

Orchard Business Park – Phase 2 Soakaway Calculations

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Unit 5B Tanners Crt Tanners La. E. Wellow Romsey SO51 6DP	Orchard Business Pk Ph2 North End Road Yapton Soakaway Sol&So2
Date January 2020	Designed By KN
File SOI 10years.SRC	Checked By
Micro Drainage	Source Control W.11.2



Summary of Results for 10 year Return Period

Half Drain Time : 1438 minutes

Storm Duration (mins)	Maximum Filtration (1/s)	Maximum Outflow (1/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.0	0.0	5.4298	0.1298	0.9	O K
30 Summer	0.0	0.0	5.4708	0.1707	1.2	O K
60 Summer	0.0	0.0	5.5152	0.2152	1.5	O K
120 Summer	0.0	0.0	5.5627	0.2627	1.9	O K
180 Summer	0.0	0.0	5.5912	0.2912	2.1	O K
240 Summer	0.0	0.0	5.6112	0.3112	2.2	O K
360 Summer	0.0	0.0	5.6382	0.3382	2.4	O K
480 Summer	0.0	0.0	5.6557	0.3557	2.5	O K
600 Summer	0.0	0.0	5.6672	0.3672	2.6	O K
720 Summer	0.0	0.0	5.6752	0.3752	2.6	O K
960 Summer	0.0	0.0	5.6842	0.3842	2.7	O K
1440 Summer	0.0	0.0	5.6962	0.3962	2.8	O K
2160 Summer	0.0	0.0	5.7047	0.4047	2.9	O K
2880 Summer	0.0	0.0	5.7067	0.4067	2.9	O K
4320 Summer	0.0	0.0	5.7012	0.4012	2.8	O K
5760 Summer	0.0	0.0	5.6897	0.3897	2.7	O K
7200 Summer	0.0	0.0	5.6767	0.3767	2.7	O K
8640 Summer	0.0	0.0	5.6637	0.3637	2.6	O K
10080 Summer	0.0	0.0	5.6512	0.3512	2.5	O K
15 Winter	0.0	0.0	5.4453	0.1452	1.0	O K
30 Winter	0.0	0.0	5.4913	0.1912	1.3	O K
60 Winter	0.0	0.0	5.5412	0.2412	1.7	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.44	23
30 Summer	35.92	38
60 Summer	22.79	68
120 Summer	14.11	128
180 Summer	10.57	186
240 Summer	8.59	246
360 Summer	6.40	366
480 Summer	5.19	486
600 Summer	4.41	604
720 Summer	3.85	724
960 Summer	3.12	882
1440 Summer	2.31	1114
2160 Summer	1.72	1496
2880 Summer	1.39	1908
4320 Summer	1.03	2728
5760 Summer	0.83	3520
7200 Summer	0.70	4328
8640 Summer	0.61	5104
10080 Summer	0.55	5856
15 Winter	54.44	23
30 Winter	35.92	38
60 Winter	22.79	68

Unit 5B Tanners Crt
Tanners La. E. Wellow
Romsey SO51 6DP

Orchard Business Pk Ph2
North End Road Yapton
Soakaway Sol&So2

Date January 2020
File SO1 10years.SRC
Micro Drainage

Designed By KN
Checked By
Source Control W.11.2



Summary of Results for 10 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
120 Winter	0.0	0.0	5.5947	0.2947	2.1	O K
180 Winter	0.0	0.0	5.6267	0.3267	2.3	O K
240 Winter	0.0	0.0	5.6492	0.3492	2.5	O K
360 Winter	0.0	0.0	5.6797	0.3797	2.7	O K
480 Winter	0.0	0.0	5.6997	0.3997	2.8	O K
600 Winter	0.0	0.0	5.7132	0.4132	2.9	O K
720 Winter	0.0	0.0	5.7227	0.4227	3.0	O K
960 Winter	0.0	0.0	5.7342	0.4342	3.1	O K
1440 Winter	0.0	0.0	5.7442	0.4442	3.1	O K
2160 Winter	0.0	0.0	5.7497	0.4497	3.2	O K
2880 Winter	0.0	0.0	5.7467	0.4467	3.1	O K
4320 Winter	0.0	0.0	5.7297	0.4297	3.0	O K
5760 Winter	0.0	0.0	5.7092	0.4092	2.9	O K
7200 Winter	0.0	0.0	5.6882	0.3882	2.7	O K
8640 Winter	0.0	0.0	5.6682	0.3682	2.6	O K
10080 Winter	0.0	0.0	5.6502	0.3502	2.5	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
120 Winter	14.11	126
180 Winter	10.57	184
240 Winter	8.59	244
360 Winter	6.40	360
480 Winter	5.19	474
600 Winter	4.41	588
720 Winter	3.85	698
960 Winter	3.12	910
1440 Winter	2.31	1142
2160 Winter	1.72	1604
2880 Winter	1.39	2052
4320 Winter	1.03	2940
5760 Winter	0.83	3752
7200 Winter	0.70	4608
8640 Winter	0.61	5440
10080 Winter	0.55	6248

Unit 5B Tanners Crt
Tanners La, E. Wellow
Romsey SO51 6DP

Orchard Business Pk Ph2
North End Road Yapton
Soakaway Sol&So2

Date January 2020
File SO1 10years.SRC

Designed By KN
Checked By
Source Control W.11.2

Micro Drainage.

