



**Arundel Road
Fontwell**

***Micro Drainage Calculations
For
Soakaways and Permeable Paved Areas***

Prepared by:
Kazys Narbutas Consulting Limited

Unit 5B Tanners Court,
Tanners Lane, East Wellow,
Romsey. SO51 6DP

KNC1822/MDC-A

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Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway Sol	
Date September 2020	Designed By KN	
File Soakaway Sol 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 10 year Return Period

Half Drain Time : 78 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	0.2	0.2	25.5943	0.5943	1.4	0 K
30 Summer	0.3	0.3	25.7408	0.7408	1.8	0 K
60 Summer	0.3	0.3	25.8418	0.8418	2.0	0 K
120 Summer	0.3	0.3	25.9078	0.9078	2.2	0 K
180 Summer	0.3	0.3	25.9203	0.9203	2.2	0 K
240 Summer	0.3	0.3	25.9128	0.9128	2.2	0 K
360 Summer	0.3	0.3	25.8773	0.8773	2.1	0 K
480 Summer	0.3	0.3	25.8343	0.8343	2.0	0 K
600 Summer	0.3	0.3	25.7923	0.7923	1.9	0 K
720 Summer	0.3	0.3	25.7533	0.7533	1.8	0 K
15 Winter	0.2	0.2	25.6663	0.6663	1.6	0 K
30 Winter	0.3	0.3	25.8333	0.8333	2.0	0 K
60 Winter	0.3	0.3	25.9473	0.9473	2.3	0 K
120 Winter	0.4	0.4	26.0063	1.0063	2.4	0 K
180 Winter	0.4	0.4	26.0023	1.0023	2.4	0 K
240 Winter	0.3	0.3	25.9758	0.9758	2.3	0 K
360 Winter	0.3	0.3	25.9088	0.9088	2.2	0 K
480 Winter	0.3	0.3	25.8418	0.8418	2.0	0 K
600 Winter	0.3	0.3	25.7813	0.7813	1.9	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.77	22
30 Summer	36.22	35
60 Summer	23.03	56
120 Summer	14.29	88
180 Summer	10.72	122
240 Summer	8.72	158
360 Summer	6.50	224
480 Summer	5.28	290
600 Summer	4.49	354
720 Summer	3.93	416
15 Winter	54.77	21
30 Winter	36.22	35
60 Winter	23.03	60
120 Winter	14.29	94
180 Winter	10.72	132
240 Winter	8.72	168
360 Winter	6.50	238
480 Winter	5.28	304
600 Winter	4.49	372

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So1	
Date September 2020 File Soakaway So1 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	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
720 Winter	0.3	0.3	25.7283	0.7283	1.7	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	3.93	436

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Romsey SO51 6DP	Soakaway Sol	
Date September 2020	Designed By KN	
File Soakaway Sol 10yrs.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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.015

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.015

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway Sol	
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Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	5.0
Infil Coef - Sides (m/hr)	0.305960	Invert Level (m)	25.000
Safety Factor	3.0	Cover Level (m)	27.400
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.2		

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File Soakaway Sol 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 78 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	0.5	0.5	26.1607	1.3607	3.3	0 K
30 Summer	0.6	0.6	26.5287	1.7287	4.1	0 K
60 Summer	0.7	0.7	26.7872	1.9872	4.8	0 K
120 Summer	0.8	0.8	26.9432	2.1432	5.1	0 K
180 Summer	0.8	0.8	26.9587	2.1587	5.2	0 K
240 Summer	0.7	0.7	26.9212	2.1212	5.1	0 K
360 Summer	0.7	0.7	26.8127	2.0127	4.8	0 K
480 Summer	0.7	0.7	26.6967	1.8967	4.6	0 K
600 Summer	0.6	0.6	26.5882	1.7882	4.3	0 K
720 Summer	0.6	0.6	26.4892	1.6892	4.1	0 K
15 Winter	0.5	0.5	26.3262	1.5262	3.7	0 K
30 Winter	0.7	0.7	26.7452	1.9452	4.7	0 K
60 Winter	0.8	0.8	27.0362	2.2362	5.4	0 K
120 Winter	0.8	0.8	27.1767	2.3767	5.7	0 K
180 Winter	0.8	0.8	27.1502	2.3502	5.6	0 K
240 Winter	0.8	0.8	27.0677	2.2677	5.4	0 K
360 Winter	0.7	0.7	26.8847	2.0847	5.0	0 K
480 Winter	0.7	0.7	26.7137	1.9137	4.6	0 K
600 Winter	0.6	0.6	26.5637	1.7637	4.2	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	22
30 Summer	84.53	35
60 Summer	54.37	56
120 Summer	33.76	88
180 Summer	25.15	122
240 Summer	20.26	158
360 Summer	14.92	224
480 Summer	12.00	290
600 Summer	10.13	354
720 Summer	8.81	416
15 Winter	125.44	21
30 Winter	84.53	35
60 Winter	54.37	60
120 Winter	33.76	94
180 Winter	25.15	132
240 Winter	20.26	168
360 Winter	14.92	238
480 Winter	12.00	304
600 Winter	10.13	372

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway Sol	
Date September 2020 File Soakaway Sol 100+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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	0.6	0.6	26.4332	1.6332	3.9	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	8.81	436

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Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.015

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.015

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Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	5.0
Infil Coef - Sides (m/hr)	0.305960	Invert Level (m)	24.800
Safety Factor	3.0	Cover Level (m)	28.100
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.2	Cap Volume (m)	27.950

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Romsey SO51 6DP	Soakaway So2	
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File Soakaway So2 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 10 year Return Period

Half Drain Time : 78 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	0.2	0.2	25.3943	0.5943	1.4	0 K
30 Summer	0.3	0.3	25.5408	0.7408	1.8	0 K
60 Summer	0.3	0.3	25.6418	0.8418	2.0	0 K
120 Summer	0.3	0.3	25.7078	0.9078	2.2	0 K
180 Summer	0.3	0.3	25.7203	0.9203	2.2	0 K
240 Summer	0.3	0.3	25.7128	0.9128	2.2	0 K
360 Summer	0.3	0.3	25.6773	0.8773	2.1	0 K
480 Summer	0.3	0.3	25.6343	0.8343	2.0	0 K
600 Summer	0.3	0.3	25.5923	0.7923	1.9	0 K
720 Summer	0.3	0.3	25.5533	0.7533	1.8	0 K
15 Winter	0.2	0.2	25.4663	0.6663	1.6	0 K
30 Winter	0.3	0.3	25.6333	0.8333	2.0	0 K
60 Winter	0.3	0.3	25.7473	0.9473	2.3	0 K
120 Winter	0.4	0.4	25.8063	1.0063	2.4	0 K
180 Winter	0.4	0.4	25.8023	1.0023	2.4	0 K
240 Winter	0.3	0.3	25.7758	0.9758	2.3	0 K
360 Winter	0.3	0.3	25.7088	0.9088	2.2	0 K
480 Winter	0.3	0.3	25.6418	0.8418	2.0	0 K
600 Winter	0.3	0.3	25.5813	0.7813	1.9	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.77	22
30 Summer	36.22	35
60 Summer	23.03	56
120 Summer	14.29	88
180 Summer	10.72	122
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Date September 2020 File Soakaway So2 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	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
720 Winter	0.3	0.3	25.5283	0.7283	1.7	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	3.93	436

