#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
17		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.023	mg/kg		<0.023	mg/kg	<0.0000023 %		<LOD
18		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
19		fluoranthene		205-912-4	206-44-0		0.12	mg/kg		0.11	mg/kg	0.000011 %	✓	
20		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		indeno[123-cd]pyrene		205-893-2	193-39-5		0.0499	mg/kg		0.0459	mg/kg	0.00000459 %	✓	
22		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	28.6	mg/kg	1.56	40.997	mg/kg	0.00263 %	✓	
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
24		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.005	mg/kg		<0.005	mg/kg	<0.0000005 %		<LOD
25		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.009	mg/kg		<0.009	mg/kg	<0.0000009 %		<LOD
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		10.4	mg/kg	1.579	15.096	mg/kg	0.00151 %	✓	
27		pH			PH		6.13	pH		6.13	pH	6.13 pH		
28		phenanthrene		201-581-5	85-01-8		0.0313	mg/kg		0.0288	mg/kg	0.00000288 %	✓	
29		phenol	604-001-00-2	203-632-7	108-95-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
30		pyrene		204-927-3	129-00-0		0.11	mg/kg		0.101	mg/kg	0.0000101 %	✓	
31		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1	mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<LOD
32		toluene	601-021-00-3	203-625-9	108-88-3		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
33		TPH (C6 to C40) petroleum group			TPH		17.6	mg/kg		16.174	mg/kg	0.00162 %	✓	
34		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		26.8	mg/kg	1.785	43.968	mg/kg	0.0044 %	✓	
35		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		47.5	mg/kg	2.774	121.098	mg/kg	0.0121 %	✓	
36		xylene	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]		<0.04	mg/kg		<0.04	mg/kg	<0.000004 %		<LOD
37		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		13.3	mg/kg	1.462	17.864	mg/kg	0.00179 %	✓	
											Total:	0.0306 %		

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 Deteminand - 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

Supplementary Hazardous Property Information

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"

Force this Hazardous property to non hazardous because Heavy end hydrocarbons unlikely to be flammable at the concentrations noted.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00162%)

Classification of sample: GWPR5571 Ws3@0.20m

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

Sample details

Sample name:
GWPR5571 Ws3@0.20m
Moisture content:
8.4%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 8.4% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1		benzene	601-020-00-8	200-753-7	71-43-2		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
2	•	ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
3		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.0005 mg/kg		<0.0005 mg/kg	<0.00000005 %		<LOD
4		toluene	601-021-00-3	203-625-9	108-88-3		<0.001 mg/kg		<0.001 mg/kg	<0.0000001 %		<LOD
5	•	coronene		205-881-7	191-07-1		<0.2 mg/kg		<0.2 mg/kg	<0.00002 %		<LOD
6	•	polychlorobiphenyls; PCB	602-039-00-4	215-648-1	1336-36-3		<0.021 mg/kg		<0.021 mg/kg	<0.0000021 %		<LOD
7		xylene	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]		<0.004 mg/kg		<0.004 mg/kg	<0.0000004 %		<LOD
									Total:	0.00002 %		

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: GWPR5571 W4s@0.20m

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

Sample details

Sample name:
GWPR5571 W4s@0.20m
Moisture content:
12%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 12% Wet Weight Moisture Correction applied (MC)

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
1		acenaphthene		201-469-6	83-32-9		<0.008	mg/kg		<0.008	mg/kg	<0.0000008 %		**<LOD**
2		acenaphthylene		205-917-1	208-96-8		<0.012	mg/kg		<0.012	mg/kg	<0.0000012 %		**<LOD**
3		anthracene		204-371-1	120-12-7		<0.016	mg/kg		<0.016	mg/kg	<0.0000016 %		**<LOD**
4		arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		6.76	mg/kg	1.32	7.854	mg/kg	0.000785 %	✓	
5		benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.0364	mg/kg		0.032	mg/kg	0.0000032 %	✓	
6		benzene	601-020-00-8	200-753-7	71-43-2		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		**<LOD**
7		benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.0404	mg/kg		0.0356	mg/kg	0.00000356 %	✓	
8		benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.0598	mg/kg		0.0526	mg/kg	0.00000526 %	✓	
9		benzo[ghi]perylene		205-883-8	191-24-2		0.0293	mg/kg		0.0258	mg/kg	0.00000258 %	✓	
10		benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.0196	mg/kg		0.0172	mg/kg	0.00000172 %	✓	
11		boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<1	mg/kg	23.173	<23.173	mg/kg	<0.00232 %		**<LOD**
12		cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.167	mg/kg	1.285	0.189	mg/kg	0.0000147 %	✓	
13		chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.6	mg/kg	1.923	<1.154	mg/kg	<0.000115 %		**<LOD**
14		chrysene	601-048-00-0	205-923-4	218-01-9		0.0417	mg/kg		0.0367	mg/kg	0.00000367 %	✓	
15		copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		14	mg/kg	1.126	13.871	mg/kg	0.00139 %	✓	
16		cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1	mg/kg	1.884	<1.884	mg/kg	<0.000188 %		**<LOD**