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	10	Longest Storm (mins)	10080
M5-60 (mm)	19.000	Summer Storms	Yes
Ratio-R	0.350	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.009

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.009

Unit 5B Tanners Crt
Tanners La, E. Wellow
Romsey SO51 6DP

Orchard Business Pk Ph2
North End Road Yapton
Soakaway Sol&So2

Date January 2020
File SO1 10years.SRC
Micro Drainage

Designed By KN
Checked By
Source Control W.J1.2



Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	44.0
Infil Coef - Sides (m/hr)	0.006696	Invert Level (m)	5.300
Safety Factor	3.0	Cover Level (m)	6.400
Porosity	0.40	Slope (1:x)	0.0
Width (m)	0.4		

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Unit 5B Tanners Crt Tanners La, E. Wellow Romsey SO51 6DP	Orchard Business Pk Ph2 North End Road Yapton Soakaway Sol&So2
Date January 2020	Designed By KN
File SO1 100years+40%.SRC	Checked By
Micro Drainage	Source Control W.11.2



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

Half Drain Time : 1425 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.0	0.0	5.4972	0.2972	2.1	O K
30 Summer	0.0	0.0	5.5987	0.3987	2.8	O K
60 Summer	0.0	0.0	5.7077	0.5077	3.6	O K
120 Summer	0.0	0.0	5.8208	0.6208	4.4	O K
180 Summer	0.0	0.0	5.8843	0.6843	4.8	O K
240 Summer	0.0	0.0	5.9248	0.7248	5.1	O K
360 Summer	0.0	0.0	5.9778	0.7778	5.5	O K
480 Summer	0.0	0.0	6.0103	0.8103	5.7	O K
600 Summer	0.0	0.0	6.0308	0.8308	5.9	O K
720 Summer	0.0	0.0	6.0438	0.8438	5.9	O K
960 Summer	0.0	0.0	6.0553	0.8553	6.0	O K
1440 Summer	0.0	0.0	6.0683	0.8683	6.1	O K
2160 Summer	0.0	0.0	6.0723	0.8723	6.1	O K
2880 Summer	0.0	0.0	6.0653	0.8653	6.1	O K
4320 Summer	0.0	0.0	6.0368	0.8368	5.9	O K
5760 Summer	0.0	0.0	6.0013	0.8013	5.6	O K
7200 Summer	0.0	0.0	5.9658	0.7658	5.4	O K
8640 Summer	0.0	0.0	5.9323	0.7323	5.2	O K
10080 Summer	0.0	0.0	5.9013	0.7013	4.9	O K
15 Winter	0.0	0.0	5.5332	0.3332	2.3	O K
30 Winter	0.0	0.0	5.6462	0.4462	3.1	O K
60 Winter	0.0	0.0	5.7687	0.5687	4.0	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	124.63	23
30 Summer	83.79	38
60 Summer	53.78	68
120 Summer	33.34	128
180 Summer	24.83	186
240 Summer	20.01	246
360 Summer	14.71	366
480 Summer	11.82	486
600 Summer	9.97	604
720 Summer	8.67	724
960 Summer	6.94	882
1440 Summer	5.07	1114
2160 Summer	3.70	1496
2880 Summer	2.95	1908
4320 Summer	2.14	2728
5760 Summer	1.70	3520
7200 Summer	1.43	4328
8640 Summer	1.24	5104
10080 Summer	1.09	5856
15 Winter	124.63	23
30 Winter	83.79	38
60 Winter	53.78	68

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Unit 5B Tanners Crt Tanners La, E. Wellow Romsey SO51 6DP	Orchard Business Pk Ph2 North End Road Yapton Soakaway Sol&So2
Date January 2020	Designed By KN
File SO1 100years+40%.SRC	Checked By
Micro Drainage	Source Control W.11.2



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

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
120 Winter	0.0	0.0	5.8958	0.6958	4.9	O K
180 Winter	0.0	0.0	5.9673	0.7673	5.4	O K
240 Winter	0.0	0.0	6.0128	0.8128	5.7	O K
360 Winter	0.0	0.0	6.0728	0.8728	6.1	O K
480 Winter	0.1	0.1	6.1103	0.9103	6.4	O K
600 Winter	0.1	0.1	6.1348	0.9348	6.6	O K
720 Winter	0.1	0.1	6.1508	0.9508	6.7	O K
960 Winter	0.1	0.1	6.1663	0.9663	6.8	O K
1440 Winter	0.1	0.1	6.1728	0.9728	6.8	O K
2160 Winter	0.1	0.1	6.1688	0.9688	6.8	O K
2880 Winter	0.1	0.1	6.1498	0.9498	6.7	O K
4320 Winter	0.0	0.0	6.0968	0.8968	6.3	O K
5760 Winter	0.0	0.0	6.0408	0.8408	5.9	O K
7200 Winter	0.0	0.0	5.9883	0.7883	5.6	O K
8640 Winter	0.0	0.0	5.9418	0.7418	5.2	O K
10080 Winter	0.0	0.0	5.8998	0.6998	4.9	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
120 Winter	33.34	126
180 Winter	24.83	184
240 Winter	20.01	244
360 Winter	14.71	360
480 Winter	11.82	474
600 Winter	9.97	588
720 Winter	8.67	698
960 Winter	6.94	910
1440 Winter	5.07	1142
2160 Winter	3.70	1604
2880 Winter	2.95	2052
4320 Winter	2.14	2940
5760 Winter	1.70	3752
7200 Winter	1.43	4608
8640 Winter	1.24	5440
10080 Winter	1.09	6248

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Unit 5B Tamers Crt Tamers La, E. Wellow Romsey SO51 6DP	Orchard Business Pk Ph2 North End Road Yapton Soakaway Sol&So2	
Date January 2020	Designed By KN	
File SO1 100years+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	10080
M5-60 (mm)	19.000	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) = 0.009

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.009

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Unit 5B Tanners Crt	Orchard Business Pk Ph2	
Tanners La, E. Wellow	North End Road Yapton	
Romsey SO51 6DP	Soakaway So1&So2	
Date January 2020	Designed By KN	
File SO1 100years+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	44.0
Infil Coef - Sides (m/hr)	0.006696	Invert Level (m)	5.200
Safety Factor	3.0	Cover Level (m)	6.400
Porosity	0.40	Slope (1:x)	0.0
Width (m)	0.4		

