aquifer Surface water: Water body within 25m or eliminate Ecology: No local designation Buildings: Replaceable Human health: Unoccupied/limited access
Low 2	Receptor of local or county importance with potential for replacement Groundwater: Secondary B aquifer or Secondary Undifferentiated Surface water: Tertiary water body immediately adjacent Ecology: local habitat resources Buildings: Local value Human health: Minimum score 4 where human health identified as potential receptor
Moderate 3	Receptor of local or county importance with potential for replacement Groundwater: Secondary A aquifer Surface water: Secondary water body immediately adjacent Ecology: County wildlife sites, Areas of Outstanding Natural Beauty (AONB) Buildings: Area of Historic Character Human health: Minimum score 4 where human health identified as potential receptor
High 4	Receptor of county or regional importance with limited potential for replacement Groundwater: Principal aquifer Surface water: Primary water body immediately adjacent Ecology: SSSI, National or Marine Nature Reserve (NNR or MNR) Buildings: Conservation Area Human health: Minimum score 4 where human health identified as potential receptor
Very High 5	Receptor of national or international importance Groundwater: Source Protection Zone Surface water: Primary water body on site Ecology: Special Areas of Conservation (SAC and candidates), Special Protection Areas (SPA and potentials) or wetlands of international importance (RAMSAR) Buildings: World Heritage site Human health: Residential, open spaces and uses where children are present

Table 3: Exposure Pathway and Modes of Transport

Receptor	Pathway	Mode of transport
Human health	Ingestion	Fruit or vegetable leaf or roots
		Contaminated water
		Soil/dust indoors
		Soil/dust outdoors
	Inhalation	Particles (dust / soil) – outdoor
		Particles (dust / soil) - indoor
		Vapours – outdoor - migration via natural or anthropogenic pathways
		Vapours - indoor - migration via natural or anthropogenic pathways
	Dermal absorption	Direct contact with soil
		Direct contact with waters (swimming / showering)
		Irradiation
Groundwater	Leaching	Gravity / permeation
	Migration	Natural – groundwater as pathway Anthropogenic (e.g. boreholes, culverts, pipelines etc.)
Surface Water	Direct	Runoff or discharges from pipes
	Indirect	Recharge from groundwater
	Indirect	Deposition of wind blown dust
Buildings	Direct contact	Sulphate attack on concrete, hydrocarbon corrosion of plastics
	Gas ingress	Migration via natural or anthropogenic paths
Ecological systems	See Notes	Runoff/discharge to surface water body
	See Notes	Windblown dust
	See Notes	Groundwater migration
	See Notes	At point of contaminant source
Animal and crop	Direct	Wind blown or flood deposited particles / dust / sediments
	Indirect	Plants via root up take or irrigation. Animals through watering
	Inhalation	By livestock / fish - gas / vapour / particulates / dust
	Ingestion	Consumption of vegetation / water / soil by animals

Table 4: Classification of Probability

Classification	Definition
High likelihood	There is a pollution linkage and an event either appears very likely in the short-term and almost inevitable over the long-term, or there is already evidence at the receptor of harm / pollution.
Likely	There is a pollution linkage and all the elements are present and in the right place, which means that it is probable that an event will occur. Circumstances are such that an event is not inevitable, but possible in the short-term and likely over the long-term.
Low likelihood	There is a pollution linkage and circumstances are possible under which an event could occur. However, it is by no means certain that even over a longer period such event would take place, and is less likely in the shorter-term.
Unlikely	There is a pollution linkage but circumstances are such that it is improbable that an event would occur even in the very long-term.

PBA Methodology for Assessment of Potentially Contaminated Land

Table 5: Classification of Consequence (score = magnitude of hazard Table 1 and sensitivity of receptor Table 2)