#		Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
17		dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.023	mg/kg		<0.023	mg/kg	<0.0000023 %		<LOD
18		ethylbenzene	601-023-00-4	202-849-4	100-41-4		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
19		fluoranthene		205-912-4	206-44-0		0.0814	mg/kg		0.0716	mg/kg	0.00000716 %	✓	
20		fluorene		201-695-5	86-73-7		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
21		indeno[123-cd]pyrene		205-893-2	193-39-5		0.0307	mg/kg		0.027	mg/kg	0.0000027 %	✓	
22		lead { lead chromate }	082-004-00-2	231-846-0	7758-97-6	1	36.2	mg/kg	1.56	49.689	mg/kg	0.00319 %	✓	
23		mercury { mercury dichloride }	080-010-00-X	231-299-8	7487-94-7		<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
24		tert-butyl methyl ether; MTBE; 2-methoxy-2-methylpropane	603-181-00-X	216-653-1	1634-04-4		<0.0005	mg/kg		<0.0005	mg/kg	<0.00000005 %		<LOD
25		naphthalene	601-052-00-2	202-049-5	91-20-3		<0.009	mg/kg		<0.009	mg/kg	<0.0000009 %		<LOD
26		nickel { nickel dihydroxide }	028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]		10.5	mg/kg	1.579	14.595	mg/kg	0.00146 %	✓	
27		pH			PH		5.65	pH		5.65	pH	5.65 pH		
28		phenanthrene		201-581-5	85-01-8		0.0246	mg/kg		0.0216	mg/kg	0.00000216 %	✓	
29		phenol	604-001-00-2	203-632-7	108-95-2		<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
30		pyrene		204-927-3	129-00-0		0.072	mg/kg		0.0634	mg/kg	0.00000634 %	✓	
31		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }	034-002-00-8				<1	mg/kg	1.405	<1.405	mg/kg	<0.000141 %		<LOD
32		toluene	601-021-00-3	203-625-9	108-88-3		<0.001	mg/kg		<0.001	mg/kg	<0.0000001 %		<LOD
33		TPH (C6 to C40) petroleum group			TPH		12.6	mg/kg		11.088	mg/kg	0.00111 %	✓	
34		vanadium { divanadium pentaoxide; vanadium pentoxide }	023-001-00-8	215-239-8	1314-62-1		26.8	mg/kg	1.785	42.102	mg/kg	0.00421 %	✓	
35		zinc { zinc chromate }	024-007-00-3	236-878-9	13530-65-9		65.3	mg/kg	2.774	159.414	mg/kg	0.0159 %	✓	
36		xylene	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]		<0.004	mg/kg		<0.004	mg/kg	<0.0000004 %		<LOD
37		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }		215-160-9	1308-38-9		17.1	mg/kg	1.462	21.993	mg/kg	0.0022 %	✓	
											Total:	0.0331 %		

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 Deteminand - 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

Supplementary Hazardous Property Information

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"

Force this Hazardous property to non hazardous because Heavy end hydrocarbons unlikely to be flammable at the concentrations noted.

Hazard Statements hit:

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

Because of determinand:

TPH (C6 to C40) petroleum group: (conc.: 0.00111%)

Classification of sample: GWPR5571 WS4@0.20m

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

Sample details

Sample name:
GWPR5571 WS4@0.20m
Moisture content:
9.1%
(wet weight correction)

LoW Code:
Chapter: 17: Construction and Demolition Wastes (including excavated soil from contaminated sites)
Entry: 17 05 04 (Soil and stones other than those mentioned in 17 05 03)

Hazard properties

None identified

Determinands

Moisture content: 9.1% Wet Weight Moisture Correction applied (MC)

#	Determinand	EU CLP index number	EC Number	CAS Number	CLP Note	User entered data	Conv. Factor	Compound conc.	Classification value	MC Applied	Conc. Not Used
1	acenaphthene		201-469-6	83-32-9		<0.008 mg/kg		<0.008 mg/kg	<0.0000008 %		<LOD
2	acenaphthylene		205-917-1	208-96-8		<0.012 mg/kg		<0.012 mg/kg	<0.0000012 %		<LOD
3	anthracene		204-371-1	120-12-7		<0.016 mg/kg		<0.016 mg/kg	<0.0000016 %		<LOD
4	arsenic { arsenic trioxide }	033-003-00-0	215-481-4	1327-53-3		9.78 mg/kg	1.32	11.738 mg/kg	0.00117 %	✓	
5	benzo[a]anthracene	601-033-00-9	200-280-6	56-55-3		0.095 mg/kg		0.0864 mg/kg	0.00000864 %	✓	
6	benzo[a]pyrene; benzo[def]chrysene	601-032-00-3	200-028-5	50-32-8		0.119 mg/kg		0.108 mg/kg	0.0000108 %	✓	
7	benzo[b]fluoranthene	601-034-00-4	205-911-9	205-99-2		0.145 mg/kg		0.132 mg/kg	0.0000132 %	✓	
8	benzo[ghi]perylene		205-883-8	191-24-2		0.0789 mg/kg		0.0717 mg/kg	0.00000717 %	✓	
9	benzo[k]fluoranthene	601-036-00-5	205-916-6	207-08-9		0.053 mg/kg		0.0482 mg/kg	0.00000482 %	✓	
10	boron { boron tribromide }	005-003-00-0	233-657-9	10294-33-4		<1 mg/kg	23.173	<23.173 mg/kg	<0.00232 %		<LOD
11	cadmium { cadmium sulfide }	048-010-00-4	215-147-8	1306-23-6	1	0.287 mg/kg	1.285	0.335 mg/kg	0.0000261 %	✓	
12	chromium in chromium(VI) compounds { chromium(VI) oxide }	024-001-00-0	215-607-8	1333-82-0		<0.6 mg/kg	1.923	<1.154 mg/kg	<0.000115 %		<LOD
13	chrysene	601-048-00-0	205-923-4	218-01-9		0.103 mg/kg		0.0936 mg/kg	0.00000936 %	✓	
14	copper { dicopper oxide; copper (I) oxide }	029-002-00-X	215-270-7	1317-39-1		10.6 mg/kg	1.126	10.848 mg/kg	0.00108 %	✓	
15	cyanides { salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex }	006-007-00-5				<1 mg/kg	1.884	<1.884 mg/kg	<0.000188 %		<LOD
16	dibenz[a,h]anthracene	601-041-00-2	200-181-8	53-70-3		<0.023 mg/kg		<0.023 mg/kg	<0.0000023 %		<LOD