Unit 5B Tanners Crt
Tanners La. E. Wellow
Romsey SO51 6DP

Orchard Business Pk Ph2
North End Road Yapton
Soakaway So3

Date January 2020
File SO3 10years.SRC

Designed By KN
Checked By

Micro Drainage

Source Control W.11.2



Summary of Results for 10 year Return Period

Half Drain Time : 1328 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.0	0.0	5.4588	0.1587	1.0	O K
30 Summer	0.0	0.0	5.5087	0.2087	1.3	O K
60 Summer	0.0	0.0	5.5627	0.2627	1.7	O K
120 Summer	0.0	0.0	5.6202	0.3202	2.1	O K
180 Summer	0.0	0.0	5.6547	0.3547	2.3	O K
240 Summer	0.0	0.0	5.6787	0.3787	2.4	O K
360 Summer	0.0	0.0	5.7107	0.4107	2.6	O K
480 Summer	0.0	0.0	5.7307	0.4307	2.8	O K
600 Summer	0.0	0.0	5.7437	0.4437	2.8	O K
720 Summer	0.0	0.0	5.7522	0.4522	2.9	O K
960 Summer	0.0	0.0	5.7627	0.4627	3.0	O K
1440 Summer	0.0	0.0	5.7767	0.4767	3.1	O K
2160 Summer	0.0	0.0	5.7857	0.4857	3.1	O K
2880 Summer	0.0	0.0	5.7867	0.4867	3.1	O K
4320 Summer	0.0	0.0	5.7772	0.4772	3.1	O K
5760 Summer	0.0	0.0	5.7617	0.4617	3.0	O K
7200 Summer	0.0	0.0	5.7447	0.4447	2.8	O K
8640 Summer	0.0	0.0	5.7277	0.4277	2.7	O K
10080 Summer	0.0	0.0	5.7117	0.4117	2.6	O K
15 Winter	0.0	0.0	5.4778	0.1777	1.1	O K
30 Winter	0.0	0.0	5.5337	0.2337	1.5	O K
60 Winter	0.0	0.0	5.5942	0.2942	1.9	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.44	23
30 Summer	35.92	38
60 Summer	22.79	68
120 Summer	14.11	128
180 Summer	10.57	186
240 Summer	8.59	246
360 Summer	6.40	366
480 Summer	5.19	486
600 Summer	4.41	604
720 Summer	3.85	724
960 Summer	3.12	840
1440 Summer	2.31	1084
2160 Summer	1.72	1476
2880 Summer	1.39	1880
4320 Summer	1.03	2724
5760 Summer	0.83	3520
7200 Summer	0.70	4320
8640 Summer	0.61	5096
10080 Summer	0.55	5856
15 Winter	54.44	23
30 Winter	35.92	38
60 Winter	22.79	68

Unit 5B Tanners Crt
Tanners La, E. Wellow
Romsey SO51 6DP

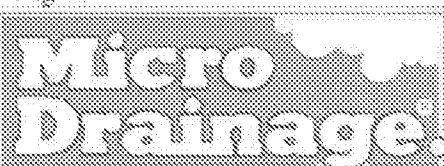
Orchard Business Pk Ph2
North End Road Yapton
Soakaway So3

Date January 2020
File SO3 10years SRC

Designed By KN
Checked By

Micro Drainage

Source Control WJ12



Summary of Results for 10 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
120 Winter	0.0	0.0	5.6592	0.3592	2.3	O K
180 Winter	0.0	0.0	5.6977	0.3977	2.5	O K
240 Winter	0.0	0.0	5.7247	0.4247	2.7	O K
360 Winter	0.0	0.0	5.7607	0.4607	2.9	O K
480 Winter	0.0	0.0	5.7842	0.4842	3.1	O K
600 Winter	0.0	0.0	5.7997	0.4997	3.2	O K
720 Winter	0.0	0.0	5.8102	0.5102	3.3	O K
960 Winter	0.0	0.0	5.8223	0.5223	3.3	O K
1440 Winter	0.0	0.0	5.8337	0.5337	3.4	O K
2160 Winter	0.0	0.0	5.8382	0.5382	3.4	O K
2880 Winter	0.0	0.0	5.8322	0.5322	3.4	O K
4320 Winter	0.0	0.0	5.8087	0.5087	3.3	O K
5760 Winter	0.0	0.0	5.7812	0.4812	3.1	O K
7200 Winter	0.0	0.0	5.7547	0.4547	2.9	O K
8640 Winter	0.0	0.0	5.7302	0.4302	2.8	O K
10080 Winter	0.0	0.0	5.7072	0.4072	2.6	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
120 Winter	14.11	126
180 Winter	10.57	184
240 Winter	8.59	242
360 Winter	6.40	358
480 Winter	5.19	474
600 Winter	4.41	586
720 Winter	3.85	696
960 Winter	3.12	906
1440 Winter	2.31	1118
2160 Winter	1.72	1584
2880 Winter	1.39	2024
4320 Winter	1.03	2900
5760 Winter	0.83	3744
7200 Winter	0.70	4544
8640 Winter	0.61	5360
10080 Winter	0.55	6152

Unit 5B Tanners Crt
Tanners La, E. Wellow
Romsey SO51 6DP

Orchard Business Pk Ph2
North End Road Yapton
Soakaway So3

Date January 2020

Designed By KN

File SO3 10years.SRC

Checked By

Micro Drainage

Source Control W.11.2



Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	10	Longest Storm (mins)	10080
M5-60 (mm)	19.000	Summer Storms	Yes
Ratio-R	0.350	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.010

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.010

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Unit 5B Tanners Crt	Orchard Business Pk Ph2	
Tanners La, E. Wellow	North End Road Yapton	
Romsey SO51 6DP	Soakaway So3	
Date January 2020	Designed By KN	
File SO3 10years.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	20.0
Infil Coef - Sides (m/hr)	0.014076	Invert Level (m)	5.300
Safety Factor	3.0	Cover Level (m)	6.400
Porosity	0.40	Slope (1:x)	0.0
width (m)	0.8		

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Unit 5B Tanners Crt Tanners La. E. Wellow Romsey SO51 6DP Date January 2020 File SO3 100years+40%.SRC Micro Drainage	Orchard Business Pk Ph2 North End Road Yapton Soakaway So3 Designed By KN Checked By Source Control W.11.2



