

6150 Knights Court
 Solihull Parkway
 Birmingham B37 7WY

10391
 Adastral Park, Ipswich
 Catchment - A



Date June 2017
 File Cellular storage - Ca...

Designed by Brookbanks Con...
 Checked by AA

Micro Drainage

Source Control 2013.1.1

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

Half Drain Time : 819 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	0.427	0.427	0.1	3.6	O K
30 min Summer	0.556	0.556	0.1	4.8	O K
60 min Summer	0.685	0.685	0.1	5.9	O K
120 min Summer	0.801	0.801	0.1	6.8	O K
180 min Summer	0.856	0.856	0.1	7.3	O K
240 min Summer	0.885	0.885	0.1	7.6	O K
360 min Summer	0.914	0.914	0.1	7.8	O K
480 min Summer	0.919	0.919	0.1	7.9	O K
600 min Summer	0.914	0.914	0.1	7.8	O K
720 min Summer	0.907	0.907	0.1	7.8	O K
960 min Summer	0.889	0.889	0.1	7.6	O K
1440 min Summer	0.849	0.849	0.1	7.3	O K
2160 min Summer	0.785	0.785	0.1	6.7	O K
2880 min Summer	0.728	0.728	0.1	6.2	O K
4320 min Summer	0.628	0.628	0.1	5.4	O K
5760 min Summer	0.544	0.544	0.1	4.6	O K
7200 min Summer	0.471	0.471	0.1	4.0	O K
8640 min Summer	0.408	0.408	0.1	3.5	O K
10080 min Summer	0.353	0.353	0.1	3.0	O K
15 min Winter	0.479	0.479	0.1	4.1	O K
30 min Winter	0.624	0.624	0.1	5.3	O K
60 min Winter	0.769	0.769	0.1	6.6	O K
120 min Winter	0.903	0.903	0.1	7.7	O K
180 min Winter	0.968	0.968	0.1	8.3	O K
240 min Winter	1.020	1.020	0.1	8.6	O K
360 min Winter	1.350	1.350	0.1	8.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	141.940	0.0	26
30 min Summer	93.140	0.0	41
60 min Summer	58.167	0.0	70
120 min Summer	35.053	0.0	128
180 min Summer	25.698	0.0	188
240 min Summer	20.487	0.0	246
360 min Summer	14.897	0.0	364
480 min Summer	11.869	0.0	482
600 min Summer	9.943	0.0	564
720 min Summer	8.600	0.0	616
960 min Summer	6.835	0.0	740
1440 min Summer	4.937	0.0	1004
2160 min Summer	3.560	0.0	1416
2880 min Summer	2.820	0.0	1828
4320 min Summer	2.028	0.0	2640
5760 min Summer	1.603	0.0	3416
7200 min Summer	1.335	0.0	4184
8640 min Summer	1.149	0.0	4936
10080 min Summer	1.012	0.0	5656
15 min Winter	141.940	0.0	26
30 min Winter	93.140	0.0	40
60 min Winter	58.167	0.0	70
120 min Winter	35.053	0.0	126
180 min Winter	25.698	0.0	184
240 min Winter	20.487	0.0	242
360 min Winter	14.897	0.0	356

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

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
480 min Winter	1.465	1.465	0.1	9.0	O K
600 min Winter	1.462	1.462	0.1	9.0	O K
720 min Winter	1.387	1.387	0.1	8.9	O K
960 min Winter	1.172	1.172	0.1	8.7	O K
1440 min Winter	0.970	0.970	0.1	8.3	O K
2160 min Winter	0.882	0.882	0.1	7.5	O K
2880 min Winter	0.800	0.800	0.1	6.8	O K
4320 min Winter	0.658	0.658	0.1	5.6	O K
5760 min Winter	0.540	0.540	0.1	4.6	O K
7200 min Winter	0.442	0.442	0.1	3.8	O K
8640 min Winter	0.359	0.359	0.1	3.1	O K
10080 min Winter	0.289	0.289	0.1	2.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
480 min Winter	11.869	0.0	468
600 min Winter	9.943	0.0	578
720 min Winter	8.600	0.0	680
960 min Winter	6.835	0.0	772
1440 min Winter	4.937	0.0	1076
2160 min Winter	3.560	0.0	1536
2880 min Winter	2.820	0.0	1968
4320 min Winter	2.028	0.0	2816
5760 min Winter	1.603	0.0	3640
7200 min Winter	1.335	0.0	4408
8640 min Winter	1.149	0.0	5192
10080 min Winter	1.012	0.0	5952

