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One Little London Chichester Sussex PO19 1PP	ELM GROVE HAYLING ISLAND BOX CULVERT STORAGE	
Date FEB. 2022 File ELM GROVE BOX CULVERT ST...	Designed By PF Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 100 year Return Period (+40%)

Storm Duration (mins)	Maximum Control (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	3.3	3.3	5.5312	0.2812	63.3	0 K
30 Summer	3.8	3.8	5.6212	0.3712	83.5	0 K
60 Summer	4.2	4.2	5.7087	0.4587	103.2	0 K
120 Summer	4.5	4.5	5.7787	0.5287	119.0	0 K
180 Summer	4.6	4.6	5.8002	0.5502	123.8	0 K
240 Summer	4.7	4.7	5.8052	0.5552	124.9	0 K
360 Summer	4.7	4.7	5.8087	0.5587	125.8	0 K
480 Summer	4.7	4.7	5.8052	0.5552	125.0	0 K
600 Summer	4.6	4.6	5.7972	0.5472	123.2	0 K
720 Summer	4.6	4.6	5.7872	0.5372	120.9	0 K
960 Summer	4.5	4.5	5.7632	0.5132	115.5	0 K
1440 Summer	4.2	4.2	5.7137	0.4637	104.3	0 K
2160 Summer	3.9	3.9	5.6487	0.3987	89.7	0 K
2880 Summer	3.6	3.6	5.5962	0.3462	77.9	0 K
4320 Summer	3.2	3.2	5.5187	0.2687	60.4	0 K
5760 Summer	2.8	2.8	5.4652	0.2152	48.4	0 K
7200 Summer	2.6	2.6	5.4278	0.1777	39.9	0 K
8640 Summer	2.3	2.3	5.3993	0.1493	33.6	0 K
10080 Summer	2.2	2.2	5.3788	0.1288	28.9	0 K
15 Winter	3.5	3.5	5.5657	0.3157	71.0	0 K
30 Winter	4.0	4.0	5.6672	0.4172	93.9	0 K
60 Winter	4.5	4.5	5.7672	0.5172	116.4	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	131.85	22
30 Summer	88.57	36
60 Summer	56.71	64
120 Summer	35.00	122
180 Summer	25.97	180
240 Summer	20.88	208
360 Summer	15.37	270
480 Summer	12.34	338
600 Summer	10.40	408
720 Summer	9.04	476
960 Summer	7.24	612
1440 Summer	5.28	882
2160 Summer	3.85	1276
2880 Summer	3.07	1648
4320 Summer	2.23	2380
5760 Summer	1.77	3112
7200 Summer	1.48	3824
8640 Summer	1.28	4504
10080 Summer	1.14	5248
15 Winter	131.85	22
30 Winter	88.57	36
60 Winter	56.71	64

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Storm Duration (mins)	Maximum Control (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
120 Winter	4.8	4.8	5.8498	0.5998	134.9	0 K
180 Winter	5.0	5.0	5.8778	0.6278	141.2	0 K
240 Winter	5.0	5.0	5.8833	0.6333	142.5	0 K
360 Winter	5.0	5.0	5.8828	0.6328	142.4	0 K
480 Winter	4.9	4.9	5.8753	0.6253	140.7	0 K
600 Winter	4.9	4.9	5.8618	0.6118	137.6	0 K
720 Winter	4.8	4.8	5.8448	0.5948	133.8	0 K
960 Winter	4.7	4.7	5.8077	0.5577	125.5	0 K
1440 Winter	4.3	4.3	5.7342	0.4842	109.0	0 K
2160 Winter	3.9	3.9	5.6427	0.3927	88.4	0 K
2880 Winter	3.5	3.5	5.5727	0.3227	72.6	0 K
4320 Winter	2.9	2.9	5.4772	0.2272	51.2	0 K
5760 Winter	2.5	2.5	5.4188	0.1687	38.0	0 K
7200 Winter	2.2	2.2	5.3808	0.1308	29.5	0 K
8640 Winter	1.9	1.9	5.3558	0.1058	23.7	0 K
10080 Winter	1.7	1.7	5.3378	0.0878	19.7	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
120 Winter	35.00	120
180 Winter	25.97	176
240 Winter	20.88	228
360 Winter	15.37	286
480 Winter	12.34	362
600 Winter	10.40	438
720 Winter	9.04	514
960 Winter	7.24	660
1440 Winter	5.28	942
2160 Winter	3.85	1344
2880 Winter	3.07	1732
4320 Winter	2.23	2468
5760 Winter	1.77	3176
7200 Winter	1.48	3888
8640 Winter	1.28	4584
10080 Winter	1.14	5320

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Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	10080
M5-60 (mm)	20.000	Summer Storms	Yes
Ratio-R	0.350	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.266

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.130	4	8	0.136

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Tank/Pond Details

Invert Level (m)		5.250	Ground Level (m)		6.400		
Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.00	225.0	0.40	225.0	0.80	225.0	1.20	225.0
0.20	225.0	0.60	225.0	1.00	225.0	1.40	225.0

Orifice Outflow Control

Diameter (m)	0.055	Invert Level (m)	5.235
Discharge Coefficient	0.600		