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Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	10	Longest Storm (mins)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.015

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.015

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File Soakaway So2 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	5.0
Infil Coef - Sides (m/hr)	0.305960	Invert Level (m)	24.800
Safety Factor	3.0	Cover Level (m)	27.150
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.2		

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File Soakaway So2 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 78 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	0.5	0.5	26.1607	1.3607	3.3	0 K
30 Summer	0.6	0.6	26.5287	1.7287	4.1	0 K
60 Summer	0.7	0.7	26.7872	1.9872	4.8	0 K
120 Summer	0.8	0.8	26.9432	2.1432	5.1	0 K
180 Summer	0.8	0.8	26.9587	2.1587	5.2	0 K
240 Summer	0.7	0.7	26.9212	2.1212	5.1	0 K
360 Summer	0.7	0.7	26.8127	2.0127	4.8	0 K
480 Summer	0.7	0.7	26.6967	1.8967	4.6	0 K
600 Summer	0.6	0.6	26.5882	1.7882	4.3	0 K
720 Summer	0.6	0.6	26.4892	1.6892	4.1	0 K
15 Winter	0.5	0.5	26.3262	1.5262	3.7	0 K
30 Winter	0.7	0.7	26.7452	1.9452	4.7	0 K
60 Winter	0.8	0.8	27.0362	2.2362	5.4	0 K
120 Winter	0.8	0.8	27.1767	2.3767	5.7	0 K
180 Winter	0.8	0.8	27.1502	2.3502	5.6	0 K
240 Winter	0.8	0.8	27.0677	2.2677	5.4	0 K
360 Winter	0.7	0.7	26.8847	2.0847	5.0	0 K
480 Winter	0.7	0.7	26.7137	1.9137	4.6	0 K
600 Winter	0.6	0.6	26.5637	1.7637	4.2	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	22
30 Summer	84.53	35
60 Summer	54.37	56
120 Summer	33.76	88
180 Summer	25.15	122
240 Summer	20.26	158
360 Summer	14.92	224
480 Summer	12.00	290
600 Summer	10.13	354
720 Summer	8.81	416
15 Winter	125.44	21
30 Winter	84.53	35
60 Winter	54.37	60
120 Winter	33.76	94
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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So2	
Date September 2020 File Soakaway So2 100+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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	0.6	0.6	26.4332	1.6332	3.9	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	8.81	436

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Romsey SO51 6DP	Soakaway So2	
Date September 2020	Designed By KN	
File Soakaway So2 100+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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.015

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.015

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Date September 2020 File Soakaway So2 100+40%.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	5.0
Infil Coef - Sides (m/hr)	0.305960	Invert Level (m)	24.800
Safety Factor	3.0	Cover Level (m)	27.500
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.2	Cap Volume (m)	27.350

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Date September 2020 File Soakaway So3 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 10 year Return Period

Half Drain Time : 78 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	0.2	0.2	25.3943	0.5943	1.4	0 K
30 Summer	0.3	0.3	25.5408	0.7408	1.8	0 K
60 Summer	0.3	0.3	25.6418	0.8418	2.0	0 K
120 Summer	0.3	0.3	25.7078	0.9078	2.2	0 K
180 Summer	0.3	0.3	25.7203	0.9203	2.2	0 K
240 Summer	0.3	0.3	25.7128	0.9128	2.2	0 K
360 Summer	0.3	0.3	25.6773	0.8773	2.1	0 K
480 Summer	0.3	0.3	25.6343	0.8343	2.0	0 K
600 Summer	0.3	0.3	25.5923	0.7923	1.9	0 K
720 Summer	0.3	0.3	25.5533	0.7533	1.8	0 K
15 Winter	0.2	0.2	25.4663	0.6663	1.6	0 K
30 Winter	0.3	0.3	25.6333	0.8333	2.0	0 K
60 Winter	0.3	0.3	25.7473	0.9473	2.3	0 K
120 Winter	0.4	0.4	25.8063	1.0063	2.4	0 K
180 Winter	0.4	0.4	25.8023	1.0023	2.4	0 K
240 Winter	0.3	0.3	25.7758	0.9758	2.3	0 K
360 Winter	0.3	0.3	25.7088	0.9088	2.2	0 K
480 Winter	0.3	0.3	25.6418	0.8418	2.0	0 K
600 Winter	0.3	0.3	25.5813	0.7813	1.9	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.77	22
30 Summer	36.22	35
60 Summer	23.03	56
120 Summer	14.29	88
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Micro Drainage	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
720 Winter	0.3	0.3	25.5283	0.7283	1.7	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
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Romsey SO51 6DP	Soakaway So3	
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Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	10	Longest Storm (mins)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.015

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
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Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	5.0
Infil Coef - Sides (m/hr)	0.305960	Invert Level (m)	24.800
Safety Factor	3.0	Cover Level (m)	26.760
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.2		

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So3	
Date September 2020	Designed By KN	
File Soakaway So3 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 81 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	0.5	0.5	25.9368	1.1368	3.3	O K
30 Summer	0.6	0.6	26.2462	1.4462	4.2	O K
60 Summer	0.7	0.7	26.4662	1.6662	4.8	O K
120 Summer	0.7	0.7	26.5992	1.7992	5.2	O K
180 Summer	0.7	0.7	26.6162	1.8162	5.2	O K
240 Summer	0.7	0.7	26.5872	1.7872	5.1	O K
360 Summer	0.7	0.7	26.4997	1.6997	4.9	O K
480 Summer	0.7	0.7	26.4052	1.6052	4.6	O K
600 Summer	0.6	0.6	26.3157	1.5157	4.4	O K
720 Summer	0.6	0.6	26.2337	1.4337	4.1	O K
15 Winter	0.5	0.5	26.0748	1.2747	3.7	O K
30 Winter	0.7	0.7	26.4272	1.6272	4.7	O K
60 Winter	0.8	0.8	26.6767	1.8767	5.4	O K
120 Winter	0.8	0.8	26.7977	1.9977	5.8	O K
180 Winter	0.8	0.8	26.7807	1.9807	5.7	O K
240 Winter	0.8	0.8	26.7147	1.9147	5.5	O K
360 Winter	0.7	0.7	26.5657	1.7657	5.1	O K
480 Winter	0.7	0.7	26.4252	1.6252	4.7	O K
600 Winter	0.6	0.6	26.3002	1.5002	4.3	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	22
30 Summer	84.53	35
60 Summer	54.37	58
120 Summer	33.76	90
180 Summer	25.15	124
240 Summer	20.26	158
360 Summer	14.92	224
480 Summer	12.00	290
600 Summer	10.13	354
720 Summer	8.81	418
15 Winter	125.44	21
30 Winter	84.53	35
60 Winter	54.37	62
120 Winter	33.76	94
180 Winter	25.15	132
240 Winter	20.26	168
360 Winter	14.92	238
480 Winter	12.00	306
600 Winter	10.13	372