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

Half Drain Time : 1575 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.0	0.0	5.5422	0.2422	1.2	O K
30 Summer	0.0	0.0	5.6247	0.3247	1.6	O K
60 Summer	0.0	0.0	5.7142	0.4142	2.0	O K
120 Summer	0.0	0.0	5.8072	0.5072	2.4	O K
180 Summer	0.0	0.0	5.8597	0.5597	2.7	O K
240 Summer	0.0	0.0	5.8938	0.5938	2.9	O K
360 Summer	0.0	0.0	5.9388	0.6388	3.1	O K
480 Summer	0.0	0.0	5.9673	0.6673	3.2	O K
600 Summer	0.0	0.0	5.9863	0.6863	3.3	O K
720 Summer	0.0	0.0	5.9988	0.6988	3.4	O K
960 Summer	0.0	0.0	6.0103	0.7103	3.4	O K
1440 Summer	0.0	0.0	6.0213	0.7213	3.5	O K
2160 Summer	0.0	0.0	6.0268	0.7268	3.5	O K
2880 Summer	0.0	0.0	6.0238	0.7238	3.5	O K
4320 Summer	0.0	0.0	6.0043	0.7043	3.4	O K
5760 Summer	0.0	0.0	5.9788	0.6788	3.3	O K
7200 Summer	0.0	0.0	5.9513	0.6513	3.1	O K
8640 Summer	0.0	0.0	5.9258	0.6258	3.0	O K
10080 Summer	0.0	0.0	5.9013	0.6013	2.9	O K
15 Winter	0.0	0.0	5.5717	0.2717	1.3	O K
30 Winter	0.0	0.0	5.6637	0.3637	1.7	O K
60 Winter	0.0	0.0	5.7642	0.4642	2.2	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	124.63	23
30 Summer	83.79	38
60 Summer	53.78	68
120 Summer	33.34	128
180 Summer	24.83	188
240 Summer	20.01	246
360 Summer	14.71	366
480 Summer	11.82	486
600 Summer	9.97	606
720 Summer	8.67	724
960 Summer	6.94	938
1440 Summer	5.07	1146
2160 Summer	3.70	1536
2880 Summer	2.95	1936
4320 Summer	2.14	2768
5760 Summer	1.70	3576
7200 Summer	1.43	4392
8640 Summer	1.24	5184
10080 Summer	1.09	5952
15 Winter	124.63	23
30 Winter	83.79	38
60 Winter	53.78	68

Unit 5B Tanners Crt
Tanners La, E. Wellow
Remsey SO51 6DP
Date January 2020

Orchard Business Pk Ph2
North End Road Yapton
Snakaway So3

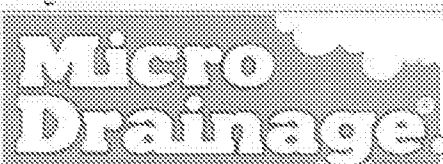
File SO3 100years+40%.SRC

Designed By KN

Micro Drainage

Checked By

Source Control W.J1.2



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

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
120 Winter	0.0	0.0	5.8688	0.5687	2.7	O K
180 Winter	0.0	0.0	5.9278	0.6278	3.0	O K
240 Winter	0.0	0.0	5.9658	0.6658	3.2	O K
360 Winter	0.0	0.0	6.0168	0.7168	3.4	O K
480 Winter	0.0	0.0	6.0498	0.7498	3.6	O K
600 Winter	0.0	0.0	6.0713	0.7713	3.7	O K
720 Winter	0.0	0.0	6.0863	0.7863	3.8	O K
960 Winter	0.0	0.0	6.1028	0.8028	3.9	O K
1440 Winter	0.0	0.0	6.1093	0.8093	3.9	O K
2160 Winter	0.0	0.0	6.1098	0.8098	3.9	O K
2880 Winter	0.0	0.0	6.0978	0.7978	3.8	O K
4320 Winter	0.0	0.0	6.0598	0.7598	3.6	O K
5760 Winter	0.0	0.0	6.0178	0.7178	3.4	O K
7200 Winter	0.0	0.0	5.9768	0.6768	3.2	O K
8640 Winter	0.0	0.0	5.9393	0.6393	3.1	O K
10080 Winter	0.0	0.0	5.9058	0.6058	2.9	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
120 Winter	33.34	126
180 Winter	24.83	184
240 Winter	20.01	244
360 Winter	14.71	360
480 Winter	11.82	476
600 Winter	9.97	588
720 Winter	8.67	702
960 Winter	6.94	918
1440 Winter	5.07	1174
2160 Winter	3.70	1624
2880 Winter	2.95	2080
4320 Winter	2.14	2984
5760 Winter	1.70	3808
7200 Winter	1.43	4680
8640 Winter	1.24	5448
10080 Winter	1.09	6256

KN Consulting Ltd	Page 3
Unit 5B Tanners Crt	Orchard Business Pk Ph2
Tanners La, E. Wellow	North End Road Yapton
Romsey SO51 6DP	Soakaway So3
Date January 2020	Designed By KN
File SO3 100years+40%.SRC	Checked By
Micro Drainage	Source Control W.11.2



Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	10080
M5-60 (mm)	19.000	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) = 0.005

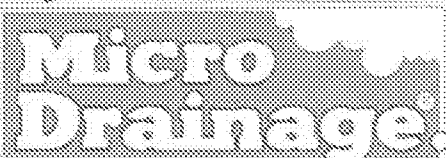
Time (mins)	Area (ha)	Time (mins)	Area (ha)
from: to:		from: to:	
0 4	0.000	4 8	0.005

KN Consulting Ltd		Page 4
Unit 5B Tanners Crt	Orchard Business Pk Ph2	
Tanners La, E. Wellow	North End Road Yapton	
Romsey SO51 6DP	Soakaway So3	
Date January 2020	Designed By KN	
File SO3 100years+40%.SRC	Checked By	
Micro Drainage	Source Control W.J1.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	12.0
Infil Coef - Sides (m/hr)	0.014076	Invert Level (m)	5.300
Safety Factor	3.0	Cover Level (m)	6.400
Porosity	0.40	Slope (1:x)	0.0
width (m)	1.0		