Classification / Score	Examples
Severe 17-25 (3 out of 25 outcomes)	Human health effect - exposure likely to result in "significant harm". Significant harm to humans is defined in circular 01/2006 as death, disease, serious injury, genetic mutation, birth defects or impairment of reproductive function. Controlled water effect - short-term risk of pollution (note: Water Resources Act contains no scope for considering significance of pollution) of sensitive water resource. Equivalent to EA Category 1 incident (persistent and/or extensive effects on water quality leading to closure of potable abstraction point or loss of amenity, agriculture or commercial value. Major fish kill. Ecological effect - short-term exposure likely to result in a substantial adverse effect. Catastrophic damage to crops, buildings or property
Medium 10-16 (7 out of 25 outcomes)	Human health effect - exposure could result in "significant harm". Significant harm to humans is defined in circular 01/2006 as death, disease, serious injury, genetic mutation, birth defects or impairment of reproductive function. Controlled water effect - equivalent to EA Category 2 incident requiring notification of abstractor Ecological effect - short-term exposure may result in a substantial adverse effect. Damage to crops, buildings or property
Mild 5-9 (7 out of 25 outcomes)	Human health effect - exposure may result in "significant harm". Significant harm to humans is defined in circular 01/2006 as death, disease, serious injury, genetic mutation, birth defects or impairment of reproductive function. Controlled water effect - equivalent to EA Category 3 incident (short lived and/or minimal effects on water quality). Ecological effect - unlikely to result in a substantial adverse effect. Minor damage to crops, buildings or property. Damage to building rendering it unsafe to occupy (for example foundation damage resulting in instability).
Minor 1-4 (8 out of 25 outcomes)	No measurable effect on humans. Protective equipment is not required during site works. Equivalent to insubstantial pollution incident with no observed effect on water quality or ecosystems. Repairable effects to crops, buildings or property. The loss of plants in a landscaping scheme. Discolouration of concrete.

Table 6: Classification of Risk (Combination of Consequence Table 5 and Probability Table 4)

	Consequence			
Probability	Severe	Medium	Mild	Minor
High likelihood	Very high	High	Moderate	Low
Likely	High	Moderate	Moderate/	Low
Low likelihood	Moderate	Moderate	Low	Very low
Unlikely	Low	Low	Very low	Very low

Table 7: Description of Risks and Likely Action Required

Risk Classification	Description
Very high risk	There is a high probability that severe harm could arise to a designated receptor from an identified hazard, OR, there is evidence that severe harm to a designated receptor is currently happening. This risk, if realised, is likely to result in a substantial liability. Urgent investigation (if not undertaken already) and remediation is likely to be required in the short term.
High risk	Harm is likely to arise to a designated receptor from an identified hazard. Realisation of the risk is likely to present a substantial liability. Urgent investigation (if not undertaken already) is required and remedial works may be necessary in the short-term and are likely over the longer-term.
Moderate risk	It is possible that harm could arise to a designated receptor from an identified hazard. However, it is either relatively unlikely that any such harm would be severe, or if any harm were to occur it is more likely that the harm would be relatively mild. Investigation (if not already undertaken) is normally required to clarify the risk and to determine the potential liability. Some remedial works may be required in the longer-term.
Low risk	It is possible that harm could arise to a designated receptor from an identified hazard, but it is likely that this harm, if realised, would at worst normally be mild.
Very low risk	There is a low possibility that harm could arise to a receptor. In the event of such harm being realised it is not likely to be severe.