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.500	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.014

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From:	To:	From:	To:	From:	To:
	(ha)		(ha)		(ha)
0	4 0.004	4	8 0.005	8	12 0.005

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Micro Drainage

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Model Details

Storage is Online Cover Level (m) 2.000

Cellular Storage Structure

Invert Level (m) 0.000 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.03710 Porosity 0.95
 Infiltration Coefficient Side (m/hr) 0.03710

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	9.0	9.0	1.000	9.0	21.0	1.001	0.0	21.0

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

Half Drain Time : 536 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	0.448	0.448	0.1	3.6	O K
30 min Summer	0.582	0.582	0.1	4.7	O K
60 min Summer	0.712	0.712	0.1	5.7	O K
120 min Summer	0.823	0.823	0.1	6.6	O K
180 min Summer	0.868	0.868	0.1	7.0	O K
240 min Summer	0.886	0.886	0.1	7.2	O K
360 min Summer	0.893	0.893	0.1	7.2	O K
480 min Summer	0.884	0.884	0.1	7.1	O K
600 min Summer	0.873	0.873	0.1	7.0	O K
720 min Summer	0.860	0.860	0.1	6.9	O K
960 min Summer	0.831	0.831	0.1	6.7	O K
1440 min Summer	0.771	0.771	0.1	6.2	O K
2160 min Summer	0.690	0.690	0.1	5.6	O K
2880 min Summer	0.620	0.620	0.1	5.0	O K
4320 min Summer	0.502	0.502	0.1	4.1	O K
5760 min Summer	0.407	0.407	0.1	3.3	O K
7200 min Summer	0.330	0.330	0.1	2.7	O K
8640 min Summer	0.266	0.266	0.1	2.1	O K
10080 min Summer	0.213	0.213	0.1	1.7	O K
15 min Winter	0.503	0.503	0.1	4.1	O K
30 min Winter	0.654	0.654	0.1	5.3	O K
60 min Winter	0.802	0.802	0.1	6.5	O K
120 min Winter	0.930	0.930	0.1	7.5	O K
180 min Winter	0.985	0.985	0.2	8.0	O K
240 min Winter	1.076	1.076	0.2	8.2	O K
360 min Winter	1.207	1.207	0.2	8.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	141.940	0.0	26
30 min Summer	93.140	0.0	41
60 min Summer	58.167	0.0	70
120 min Summer	35.053	0.0	128
180 min Summer	25.698	0.0	186
240 min Summer	20.487	0.0	244
360 min Summer	14.897	0.0	360
480 min Summer	11.869	0.0	412
600 min Summer	9.943	0.0	474
720 min Summer	8.600	0.0	538
960 min Summer	6.835	0.0	672
1440 min Summer	4.937	0.0	948
2160 min Summer	3.560	0.0	1364
2880 min Summer	2.820	0.0	1764
4320 min Summer	2.028	0.0	2552
5760 min Summer	1.603	0.0	3296
7200 min Summer	1.335	0.0	4040
8640 min Summer	1.149	0.0	4760
10080 min Summer	1.012	0.0	5456
15 min Winter	141.940	0.0	26
30 min Winter	93.140	0.0	40
60 min Winter	58.167	0.0	68
120 min Winter	35.053	0.0	126
180 min Winter	25.698	0.0	182
240 min Winter	20.487	0.0	240
360 min Winter	14.897	0.0	350