#		Determinand			CLP Note	User entered data		Conv. Factor	Compound conc.		Classification value	MC Applied	Conc. Not Used
		EU CLP index number	EC Number	CAS Number									
17		fluoranthene				0.192	mg/kg		0.175	mg/kg	0.0000175 %	✓	
			205-912-4	206-44-0									
18		fluorene				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
			201-695-5	86-73-7									
19		indeno[123-cd]pyrene				0.085	mg/kg		0.0773	mg/kg	0.00000773 %	✓	
			205-893-2	193-39-5									
20		lead { lead chromate }			1	36.2	mg/kg	1.56	51.327	mg/kg	0.00329 %	✓	
		082-004-00-2	231-846-0	7758-97-6									
21		mercury { mercury dichloride }				<0.1	mg/kg	1.353	<0.135	mg/kg	<0.0000135 %		<LOD
		080-010-00-X	231-299-8	7487-94-7									
22		naphthalene				<0.009	mg/kg		<0.009	mg/kg	<0.0000009 %		<LOD
		601-052-00-2	202-049-5	91-20-3									
23		nickel { nickel dihydroxide }				16.6	mg/kg	1.579	23.834	mg/kg	0.00238 %	✓	
		028-008-00-X	235-008-5 [1] 234-348-1 [2]	12054-48-7 [1] 11113-74-9 [2]									
24		pH				6.41	pH		6.41	pH	6.41 pH		
				PH									
25		phenanthrene				0.0507	mg/kg		0.0461	mg/kg	0.00000461 %	✓	
			201-581-5	85-01-8									
26		phenol				<0.01	mg/kg		<0.01	mg/kg	<0.000001 %		<LOD
		604-001-00-2	203-632-7	108-95-2									
27		pyrene				0.173	mg/kg		0.157	mg/kg	0.0000157 %	✓	
			204-927-3	129-00-0									
28		selenium { selenium compounds with the exception of cadmium sulphoselenide and those specified elsewhere in this Annex }				1.54	mg/kg	1.405	1.967	mg/kg	0.000197 %	✓	
		034-002-00-8											
29		vanadium { divanadium pentaoxide; vanadium pentoxide }				24.7	mg/kg	1.785	40.082	mg/kg	0.00401 %	✓	
		023-001-00-8	215-239-8	1314-62-1									
30		zinc { zinc chromate }				66.1	mg/kg	2.774	166.684	mg/kg	0.0167 %	✓	
		024-007-00-3	236-878-9	13530-65-9									
31		chromium in chromium(III) compounds { chromium(III) oxide (worst case) }				12.2	mg/kg	1.462	16.208	mg/kg	0.00162 %	✓	
			215-160-9	1308-38-9									
										Total:	0.0332 %		

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 Deteminand - 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 GB MCL determinands

- **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 Jul 2015
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

- **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 Jul 2015
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

- **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 Jul 2015
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

- **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 Jul 2015
Hazard Statements: Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex**

GB MCL index number: 006-007-00-5
Description/Comments: Conversion factor based on a worst case compound: sodium cyanide
Additional Hazard Statement(s): EUH032 >= 0.2 %
Reason for additional Hazards Statement(s):
20 Nov 2021 - EUH032 >= 0.2 % hazard statement sourced from: WM3, Table C12.2

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

GB MCL index number: 601-023-00-4
Description/Comments:
Additional Hazard Statement(s): Carc. 2; H351
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 2; H351 hazard statement sourced from: IARC Group 2B (77) 2000

- **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 Aug 2015
Hazard Statements: Acute Tox. 4; H302 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

- **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 Aug 2015
Hazard Statements: 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 Aug 2015
Hazard Statements: Carc. 2; H351

- **pH** (CAS Number: PH)

Description/Comments: Appendix C4
Data source: WM3 1st Edition 2015
Data source date: 25 May 2015
Hazard Statements: None.

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 Aug 2015
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

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 Aug 2015
Hazard Statements: Skin Irrit. 2; H315 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

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 May 2015
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

divanadium pentaoxide; vanadium pentoxide (EC Number: 215-239-8, CAS Number: 1314-62-1)

GB MCL index number: 023-001-00-8
Description/Comments: Hazard statements H301, H330, H350 added by HazWasteOnline due to ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be Carc. 1B; H350. The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.
Additional Hazard Statement(s): Carc. 1B; H350 , Acute Tox. 3; H301 , Acute Tox. 2; H330
Reason for additional Hazards Statement(s):
20 Sep 2022 - Carc. 1B; H350 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be Carc. 1B; H350. The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.
28 Sep 2022 - Acute Tox. 3; H301 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be "Acute tox 3; H301". The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.
28 Sep 2022 - Acute Tox. 2; H330 hazard statement sourced from: ATP 18 (Regulation (EU) 2022/692) considers vanadium pentoxide to be "Acute tox 2; H330". The GB MCL Agency has reached the same opinion [but is yet to formerly make this change to the MCL List]. Substance has therefore been self-classified.

chromium(III) oxide (worst case) (EC Number: 215-160-9, CAS Number: 1308-38-9)

Description/Comments: Data from C&L Inventory Database
Data source: https://echa.europa.eu/information-on-chemicals/cl-inventory-database/-/discli/details/33806
Data source date: 17 Jul 2015
Hazard Statements: Acute Tox. 4; H332 , Acute Tox. 4; H302 , Eye Irrit. 2; H319 , STOT SE 3; H335 , Skin Irrit. 2; H315 , Resp. Sens. 1; H334 , Skin Sens. 1; H317 , Repr. 1B; H360FD , Aquatic Acute 1; H400 , Aquatic Chronic 1; H410

coronene (EC Number: 205-881-7, CAS Number: 191-07-1)

Description/Comments: Data from C&L Inventory Database; no entries in Registered Substances or Pesticides Properties databases; SDS: Sigma Aldrich, 1907/2006 compliant, dated 2012 - no entries; IARC – Group 3, not carcinogenic.
Data source: http://clp-inventory.echa.europa.eu/SummaryOfClassAndLabelling.aspx?SubstanceID=17010&HarmOnly=no?fc=true&lang=en
Data source date: 16 Jun 2014
Hazard Statements: STOT SE 2; H371

polychlorobiphenyls; PCB (EC Number: 215-648-1, CAS Number: 1336-36-3)

GB MCL index number: 602-039-00-4
Description/Comments: Worst Case: IARC considers PCB Group 1; Carcinogenic to humans;