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So3	
Date September 2020 File Soakaway So3 100+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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	0.6	0.6	26.1917	1.3917	4.0	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	8.81	438

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So3	
Date September 2020	Designed By KN	
File Soakaway So3 100+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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.015

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.015

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So3	
Date September 2020 File Soakaway So3 100+40%.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	6.0
Infil Coef - Sides (m/hr)	0.305960	Invert Level (m)	24.800
Safety Factor	3.0	Cover Level (m)	27.200
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.2	Cap Volume (m)	27.050

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So4	
Date September 2020	Designed By KN	
File Soakaway So4 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 10 year Return Period

Half Drain Time : 90 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	0.2	0.2	25.0333	0.5332	1.5	0 K
30 Summer	0.2	0.2	25.1698	0.6698	1.9	0 K
60 Summer	0.3	0.3	25.2688	0.7688	2.2	0 K
120 Summer	0.3	0.3	25.3333	0.8333	2.4	0 K
180 Summer	0.3	0.3	25.3518	0.8518	2.5	0 K
240 Summer	0.3	0.3	25.3508	0.8508	2.4	0 K
360 Summer	0.3	0.3	25.3268	0.8268	2.4	0 K
480 Summer	0.3	0.3	25.2933	0.7933	2.3	0 K
600 Summer	0.3	0.3	25.2588	0.7588	2.2	0 K
720 Summer	0.3	0.3	25.2253	0.7253	2.1	0 K
15 Winter	0.2	0.2	25.0978	0.5978	1.7	0 K
30 Winter	0.3	0.3	25.2533	0.7533	2.2	0 K
60 Winter	0.3	0.3	25.3678	0.8678	2.5	0 K
120 Winter	0.3	0.3	25.4283	0.9283	2.7	0 K
180 Winter	0.3	0.3	25.4343	0.9343	2.7	0 K
240 Winter	0.3	0.3	25.4178	0.9178	2.6	0 K
360 Winter	0.3	0.3	25.3668	0.8668	2.5	0 K
480 Winter	0.3	0.3	25.3118	0.8118	2.3	0 K
600 Winter	0.3	0.3	25.2598	0.7598	2.2	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.77	22
30 Summer	36.22	36
60 Summer	23.03	60
120 Summer	14.29	90
180 Summer	10.72	126
240 Summer	8.72	160
360 Summer	6.50	226
480 Summer	5.28	294
600 Summer	4.49	358
720 Summer	3.93	422
15 Winter	54.77	22
30 Winter	36.22	35
60 Winter	23.03	62
120 Winter	14.29	96
180 Winter	10.72	134
240 Winter	8.72	170
360 Winter	6.50	242
480 Winter	5.28	310
600 Winter	4.49	378

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So4	
Date September 2020 File Soakaway So4 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	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
720 Winter	0.3	0.3	25.2128	0.7128	2.1	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	3.93	442

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So4	
Date September 2020	Designed By KN	
File Soakaway So4 10yrs.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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.016

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.016

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So4	
Date September 2020	Designed By KN	
File Soakaway So4 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	6.0
Infil Coef - Sides (m/hr)	0.273300	Invert Level (m)	24.500
Safety Factor	3.0	Cover Level (m)	26.330
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.2		

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Romsey SO51 6DP	Soakaway So4	
Date September 2020	Designed By KN	
File Soakaway So4 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 97 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	0.4	0.4	25.6323	1.1323	3.5	0 K
30 Summer	0.5	0.5	25.9532	1.4532	4.5	0 K
60 Summer	0.6	0.6	26.1962	1.6962	5.3	0 K
120 Summer	0.7	0.7	26.3427	1.8427	5.7	0 K
180 Summer	0.7	0.7	26.3762	1.8762	5.9	0 K
240 Summer	0.7	0.7	26.3617	1.8617	5.8	0 K
360 Summer	0.7	0.7	26.2957	1.7957	5.6	0 K
480 Summer	0.6	0.6	26.2147	1.7147	5.3	0 K
600 Summer	0.6	0.6	26.1327	1.6327	5.1	0 K
720 Summer	0.6	0.6	26.0552	1.5552	4.9	0 K
15 Winter	0.5	0.5	25.7693	1.2692	4.0	0 K
30 Winter	0.6	0.6	26.1332	1.6332	5.1	0 K
60 Winter	0.7	0.7	26.4147	1.9147	6.0	0 K
120 Winter	0.8	0.8	26.5562	2.0562	6.4	0 K
180 Winter	0.8	0.8	26.5642	2.0642	6.4	0 K
240 Winter	0.7	0.7	26.5177	2.0177	6.3	0 K
360 Winter	0.7	0.7	26.3922	1.8922	5.9	0 K
480 Winter	0.7	0.7	26.2642	1.7642	5.5	0 K
600 Winter	0.6	0.6	26.1452	1.6452	5.1	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	22
30 Summer	84.53	36
60 Summer	54.37	62
120 Summer	33.76	92
180 Summer	25.15	126
240 Summer	20.26	160
360 Summer	14.92	228
480 Summer	12.00	294
600 Summer	10.13	360
720 Summer	8.81	424
15 Winter	125.44	22
30 Winter	84.53	35
60 Winter	54.37	62
120 Winter	33.76	96
180 Winter	25.15	134
240 Winter	20.26	172
360 Winter	14.92	244
480 Winter	12.00	312
600 Winter	10.13	378

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So4	
Date September 2020 File Soakaway So4 100+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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	0.6	0.6	26.0387	1.5387	4.8	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	8.81	446

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.016

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.016

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Unit 5B Tanners Court	Arundel Road	
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Romsey SO51 6DP	Soakaway So4	
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File Soakaway So4 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	6.0
Infil Coef - Sides (m/hr)	0.273300	Invert Level (m)	24.500
Safety Factor	3.0	Cover Level (m)	26.800
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.3	Cap Volume (m)	26.650

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Unit 5B Tanners Court	Arundel Road	
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File Soakaway So5 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 10 year Return Period

