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23 Elm Grove South Barnham Surface Water Drainage		
Date 18.4.19 File Geocell G1.SRCX	Designed by Checked by	
Micro Drainage	Source Control 2016.1	

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

Half Drain Time : 119 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m ³)	Status
15 min Summer	8.814	0.214	0.3	2.1	0 K
30 min Summer	8.875	0.275	0.3	2.7	0 K
60 min Summer	8.922	0.322	0.3	3.2	0 K
120 min Summer	8.942	0.342	0.3	3.4	0 K
180 min Summer	8.940	0.340	0.3	3.4	0 K
240 min Summer	8.931	0.331	0.3	3.3	0 K
360 min Summer	8.908	0.308	0.3	3.1	0 K
480 min Summer	8.885	0.285	0.3	2.8	0 K
600 min Summer	8.862	0.262	0.3	2.6	0 K
720 min Summer	8.841	0.241	0.3	2.4	0 K
960 min Summer	8.802	0.202	0.3	2.0	0 K
1440 min Summer	8.739	0.139	0.3	1.4	0 K
2160 min Summer	8.678	0.078	0.2	0.8	0 K
2880 min Summer	8.650	0.050	0.2	0.5	0 K
4320 min Summer	8.637	0.037	0.2	0.4	0 K
5760 min Summer	8.630	0.030	0.1	0.3	0 K
7200 min Summer	8.625	0.025	0.1	0.2	0 K
8640 min Summer	8.622	0.022	0.1	0.2	0 K
10080 min Summer	8.619	0.019	0.1	0.2	0 K
15 min Winter	8.841	0.241	0.3	2.4	0 K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Time-Peak (mins)
15 min Summer	124.633	0.0	18
30 min Summer	83.789	0.0	32
60 min Summer	53.779	0.0	60
120 min Summer	33.337	0.0	98
180 min Summer	24.832	0.0	132
240 min Summer	20.006	0.0	166
360 min Summer	14.706	0.0	234
480 min Summer	11.818	0.0	304
600 min Summer	9.966	0.0	370
720 min Summer	8.665	0.0	434
960 min Summer	6.943	0.0	562
1440 min Summer	5.071	0.0	808
2160 min Summer	3.696	0.0	1148
2880 min Summer	2.949	0.0	1472
4320 min Summer	2.142	0.0	2204
5760 min Summer	1.705	0.0	2936
7200 min Summer	1.427	0.0	3656
8640 min Summer	1.235	0.0	4376
10080 min Summer	1.093	0.0	5056
15 min Winter	124.633	0.0	18

23 Elm Grove South
Barnham
Surface Water Drainage



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Micro Drainage

Source Control 2016.1

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
30 min Winter	8.912	0.312	0.3	3.1	0 K
60 min Winter	8.969	0.369	0.3	3.7	0 K
120 min Winter	8.994	0.394	0.3	3.9	0 K
180 min Winter	8.990	0.390	0.3	3.9	0 K
240 min Winter	8.976	0.376	0.3	3.8	0 K
360 min Winter	8.942	0.342	0.3	3.4	0 K
480 min Winter	8.906	0.306	0.3	3.1	0 K
600 min Winter	8.872	0.272	0.3	2.7	0 K
720 min Winter	8.840	0.240	0.3	2.4	0 K
960 min Winter	8.784	0.184	0.3	1.8	0 K
1440 min Winter	8.698	0.098	0.2	1.0	0 K
2160 min Winter	8.646	0.046	0.2	0.5	0 K
2880 min Winter	8.637	0.037	0.2	0.4	0 K
4320 min Winter	8.627	0.027	0.1	0.3	0 K
5760 min Winter	8.622	0.022	0.1	0.2	0 K
7200 min Winter	8.618	0.018	0.1	0.2	0 K
8640 min Winter	8.616	0.016	0.1	0.2	0 K
10080 min Winter	8.614	0.014	0.1	0.1	0 K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	83.789	0.0	32
60 min Winter	53.779	0.0	60
120 min Winter	33.337	0.0	112
180 min Winter	24.832	0.0	140
240 min Winter	20.006	0.0	180
360 min Winter	14.706	0.0	254
480 min Winter	11.818	0.0	328
600 min Winter	9.966	0.0	398
720 min Winter	8.665	0.0	464
960 min Winter	6.943	0.0	596
1440 min Winter	5.071	0.0	826
2160 min Winter	3.696	0.0	1120
2880 min Winter	2.949	0.0	1468
4320 min Winter	2.142	0.0	2192
5760 min Winter	1.705	0.0	2928
7200 min Winter	1.427	0.0	3624
8640 min Winter	1.235	0.0	4312
10080 min Winter	1.093	0.0	5104

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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)	19.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.010

Time (mins)		Area (ha)
From:	To:	
0	4	0.010

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<u>Model Details</u> Storage is Online Cover Level (m) 9.500 <u>Cellular Storage Structure</u> Invert Level (m) 8.600 Infiltration Coefficient Base (m/hr) 0.22507 Infiltration Coefficient Side (m/hr) 0.22507 Safety Factor 3.0 Porosity 0.95 <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>10.5</td> <td>10.5</td> <td>0.500</td> <td>0.0</td> <td>15.7</td> </tr> <tr> <td>0.400</td> <td>10.5</td> <td>15.7</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	10.5	10.5	0.500	0.0	15.7	0.400	10.5	15.7			
Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)															
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