POP specific threshold from ATP1 (Regulation 756/2010/EU) to POPs Regulation (Regulation 850/2004/EC). Where applicable, the calculation method laid down in European standards EN 12766-1 and EN 12766-2 shall be applied.
Additional Hazard Statement(s): Carc. 1A; H350
Reason for additional Hazards Statement(s):
20 Nov 2021 - Carc. 1A; H350 hazard statement sourced from: IARC Group 1 (23, Sup 7, 100C) 2012

Appendix B: Rationale for selection of metal species

arsenic {arsenic trioxide}

Most likely worst-case

boron {boron tribromide}

worst-case

cadmium {cadmium sulfide}

Most likely worst-case

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

Most likely worst-case

copper {dicopper oxide; copper (I) oxide}

Most likely worst-case

cyanides {salts of hydrogen cyanide with the exception of complex cyanides such as ferrocyanides, ferricyanides and mercuric oxycyanide and those specified elsewhere in this Annex}

Most likely worst-case

lead {lead chromate}

worst-case

mercury {mercury dichloride}

Most likely worst-case

nickel {nickel dihydroxide}

Most likely worst-case

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

Most likely worst-case

vanadium {divanadium pentaoxide; vanadium pentoxide}

Most likely worst-case

zinc {zinc chromate}

worst-case

chromium in chromium(III) compounds {chromium(III) oxide (worst case)}

worst case

Appendix C: Version

HazWasteOnline Classification Engine: WM3 1st Edition v1.2.GB - Oct 2021
HazWasteOnline Classification Engine Version: 2023.289.5779.10675 (16 Oct 2023)
HazWasteOnline Database: 2023.283.5774.10667 (10 Oct 2023)

This classification utilises the following guidance and legislation:
WM3 v1.2.GB - Waste Classification - 1st Edition v1.2.GB - Oct 2021
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 Waste 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
10th ATP - Regulation (EU) 2017/776 of 4 May 2017
HP14 amendment - Regulation (EU) 2017/997 of 8 June 2017
13th ATP - Regulation (EU) 2018/1480 of 4 October 2018
14th ATP - Regulation (EU) 2020/217 of 4 October 2019
15th ATP - Regulation (EU) 2020/1182 of 19 May 2020
The Chemicals (Health and Safety) and Genetically Modified Organisms (Contained Use)(Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1567 of 16th December 2020
The Waste and Environmental Permitting etc. (Legislative Functions and Amendment etc.) (EU Exit) Regulations 2020 - UK: 2020 No. 1540 of 16th December 2020
GB MCL List - version 1.1 of 09 June 2021

Appendix E

Network Details

Manhole Schedule

Manhole	Catchment Area (ha)	Diameter (m)	Type	CL (m)	IL (m)	Depth To Soffit (m)	Easting (m)	Northing (m)
PP1 DUMMY	0.006	0.250	250	16.889	16.300	0.489	494832.789	106267.719
PP1 OUTFALL	0.000	0.250	250	16.803	16.250	0.453	494831.692	106268.669

Pipe Schedule

Pipe Number	US Manhole	US IL (m)	DS Manhole	DS IL (m)	Shape	Dimension (m)	Length (m)	Gradient (1:x)	Roughness (mm)	US Depth To Soffit (m)	DS Depth To Soffit (m)
1.000	PP1 DUMMY	16.300	PP1	16.250	Circ	0.1mØ	1.451	29.0	0.600	0.489	0.453

Permeable Paving Schedule

Permeable Paving	Assigned Manhole	Effective Storage Volume (m3)	CL (m)	IL (m)	Storage Infil Rate (m/hr)	Safety Factor	Easting (m)	Northing (m)
Permeable Paving1	PP1 DUMMY	7.648	16.889	16.309	0.07812000	1.50	494836.550	106264.870

Outfall Details

Outfall Manhole PP1 OUTFALL : Free Discharge

Flow Control Details

Simulation Settings

FEH2022 (point): Filename=FEH_Point_Descriptors_495282_106614_v5_0_1.xml

Summer (Cv: 1.00), Winter (Cv: 1.00)

Global Time of Entry: 5.0 mins

Durations (mins): 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440

Return Periods (yrs) + Climate Change: (2, +45%), (30, +45%), (100, +0%), (100, +45%)

Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
2Yr+45% 15Min Winter	47.455	0.00	0.00	100Yr 15Min Summer	103.046	0.00	0.00
2Yr+45% 15Min Summer	47.455	0.00	0.00	100Yr 15Min Winter	103.046	0.00	0.00
2Yr+45% 30Min Winter	31.030	0.00	0.00	100Yr 30Min Summer	69.278	0.00	0.00
2Yr+45% 30Min Summer	31.030	0.00	0.00	100Yr 30Min Winter	69.278	0.00	0.00
2Yr+45% 60Min Winter	19.694	0.00	0.00	100Yr 60Min Summer	44.609	0.00	0.00
2Yr+45% 60Min Summer	19.694	0.00	0.00	100Yr 60Min Winter	44.609	0.00	0.00
2Yr+45% 120Min Summer	13.759	0.00	0.00	100Yr 120Min Summer	26.800	0.00	0.00
2Yr+45% 120Min Winter	13.759	0.00	0.00	100Yr 120Min Winter	26.800	0.00	0.00
2Yr+45% 180Min Summer	10.912	0.00	0.00	100Yr 180Min Summer	19.661	0.00	0.00
2Yr+45% 180Min Winter	10.912	0.00	0.00	100Yr 180Min Winter	19.661	0.00	0.00
2Yr+45% 240Min Summer	8.907	0.00	0.00	100Yr 240Min Summer	15.803	0.00	0.00
2Yr+45% 240Min Winter	8.907	0.00	0.00	100Yr 240Min Winter	15.803	0.00	0.00
2Yr+45% 360Min Summer	6.688	0.00	0.00	100Yr 360Min Summer	11.471	0.00	0.00
2Yr+45% 360Min Winter	6.688	0.00	0.00	100Yr 360Min Winter	11.471	0.00	0.00
2Yr+45% 480Min Summer	5.428	0.00	0.00	100Yr 480Min Summer	9.103	0.00	0.00
2Yr+45% 480Min Winter	5.428	0.00	0.00	100Yr 480Min Winter	9.103	0.00	0.00
2Yr+45% 600Min Summer	4.574	0.00	0.00	100Yr 600Min Summer	7.598	0.00	0.00
2Yr+45% 600Min Winter	4.574	0.00	0.00	100Yr 600Min Winter	7.598	0.00	0.00
2Yr+45% 720Min Winter	3.959	0.00	0.00	100Yr 720Min Summer	6.542	0.00	0.00
2Yr+45% 720Min Summer	3.959	0.00	0.00	100Yr 720Min Winter	6.542	0.00	0.00
2Yr+45% 960Min Summer	3.164	0.00	0.00	100Yr 960Min Summer	5.152	0.00	0.00
2Yr+45% 960Min Winter	3.164	0.00	0.00	100Yr 960Min Winter	5.152	0.00	0.00
2Yr+45% 1440Min Summer	2.322	0.00	0.00	100Yr 1440Min Summer	3.682	0.00	0.00
2Yr+45% 1440Min Winter	2.322	0.00	0.00	100Yr 1440Min Winter	3.682	0.00	0.00
30Yr+45% 15Min Summer	119.517	0.00	0.00	100Yr+45% 15Min Summer	149.416	0.00	0.00
30Yr+45% 15Min Winter	119.517	0.00	0.00	100Yr+45% 15Min Winter	149.416	0.00	0.00
30Yr+45% 30Min Summer	79.682	0.00	0.00	100Yr+45% 30Min Summer	100.453	0.00	0.00
30Yr+45% 30Min Winter	79.682	0.00	0.00	100Yr+45% 30Min Winter	100.453	0.00	0.00
30Yr+45% 60Min Summer	50.792	0.00	0.00	100Yr+45% 60Min Summer	64.683	0.00	0.00
30Yr+45% 60Min Winter	50.792	0.00	0.00	100Yr+45% 60Min Winter	64.683	0.00	0.00
30Yr+45% 120Min Winter	31.117	0.00	0.00	100Yr+45% 120Min Summer	38.860	0.00	0.00
30Yr+45% 120Min Summer	31.117	0.00	0.00	100Yr+45% 120Min Winter	38.860	0.00	0.00
30Yr+45% 180Min Summer	23.060	0.00	0.00	100Yr+45% 180Min Summer	28.509	0.00	0.00
30Yr+45% 180Min Winter	23.060	0.00	0.00	100Yr+45% 180Min Winter	28.509	0.00	0.00
30Yr+45% 240Min Summer	18.509	0.00	0.00	100Yr+45% 240Min Summer	22.915	0.00	0.00
30Yr+45% 240Min Winter	18.509	0.00	0.00	100Yr+45% 240Min Winter	22.915	0.00	0.00
30Yr+45% 360Min Summer	13.435	0.00	0.00	100Yr+45% 360Min Summer	16.633	0.00	0.00
30Yr+45% 360Min Winter	13.435	0.00	0.00	100Yr+45% 360Min Winter	16.633	0.00	0.00
30Yr+45% 480Min Summer	10.657	0.00	0.00	100Yr+45% 480Min Summer	13.199	0.00	0.00
30Yr+45% 480Min Winter	10.657	0.00	0.00	100Yr+45% 480Min Winter	13.199	0.00	0.00
30Yr+45% 600Min Winter	8.878	0.00	0.00	100Yr+45% 600Min Summer	11.017	0.00	0.00
30Yr+45% 600Min Summer	8.878	0.00	0.00	100Yr+45% 600Min Winter	11.017	0.00	0.00
30Yr+45% 720Min Summer	7.631	0.00	0.00	100Yr+45% 720Min Summer	9.486	0.00	0.00
30Yr+45% 720Min Winter	7.631	0.00	0.00	100Yr+45% 720Min Winter	9.486	0.00	0.00
30Yr+45% 960Min Summer	6.007	0.00	0.00	100Yr+45% 960Min Summer	7.471	0.00	0.00
30Yr+45% 960Min Winter	6.007	0.00	0.00	100Yr+45% 960Min Winter	7.471	0.00	0.00
30Yr+45% 1440Min Summer	4.299	0.00	0.00	100Yr+45% 1440Min Winter	5.340	0.00	0.00
30Yr+45% 1440Min Winter	4.299	0.00	0.00	100Yr+45% 1440Min Summer	5.340	0.00	0.00

Simulation Results

Return Period Yrs: 2.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP1 DUMMY	-	0	16.300	0.000	0.000		OK
PP1 OUTFALL	-	0	16.250	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Winter	0	PP1 DUMMY	PP1	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving1	240 min Summer	153	16.367	0.058	0.166		OK

Return Period Yrs: 30.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP1 DUMMY	-	0	16.300	0.000	0.000		OK
PP1 OUTFALL	-	0	16.250	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Summer	0	PP1 DUMMY	PP1	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving1	180 min Summer	122	16.442	0.133	0.303		OK

Return Period Yrs: 100.0

Climate Change %: 0

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP1 DUMMY	-	0	16.300	0.000	0.000		OK
PP1 OUTFALL	-	0	16.250	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Summer	0	PP1 DUMMY	PP1	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving1	120 min Summer	85	16.419	0.110	0.294		OK

Return Period Yrs: 100.0
Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP1 DUMMY	-	0	16.300	0.000	0.000		OK
PP1 OUTFALL	-	0	16.250	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Summer	0	PP1 DUMMY	PP1	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving1	120 min Summer	92	16.481	0.172	0.325		OK

Network Details

Manhole Schedule

Manhole	Catchment Area (ha)	Diameter (m)	Type	CL (m)	IL (m)	Depth To Soffit (m)	Easting (m)	Northing (m)
PP2 DUMMY	0.048	0.180	Type E	17.511	16.700	0.711	494828.734	106254.871
PP2 OUTFALL	0.000	0.180	Type E	17.483	16.650	0.733	494829.739	106256.679

Pipe Schedule

Pipe Number	US Manhole	US IL (m)	DS Manhole	DS IL (m)	Shape	Dimension (m)	Length (m)	Gradient (1:x)	Roughness (mm)	US Depth To Soffit (m)	DS Depth To Soffit (m)
1.003	PP2 DUMMY	16.700	PP2	16.650	Circ	0.1mØ	2.069	41.4	0.600	0.711	0.733