Half Drain Time : 90 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	0.2	0.2	25.2668	0.5667	1.6	0 K
30 Summer	0.3	0.3	25.4118	0.7118	2.0	0 K
60 Summer	0.3	0.3	25.5168	0.8168	2.4	0 K
120 Summer	0.3	0.3	25.5853	0.8853	2.5	0 K
180 Summer	0.3	0.3	25.6048	0.9048	2.6	0 K
240 Summer	0.3	0.3	25.6038	0.9038	2.6	0 K
360 Summer	0.3	0.3	25.5783	0.8783	2.5	0 K
480 Summer	0.3	0.3	25.5428	0.8428	2.4	0 K
600 Summer	0.3	0.3	25.5063	0.8063	2.3	0 K
720 Summer	0.3	0.3	25.4708	0.7708	2.2	0 K
15 Winter	0.2	0.2	25.3353	0.6353	1.8	0 K
30 Winter	0.3	0.3	25.5003	0.8003	2.3	0 K
60 Winter	0.3	0.3	25.6223	0.9223	2.7	0 K
120 Winter	0.4	0.4	25.6863	0.9863	2.8	0 K
180 Winter	0.4	0.4	25.6928	0.9928	2.9	0 K
240 Winter	0.4	0.4	25.6753	0.9753	2.8	0 K
360 Winter	0.3	0.3	25.6208	0.9208	2.7	0 K
480 Winter	0.3	0.3	25.5623	0.8623	2.5	0 K
600 Winter	0.3	0.3	25.5073	0.8073	2.3	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.77	22
30 Summer	36.22	36
60 Summer	23.03	60
120 Summer	14.29	90
180 Summer	10.72	126
240 Summer	8.72	160
360 Summer	6.50	226
480 Summer	5.28	294
600 Summer	4.49	358
720 Summer	3.93	422
15 Winter	54.77	22
30 Winter	36.22	35
60 Winter	23.03	62
120 Winter	14.29	96
180 Winter	10.72	134
240 Winter	8.72	170
360 Winter	6.50	242
480 Winter	5.28	310
600 Winter	4.49	378

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So5	
Date September 2020 File Soakaway So5 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	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
720 Winter	0.3	0.3	25.4573	0.7573	2.2	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	3.93	442

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Unit 5B Tanners Court	Arundel Road	
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Romsey SO51 6DP	Soakaway So5	
Date September 2020	Designed By KN	
File Soakaway So5 10yrs.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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.017

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.017

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Unit 5B Tanners Court	Arundel Road	
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Romsey SO51 6DP	Soakaway So5	
Date September 2020	Designed By KN	
File Soakaway So5 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	6.0
Infil Coef - Sides (m/hr)	0.273300	Invert Level (m)	24.700
Safety Factor	3.0	Cover Level (m)	26.430
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.2		

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So4	
Date September 2020	Designed By KN	
File Soakaway So5 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 97 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	0.4	0.4	25.9033	1.2033	3.8	0 K
30 Summer	0.6	0.6	26.2442	1.5442	4.8	0 K
60 Summer	0.7	0.7	26.5022	1.8022	5.6	0 K
120 Summer	0.7	0.7	26.6577	1.9577	6.1	0 K
180 Summer	0.7	0.7	26.6937	1.9937	6.2	0 K
240 Summer	0.7	0.7	26.6782	1.9782	6.2	0 K
360 Summer	0.7	0.7	26.6077	1.9077	6.0	0 K
480 Summer	0.7	0.7	26.5217	1.8217	5.7	0 K
600 Summer	0.6	0.6	26.4347	1.7347	5.4	0 K
720 Summer	0.6	0.6	26.3527	1.6527	5.2	0 K
15 Winter	0.5	0.5	26.0487	1.3487	4.2	0 K
30 Winter	0.6	0.6	26.4357	1.7357	5.4	0 K
60 Winter	0.8	0.8	26.7342	2.0342	6.3	0 K
120 Winter	0.8	0.8	26.8847	2.1847	6.8	0 K
180 Winter	0.8	0.8	26.8932	2.1932	6.8	0 K
240 Winter	0.8	0.8	26.8437	2.1437	6.7	0 K
360 Winter	0.7	0.7	26.7107	2.0107	6.3	0 K
480 Winter	0.7	0.7	26.5747	1.8747	5.8	0 K
600 Winter	0.6	0.6	26.4482	1.7482	5.5	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	22
30 Summer	84.53	36
60 Summer	54.37	62
120 Summer	33.76	92
180 Summer	25.15	126
240 Summer	20.26	160
360 Summer	14.92	228
480 Summer	12.00	294
600 Summer	10.13	360
720 Summer	8.81	424
15 Winter	125.44	22
30 Winter	84.53	35
60 Winter	54.37	62
120 Winter	33.76	96
180 Winter	25.15	134
240 Winter	20.26	172
360 Winter	14.92	244
480 Winter	12.00	312
600 Winter	10.13	378

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Date September 2020 File Soakaway So5 100+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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	0.6	0.6	26.3352	1.6352	5.1	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	8.81	446

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Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So4	
Date September 2020	Designed By KN	
File Soakaway So5 100+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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.017

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.017

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So4	
Date September 2020 File Soakaway So5 100+40%.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	6.0
Infil Coef - Sides (m/hr)	0.273300	Invert Level (m)	24.700
Safety Factor	3.0	Cover Level (m)	27.200
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.3	Cap Volume (m)	27.050

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So6	
Date September 2020	Designed By KN	
File Soakaway So6 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 10 year Return Period

Half Drain Time : 224 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	0.1	0.1	24.9773	0.2772	1.6	0 K
30 Summer	0.1	0.1	25.0588	0.3587	2.1	0 K
60 Summer	0.1	0.1	25.1373	0.4372	2.5	0 K
120 Summer	0.1	0.1	25.1972	0.4972	2.9	0 K
180 Summer	0.2	0.2	25.2193	0.5192	3.0	0 K
240 Summer	0.2	0.2	25.2323	0.5322	3.1	0 K
360 Summer	0.2	0.2	25.2463	0.5462	3.1	0 K
480 Summer	0.2	0.2	25.2498	0.5497	3.2	0 K
600 Summer	0.2	0.2	25.2473	0.5472	3.2	0 K
720 Summer	0.2	0.2	25.2418	0.5417	3.1	0 K
15 Winter	0.1	0.1	25.0108	0.3107	1.8	0 K
30 Winter	0.1	0.1	25.1023	0.4022	2.3	0 K
60 Winter	0.1	0.1	25.1908	0.4907	2.8	0 K
120 Winter	0.2	0.2	25.2608	0.5607	3.2	0 K
180 Winter	0.2	0.2	25.2838	0.5838	3.4	0 K
240 Winter	0.2	0.2	25.2963	0.5963	3.4	0 K
360 Winter	0.2	0.2	25.3048	0.6048	3.5	0 K
480 Winter	0.2	0.2	25.3008	0.6008	3.5	0 K
600 Winter	0.2	0.2	25.2908	0.5908	3.4	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.77	22
30 Summer	36.22	37
60 Summer	23.03	66
120 Summer	14.29	124
180 Summer	10.72	156
240 Summer	8.72	186
360 Summer	6.50	252
480 Summer	5.28	320
600 Summer	4.49	390
720 Summer	3.93	458
15 Winter	54.77	22
30 Winter	36.22	36
60 Winter	23.03	64
120 Winter	14.29	120
180 Winter	10.72	170
240 Winter	8.72	192
360 Winter	6.50	268
480 Winter	5.28	344
600 Winter	4.49	418