KN Consulting Ltd	Page 1
Unit 5B Tanners Crt	Orchard Business Pk Ph2
Tanners La, E. Wellow	North End Road Yapton
Romsey SO51 6DP	Soakaways So4 5 6
Date January 2020	Designed By KN
File SO4 10years.SRC	Checked By
Micro Drainage	Source Control W.11.2



Summary of Results for 10 year Return Period

Half Drain Time : 1203 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.0	0.0	5.3973	0.0973	1.0	O K
30 Summer	0.0	0.0	5.4278	0.1278	1.3	O K
60 Summer	0.0	0.0	5.4608	0.1607	1.7	O K
120 Summer	0.0	0.0	5.4957	0.1957	2.0	O K
180 Summer	0.0	0.0	5.5162	0.2162	2.3	O K
240 Summer	0.0	0.0	5.5307	0.2307	2.4	O K
360 Summer	0.0	0.0	5.5492	0.2492	2.6	O K
480 Summer	0.0	0.0	5.5607	0.2607	2.7	O K
600 Summer	0.0	0.0	5.5677	0.2677	2.8	O K
720 Summer	0.0	0.0	5.5722	0.2722	2.8	O K
960 Summer	0.0	0.0	5.5782	0.2782	2.9	O K
1440 Summer	0.0	0.0	5.5862	0.2862	3.0	O K
2160 Summer	0.0	0.0	5.5907	0.2907	3.0	O K
2880 Summer	0.0	0.0	5.5902	0.2902	3.0	O K
4320 Summer	0.0	0.0	5.5827	0.2827	3.0	O K
5760 Summer	0.0	0.0	5.5717	0.2717	2.8	O K
7200 Summer	0.0	0.0	5.5607	0.2607	2.7	O K
8640 Summer	0.0	0.0	5.5497	0.2497	2.6	O K
10080 Summer	0.0	0.0	5.5398	0.2397	2.5	O K
15 Winter	0.0	0.0	5.4088	0.1088	1.1	O K
30 Winter	0.0	0.0	5.4433	0.1433	1.5	O K
60 Winter	0.0	0.0	5.4798	0.1797	1.9	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.44	23
30 Summer	35.92	38
60 Summer	22.79	68
120 Summer	14.11	128
180 Summer	10.57	186
240 Summer	8.59	246
360 Summer	6.40	366
480 Summer	5.19	486
600 Summer	4.41	604
720 Summer	3.85	708
960 Summer	3.12	812
1440 Summer	2.31	1054
2160 Summer	1.72	1456
2880 Summer	1.39	1876
4320 Summer	1.03	2684
5760 Summer	0.83	3464
7200 Summer	0.70	4256
8640 Summer	0.61	5024
10080 Summer	0.55	5848
15 Winter	54.44	23
30 Winter	35.92	38
60 Winter	22.79	68

KN Consulting Ltd	Orchard Business Pk Ph2	Page 2
Unit 5B Tanners Crt	North End Road Yapton	
Tanners La, E. Wellow	Soakaways So4 5 6	
Romsey SO51 6DP	Designed By KN	
Date January 2020	Checked By	
File SO4 10years.SRC	Source Control W.L1.2	
Micro Drainage		

Summary of Results for 10 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
120 Winter	0.0	0.0	5.5192	0.2192	2.3	O K
180 Winter	0.0	0.0	5.5427	0.2427	2.5	O K
240 Winter	0.0	0.0	5.5587	0.2587	2.7	O K
360 Winter	0.0	0.0	5.5797	0.2797	2.9	O K
480 Winter	0.0	0.0	5.5932	0.2932	3.1	O K
600 Winter	0.0	0.0	5.6017	0.3017	3.2	O K
720 Winter	0.0	0.0	5.6077	0.3077	3.2	O K
960 Winter	0.0	0.0	5.6132	0.3132	3.3	O K
1440 Winter	0.0	0.0	5.6202	0.3202	3.3	O K
2160 Winter	0.0	0.0	5.6207	0.3207	3.4	O K
2880 Winter	0.0	0.0	5.6152	0.3152	3.3	O K
4320 Winter	0.0	0.0	5.5992	0.2992	3.1	O K
5760 Winter	0.0	0.0	5.5812	0.2812	2.9	O K
7200 Winter	0.0	0.0	5.5642	0.2642	2.8	O K
8640 Winter	0.0	0.0	5.5487	0.2487	2.6	O K
10080 Winter	0.0	0.0	5.5348	0.2347	2.5	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
120 Winter	14.11	126
180 Winter	10.57	184
240 Winter	8.59	242
360 Winter	6.40	358
480 Winter	5.19	472
600 Winter	4.41	582
720 Winter	3.85	690
960 Winter	3.12	890
1440 Winter	2.31	1102
2160 Winter	1.72	1560
2880 Winter	1.39	2020
4320 Winter	1.03	2860
5760 Winter	0.83	3696
7200 Winter	0.70	4536
8640 Winter	0.61	5280
10080 Winter	0.55	6056

KN Consulting Ltd		Page 3
Unit 5B Tanners Crt	Orchard Business Pk Ph2	
Tanners LA, E. Wellow	North End Road Yapton	
Romsey SO51 6DP	Soakaways SO4 5 6	
Date January 2020	Designed By KN	
File SO4 10years.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	10	Longest Storm (mins)	10080
M5-60 (mm)	19.000	Summer Storms	Yes
Ratio-R	0.350	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.010

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.010

KN Consulting Ltd

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Unit 5B Tanners Crt
Tanners La, E. Wellow
Romsey SO51 6DP

Orchard Business Pk Ph2
North End Road Yapton
Soakaways So4 5 6

Date January 2020
File SO4 10years.SRC

Designed By KN
Checked By

Micro Drainage

Source Control W.J1.2



Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	11.0
Infil Coef - Sides (m/hr)	0.146160	Invert Level (m)	5.300
Safety Factor	10.0	Cover Level (m)	6.400
Porosity	0.95	Slope (1:x)	0.0
width (m)	1.0		