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

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
480 min Winter	1.139	1.139	0.2	8.2	O K
600 min Winter	1.000	1.000	0.2	8.1	O K
720 min Winter	0.986	0.986	0.2	8.0	O K
960 min Winter	0.949	0.949	0.1	7.7	O K
1440 min Winter	0.867	0.867	0.1	7.0	O K
2160 min Winter	0.751	0.751	0.1	6.1	O K
2880 min Winter	0.650	0.650	0.1	5.3	O K
4320 min Winter	0.487	0.487	0.1	3.9	O K
5760 min Winter	0.360	0.360	0.1	2.9	O K
7200 min Winter	0.261	0.261	0.1	2.1	O K
8640 min Winter	0.183	0.183	0.1	1.5	O K
10080 min Winter	0.121	0.121	0.1	1.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
480 min Winter	11.869	0.0	456
600 min Winter	9.943	0.0	492
720 min Winter	8.600	0.0	564
960 min Winter	6.835	0.0	720
1440 min Winter	4.937	0.0	1026
2160 min Winter	3.560	0.0	1460
2880 min Winter	2.820	0.0	1880
4320 min Winter	2.028	0.0	2688
5760 min Winter	1.603	0.0	3464
7200 min Winter	1.335	0.0	4192
8640 min Winter	1.149	0.0	4928
10080 min Winter	1.012	0.0	5560

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.500	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.014

Time (mins)	Area (ha)	Time (mins)	Area (ha)	Time (mins)	Area (ha)
From:	To:	From:	To:	From:	To:
0	4	4	8	8	12
	0.004		0.005		0.005

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Model Details

Storage is Online Cover Level (m) 2.000

Cellular Storage Structure

Invert Level (m) 0.000 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.05400 Porosity 0.95
 Infiltration Coefficient Side (m/hr) 0.05400

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	8.5	8.5	1.000	8.5	20.2	1.001	0.0	20.2

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Micro Drainage

Source Control 2013.1.1

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

Half Drain Time : 819 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	0.427	0.427	0.1	3.6	O K
30 min Summer	0.556	0.556	0.1	4.8	O K
60 min Summer	0.685	0.685	0.1	5.9	O K
120 min Summer	0.801	0.801	0.1	6.8	O K
180 min Summer	0.856	0.856	0.1	7.3	O K
240 min Summer	0.885	0.885	0.1	7.6	O K
360 min Summer	0.914	0.914	0.1	7.8	O K
480 min Summer	0.919	0.919	0.1	7.9	O K
600 min Summer	0.914	0.914	0.1	7.8	O K
720 min Summer	0.907	0.907	0.1	7.8	O K
960 min Summer	0.889	0.889	0.1	7.6	O K
1440 min Summer	0.849	0.849	0.1	7.3	O K
2160 min Summer	0.785	0.785	0.1	6.7	O K
2880 min Summer	0.728	0.728	0.1	6.2	O K
4320 min Summer	0.628	0.628	0.1	5.4	O K
5760 min Summer	0.544	0.544	0.1	4.6	O K
7200 min Summer	0.471	0.471	0.1	4.0	O K
8640 min Summer	0.408	0.408	0.1	3.5	O K
10080 min Summer	0.353	0.353	0.1	3.0	O K
15 min Winter	0.479	0.479	0.1	4.1	O K
30 min Winter	0.624	0.624	0.1	5.3	O K
60 min Winter	0.769	0.769	0.1	6.6	O K
120 min Winter	0.903	0.903	0.1	7.7	O K
180 min Winter	0.968	0.968	0.1	8.3	O K
240 min Winter	1.020	1.020	0.1	8.6	O K
360 min Winter	1.350	1.350	0.1	8.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	141.940	0.0	26
30 min Summer	93.140	0.0	41
60 min Summer	58.167	0.0	70
120 min Summer	35.053	0.0	128
180 min Summer	25.698	0.0	188
240 min Summer	20.487	0.0	246
360 min Summer	14.897	0.0	364
480 min Summer	11.869	0.0	482
600 min Summer	9.943	0.0	564
720 min Summer	8.600	0.0	616
960 min Summer	6.835	0.0	740
1440 min Summer	4.937	0.0	1004
2160 min Summer	3.560	0.0	1416
2880 min Summer	2.820	0.0	1828
4320 min Summer	2.028	0.0	2640
5760 min Summer	1.603	0.0	3416
7200 min Summer	1.335	0.0	4184
8640 min Summer	1.149	0.0	4936
10080 min Summer	1.012	0.0	5656
15 min Winter	141.940	0.0	26
30 min Winter	93.140	0.0	40
60 min Winter	58.167	0.0	70
120 min Winter	35.053	0.0	126
180 min Winter	25.698	0.0	184
240 min Winter	20.487	0.0	242
360 min Winter	14.897	0.0	356