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So6	
Date September 2020 File Soakaway So6 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	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
720 Winter	0.2	0.2	25.2778	0.5778	3.3	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	3.93	488

Kazys Narbutas Consulting Limited		Page 3
Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So6	
Date September 2020	Designed By KN	
File Soakaway So6 10yrs.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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.016

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.016

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So6	
Date September 2020 File Soakaway So6 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	9.0
Infil Coef - Sides (m/hr)	0.148530	Invert Level (m)	24.700
Safety Factor	3.0	Cover Level (m)	25.900
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.6		

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So6	
Date September 2020	Designed By KN	
File Soakaway So6 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 224 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	0.2	0.2	25.3348	0.6348	3.7	0 K
30 Summer	0.2	0.2	25.5378	0.8378	4.8	0 K
60 Summer	0.3	0.3	25.7318	1.0318	5.9	0 K
120 Summer	0.3	0.3	25.8743	1.1743	6.8	0 K
180 Summer	0.4	0.4	25.9178	1.2178	7.0	0 K
240 Summer	0.4	0.4	25.9373	1.2373	7.1	0 K
360 Summer	0.4	0.4	25.9533	1.2533	7.2	0 K
480 Summer	0.4	0.4	25.9493	1.2493	7.2	0 K
600 Summer	0.4	0.4	25.9353	1.2353	7.1	0 K
720 Summer	0.4	0.4	25.9148	1.2148	7.0	0 K
15 Winter	0.2	0.2	25.4118	0.7118	4.1	0 K
30 Winter	0.3	0.3	25.6393	0.9393	5.4	0 K
60 Winter	0.3	0.3	25.8578	1.1578	6.7	0 K
120 Winter	0.4	0.4	26.0248	1.3247	7.6	0 K
180 Winter	0.4	0.4	26.0692	1.3692	7.9	0 K
240 Winter	0.4	0.4	26.0852	1.3852	8.0	0 K
360 Winter	0.4	0.4	26.0877	1.3877	8.0	0 K
480 Winter	0.4	0.4	26.0657	1.3657	7.9	0 K
600 Winter	0.4	0.4	26.0328	1.3327	7.7	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	22
30 Summer	84.53	37
60 Summer	54.37	66
120 Summer	33.76	124
180 Summer	25.15	156
240 Summer	20.26	186
360 Summer	14.92	252
480 Summer	12.00	320
600 Summer	10.13	390
720 Summer	8.81	458
15 Winter	125.44	22
30 Winter	84.53	36
60 Winter	54.37	64
120 Winter	33.76	120
180 Winter	25.15	170
240 Winter	20.26	192
360 Winter	14.92	268
480 Winter	12.00	344
600 Winter	10.13	418

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So6	
Date September 2020 File Soakaway So6 100+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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	0.4	0.4	25.9953	1.2952	7.5	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	8.81	488

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.016

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.016

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So6	
Date September 2020 File Soakaway So6 100+40%.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	9.0
Infil Coef - Sides (m/hr)	0.148530	Invert Level (m)	24.700
Safety Factor	3.0	Cover Level (m)	26.250
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.6	Cap Volume (m)	26.100

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So7	
Date September 2020	Designed By KN	
File Soakaway So7 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 10 year Return Period

Half Drain Time : 219 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	0.1	0.1	25.0118	0.3117	1.6	0 K
30 Summer	0.1	0.1	25.1033	0.4032	2.1	0 K
60 Summer	0.1	0.1	25.1908	0.4907	2.5	0 K
120 Summer	0.1	0.1	25.2578	0.5577	2.9	0 K
180 Summer	0.2	0.2	25.2823	0.5823	3.0	0 K
240 Summer	0.2	0.2	25.2968	0.5968	3.1	0 K
360 Summer	0.2	0.2	25.3118	0.6118	3.1	0 K
480 Summer	0.2	0.2	25.3153	0.6153	3.1	0 K
600 Summer	0.2	0.2	25.3123	0.6123	3.1	0 K
720 Summer	0.2	0.2	25.3053	0.6053	3.1	0 K
15 Winter	0.1	0.1	25.0493	0.3492	1.8	0 K
30 Winter	0.1	0.1	25.1523	0.4522	2.3	0 K
60 Winter	0.1	0.1	25.2513	0.5512	2.8	0 K
120 Winter	0.2	0.2	25.3293	0.6293	3.2	0 K
180 Winter	0.2	0.2	25.3538	0.6538	3.3	0 K
240 Winter	0.2	0.2	25.3678	0.6678	3.4	0 K
360 Winter	0.2	0.2	25.3773	0.6773	3.5	0 K
480 Winter	0.2	0.2	25.3718	0.6718	3.4	0 K
600 Winter	0.2	0.2	25.3598	0.6598	3.4	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.77	22
30 Summer	36.22	37
60 Summer	23.03	66
120 Summer	14.29	124
180 Summer	10.72	154
240 Summer	8.72	184
360 Summer	6.50	252
480 Summer	5.28	320
600 Summer	4.49	388
720 Summer	3.93	458
15 Winter	54.77	22
30 Winter	36.22	36
60 Winter	23.03	64
120 Winter	14.29	120
180 Winter	10.72	170
240 Winter	8.72	192
360 Winter	6.50	268
480 Winter	5.28	342
600 Winter	4.49	416

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So7	
Date September 2020 File Soakaway So7 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	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
720 Winter	0.2	0.2	25.3448	0.6448	3.3	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	3.93	488

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So7	
Date September 2020	Designed By KN	
File Soakaway So7 10yrs.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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.016

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.016

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So7	
Date September 2020	Designed By KN	
File Soakaway So7 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	8.0
Infil Coef - Sides (m/hr)	0.148530	Invert Level (m)	24.700
Safety Factor	3.0	Cover Level (m)	25.920
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.6		