Permeable Paving Schedule

Permeable Paving	Assigned Manhole	Effective Storage Volume (m3)	CL (m)	IL (m)	Storage Infil Rate (m/hr)	Safety Factor	Easting (m)	Northing (m)
Permeable Paving2	PP2 DUMMY	35.097	17.511	16.706	0.07812000	1.50	494834.271	106252.009

Outfall Details

Outfall Manhole PP2 OUTFALL : Free Discharge

Flow Control Details

Simulation Settings

FEH2022 (point): Filename=FEH_Point_Descriptors_495282_106614_v5_0_1.xml

Summer (Cv: 1.00), Winter (Cv: 1.00)

Global Time of Entry: 5.0 mins

Durations (mins): 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440

Return Periods (yrs) + Climate Change: (2, +45%), (30, +45%), (100, +0%), (100, +45%)

Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
2Yr+45% 15Min Winter	47.455	0.00	0.00	100Yr 15Min Summer	103.046	0.00	0.00
2Yr+45% 15Min Summer	47.455	0.00	0.00	100Yr 15Min Winter	103.046	0.00	0.00
2Yr+45% 30Min Winter	31.030	0.00	0.00	100Yr 30Min Summer	69.278	0.00	0.00
2Yr+45% 30Min Summer	31.030	0.00	0.00	100Yr 30Min Winter	69.278	0.00	0.00
2Yr+45% 60Min Winter	19.694	0.00	0.00	100Yr 60Min Summer	44.609	0.00	0.00
2Yr+45% 60Min Summer	19.694	0.00	0.00	100Yr 60Min Winter	44.609	0.00	0.00
2Yr+45% 120Min Summer	13.759	0.00	0.00	100Yr 120Min Summer	26.800	0.00	0.00
2Yr+45% 120Min Winter	13.759	0.00	0.00	100Yr 120Min Winter	26.800	0.00	0.00
2Yr+45% 180Min Summer	10.912	0.00	0.00	100Yr 180Min Summer	19.661	0.00	0.00
2Yr+45% 180Min Winter	10.912	0.00	0.00	100Yr 180Min Winter	19.661	0.00	0.00
2Yr+45% 240Min Summer	8.907	0.00	0.00	100Yr 240Min Summer	15.803	0.00	0.00
2Yr+45% 240Min Winter	8.907	0.00	0.00	100Yr 240Min Winter	15.803	0.00	0.00
2Yr+45% 360Min Summer	6.688	0.00	0.00	100Yr 360Min Summer	11.471	0.00	0.00
2Yr+45% 360Min Winter	6.688	0.00	0.00	100Yr 360Min Winter	11.471	0.00	0.00
2Yr+45% 480Min Summer	5.428	0.00	0.00	100Yr 480Min Summer	9.103	0.00	0.00
2Yr+45% 480Min Winter	5.428	0.00	0.00	100Yr 480Min Winter	9.103	0.00	0.00
2Yr+45% 600Min Summer	4.574	0.00	0.00	100Yr 600Min Summer	7.598	0.00	0.00
2Yr+45% 600Min Winter	4.574	0.00	0.00	100Yr 600Min Winter	7.598	0.00	0.00
2Yr+45% 720Min Winter	3.959	0.00	0.00	100Yr 720Min Summer	6.542	0.00	0.00
2Yr+45% 720Min Summer	3.959	0.00	0.00	100Yr 720Min Winter	6.542	0.00	0.00
2Yr+45% 960Min Summer	3.164	0.00	0.00	100Yr 960Min Summer	5.152	0.00	0.00
2Yr+45% 960Min Winter	3.164	0.00	0.00	100Yr 960Min Winter	5.152	0.00	0.00
2Yr+45% 1440Min Summer	2.322	0.00	0.00	100Yr 1440Min Summer	3.682	0.00	0.00
2Yr+45% 1440Min Winter	2.322	0.00	0.00	100Yr 1440Min Winter	3.682	0.00	0.00
30Yr+45% 15Min Summer	119.517	0.00	0.00	100Yr+45% 15Min Summer	149.416	-6.41	0.00
30Yr+45% 15Min Winter	119.517	0.00	0.00	100Yr+45% 15Min Winter	149.416	0.00	0.00
30Yr+45% 30Min Summer	79.682	0.00	0.00	100Yr+45% 30Min Summer	100.453	0.00	0.00
30Yr+45% 30Min Winter	79.682	0.00	0.00	100Yr+45% 30Min Winter	100.453	0.00	0.00
30Yr+45% 60Min Summer	50.792	0.00	0.00	100Yr+45% 60Min Summer	64.683	0.00	0.00
30Yr+45% 60Min Winter	50.792	0.00	0.00	100Yr+45% 60Min Winter	64.683	0.00	0.00
30Yr+45% 120Min Winter	31.117	0.00	0.00	100Yr+45% 120Min Summer	38.860	0.00	0.00
30Yr+45% 120Min Summer	31.117	0.00	0.00	100Yr+45% 120Min Winter	38.860	0.00	0.00
30Yr+45% 180Min Summer	23.060	0.00	0.00	100Yr+45% 180Min Summer	28.509	0.00	0.00
30Yr+45% 180Min Winter	23.060	0.00	0.00	100Yr+45% 180Min Winter	28.509	0.00	0.00
30Yr+45% 240Min Summer	18.509	0.00	0.00	100Yr+45% 240Min Summer	22.915	0.00	0.00
30Yr+45% 240Min Winter	18.509	0.00	0.00	100Yr+45% 240Min Winter	22.915	0.00	0.00
30Yr+45% 360Min Summer	13.435	0.00	0.00	100Yr+45% 360Min Summer	16.633	0.00	0.00
30Yr+45% 360Min Winter	13.435	0.00	0.00	100Yr+45% 360Min Winter	16.633	0.00	0.00
30Yr+45% 480Min Summer	10.657	0.00	0.00	100Yr+45% 480Min Summer	13.199	0.00	0.00
30Yr+45% 480Min Winter	10.657	0.00	0.00	100Yr+45% 480Min Winter	13.199	0.00	0.00
30Yr+45% 600Min Winter	8.878	0.00	0.00	100Yr+45% 600Min Summer	11.017	0.00	0.00
30Yr+45% 600Min Summer	8.878	0.00	0.00	100Yr+45% 600Min Winter	11.017	0.00	0.00
30Yr+45% 720Min Summer	7.631	0.00	0.00	100Yr+45% 720Min Summer	9.486	0.00	0.00
30Yr+45% 720Min Winter	7.631	0.00	0.00	100Yr+45% 720Min Winter	9.486	0.00	0.00
30Yr+45% 960Min Summer	6.007	0.00	0.00	100Yr+45% 960Min Summer	7.471	0.00	0.00
30Yr+45% 960Min Winter	6.007	0.00	0.00	100Yr+45% 960Min Winter	7.471	0.00	0.00
30Yr+45% 1440Min Summer	4.299	0.00	0.00	100Yr+45% 1440Min Winter	5.340	0.00	0.00
30Yr+45% 1440Min Winter	4.299	0.00	0.00	100Yr+45% 1440Min Summer	5.340	0.00	0.00