APPENDIX 6

Receptor	Sensitivity Value or 0 if not present	Pathway	Present (Y=1, N=0)	EPH & Solvents	PAHs	Metals	Asbestos	Biocides	Permanent Gases	Consequence (Hazard Classification x Sensitivity)	Probability/ Likelihood	Estimated Risk
Human Health - On-Site Current Users	5	Ingestion of fruit or vegetable leaf or roots	0	x	x	√	x	√	x	N/A	N/A	N/A
		Ingestion of contaminated drinking water	0	√	√	x	x	√	x	N/A	N/A	N/A
		Ingestion of water / sediments when swimming	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Ingestion of soil/dust indoors	0	√	√	√	√	√	x	N/A	N/A	N/A
		Ingestion of soil/dust outdoors	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Inhalation of particles (dust / soil) indoor and outdoor	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Inhalation of vapours/gases – outdoor	1	√	x	x	x	x	√	Medium	Unlikely	Low
		Inhalation of vapours/gases - indoor	0	√	x	x	x	x	√	N/A	N/A	N/A
		Dermal absorption via direct contact with soil	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Dermal absorption via waters (swimming / showering)	1	√	√	√	√	√	x	Medium	Unlikely	Low
Human Health On- Site Future User	5	Ingestion of fruit or vegetable leaf or roots	0	x	x	√	x	√	x	N/A	N/A	N/A
		Ingestion of contaminated drinking water	0	√	√	x	x	√	x	N/A	N/A	N/A
		Ingestion of water / sediments when swimming	1	√	√	x	x	√	x	Medium	Unlikely	Low
		Ingestion of soil/dust indoors	0	√	√	√	√	√	x	N/A	N/A	N/A
		Ingestion of soil/dust outdoors	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Inhalation of particles (dust / soil) indoor and outdoor	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Inhalation of vapours – outdoor	1	√	x	x	x	x	√	Medium	Unlikely	Low
		Inhalation of vapours - indoor	0	√	x	x	x	x	√	N/A	N/A	N/A
		Dermal absorption via direct contact with soil	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Dermal absorption via waters (swimming / showering)	1	√	√	√	√	√	x	Medium	Unlikely	Low
Human Health - Neighbours	5	Ingestion of fruit or vegetable leaf or roots	0	x	x	√	x	√	x	N/A	N/A	N/A
		Ingestion of contaminated drinking water	1	√	√	x	x	√	x	Medium	Unlikely	Low
		Ingestion of water / sediments when swimming	1	√	√	x	x	√	x	Medium	Unlikely	Low
		Ingestion of soil/dust indoors	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Ingestion of soil/dust outdoors	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Inhalation of particles (dust / soil) indoor and outdoor	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Inhalation of vapours – outdoor	1	√	x	x	x	x	√	Medium	Unlikely	Low
		Inhalation of vapours - indoor	1	√	x	x	x	x	√	Medium	Unlikely	Low
		Dermal absorption via direct contact with soil	1	√	√	√	√	√	x	Medium	Unlikely	Low
		Dermal absorption via waters (swimming / showering)	1	√	√	√	√	√	x	Medium	Unlikely	Low
Human Health - Construction/ Maintenance Workers*	4	Ingestion of soil/dust indoors	0	√	√	√	√	√	x	N/A	N/A	N/A
		Ingestion of soil/dust outdoors	1	√	√	√	√	√	x	Mild	Likely	Moderate
		Inhalation of particles (dust / soil) outdoor	1	√	√	√	√	√	x	Mild	Likely	Moderate
		Inhalation of vapours – outdoor	1	√	x	x	x	x	√	Mild	Likely	Moderate
		Inhalation of vapours - indoor	0	√	x	x	x	x	√	N/A	N/A	N/A
		Dermal absorption via direct contact with soil	1	√	√	√	√	√	x	Mild	Likely	Moderate
Groundwater (Shallow)	3	Leaching	1	√	√	√	√	√	x	Mild	Low	Low
		Migration via natural or anthropogenic	1	√	√	√	√	√	√	Mild	Low	Low
Groundwater (Deep)	5	Leaching	1	√	√	√	√	√	x	Medium	Low	Moderate
		Migration via natural or anthropogenic	1	√	√	√	√	√	√	Medium	Low	Moderate
Surface Water	5	Direct runoff or discharges from pipes	1	√	√	√	√	√	x	Medium	Low	Moderate
		Indirect via recharge from groundwater (hydraulic flow)	1	√	√	√	√	√	x	Medium	Low	Moderate
		Deposition of wind blown dust	1	√	√	√	√	√	x	Medium	Unlikely	Low
Property - Buildings	2	Direct contact	1	√	√	x	x	x	x	Minor	Low	Very Low
		Explosion due to gas migration via natural / anthropogenic	0	√	x	x	x	x	√	N/A	N/A	N/A
Ecological Systems	2	Direct deposition of particles / dust - wind blown or flood	1	√	√	√	√	√	x	Minor	Unlikely	Very Low
		Indirect - through watering	1	√	√	√	x	x	x	Minor	Unlikely	Very Low
		Inhalation of gases/vapours or particulates/dust by animals	1	√	√	√	x	x	√	Minor	Unlikely	Very Low
		Ingestion of of vegetation / water / soil by animals	1	√	√	√	√	√	x	Minor	Unlikely	Very Low
Property - Animal/Crop	1	Direct (including deposition via wind or flood)	1	√	√	√	√	√	x	Minor	Unlikely	Very Low
		Indirect (through watering)	1	√	√	√	x	x	x	Minor	Unlikely	Very Low
		Inhalation of gas / vapour / particulates / dust by animals	1	√	x	x	x	x	√	Minor	Unlikely	Very Low
		Ingestion of vegetation / water / soil by animals	1	√	√	√	√	√	x	Minor	Unlikely	Very Low

Risk estimation establishes the magnitude and probability of the possible consequences (what degree of harm might result and how likely).
The criteria for classifying probability and consequence are set out in Tables 3 and 4 of the PBA methodology.
Green text highlights one or more elements of the Pollutant Linkage are missing and therefore eliminated

EPH = Extractable hydrocarbons
PAHs = Poly Aromatic Hydrocarbons

 Offices throughout the UK and continental Europe www.peterbrett.com	 Reading Borough Council Working better with you	TABLE SUMMARISING POLLUTANT LINKAGES AND RISK ESTIMATION										Date	16/06/2017
		PROPOSED MRT SCHEME, EAST READING										A3 Scale	nts
												Drawn	az
												Checked	rht