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So7	
Date September 2020	Designed By KN	
File Soakaway So7 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 219 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	0.2	0.2	25.4138	0.7138	3.7	0 K
30 Summer	0.2	0.2	25.6413	0.9413	4.8	0 K
60 Summer	0.3	0.3	25.8588	1.1588	5.9	0 K
120 Summer	0.3	0.3	26.0173	1.3172	6.7	0 K
180 Summer	0.4	0.4	26.0652	1.3652	7.0	0 K
240 Summer	0.4	0.4	26.0867	1.3867	7.1	0 K
360 Summer	0.4	0.4	26.1037	1.4037	7.2	0 K
480 Summer	0.4	0.4	26.0982	1.3982	7.2	0 K
600 Summer	0.4	0.4	26.0812	1.3812	7.1	0 K
720 Summer	0.4	0.4	26.0577	1.3577	7.0	0 K
15 Winter	0.2	0.2	25.5003	0.8003	4.1	0 K
30 Winter	0.3	0.3	25.7558	1.0558	5.4	0 K
60 Winter	0.3	0.3	26.0008	1.3007	6.7	0 K
120 Winter	0.4	0.4	26.1857	1.4857	7.6	0 K
180 Winter	0.4	0.4	26.2337	1.5337	7.9	0 K
240 Winter	0.4	0.4	26.2522	1.5522	7.9	0 K
360 Winter	0.4	0.4	26.2532	1.5532	8.0	0 K
480 Winter	0.4	0.4	26.2272	1.5272	7.8	0 K
600 Winter	0.4	0.4	26.1887	1.4887	7.6	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	22
30 Summer	84.53	37
60 Summer	54.37	66
120 Summer	33.76	124
180 Summer	25.15	154
240 Summer	20.26	184
360 Summer	14.92	252
480 Summer	12.00	320
600 Summer	10.13	388
720 Summer	8.81	458
15 Winter	125.44	22
30 Winter	84.53	36
60 Winter	54.37	64
120 Winter	33.76	120
180 Winter	25.15	170
240 Winter	20.26	192
360 Winter	14.92	268
480 Winter	12.00	342
600 Winter	10.13	416

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So7	
Date September 2020 File Soakaway So7 100+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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	0.4	0.4	26.1457	1.4457	7.4	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	8.81	488

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So7	
Date September 2020	Designed By KN	
File Soakaway So7 100+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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.016

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.016

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So7	
Date September 2020	Designed By KN	
File Soakaway So7 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	8.0
Infil Coef - Sides (m/hr)	0.148530	Invert Level (m)	24.700
Safety Factor	3.0	Cover Level (m)	26.650
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.6	Cap Volume (m)	26.500

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So8	
Date September 2020	Designed By KN	
File Soakaway So8 10yrs.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 10 year Return Period

Half Drain Time : 219 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	0.1	0.1	24.7118	0.3117	1.6	0 K
30 Summer	0.1	0.1	24.8033	0.4032	2.1	0 K
60 Summer	0.1	0.1	24.8908	0.4907	2.5	0 K
120 Summer	0.1	0.1	24.9578	0.5577	2.9	0 K
180 Summer	0.2	0.2	24.9823	0.5823	3.0	0 K
240 Summer	0.2	0.2	24.9968	0.5968	3.1	0 K
360 Summer	0.2	0.2	25.0118	0.6118	3.1	0 K
480 Summer	0.2	0.2	25.0153	0.6153	3.1	0 K
600 Summer	0.2	0.2	25.0123	0.6123	3.1	0 K
720 Summer	0.2	0.2	25.0053	0.6053	3.1	0 K
15 Winter	0.1	0.1	24.7493	0.3492	1.8	0 K
30 Winter	0.1	0.1	24.8523	0.4522	2.3	0 K
60 Winter	0.1	0.1	24.9513	0.5512	2.8	0 K
120 Winter	0.2	0.2	25.0293	0.6293	3.2	0 K
180 Winter	0.2	0.2	25.0538	0.6538	3.3	0 K
240 Winter	0.2	0.2	25.0678	0.6678	3.4	0 K
360 Winter	0.2	0.2	25.0773	0.6773	3.5	0 K
480 Winter	0.2	0.2	25.0718	0.6718	3.4	0 K
600 Winter	0.2	0.2	25.0598	0.6598	3.4	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.77	22
30 Summer	36.22	37
60 Summer	23.03	66
120 Summer	14.29	124
180 Summer	10.72	154
240 Summer	8.72	184
360 Summer	6.50	252
480 Summer	5.28	320
600 Summer	4.49	388
720 Summer	3.93	458
15 Winter	54.77	22
30 Winter	36.22	36
60 Winter	23.03	64
120 Winter	14.29	120
180 Winter	10.72	170
240 Winter	8.72	192
360 Winter	6.50	268
480 Winter	5.28	342
600 Winter	4.49	416

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So8	
Date September 2020 File Soakaway So8 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	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
720 Winter	0.2	0.2	25.0448	0.6448	3.3	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	3.93	488

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So8	
Date September 2020	Designed By KN	
File Soakaway So8 10yrs.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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.016

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.016

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So8	
Date September 2020 File Soakaway So8 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	8.0
Infil Coef - Sides (m/hr)	0.148530	Invert Level (m)	24.400
Safety Factor	3.0	Cover Level (m)	25.920
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.6		

Kazys Narbutas Consulting Limited		Page 1
Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So8	
Date September 2020	Designed By KN	
File Soakaway So8 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 219 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	0.2	0.2	25.1138	0.7138	3.7	0 K
30 Summer	0.2	0.2	25.3413	0.9413	4.8	0 K
60 Summer	0.3	0.3	25.5588	1.1588	5.9	0 K
120 Summer	0.3	0.3	25.7173	1.3172	6.7	0 K
180 Summer	0.4	0.4	25.7652	1.3652	7.0	0 K
240 Summer	0.4	0.4	25.7867	1.3867	7.1	0 K
360 Summer	0.4	0.4	25.8037	1.4037	7.2	0 K
480 Summer	0.4	0.4	25.7982	1.3982	7.2	0 K
600 Summer	0.4	0.4	25.7812	1.3812	7.1	0 K
720 Summer	0.4	0.4	25.7577	1.3577	7.0	0 K
15 Winter	0.2	0.2	25.2003	0.8003	4.1	0 K
30 Winter	0.3	0.3	25.4558	1.0558	5.4	0 K
60 Winter	0.3	0.3	25.7008	1.3007	6.7	0 K
120 Winter	0.4	0.4	25.8857	1.4857	7.6	0 K
180 Winter	0.4	0.4	25.9337	1.5337	7.9	0 K
240 Winter	0.4	0.4	25.9617	1.5617	7.9	0 K
360 Winter	0.4	0.4	25.9677	1.5677	8.0	0 K
480 Winter	0.4	0.4	25.9272	1.5272	7.8	0 K
600 Winter	0.4	0.4	25.8887	1.4887	7.6	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	22
30 Summer	84.53	37
60 Summer	54.37	66
120 Summer	33.76	124
180 Summer	25.15	154
240 Summer	20.26	184
360 Summer	14.92	252
480 Summer	12.00	320
600 Summer	10.13	388
720 Summer	8.81	458
15 Winter	125.44	22
30 Winter	84.53	36
60 Winter	54.37	64
120 Winter	33.76	120
180 Winter	25.15	170
240 Winter	20.26	192
360 Winter	14.92	268
480 Winter	12.00	342
600 Winter	10.13	416