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

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
480 min Winter	1.465	1.465	0.1	9.0	O K
600 min Winter	1.462	1.462	0.1	9.0	O K
720 min Winter	1.387	1.387	0.1	8.9	O K
960 min Winter	1.172	1.172	0.1	8.7	O K
1440 min Winter	0.970	0.970	0.1	8.3	O K
2160 min Winter	0.882	0.882	0.1	7.5	O K
2880 min Winter	0.800	0.800	0.1	6.8	O K
4320 min Winter	0.658	0.658	0.1	5.6	O K
5760 min Winter	0.540	0.540	0.1	4.6	O K
7200 min Winter	0.442	0.442	0.1	3.8	O K
8640 min Winter	0.359	0.359	0.1	3.1	O K
10080 min Winter	0.289	0.289	0.1	2.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
480 min Winter	11.869	0.0	468
600 min Winter	9.943	0.0	578
720 min Winter	8.600	0.0	680
960 min Winter	6.835	0.0	772
1440 min Winter	4.937	0.0	1076
2160 min Winter	3.560	0.0	1536
2880 min Winter	2.820	0.0	1968
4320 min Winter	2.028	0.0	2816
5760 min Winter	1.603	0.0	3640
7200 min Winter	1.335	0.0	4408
8640 min Winter	1.149	0.0	5192
10080 min Winter	1.012	0.0	5952

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.500	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.014

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From:	To:	From:	To:	From:	To:
	(ha)		(ha)		(ha)
0	4 0.004	4	8 0.005	8	12 0.005

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Model Details


Storage is Online Cover Level (m) 2.000

Cellular Storage Structure

Invert Level (m) 0.000 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.03710 Porosity 0.95
 Infiltration Coefficient Side (m/hr) 0.03710

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	9.0	9.0	1.000	9.0	21.0	1.001	0.0	21.0

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Solihull Parkway	Adastral Park, Ipswich	
Birmingham B37 7WY	Catchment - E	
Date June 2017	Designed by Brookbanks Con...	
File Cellular storage - Ca...	Checked by AA	
Micro Drainage	Source Control 2013.1.1	

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

Half Drain Time : 800 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	0.427	0.427	0.1	3.6	O K
30 min Summer	0.556	0.556	0.1	4.8	O K
60 min Summer	0.684	0.684	0.1	5.8	O K
120 min Summer	0.800	0.800	0.1	6.8	O K
180 min Summer	0.855	0.855	0.1	7.3	O K
240 min Summer	0.883	0.883	0.1	7.5	O K
360 min Summer	0.910	0.910	0.1	7.8	O K
480 min Summer	0.915	0.915	0.1	7.8	O K
600 min Summer	0.909	0.909	0.1	7.8	O K
720 min Summer	0.902	0.902	0.1	7.7	O K
960 min Summer	0.884	0.884	0.1	7.6	O K
1440 min Summer	0.842	0.842	0.1	7.2	O K
2160 min Summer	0.778	0.778	0.1	6.7	O K
2880 min Summer	0.720	0.720	0.1	6.2	O K
4320 min Summer	0.620	0.620	0.1	5.3	O K
5760 min Summer	0.535	0.535	0.1	4.6	O K
7200 min Summer	0.462	0.462	0.1	4.0	O K
8640 min Summer	0.399	0.399	0.1	3.4	O K
10080 min Summer	0.344	0.344	0.1	2.9	O K
15 min Winter	0.478	0.478	0.1	4.1	O K
30 min Winter	0.624	0.624	0.1	5.3	O K
60 min Winter	0.769	0.769	0.1	6.6	O K
120 min Winter	0.902	0.902	0.1	7.7	O K
180 min Winter	0.966	0.966	0.1	8.3	O K
240 min Winter	1.002	1.002	0.1	8.6	O K
360 min Winter	1.321	1.321	0.1	8.9	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	141.940	0.0	26
30 min Summer	93.140	0.0	41
60 min Summer	58.167	0.0	70
120 min Summer	35.053	0.0	128
180 min Summer	25.698	0.0	188
240 min Summer	20.487	0.0	246
360 min Summer	14.897	0.0	364
480 min Summer	11.869	0.0	480
600 min Summer	9.943	0.0	558
720 min Summer	8.600	0.0	612
960 min Summer	6.835	0.0	734
1440 min Summer	4.937	0.0	1000
2160 min Summer	3.560	0.0	1412
2880 min Summer	2.820	0.0	1824
4320 min Summer	2.028	0.0	2640
5760 min Summer	1.603	0.0	3408
7200 min Summer	1.335	0.0	4184
8640 min Summer	1.149	0.0	4936
10080 min Summer	1.012	0.0	5656
15 min Winter	141.940	0.0	26
30 min Winter	93.140	0.0	40
60 min Winter	58.167	0.0	70
120 min Winter	35.053	0.0	126
180 min Winter	25.698	0.0	184
240 min Winter	20.487	0.0	242
360 min Winter	14.897	0.0	356

