

T J Booth Associates		Page 1
104 Yorkshire St Rochdale Lancashire OL16 1JY	SUDS basin & control B&L Homes Schofield St Heywood	
Date may 2026 - revision 1 File CALC-T~1.SRC	Designed By DS Checked By	
Micro Drainage	Source Control W.10.4	

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

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	5.0	5.0	125.1092	0.4592	15.9	O K
30 Summer	5.0	5.0	125.1517	0.5017	18.2	FLOOD RISK
60 Summer	5.0	5.0	125.2113	0.5612	21.6	FLOOD RISK
120 Summer	5.0	5.0	125.2117	0.5617	21.7	FLOOD RISK
180 Summer	5.0	5.0	125.1878	0.5377	20.3	FLOOD RISK
240 Summer	5.0	5.0	125.1572	0.5072	18.5	FLOOD RISK
360 Summer	5.0	5.0	125.0892	0.4392	14.8	O K
480 Summer	5.0	5.0	125.0122	0.3622	11.1	O K
600 Summer	5.0	5.0	124.9202	0.2702	7.2	O K
720 Summer	5.0	5.0	124.8453	0.1952	4.4	O K
960 Summer	5.0	5.0	124.7353	0.0853	1.0	O K
1440 Summer	4.3	4.3	124.6500	0.0000	0.0	O K
2160 Summer	3.1	3.1	124.6500	0.0000	0.0	O K
2880 Summer	2.6	2.6	124.6500	0.0000	0.0	O K
4320 Summer	1.9	1.9	124.6500	0.0000	0.0	O K
5760 Summer	1.5	1.5	124.6500	0.0000	0.0	O K
7200 Summer	1.3	1.3	124.6500	0.0000	0.0	O K
8640 Summer	1.1	1.1	124.6500	0.0000	0.0	O K
10080 Summer	1.0	1.0	124.6500	0.0000	0.0	O K
15 Winter	5.0	5.0	125.1547	0.5047	18.4	FLOOD RISK
30 Winter	5.0	5.0	125.2378	0.5877	23.3	FLOOD RISK
60 Winter	5.0	5.0	125.2768	0.6268	25.8	FLOOD RISK
120 Winter	5.0	5.0	125.2698	0.6198	25.3	FLOOD RISK
180 Winter	5.0	5.0	125.2313	0.5812	22.9	FLOOD RISK
240 Winter	5.0	5.0	125.1827	0.5327	20.0	FLOOD RISK
360 Winter	5.0	5.0	125.0723	0.4222	14.0	O K
480 Winter	5.0	5.0	124.9222	0.2722	7.2	O K
600 Winter	5.0	5.0	124.7873	0.1373	2.5	O K
720 Winter	5.0	5.0	124.6833	0.0332	0.2	O K
960 Winter	4.2	4.2	124.6500	0.0000	0.0	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	89.23	18
30 Summer	61.54	31
60 Summer	40.51	52
120 Summer	25.63	86
180 Summer	19.23	120
240 Summer	15.63	156
360 Summer	11.65	222
480 Summer	9.44	288
600 Summer	8.01	342
720 Summer	7.00	398
960 Summer	5.65	502
1440 Summer	4.17	0
2160 Summer	3.07	0
2880 Summer	2.46	0
4320 Summer	1.81	0
5760 Summer	1.45	0
7200 Summer	1.23	0
8640 Summer	1.07	0
10080 Summer	0.95	0
15 Winter	89.23	18
30 Winter	61.54	31
60 Winter	40.51	58
120 Winter	25.63	92
180 Winter	19.23	132
240 Winter	15.63	168
360 Winter	11.65	240
480 Winter	9.44	296
600 Winter	8.01	342
720 Winter	7.00	376
960 Winter	5.65	0

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

Storm Duration (mins)	Maximum Control (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
1440 Winter	3.0	3.0	124.6500	0.0000	0.0	O K
2160 Winter	2.3	2.3	124.6500	0.0000	0.0	O K
2880 Winter	1.9	1.9	124.6500	0.0000	0.0	O K
4320 Winter	1.3	1.3	124.6500	0.0000	0.0	O K
5760 Winter	1.1	1.1	124.6500	0.0000	0.0	O K
7200 Winter	0.9	0.9	124.6500	0.0000	0.0	O K
8640 Winter	0.8	0.8	124.6500	0.0000	0.0	O K
10080 Winter	0.7	0.7	124.6500	0.0000	0.0	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
1440 Winter	4.17	0
2160 Winter	3.07	0
2880 Winter	2.46	0
4320 Winter	1.81	0
5760 Winter	1.45	0
7200 Winter	1.23	0
8640 Winter	1.07	0
10080 Winter	0.95	0

T J Booth Associates		Page 3
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Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	100	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+45
Ratio-R	0.300	Longest Storm (mins)	10080		

Pipe Network

Volume in Pipe Network (m³)	2	Dia of Outfall Pipe (m)	0.200
Slope of Outfall Pipe (1:x)	150.0	Roughness of Outfall Pipe	0.060

Time / Area Diagram

Total Area (ha) = 0.085

Time	(mins)	Area
from:	to:	(ha)
0	4	0.085

Tank/Pond Details

Invert Level (m) 124.650 Ground Level (m) 125.350

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.00	0.0	0.50	55.8	1.00	500.0	1.50	500.0	2.00	500.0	2.50	500.0
0.10	28.3	0.60	63.2	1.10	500.0	1.60	500.0	2.10	500.0		
0.20	34.8	0.70	71.0	1.20	500.0	1.70	500.0	2.20	500.0		
0.30	41.5	0.80	500.0	1.30	500.0	1.80	500.0	2.30	500.0		
0.40	48.5	0.90	500.0	1.40	500.0	1.90	500.0	2.40	500.0		

Depth / Flow Outflow Control

Invert Level of Control 124.410

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)	Depth (m)	Flow (l/s)
0.10	3.5	0.60	4.2	1.60	5.9	2.60	7.6	5.00	10.5	7.50	12.9
0.20	4.9	0.80	4.6	1.80	6.3	3.00	8.1	5.50	11.0	8.00	13.3
0.30	5.0	1.00	5.1	2.00	6.6	3.50	8.8	6.00	11.5	8.50	13.7
0.40	4.9	1.20	5.1	2.20	7.0	4.00	9.4	6.50	12.0	9.00	14.1
0.50	4.7	1.40	5.7	2.40	7.3	4.50	10.0	7.00	12.4	9.50	14.5