KN Consulting Ltd	Page 1
Unit 5B Tanners Crt Tanners La, E. Wellow Romsey SO51 6DP	Orchard Business Pk Ph2 North End Road Yapton Soakaway So4 5 6
Date January 2020	Designed By KN
File SO4 100years+40%.SRC	Checked By
Micro Drainage	Source Control W.11.2



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

Half Drain Time : 1200 minutes

Storm Duration (mins)	Maximum Filtration (1/s)	Maximum Outflow (1/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.0	0.0	5.4222	0.2222	2.3	O K
30 Summer	0.0	0.0	5.4977	0.2977	3.1	O K
60 Summer	0.0	0.0	5.5792	0.3792	4.0	O K
120 Summer	0.0	0.0	5.6622	0.4622	4.8	O K
180 Summer	0.0	0.0	5.7082	0.5082	5.3	O K
240 Summer	0.1	0.1	5.7367	0.5367	5.6	O K
360 Summer	0.1	0.1	5.7728	0.5728	6.0	O K
480 Summer	0.1	0.1	5.7938	0.5938	6.2	O K
600 Summer	0.1	0.1	5.8058	0.6058	6.3	O K
720 Summer	0.1	0.1	5.8123	0.6123	6.4	O K
960 Summer	0.1	0.1	5.8198	0.6198	6.5	O K
1440 Summer	0.1	0.1	5.8273	0.6273	6.6	O K
2160 Summer	0.1	0.1	5.8263	0.6263	6.5	O K
2880 Summer	0.1	0.1	5.8173	0.6173	6.4	O K
4320 Summer	0.1	0.1	5.7893	0.5893	6.2	O K
5760 Summer	0.1	0.1	5.7587	0.5587	5.8	O K
7200 Summer	0.1	0.1	5.7292	0.5292	5.5	O K
8640 Summer	0.0	0.0	5.7027	0.5027	5.3	O K
10080 Summer	0.0	0.0	5.6787	0.4787	5.0	O K
15 Winter	0.0	0.0	5.4492	0.2492	2.6	O K
30 Winter	0.0	0.0	5.5337	0.3337	3.5	O K
60 Winter	0.0	0.0	5.6247	0.4247	4.4	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	124.63	23
30 Summer	83.79	38
60 Summer	53.78	68
120 Summer	33.34	128
180 Summer	24.83	186
240 Summer	20.01	246
360 Summer	14.71	366
480 Summer	11.82	486
600 Summer	9.97	604
720 Summer	8.67	708
960 Summer	6.94	812
1440 Summer	5.07	1054
2160 Summer	3.70	1456
2880 Summer	2.95	1876
4320 Summer	2.14	2684
5760 Summer	1.70	3464
7200 Summer	1.43	4256
8640 Summer	1.24	5024
10080 Summer	1.09	5848
15 Winter	124.63	23
30 Winter	83.79	38
60 Winter	53.78	68

Unit 5B Tanners Crt
Tanners La, E. Wellow
Romsey SO51 6DP

Orchard Business Pk Ph2
North End Road Yapton
Soakaway So4 5 6

Date January 2020

Designed By KN

File SO4 100years+40%.SRC

Checked By

Micro Drainage

Source Control WJ1.2



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

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
120 Winter	0.1	0.1	5.7182	0.5182	5.4	O K
180 Winter	0.1	0.1	5.7698	0.5697	6.0	O K
240 Winter	0.1	0.1	5.8023	0.6023	6.3	O K
360 Winter	0.1	0.1	5.8433	0.6433	6.7	O K
480 Winter	0.1	0.1	5.8678	0.6678	7.0	O K
600 Winter	0.1	0.1	5.8828	0.6828	7.1	O K
720 Winter	0.1	0.1	5.8913	0.6913	7.2	O K
960 Winter	0.1	0.1	5.8973	0.6973	7.3	O K
1440 Winter	0.1	0.1	5.9013	0.7013	7.3	O K
2160 Winter	0.1	0.1	5.8908	0.6908	7.2	O K
2880 Winter	0.1	0.1	5.8708	0.6708	7.0	O K
4320 Winter	0.1	0.1	5.8238	0.6238	6.5	O K
5760 Winter	0.1	0.1	5.7778	0.5778	6.0	O K
7200 Winter	0.1	0.1	5.7362	0.5362	5.6	O K
8640 Winter	0.0	0.0	5.7002	0.5002	5.2	O K
10080 Winter	0.0	0.0	5.6687	0.4687	4.9	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
120 Winter	33.34	126
180 Winter	24.83	184
240 Winter	20.01	242
360 Winter	14.71	358
480 Winter	11.82	472
600 Winter	9.97	582
720 Winter	8.67	690
960 Winter	6.94	890
1440 Winter	5.07	1102
2160 Winter	3.70	1560
2880 Winter	2.95	2020
4320 Winter	2.14	2860
5760 Winter	1.70	3696
7200 Winter	1.43	4536
8640 Winter	1.24	5280
10080 Winter	1.09	6056

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Unit 5B Tanners Crt	Orchard Business Pk Ph2	
Tanners La, E. Wellow	North End Road Yapton	
Romsey SO51 6DP	Soakaway S04 5 6	
Date January 2020	Designed By KN	
File SO4 100years+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	10080
M5-60 (mm)	19.000	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) = 0.010

Time (mins)	Area (ha)	Time (mins)	Area (ha)
from:	to:	from:	to:
0	4	4	8
	0.000		0.010

Unit 5B Tanners Crt
Tanners La, E. Wellow
Romsey SO51 6DP

Orchard Business Pk Ph2
North End Road Yapton
Soakaway So4 5 6

Date January 2020

Designed By KN

File SO4 100years+40% SRC

Checked By

Micro Drainage

Source Control W.11.2

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	11.0
Infil Coef - Sides (m/hr)	0.146160	Invert Level (m)	5.200
Safety Factor	10.0	Cover Level (m)	6.400
Porosity	0.95	Slope (1:x)	0.0
Width (m)	1.0		