6150 Knights Court
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10391
 Adastral Park, Ipswich
 Catchment - E



Date June 2017
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Micro Drainage

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

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
480 min Winter	1.428	1.428	0.1	9.0	O K
600 min Winter	1.416	1.416	0.1	9.0	O K
720 min Winter	1.333	1.333	0.1	8.9	O K
960 min Winter	1.118	1.118	0.1	8.7	O K
1440 min Winter	0.962	0.962	0.1	8.2	O K
2160 min Winter	0.873	0.873	0.1	7.5	O K
2880 min Winter	0.790	0.790	0.1	6.8	O K
4320 min Winter	0.647	0.647	0.1	5.5	O K
5760 min Winter	0.529	0.529	0.1	4.5	O K
7200 min Winter	0.431	0.431	0.1	3.7	O K
8640 min Winter	0.348	0.348	0.1	3.0	O K
10080 min Winter	0.278	0.278	0.1	2.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
480 min Winter	11.869	0.0	468
600 min Winter	9.943	0.0	576
720 min Winter	8.600	0.0	680
960 min Winter	6.835	0.0	768
1440 min Winter	4.937	0.0	1072
2160 min Winter	3.560	0.0	1532
2880 min Winter	2.820	0.0	1968
4320 min Winter	2.028	0.0	2816
5760 min Winter	1.603	0.0	3632
7200 min Winter	1.335	0.0	4400
8640 min Winter	1.149	0.0	5192
10080 min Winter	1.012	0.0	5944

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.500	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.014

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From:	To:	From:	To:	From:	To:
0	4 0.004	4	8 0.005	8	12 0.005

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Model Details

Storage is Online Cover Level (m) 2.000

Cellular Storage Structure

Invert Level (m) 0.000 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.03780 Porosity 0.95
 Infiltration Coefficient Side (m/hr) 0.03780

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	9.0	9.0	1.000	9.0	21.0	1.001	0.0	21.0

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Date June 2017
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Micro Drainage

