

Escher Silverman		Page 1
Lone Barn Studios Stanbridge Lane Romsey SO51 0HE	Redlands Lane Westbourne Attenuation 100yrs+40%	
Date January 2016 File Attenuation 100yrs+40%.SRC	Designed By KN 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	1.7	1.7	21.4558	0.3557	10.7	O K
30 Summer	1.8	1.8	21.5518	0.4517	13.6	O K
60 Summer	1.9	1.9	21.6168	0.5167	15.5	O K
120 Summer	1.9	1.9	21.6333	0.5332	16.0	O K
180 Summer	1.9	1.9	21.6203	0.5202	15.6	O K
240 Summer	1.8	1.8	21.5978	0.4977	14.9	O K
360 Summer	1.8	1.8	21.5513	0.4512	13.5	O K
480 Summer	1.7	1.7	21.5058	0.4057	12.2	O K
600 Summer	1.7	1.7	21.4618	0.3617	10.8	O K
720 Summer	1.7	1.7	21.4188	0.3187	9.6	O K
960 Summer	1.7	1.7	21.3378	0.2377	7.1	O K
1440 Summer	1.6	1.6	21.2308	0.1308	3.9	O K
15 Winter	1.7	1.7	21.5023	0.4022	12.1	O K
30 Winter	1.9	1.9	21.6143	0.5142	15.4	O K
60 Winter	2.0	2.0	21.6943	0.5943	17.8	O K
120 Winter	2.0	2.0	21.7133	0.6133	18.4	O K
180 Winter	2.0	2.0	21.6943	0.5943	17.8	O K
240 Winter	1.9	1.9	21.6603	0.5602	16.8	O K
360 Winter	1.8	1.8	21.5897	0.4897	14.7	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	128.11	22
30 Summer	86.13	36
60 Summer	55.25	64
120 Summer	34.19	96
180 Summer	25.43	130
240 Summer	20.45	164
360 Summer	15.05	234
480 Summer	12.10	302
600 Summer	10.20	368
720 Summer	8.87	432
960 Summer	7.10	554
1440 Summer	5.19	772
15 Winter	128.11	22
30 Winter	86.13	35
60 Winter	55.25	64
120 Winter	34.19	100
180 Winter	25.43	140
240 Winter	20.45	178
360 Winter	15.05	252

Escher Silverman		Page 2
Lone Barn Studios Stanbridge Lane Romsey SO51 0HE	Redlands Lane Westbourne Attenuation 100yrs+40%	
Date January 2016 File Attenuation 100yrs+40%.SRC	Designed By KN 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
480 Winter	1.7	1.7	21.5208	0.4207	12.6	0 K
600 Winter	1.7	1.7	21.4528	0.3527	10.6	0 K
720 Winter	1.7	1.7	21.3868	0.2867	8.6	0 K
960 Winter	1.7	1.7	21.2693	0.1692	5.1	0 K
1440 Winter	1.5	1.5	21.1748	0.0748	2.2	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
480 Winter	12.10	324
600 Winter	10.20	394
720 Winter	8.87	460
960 Winter	7.10	564
1440 Winter	5.19	754

Escher Silverman		Page 3
Lone Barn Studios Stanbridge Lane Romsey SO51 0HE	Redlands Lane Westbourne Attenuation 100yrs+40%	
Date January 2016 File Attenuation 100yrs+40%.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

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)	19.500	Shortest Storm (mins)	15	Climate Change %	+40
Ratio-R	0.349	Longest Storm (mins)	1440		

Time / Area Diagram

Total Area (ha) = 0.050

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.050

Escher Silverman		Page 4
Lone Barn Studios Stanbridge Lane Romsey SO51 0HE	Redlands Lane Westbourne Attenuation 100yrs+40%	
Date January 2016 File Attenuation 100yrs+40%.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

Tank/Pond Details

Invert Level (m) 21.100 Ground Level (m) 22.750

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	30.0	0.50	30.0	1.00	30.0	1.50	30.0	2.00	30.0	2.50	30.0
0.10	30.0	0.60	30.0	1.10	30.0	1.60	30.0	2.10	30.0		
0.20	30.0	0.70	30.0	1.20	30.0	1.70	30.0	2.20	30.0		
0.30	30.0	0.80	30.0	1.30	30.0	1.80	30.0	2.30	30.0		
0.40	30.0	0.90	30.0	1.40	30.0	1.90	30.0	2.40	30.0		

Hydro-Brake Outflow Control

Design Head (m) 0.650 Hydro-Brake Type MD6 Invert Level (m) 21.080
Design Flow (l/s) 2.0 Diameter (mm) 66

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	1.6	0.60	2.0	1.60	3.2	2.60	4.1	5.00	5.6	7.50	6.9
0.20	1.7	0.80	2.3	1.80	3.4	3.00	4.4	5.50	5.9	8.00	7.1
0.30	1.6	1.00	2.5	2.00	3.6	3.50	4.7	6.00	6.2	8.50	7.3
0.40	1.7	1.20	2.8	2.20	3.7	4.00	5.0	6.50	6.4	9.00	7.6
0.50	1.8	1.40	3.0	2.40	3.9	4.50	5.3	7.00	6.7	9.50	7.8