

Summary of Results for 100 year Return Period (+45%)


Storm Duration (mins)	Maximum Control (1/s)	Maximum Outflow (1/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m <sup>3</sup> )	Status
15 Summer	2.3	2.3	45.4478	0.6478	4.4	O K
30 Summer	2.3	2.3	45.6083	0.8083	5.4	O K
60 Summer	2.3	2.3	45.5963	0.7963	5.3	O K
120 Summer	2.3	2.3	45.5178	0.7178	4.9	O K
180 Summer	2.3	2.3	45.4778	0.6778	4.6	O K
240 Summer	2.3	2.3	45.3023	0.5022	3.5	O K
360 Summer	2.3	2.3	45.0773	0.2772	1.9	O K
480 Summer	2.2	2.2	44.9578	0.1577	1.1	O K
600 Summer	2.0	2.0	44.8938	0.0938	0.7	O K
720 Summer	1.9	1.9	44.8548	0.0548	0.4	O K
960 Summer	1.6	1.6	44.8328	0.0327	0.2	O K
1440 Summer	1.1	1.1	44.8103	0.0103	0.1	O K
2160 Summer	0.8	0.8	44.8000	0.0000	0.0	O K
2880 Summer	0.7	0.7	44.8000	0.0000	0.0	O K
4320 Summer	0.5	0.5	44.8000	0.0000	0.0	O K
5760 Summer	0.4	0.4	44.8000	0.0000	0.0	O K
7200 Summer	0.3	0.3	44.8000	0.0000	0.0	O K
8640 Summer	0.3	0.3	44.8000	0.0000	0.0	O K
10080 Summer	0.2	0.2	44.8000	0.0000	0.0	O K
15 Winter	2.3	2.3	45.6463	0.8463	5.6	O K
30 Winter	2.3	2.3	45.8328	1.0328	6.7	FLOOD RISK
60 Winter	2.3	2.3	45.8118	1.0118	6.6	FLOOD RISK
120 Winter	2.3	2.3	45.7243	0.9243	6.1	O K
180 Winter	2.3	2.3	45.4823	0.6823	4.6	O K
240 Winter	2.3	2.3	45.2133	0.4132	2.9	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	98.68	16
30 Summer	64.79	29
60 Summer	40.51	46
120 Summer	24.46	80
180 Summer	17.96	116
240 Summer	14.34	146
360 Summer	10.42	202
480 Summer	8.30	258
600 Summer	6.96	316
720 Summer	6.02	370
960 Summer	4.78	490
1440 Summer	3.46	732
2160 Summer	2.49	0
2880 Summer	1.98	0
4320 Summer	1.42	0
5760 Summer	1.12	0
7200 Summer	0.94	0
8640 Summer	0.81	0
10080 Summer	0.71	0
15 Winter	98.68	16
30 Winter	64.79	29
60 Winter	40.51	48
120 Winter	24.46	88
180 Winter	17.96	124
240 Winter	14.34	152

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Storm Duration (mins)	Maximum Control (1/s)	Maximum Outflow (1/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m <sup>3</sup> )	Status
360 Winter	2.2	2.2	44.9568	0.1567	1.1	O K
480 Winter	1.9	1.9	44.8588	0.0588	0.4	O K
600 Winter	1.7	1.7	44.8373	0.0372	0.3	O K
720 Winter	1.4	1.4	44.8258	0.0257	0.2	O K
960 Winter	1.1	1.1	44.8103	0.0103	0.1	O K
1440 Winter	0.8	0.8	44.8000	0.0000	0.0	O K
2160 Winter	0.6	0.6	44.8000	0.0000	0.0	O K
2880 Winter	0.5	0.5	44.8000	0.0000	0.0	O K
4320 Winter	0.3	0.3	44.8000	0.0000	0.0	O K
5760 Winter	0.3	0.3	44.8000	0.0000	0.0	O K
7200 Winter	0.2	0.2	44.8000	0.0000	0.0	O K
8640 Winter	0.2	0.2	44.8000	0.0000	0.0	O K
10080 Winter	0.2	0.2	44.8000	0.0000	0.0	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
360 Winter	10.42	204
480 Winter	8.30	254
600 Winter	6.96	306
720 Winter	6.02	370
960 Winter	4.78	486
1440 Winter	3.46	0
2160 Winter	2.49	0
2880 Winter	1.98	0
4320 Winter	1.42	0
5760 Winter	1.12	0
7200 Winter	0.94	0
8640 Winter	0.81	0
10080 Winter	0.71	0

T J Booth Associates		Page 3
104 Yorkshire St Rochdale Lancashire OL16 1JY	PLOTS 3 & 4 attenuation myra devs 28 low cudworth	
Date jun 2023 File CALC-T~1.SRC	Designed By ds Checked By	
Micro Drainage	Source Control W.10.4	

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	0.400	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+45
Cv (Winter)	0.840		

Pipe Network

Volume in Pipe Network (m <sup>3</sup> )	1	Dia of Outfall Pipe (m)	0.100
Slope of Outfall Pipe (1:x)	100.0	Roughness of Outfall Pipe	0.600

Time / Area Diagram

Total Area (ha) = 0.028

<b>Time</b>	<b>(mins)</b>	<b>Area</b>
<b>from:</b>	<b>to:</b>	<b>(ha)</b>
0	4	0.028

Tank/Pond Details

Invert Level (m) 44.800 Ground Level (m) 46.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.00	7.0	0.50	7.0	1.00	6.0	1.50	0.4	2.00	0.4	2.50	0.4
0.10	7.0	0.60	6.0	1.10	6.0	1.60	0.4	2.10	0.4		
0.20	7.0	0.70	6.0	1.20	0.4	1.70	0.4	2.20	0.4		
0.30	7.0	0.80	6.0	1.30	0.4	1.80	0.4	2.30	0.4		
0.40	7.0	0.90	6.0	1.40	0.4	1.90	0.4	2.40	0.4		

Depth / Flow Outflow Control

Invert Level of Control 44.750

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.10	1.9	0.80	2.0	2.00	3.2	4.00	4.5	7.00	6.0
0.20	2.2	1.00	2.3	2.20	3.4	4.50	4.8	7.50	6.2
0.30	2.3	1.20	2.4	2.40	3.5	5.00	5.1	8.00	6.4
0.40	2.3	1.40	2.6	2.60	3.7	5.50	5.3	8.50	6.6
0.50	2.2	1.60	2.9	3.00	3.9	6.00	5.6	9.00	6.8
0.60	2.0	1.80	3.0	3.50	4.3	6.50	5.8	9.50	7.0