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So8	
Date September 2020 File Soakaway So8 100+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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	0.4	0.4	25.8457	1.4457	7.4	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	8.81	488

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.016

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.016

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So8	
Date September 2020	Designed By KN	
File Soakaway So8 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	8.0
Infil Coef - Sides (m/hr)	0.148530	Invert Level (m)	24.400
Safety Factor	3.0	Cover Level (m)	26.100
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.6	Cap Volume (m)	25.950

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So9	
Date September 2020 File Soakaway So9 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 10 year Return Period

Half Drain Time : 57 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	0.1	0.1	26.7958	0.3457	0.3	0 K
30 Summer	0.1	0.1	26.8708	0.4207	0.3	0 K
60 Summer	0.1	0.1	26.9198	0.4697	0.4	0 K
120 Summer	0.1	0.1	26.9453	0.4952	0.4	0 K
180 Summer	0.1	0.1	26.9408	0.4907	0.4	0 K
240 Summer	0.1	0.1	26.9268	0.4767	0.4	0 K
360 Summer	0.1	0.1	26.8938	0.4437	0.4	0 K
480 Summer	0.1	0.1	26.8623	0.4122	0.3	0 K
600 Summer	0.1	0.1	26.8348	0.3847	0.3	0 K
720 Summer	0.1	0.1	26.8113	0.3612	0.3	0 K
15 Winter	0.1	0.1	26.8383	0.3882	0.3	0 K
30 Winter	0.1	0.1	26.9243	0.4742	0.4	0 K
60 Winter	0.1	0.1	26.9753	0.5252	0.4	0 K
120 Winter	0.1	0.1	26.9898	0.5397	0.4	0 K
180 Winter	0.1	0.1	26.9713	0.5212	0.4	0 K
240 Winter	0.1	0.1	26.9453	0.4952	0.4	0 K
360 Winter	0.1	0.1	26.8938	0.4437	0.4	0 K
480 Winter	0.1	0.1	26.8503	0.4002	0.3	0 K
600 Winter	0.1	0.1	26.8143	0.3642	0.3	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	54.77	21
30 Summer	36.22	34
60 Summer	23.03	50
120 Summer	14.29	84
180 Summer	10.72	118
240 Summer	8.72	152
360 Summer	6.50	218
480 Summer	5.28	280
600 Summer	4.49	344
720 Summer	3.93	404
15 Winter	54.77	21
30 Winter	36.22	34
60 Winter	23.03	52
120 Winter	14.29	90
180 Winter	10.72	126
240 Winter	8.72	162
360 Winter	6.50	228
480 Winter	5.28	294
600 Winter	4.49	358

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So9	
Date September 2020 File Soakaway So9 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	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
720 Winter	0.1	0.1	26.7843	0.3342	0.3	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	3.93	420

Kazys Narbutas Consulting Limited		Page 3
Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So9	
Date September 2020	Designed By KN	
File Soakaway So9 10yrs.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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+0
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.003

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.003

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So9	
Date September 2020 File Soakaway So9 10yrs.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	2.0
Infil Coef - Sides (m/hr)	0.305960	Invert Level (m)	26.450
Safety Factor	3.0	Cover Level (m)	27.250
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.0		

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So9	
Date September 2020 File Soakaway So9 100+40%.SRC	Designed By KN Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 57 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	0.1	0.1	27.2418	0.7918	0.6	0 K
30 Summer	0.2	0.2	27.4323	0.9823	0.8	0 K
60 Summer	0.2	0.2	27.5588	1.1088	0.9	0 K
120 Summer	0.2	0.2	27.6193	1.1693	0.9	0 K
180 Summer	0.2	0.2	27.6003	1.1503	0.9	0 K
240 Summer	0.2	0.2	27.5578	1.1078	0.9	0 K
360 Summer	0.2	0.2	27.4678	1.0178	0.8	0 K
480 Summer	0.2	0.2	27.3878	0.9378	0.8	0 K
600 Summer	0.1	0.1	27.3188	0.8688	0.7	0 K
720 Summer	0.1	0.1	27.2598	0.8098	0.6	0 K
15 Winter	0.2	0.2	27.3388	0.8888	0.7	0 K
30 Winter	0.2	0.2	27.5568	1.1068	0.9	0 K
60 Winter	0.2	0.2	27.6898	1.2398	1.0	0 K
120 Winter	0.2	0.2	27.7253	1.2752	1.0	0 K
180 Winter	0.2	0.2	27.6728	1.2228	1.0	0 K
240 Winter	0.2	0.2	27.6008	1.1508	0.9	0 K
360 Winter	0.2	0.2	27.4688	1.0188	0.8	0 K
480 Winter	0.2	0.2	27.3603	0.9103	0.7	0 K
600 Winter	0.1	0.1	27.2718	0.8218	0.7	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	21
30 Summer	84.53	34
60 Summer	54.37	50
120 Summer	33.76	84
180 Summer	25.15	118
240 Summer	20.26	152
360 Summer	14.92	218
480 Summer	12.00	280
600 Summer	10.13	344
720 Summer	8.81	404
15 Winter	125.44	21
30 Winter	84.53	34
60 Winter	54.37	52
120 Winter	33.76	90
180 Winter	25.15	126
240 Winter	20.26	162
360 Winter	14.92	228
480 Winter	12.00	294
600 Winter	10.13	358

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Soakaway So9	
Date September 2020 File Soakaway So9 100+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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	0.1	0.1	27.1993	0.7493	0.6	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	8.81	420

Rainfall Details

Region	ENG+WAL	Shortest Storm (mins)	15
Return Period (years)	100	Longest Storm (mins)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.003

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.003

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Soakaway So9	
Date September 2020	Designed By KN	
File Soakaway So9 100+40%.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Trench Soakaway Details

Infil Coef - Base (m/hr)	0.000000	Length (m)	2.0
Infil Coef - Sides (m/hr)	0.305960	Invert Level (m)	26.450
Safety Factor	3.0	Cover Level (m)	27.900
Porosity	0.40	Slope (1:x)	0.0
Width (m)	1.0	Cap Volume (m)	27.750

