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Raven House 29 Linkfield Lane Surrey RH1 1SS		11557: Station Road, Barnsley Prelim SW Strategy Plot 1 Soakaway				
Date 12/06/2014 09:31 File Plot 1.srcx		Designed by TF Checked by				
Micro Drainage		Source Control 2014.1.1				
Summary of Results for 100 year Return Period (+30%)						
Half Drain Time : 50 minutes.						
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	
15 min Summer	62.552	0.802	0.6	2.4	O K	
30 min Summer	62.760	1.010	0.7	3.0	O K	
60 min Summer	62.893	1.143	0.7	3.4	O K	
120 min Summer	62.931	1.181	0.8	3.5	O K	
180 min Summer	62.884	1.134	0.7	3.4	O K	
240 min Summer	62.827	1.077	0.7	3.2	O K	
360 min Summer	62.719	0.969	0.7	2.9	O K	
480 min Summer	62.618	0.868	0.6	2.6	O K	
600 min Summer	62.529	0.779	0.6	2.3	O K	
720 min Summer	62.449	0.699	0.6	2.1	O K	
960 min Summer	62.317	0.567	0.5	1.7	O K	
1440 min Summer	62.123	0.373	0.4	1.1	O K	
2160 min Summer	61.940	0.190	0.4	0.6	O K	
2880 min Summer	61.835	0.085	0.3	0.3	O K	
4320 min Summer	61.791	0.041	0.3	0.1	O K	
5760 min Summer	61.783	0.033	0.2	0.1	O K	
7200 min Summer	61.778	0.028	0.2	0.1	O K	
8640 min Summer	61.775	0.025	0.2	0.1	O K	
10080 min Summer	61.772	0.022	0.1	0.1	O K	
15 min Winter	62.659	0.909	0.6	2.7	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
15 min Summer	116.002	0.0	17			
30 min Summer	79.998	0.0	30			
60 min Summer	52.662	0.0	48			
120 min Summer	33.322	0.0	82			
180 min Summer	24.998	0.0	116			
240 min Summer	20.313	0.0	150			
360 min Summer	15.144	0.0	218			
480 min Summer	12.271	0.0	282			
600 min Summer	10.413	0.0	346			
720 min Summer	9.099	0.0	410			
960 min Summer	7.345	0.0	532			
1440 min Summer	5.419	0.0	778			
2160 min Summer	3.986	0.0	1128			
2880 min Summer	3.200	0.0	1472			
4320 min Summer	2.349	0.0	2152			
5760 min Summer	1.888	0.0	2864			
7200 min Summer	1.594	0.0	3656			
8640 min Summer	1.389	0.0	4320			
10080 min Summer	1.237	0.0	5136			
15 min Winter	116.002	0.0	17			
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Summary of Results for 100 year Return Period (+30%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	62.905	1.155	0.7	3.5	O K
60 min Winter	63.057	1.307	0.8	3.9	O K
120 min Winter	63.084	1.334	0.8	4.0	O K
180 min Winter	63.002	1.252	0.8	3.8	O K
240 min Winter	62.909	1.159	0.7	3.5	O K
360 min Winter	62.742	0.992	0.7	3.0	O K
480 min Winter	62.598	0.848	0.6	2.5	O K
600 min Winter	62.476	0.726	0.6	2.2	O K
720 min Winter	62.372	0.622	0.5	1.9	O K
960 min Winter	62.205	0.455	0.5	1.4	O K
1440 min Winter	61.979	0.229	0.4	0.7	O K
2160 min Winter	61.802	0.052	0.3	0.2	O K
2880 min Winter	61.791	0.041	0.2	0.1	O K
4320 min Winter	61.780	0.030	0.2	0.1	O K
5760 min Winter	61.774	0.024	0.1	0.1	O K
7200 min Winter	61.770	0.020	0.1	0.1	O K
8640 min Winter	61.768	0.018	0.1	0.1	O K
10080 min Winter	61.766	0.016	0.1	0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	79.998	0.0	30		
60 min Winter	52.662	0.0	50		
120 min Winter	33.322	0.0	88		
180 min Winter	24.998	0.0	126		
240 min Winter	20.313	0.0	162		
360 min Winter	15.144	0.0	230		
480 min Winter	12.271	0.0	298		
600 min Winter	10.413	0.0	362		
720 min Winter	9.099	0.0	428		
960 min Winter	7.345	0.0	552		
1440 min Winter	5.419	0.0	794		
2160 min Winter	3.986	0.0	1104		
2880 min Winter	3.200	0.0	1436		
4320 min Winter	2.349	0.0	2196		
5760 min Winter	1.888	0.0	2872		
7200 min Winter	1.594	0.0	3608		
8640 min Winter	1.389	0.0	4256		
10080 min Winter	1.237	0.0	5128		
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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)	20.000	Shortest Storm (mins)	15
Ratio R	0.300	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+30

Time Area Diagram

Total Area (ha) 0.013

Time (mins)	Area
From:	To: (ha)
0	4 0.013

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Micro Drainage Source Control 2014.1.1																						
<u>Model Details</u> Storage is Online Cover Level (m) 64.250 <u>Trench Soakaway Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.20400</td> <td>Trench Width (m)</td> <td>2.0</td> </tr> <tr> <td>Infiltration Coefficient Side (m/hr)</td> <td>0.20400</td> <td>Trench Length (m)</td> <td>5.0</td> </tr> <tr> <td>Safety Factor</td> <td>2.0</td> <td>Slope (1:X)</td> <td>0.0</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> <td>Cap Volume Depth (m)</td> <td>0.000</td> </tr> <tr> <td>Invert Level (m)</td> <td>61.750</td> <td>Cap Infiltration Depth (m)</td> <td>1.500</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.20400	Trench Width (m)	2.0	Infiltration Coefficient Side (m/hr)	0.20400	Trench Length (m)	5.0	Safety Factor	2.0	Slope (1:X)	0.0	Porosity	0.30	Cap Volume Depth (m)	0.000	Invert Level (m)	61.750	Cap Infiltration Depth (m)	1.500
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