Source Control 2013.1.1

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

Half Drain Time : 147 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	0.597	0.597	0.3	3.4	O K
30 min Summer	0.759	0.759	0.4	4.3	O K
60 min Summer	0.884	0.884	0.4	5.0	O K
120 min Summer	0.929	0.929	0.4	5.3	O K
180 min Summer	0.920	0.920	0.4	5.2	O K
240 min Summer	0.895	0.895	0.4	5.1	O K
360 min Summer	0.841	0.841	0.4	4.8	O K
480 min Summer	0.789	0.789	0.4	4.5	O K
600 min Summer	0.740	0.740	0.4	4.2	O K
720 min Summer	0.695	0.695	0.4	4.0	O K
960 min Summer	0.615	0.615	0.3	3.5	O K
1440 min Summer	0.484	0.484	0.3	2.8	O K
2160 min Summer	0.341	0.341	0.3	1.9	O K
2880 min Summer	0.238	0.238	0.2	1.4	O K
4320 min Summer	0.109	0.109	0.2	0.6	O K
5760 min Summer	0.051	0.051	0.2	0.3	O K
7200 min Summer	0.042	0.042	0.2	0.2	O K
8640 min Summer	0.036	0.036	0.1	0.2	O K
10080 min Summer	0.032	0.032	0.1	0.2	O K
15 min Winter	0.673	0.673	0.4	3.8	O K
30 min Winter	0.858	0.858	0.4	4.9	O K
60 min Winter	1.027	1.027	0.4	5.7	O K
120 min Winter	1.393	1.393	0.4	6.1	O K
180 min Winter	1.301	1.301	0.4	6.0	O K
240 min Winter	1.111	1.111	0.4	5.8	O K
360 min Winter	0.944	0.944	0.4	5.4	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	141.940	0.0	25
30 min Summer	93.140	0.0	38
60 min Summer	58.167	0.0	64
120 min Summer	35.053	0.0	108
180 min Summer	25.698	0.0	138
240 min Summer	20.487	0.0	172
360 min Summer	14.897	0.0	242
480 min Summer	11.869	0.0	310
600 min Summer	9.943	0.0	378
720 min Summer	8.600	0.0	446
960 min Summer	6.835	0.0	578
1440 min Summer	4.937	0.0	832
2160 min Summer	3.560	0.0	1200
2880 min Summer	2.820	0.0	1564
4320 min Summer	2.028	0.0	2256
5760 min Summer	1.603	0.0	2936
7200 min Summer	1.335	0.0	3672
8640 min Summer	1.149	0.0	4400
10080 min Summer	1.012	0.0	5120
15 min Winter	141.940	0.0	25
30 min Winter	93.140	0.0	38
60 min Winter	58.167	0.0	64
120 min Winter	35.053	0.0	118
180 min Winter	25.698	0.0	148
240 min Winter	20.487	0.0	184
360 min Winter	14.897	0.0	260

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

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
480 min Winter	0.867	0.867	0.4	4.9	O K
600 min Winter	0.797	0.797	0.4	4.5	O K
720 min Winter	0.732	0.732	0.4	4.2	O K
960 min Winter	0.620	0.620	0.3	3.5	O K
1440 min Winter	0.444	0.444	0.3	2.5	O K
2160 min Winter	0.263	0.263	0.2	1.5	O K
2880 min Winter	0.143	0.143	0.2	0.8	O K
4320 min Winter	0.046	0.046	0.2	0.3	O K
5760 min Winter	0.037	0.037	0.1	0.2	O K
7200 min Winter	0.030	0.030	0.1	0.2	O K
8640 min Winter	0.026	0.026	0.1	0.1	O K
10080 min Winter	0.023	0.023	0.1	0.1	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
480 min Winter	11.869	0.0	334
600 min Winter	9.943	0.0	406
720 min Winter	8.600	0.0	476
960 min Winter	6.835	0.0	614
1440 min Winter	4.937	0.0	874
2160 min Winter	3.560	0.0	1252
2880 min Winter	2.820	0.0	1596
4320 min Winter	2.028	0.0	2204
5760 min Winter	1.603	0.0	2928
7200 min Winter	1.335	0.0	3672
8640 min Winter	1.149	0.0	4352
10080 min Winter	1.012	0.0	5040

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.500	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.014

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From:	To:	From:	To:	From:	To:
	(ha)		(ha)		(ha)
0	4 0.004	4	8 0.005	8	12 0.005

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Model Details

Storage is Online Cover Level (m) 2.000

Cellular Storage Structure

Invert Level (m) 0.000 Safety Factor 2.0
 Infiltration Coefficient Base (m/hr) 0.20160 Porosity 0.95
 Infiltration Coefficient Side (m/hr) 0.20160

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	6.0	6.0	1.000	6.0	15.8	1.001	0.0	15.8