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Permeable Access Road	
Date September 2020	Designed By KN	
File Permeable Access Road.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 30 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	1.0	1.0	25.8538	0.1537	2.3	0 K
30 Summer	1.2	1.2	25.8743	0.1742	2.9	0 K
60 Summer	1.3	1.3	25.8863	0.1862	3.3	0 K
120 Summer	1.3	1.3	25.8873	0.1872	3.4	0 K
180 Summer	1.2	1.2	25.8803	0.1802	3.1	0 K
240 Summer	1.2	1.2	25.8713	0.1712	2.8	0 K
360 Summer	1.1	1.1	25.8553	0.1552	2.3	0 K
480 Summer	1.0	1.0	25.8418	0.1418	1.9	0 K
600 Summer	0.9	0.9	25.8303	0.1303	1.6	0 K
720 Summer	0.8	0.8	25.8208	0.1208	1.4	0 K
15 Winter	1.1	1.1	25.8663	0.1662	2.7	0 K
30 Winter	1.3	1.3	25.8873	0.1872	3.4	0 K
60 Winter	1.3	1.3	25.8983	0.1982	3.8	0 K
120 Winter	1.3	1.3	25.8943	0.1942	3.6	0 K
180 Winter	1.2	1.2	25.8823	0.1822	3.2	0 K
240 Winter	1.2	1.2	25.8698	0.1697	2.8	0 K
360 Winter	1.0	1.0	25.8478	0.1478	2.1	0 K
480 Winter	0.9	0.9	25.8298	0.1298	1.6	0 K
600 Winter	0.8	0.8	25.8158	0.1158	1.3	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	20
30 Summer	84.53	30
60 Summer	54.37	48
120 Summer	33.76	82
180 Summer	25.15	114
240 Summer	20.26	146
360 Summer	14.92	210
480 Summer	12.00	270
600 Summer	10.13	330
720 Summer	8.81	390
15 Winter	125.44	20
30 Winter	84.53	32
60 Winter	54.37	50
120 Winter	33.76	86
180 Winter	25.15	122
240 Winter	20.26	154
360 Winter	14.92	218
480 Winter	12.00	280
600 Winter	10.13	340

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Permeable Access Road	
Date September 2020 File Permeable Access Road.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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	0.7	0.7	25.8043	0.1043	1.0	0 K
	Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)			
	720 Winter	8.81	400			

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Permeable Access Road	
Date September 2020	Designed By KN	
File Permeable Access Road.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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.015

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	4	8	0.015

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Permeable Access Road	
Date September 2020	Designed By KN	
File Permeable Access Road.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Porous Car Park Details

Infil Coef - Base (m/hr)	0.510100	Invert Level (m)	25.700
Membrane Percolation (mm/hr)	1000	Cover Level (m)	28.100
Safety Factor	10.0	Slope (1:x)	100.0
Porosity	0.40	Max Percolation (l/s)	40.0
Length (m)	30.0	Depression Storage (mm)	5
Width (m)	4.8	Evaporation (mm/day)	3

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Permeable Drives	
Date September 2020	Designed By KN	
File Permeable Drives.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

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

Half Drain Time : 34 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	1.1	1.1	25.8623	0.1622	2.6	0 K
30 Summer	1.3	1.3	25.8878	0.1877	3.5	0 K
60 Summer	1.5	1.5	25.9093	0.2092	4.4	0 K
120 Summer	1.6	1.6	25.9253	0.2252	5.1	0 K
180 Summer	1.6	1.6	25.9218	0.2217	4.9	0 K
240 Summer	1.5	1.5	25.9148	0.2147	4.6	0 K
360 Summer	1.4	1.4	25.9023	0.2022	4.1	0 K
480 Summer	1.4	1.4	25.8913	0.1912	3.7	0 K
600 Summer	1.3	1.3	25.8813	0.1812	3.3	0 K
720 Summer	1.2	1.2	25.8713	0.1712	2.9	0 K
15 Winter	1.2	1.2	25.8758	0.1757	3.1	0 K
30 Winter	1.4	1.4	25.9023	0.2022	4.1	0 K
60 Winter	1.6	1.6	25.9238	0.2237	5.0	0 K
120 Winter	1.7	1.7	25.9363	0.2362	5.6	0 K
180 Winter	1.6	1.6	25.9328	0.2327	5.4	0 K
240 Winter	1.6	1.6	25.9238	0.2237	5.0	0 K
360 Winter	1.5	1.5	25.9063	0.2062	4.2	0 K
480 Winter	1.3	1.3	25.8888	0.1887	3.6	0 K
600 Winter	1.2	1.2	25.8733	0.1732	3.0	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	125.44	72
30 Summer	84.53	80
60 Summer	54.37	96
120 Summer	33.76	130
180 Summer	25.15	162
240 Summer	20.26	194
360 Summer	14.92	252
480 Summer	12.00	312
600 Summer	10.13	372
720 Summer	8.81	432
15 Winter	125.44	72
30 Winter	84.53	81
60 Winter	54.37	100
120 Winter	33.76	132
180 Winter	25.15	168
240 Winter	20.26	196
360 Winter	14.92	256
480 Winter	12.00	318
600 Winter	10.13	378

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Unit 5B Tanners Court Tanners Lane, East Wellow Romsey SO51 6DP	Arundel Road Fontwell Permeable Drives	
Date September 2020 File Permeable Drives.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 Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
720 Winter	1.1	1.1	25.8593	0.1593	2.5	0 K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
720 Winter	8.81	438

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Permeable Drives	
Date September 2020	Designed By KN	
File Permeable Drives.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)	720
M5-60 (mm)	19.200	Summer Storms	Yes
Ratio-R	0.345	Winter Storms	Yes
Cv (Summer)	0.750	Climate Change %	+40
Cv (Winter)	0.840		

Time / Area Diagram

Total Area (ha) = 0.026

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.000	20	24	0.000	40	44	0.000
4	8	0.013	24	28	0.000	44	48	0.000
8	12	0.000	28	32	0.000	48	52	0.000
12	16	0.000	32	36	0.000	52	56	0.000
16	20	0.000	36	40	0.000	56	60	0.013

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Unit 5B Tanners Court	Arundel Road	
Tanners Lane, East Wellow	Fontwell	
Romsey SO51 6DP	Permeable Drives	
Date September 2020	Designed By KN	
File Permeable Drives.SRC	Checked By	
Micro Drainage	Source Control W.11.2	

Porous Car Park Details

Infil Coef - Base (m/hr)	0.510100	Invert Level (m)	25.700
Membrane Percolation (mm/hr)	1000	Cover Level (m)	26.400
Safety Factor	10.0	Slope (1:x)	100.0
Porosity	0.40	Max Percolation (l/s)	36.1
Length (m)	26.0	Depression Storage (mm)	5
Width (m)	5.0	Evaporation (mm/day)	3