KN Consulting Ltd	Page 1
Unit 5B Tanners Crt	Orchard Business Pk Ph2
Tanners La, E. Wellow	Access Road Ch0-40
Romsey SO51 6DP	
Date January 2020	Designed By KN
File Access Road Ch0-Ch40.SRC	Checked By
Micro Drainage	Source Control W.IJ.2



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

Half Drain Time : 1683 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.0	0.0	5.8343	0.1343	3.5	O K
30 Summer	0.1	0.1	5.8608	0.1607	4.9	O K
60 Summer	0.1	0.1	5.8847	0.1847	6.6	O K
120 Summer	0.1	0.1	5.9067	0.2067	8.2	O K
180 Summer	0.1	0.1	5.9192	0.2192	9.1	O K
240 Summer	0.1	0.1	5.9272	0.2272	9.7	O K
360 Summer	0.1	0.1	5.9377	0.2377	10.5	O K
480 Summer	0.1	0.1	5.9447	0.2447	11.1	O K
600 Summer	0.1	0.1	5.9492	0.2492	11.4	O K
720 Summer	0.1	0.1	5.9522	0.2522	11.6	O K
960 Summer	0.1	0.1	5.9552	0.2552	11.9	O K
1440 Summer	0.1	0.1	5.9562	0.2562	12.0	O K
2160 Summer	0.1	0.1	5.9542	0.2542	11.8	O K
2880 Summer	0.1	0.1	5.9512	0.2512	11.6	O K
4320 Summer	0.1	0.1	5.9418	0.2417	10.8	O K
5760 Summer	0.1	0.1	5.9312	0.2312	10.1	O K
7200 Summer	0.1	0.1	5.9208	0.2207	9.3	O K
8640 Summer	0.1	0.1	5.9118	0.2117	8.6	O K
10080 Summer	0.1	0.1	5.9033	0.2033	7.9	O K
15 Winter	0.1	0.1	5.8443	0.1442	4.0	O K
30 Winter	0.1	0.1	5.8717	0.1717	5.7	O K
60 Winter	0.1	0.1	5.8972	0.1972	7.5	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	124.63	19
30 Summer	83.79	34
60 Summer	53.78	64
120 Summer	33.34	124
180 Summer	24.83	184
240 Summer	20.01	242
360 Summer	14.71	362
480 Summer	11.82	482
600 Summer	9.97	602
720 Summer	8.67	722
960 Summer	6.94	960
1440 Summer	5.07	1254
2160 Summer	3.70	1624
2880 Summer	2.95	2016
4320 Summer	2.14	2812
5760 Summer	1.70	3632
7200 Summer	1.43	4400
8640 Summer	1.24	5192
10080 Summer	1.09	5952
15 Winter	124.63	19
30 Winter	83.79	33
60 Winter	53.78	64

Unit 5B Tanners Crt
Tanners La, E. Wellow
Romsey SO51 6DP

Orchard Business Pk Ph2
Access Road Ch0-40

Date January 2020

Designed By KN

File Access Road Ch0-Ch40.SRC

Checked By

Micro Drainage

Source Control W.J1.2



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

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
120 Winter	0.1	0.1	5.9217	0.2217	9.3	O K
180 Winter	0.1	0.1	5.9357	0.2357	10.4	O K
240 Winter	0.1	0.1	5.9447	0.2447	11.1	O K
360 Winter	0.1	0.1	5.9572	0.2572	12.0	O K
480 Winter	0.1	0.1	5.9652	0.2652	12.6	O K
600 Winter	0.1	0.1	5.9707	0.2707	13.1	O K
720 Winter	0.1	0.1	5.9747	0.2747	13.4	O K
960 Winter	0.1	0.1	5.9797	0.2797	13.7	O K
1440 Winter	0.1	0.1	5.9822	0.2822	13.9	O K
2160 Winter	0.1	0.1	5.9777	0.2777	13.6	O K
2880 Winter	0.1	0.1	5.9727	0.2727	13.2	O K
4320 Winter	0.1	0.1	5.9587	0.2587	12.2	O K
5760 Winter	0.1	0.1	5.9432	0.2432	10.9	O K
7200 Winter	0.1	0.1	5.9272	0.2272	9.8	O K
8640 Winter	0.1	0.1	5.9133	0.2133	8.7	O K
10080 Winter	0.1	0.1	5.9013	0.2013	7.8	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
120 Winter	33.34	122
180 Winter	24.83	180
240 Winter	20.01	240
360 Winter	14.71	356
480 Winter	11.82	474
600 Winter	9.97	590
720 Winter	8.67	706
960 Winter	6.94	932
1440 Winter	5.07	1370
2160 Winter	3.70	1732
2880 Winter	2.95	2188
4320 Winter	2.14	3108
5760 Winter	1.70	3976
7200 Winter	1.43	4760
8640 Winter	1.24	5536
10080 Winter	1.09	6256

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Unit 5B Tanners Crt Tanners La, E. Wellow Romsey SO51 6DP	Orchard Business Pk Ph2 Access Road Ch0-40	
Date January 2020	Designed By KN	
File Access Road Ch0-Ch40.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	10080
M5-60 (mm)	19.000	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) = 0.019

Time	(mins)	Area
from:	to:	(ha)
0	4	0.019

Unit 5B Tanners Crt
Tanners La. E. Wellow
Romsey SO51 6DP

Orchard Business Pk Ph2
Access Road Ch0-40

Date January 2020

Designed By KN

File Access Road Ch0-Ch40 SRC

Checked By

Micro Drainage

Source Control W.11.2

**Micro
Drainage.**

Porous Car Park Details

Infil Coef - Base (m/hr)	0.006696	Invert Level (m)	5.700
Membrane Percolation (mm/hr)	1000	Cover Level (m)	7.340
Safety Factor	5.0	Slope (1:x)	200.0
Porosity	0.40	Max Percolation (l/s)	52.8
Length (m)	39.6	Depression Storage (mm)	5
Width (m)	4.8	Evaporation (mm/day)	3

Unit 5B Tanners Crt
Tanners Ld, E. Wellow
Romsey SO51 6DP

Orchard Business Park
Yapton - Phase 2
Access Ch40 onwards

Date January 2020

Designed By KN

File Access Road Ch40 onwards.S...