Simulation Results

Return Period Yrs: 2.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP2 DUMMY	-	0	16.700	0.000	0.000		OK
PP2 OUTFALL	-	0	16.650	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.003	15 min Winter	0	PP2 DUMMY	PP2	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving2	240 min Summer	166	16.899	0.193	0.915		OK

Return Period Yrs: 30.0
Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP2 DUMMY	-	0	16.700	0.000	0.000		OK
PP2 OUTFALL	-	0	16.650	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.003	15 min Summer	0	PP2 DUMMY	PP2	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving2	240 min Winter	197	17.179	0.473	1.169		OK

Return Period Yrs: 100.0
Climate Change %: 0

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP2 DUMMY	-	0	16.700	0.000	0.000		OK
PP2 OUTFALL	-	0	16.650	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.003	15 min Summer	0	PP2 DUMMY	PP2	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving2	180 min Winter	155	17.097	0.391	1.089		OK

Return Period Yrs: 100.0
Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP2 DUMMY	-	0	16.700	0.000	0.000		OK
PP2 OUTFALL	-	0	16.650	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.003	15 min Summer	0	PP2 DUMMY	PP2	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving2	240 min Winter	205	17.317	0.611	1.279		OK

Network Details

Manhole Schedule

Manhole	Catchment Area (ha)	Diameter (m)	Type	CL (m)	IL (m)	Depth To Soffit (m)	Easting (m)	Northing (m)
PP3 DUMMY	0.096	0.180	Type E	17.363	16.900	0.363	494843.557	106245.558
PP3 OUTFALL	0.000	0.180	Type E	17.402	16.850	0.452	494842.606	106243.898

Pipe Schedule

Pipe Number	US Manhole	US IL (m)	DS Manhole	DS IL (m)	Shape	Dimension (m)	Length (m)	Gradient (1:x)	Roughness (mm)	US Depth To Soffit (m)	DS Depth To Soffit (m)
1.000	PP3 DUMMY	16.900	PP3	16.850	Circ	0.1mØ	1.913	38.3	0.600	0.363	0.452

Permeable Paving Schedule

Permeable Paving	Assigned Manhole	Effective Storage Volume (m3)	CL (m)	IL (m)	Storage Infil Rate (m/hr)	Safety Factor	Easting (m)	Northing (m)
Permeable Paving3	PP3 DUMMY	71.004	17.363	16.558	0.07812000	1.50	494849.117	106246.647

Outfall Details

Outfall Manhole PP3 OUTFALL : Free Discharge

Flow Control Details

Simulation Settings

FEH2022 (point): Filename=FEH_Point_Descriptors_495282_106614_v5_0_1.xml

Summer (Cv: 1.00), Winter (Cv: 1.00)

Global Time of Entry: 5.0 mins

Durations (mins): 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440

Return Periods (yrs) + Climate Change: (2, +45%), (30, +45%), (100, +0%), (100, +45%)

Simulated Rainfall Events

Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %	Storm	Average Intensity (mm/hr)	Runoff Continuity %	Flow Continuity %
2Yr+45% 15Min Winter	47.455	0.00	0.00	100Yr 15Min Summer	103.046	0.00	0.00
2Yr+45% 15Min Summer	47.455	0.00	0.00	100Yr 15Min Winter	103.046	0.00	0.00
2Yr+45% 30Min Winter	31.030	0.00	0.00	100Yr 30Min Summer	69.278	0.00	0.00
2Yr+45% 30Min Summer	31.030	0.00	0.00	100Yr 30Min Winter	69.278	0.00	0.00
2Yr+45% 60Min Winter	19.694	0.00	0.00	100Yr 60Min Summer	44.609	0.00	0.00
2Yr+45% 60Min Summer	19.694	0.00	0.00	100Yr 60Min Winter	44.609	0.00	0.00
2Yr+45% 120Min Summer	13.759	0.00	0.00	100Yr 120Min Summer	26.800	0.00	0.00
2Yr+45% 120Min Winter	13.759	0.00	0.00	100Yr 120Min Winter	26.800	0.00	0.00
2Yr+45% 180Min Summer	10.912	0.00	0.00	100Yr 180Min Summer	19.661	0.00	0.00
2Yr+45% 180Min Winter	10.912	0.00	0.00	100Yr 180Min Winter	19.661	0.00	0.00
2Yr+45% 240Min Summer	8.907	0.00	0.00	100Yr 240Min Summer	15.803	0.00	0.00
2Yr+45% 240Min Winter	8.907	0.00	0.00	100Yr 240Min Winter	15.803	0.00	0.00
2Yr+45% 360Min Summer	6.688	0.00	0.00	100Yr 360Min Summer	11.471	0.00	0.00
2Yr+45% 360Min Winter	6.688	0.00	0.00	100Yr 360Min Winter	11.471	0.00	0.00
2Yr+45% 480Min Summer	5.428	0.00	0.00	100Yr 480Min Summer	9.103	0.00	0.00
2Yr+45% 480Min Winter	5.428	0.00	0.00	100Yr 480Min Winter	9.103	0.00	0.00
2Yr+45% 600Min Summer	4.574	0.00	0.00	100Yr 600Min Summer	7.598	0.00	0.00
2Yr+45% 600Min Winter	4.574	0.00	0.00	100Yr 600Min Winter	7.598	0.00	0.00
2Yr+45% 720Min Winter	3.959	0.00	0.00	100Yr 720Min Summer	6.542	0.00	0.00
2Yr+45% 720Min Summer	3.959	0.00	0.00	100Yr 720Min Winter	6.542	0.00	0.00
2Yr+45% 960Min Summer	3.164	0.00	0.00	100Yr 960Min Summer	5.152	0.00	0.00
2Yr+45% 960Min Winter	3.164	0.00	0.00	100Yr 960Min Winter	5.152	0.00	0.00
2Yr+45% 1440Min Summer	2.322	0.00	0.00	100Yr 1440Min Summer	3.682	0.00	0.00
2Yr+45% 1440Min Winter	2.322	0.00	0.00	100Yr 1440Min Winter	3.682	0.00	0.00
30Yr+45% 15Min Summer	119.517	0.00	0.00	100Yr+45% 15Min Summer	149.416	-6.50	0.00
30Yr+45% 15Min Winter	119.517	0.00	0.00	100Yr+45% 15Min Winter	149.416	0.00	0.00
30Yr+45% 30Min Summer	79.682	0.00	0.00	100Yr+45% 30Min Summer	100.453	0.00	0.00
30Yr+45% 30Min Winter	79.682	0.00	0.00	100Yr+45% 30Min Winter	100.453	0.00	0.00
30Yr+45% 60Min Summer	50.792	0.00	0.00	100Yr+45% 60Min Summer	64.683	0.00	0.00
30Yr+45% 60Min Winter	50.792	0.00	0.00	100Yr+45% 60Min Winter	64.683	0.00	0.00
30Yr+45% 120Min Winter	31.117	0.00	0.00	100Yr+45% 120Min Summer	38.860	0.00	0.00
30Yr+45% 120Min Summer	31.117	0.00	0.00	100Yr+45% 120Min Winter	38.860	0.00	0.00
30Yr+45% 180Min Summer	23.060	0.00	0.00	100Yr+45% 180Min Summer	28.509	0.00	0.00
30Yr+45% 180Min Winter	23.060	0.00	0.00	100Yr+45% 180Min Winter	28.509	0.00	0.00
30Yr+45% 240Min Summer	18.509	0.00	0.00	100Yr+45% 240Min Summer	22.915	0.00	0.00
30Yr+45% 240Min Winter	18.509	0.00	0.00	100Yr+45% 240Min Winter	22.915	0.00	0.00
30Yr+45% 360Min Summer	13.435	0.00	0.00	100Yr+45% 360Min Summer	16.633	0.00	0.00
30Yr+45% 360Min Winter	13.435	0.00	0.00	100Yr+45% 360Min Winter	16.633	0.00	0.00
30Yr+45% 480Min Summer	10.657	0.00	0.00	100Yr+45% 480Min Summer	13.199	0.00	0.00
30Yr+45% 480Min Winter	10.657	0.00	0.00	100Yr+45% 480Min Winter	13.199	0.00	0.00
30Yr+45% 600Min Winter	8.878	0.00	0.00	100Yr+45% 600Min Summer	11.017	0.00	0.00
30Yr+45% 600Min Summer	8.878	0.00	0.00	100Yr+45% 600Min Winter	11.017	0.00	0.00
30Yr+45% 720Min Summer	7.631	0.00	0.00	100Yr+45% 720Min Summer	9.486	0.00	0.00
30Yr+45% 720Min Winter	7.631	0.00	0.00	100Yr+45% 720Min Winter	9.486	0.00	0.00
30Yr+45% 960Min Summer	6.007	0.00	0.00	100Yr+45% 960Min Summer	7.471	0.00	0.00
30Yr+45% 960Min Winter	6.007	0.00	0.00	100Yr+45% 960Min Winter	7.471	0.00	0.00
30Yr+45% 1440Min Summer	4.299	0.00	0.00	100Yr+45% 1440Min Winter	5.340	0.00	0.00
30Yr+45% 1440Min Winter	4.299	0.00	0.00	100Yr+45% 1440Min Summer	5.340	0.00	0.00

Simulation Results

Return Period Yrs: 2.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP3 DUMMY	-	0	16.900	0.000	0.000		OK
PP3 OUTFALL	-	0	16.850	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Winter	0	PP3 DUMMY	PP3	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving3	240 min Summer	165	16.748	0.189	1.883		OK

Return Period Yrs: 30.0

Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP3 DUMMY	-	0	16.900	0.000	0.000		OK
PP3 OUTFALL	-	0	16.850	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Summer	0	PP3 DUMMY	PP3	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving3	180 min Winter	160	17.023	0.465	2.344		OK

Return Period Yrs: 100.0

Climate Change %: 0

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP3 DUMMY	-	0	16.900	0.000	0.000		OK
PP3 OUTFALL	-	0	16.850	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Summer	0	PP3 DUMMY	PP3	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving3	180 min Winter	154	16.943	0.384	2.216		OK

Return Period Yrs: 100.0
Climate Change %: 45

Manholes

Manhole	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
PP3 DUMMY	-	0	16.900	0.000	0.000		OK
PP3 OUTFALL	-	0	16.850	0.000	0.000		Outfall

Conduits

Pipe No.	Critical Storm	Peak (mins)	US Manhole	DS Manhole	Flow Depth (m)	Max Velocity (m/s)	Max Flow (l/s)	Flow / Capacity	Status
1.000	15 min Summer	0	PP3 DUMMY	PP3	0.000	0.000	0.000	0.000	OK

Permeable Paving Storage

Permeable Paving	Critical Storm	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Flood (m3)	Status
Permeable Paving3	240 min Winter	204	17.158	0.599	2.590		OK

BRIGHT PLAN CIVILS

Appendix F