Checked By

Micro Drainage

Source Control W.11.2



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

Half Drain Time : 90 minutes

Storm Duration (mins)	Maximum Filtration (1/s)	Maximum Outflow (1/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	1.2	1.2	7.0113	0.1113	6.7	O K
30 Summer	1.4	1.4	7.0303	0.1303	9.2	O K
60 Summer	1.5	1.5	7.0433	0.1433	11.1	O K
120 Summer	1.6	1.6	7.0503	0.1502	12.2	O K
180 Summer	1.6	1.6	7.0518	0.1517	12.4	O K
240 Summer	1.6	1.6	7.0508	0.1507	12.3	O K
360 Summer	1.5	1.5	7.0463	0.1463	11.6	O K
480 Summer	1.5	1.5	7.0413	0.1413	10.8	O K
600 Summer	1.4	1.4	7.0358	0.1358	10.0	O K
720 Summer	1.4	1.4	7.0308	0.1308	9.2	O K
960 Summer	1.3	1.3	7.0213	0.1213	8.0	O K
1440 Summer	1.1	1.1	7.0063	0.1063	6.1	O K
2160 Summer	0.9	0.9	6.9893	0.0893	4.3	O K
2880 Summer	0.8	0.8	6.9768	0.0768	3.2	O K
4320 Summer	0.6	0.6	6.9608	0.0607	2.0	O K
5760 Summer	0.5	0.5	6.9508	0.0507	1.4	O K
7200 Summer	0.5	0.5	6.9463	0.0462	1.1	O K
8640 Summer	0.4	0.4	6.9433	0.0432	1.0	O K
10080 Summer	0.3	0.3	6.9403	0.0402	0.9	O K
15 Winter	1.3	1.3	7.0198	0.1198	7.8	O K
30 Winter	1.5	1.5	7.0398	0.1398	10.6	O K
60 Winter	1.6	1.6	7.0543	0.1542	12.8	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	124.63	18
30 Summer	83.79	32
60 Summer	53.78	60
120 Summer	33.34	90
180 Summer	24.83	124
240 Summer	20.01	158
360 Summer	14.71	226
480 Summer	11.82	292
600 Summer	9.97	358
720 Summer	8.67	420
960 Summer	6.94	548
1440 Summer	5.07	794
2160 Summer	3.70	1148
2880 Summer	2.95	1500
4320 Summer	2.14	2208
5760 Summer	1.70	2936
7200 Summer	1.43	3672
8640 Summer	1.24	4400
10080 Summer	1.09	5136
15 Winter	124.63	18
30 Winter	83.79	31
60 Winter	53.78	58

Unit 5B Tanners Crt
Tanners La, E. Wellow
Romsey SO51 6DP
Date January 2020

Orchard Business Park
Yapton - Phase 2
Access Ch40 onwards

Designed By KN

File Access Road Ch40 onwards.S...

Checked By

Micro Drainage

Source Control W.11.2



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

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
120 Winter	1.7	1.7	7.0608	0.1607	13.9	O K
180 Winter	1.7	1.7	7.0608	0.1607	14.0	O K
240 Winter	1.7	1.7	7.0583	0.1582	13.5	O K
360 Winter	1.6	1.6	7.0513	0.1513	12.3	O K
480 Winter	1.5	1.5	7.0433	0.1433	11.1	O K
600 Winter	1.4	1.4	7.0358	0.1358	10.0	O K
720 Winter	1.4	1.4	7.0288	0.1288	8.9	O K
960 Winter	1.2	1.2	7.0158	0.1158	7.3	O K
1440 Winter	1.0	1.0	6.9958	0.0958	5.0	O K
2160 Winter	0.8	0.8	6.9758	0.0758	3.1	O K
2880 Winter	0.7	0.7	6.9623	0.0622	2.1	O K
4320 Winter	0.5	0.5	6.9483	0.0482	1.2	O K
5760 Winter	0.4	0.4	6.9433	0.0432	1.0	O K
7200 Winter	0.3	0.3	6.9393	0.0392	0.8	O K
8640 Winter	0.3	0.3	6.9363	0.0362	0.7	O K
10080 Winter	0.2	0.2	6.9343	0.0342	0.6	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
120 Winter	33.34	94
180 Winter	24.83	134
240 Winter	20.01	170
360 Winter	14.71	242
480 Winter	11.82	312
600 Winter	9.97	380
720 Winter	8.67	444
960 Winter	6.94	570
1440 Winter	5.07	812
2160 Winter	3.70	1168
2880 Winter	2.95	1528
4320 Winter	2.14	2204
5760 Winter	1.70	2920
7200 Winter	1.43	3592
8640 Winter	1.24	4408
10080 Winter	1.09	5032

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Unit 5B Tanners Crt	Orchard Business Park	
Tanners La, E. Wellow	Yapton - Phase 2	
Romsey SO51 6DP	Access Ch40 onwards	
Date January 2020	Designed By KN	
File Access Road Ch40 onwards S...	Checked By	
Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	10080
M5-60 (mm)	19.000	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) = 0.040

Time	(mins)	Area
from:	to:	(ha)
0	4	0.040

Unit 5B Tanners Crt
Tanners La, E. Wellow
Romsey SO51 6DP

Orchard Business Park
Yapton - Phase 2
Access Ch40 onwards

Date January 2020

Designed By KN

File Access Road Ch40 onwards.S...

Checked By

Micro Drainage

Source Control W.J1.2



Porous Car Park Details

Infil Coef - Base (m/hr)	0.157900	Invert Level (m)	6.900
Membrane Percolation (mm/hr)	1000	Cover Level (m)	7.340
Safety Factor	10.0	Slope (1:x)	500.0
Porosity	0.45	Max Percolation (l/s)	111.1
Length (m)	83.3	Depression Storage (mm)	5
Width (m)	4.8	Evaporation (mm/day)	3