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Raven House 29 Linkfield Lane Surrey RH1 1SS		11557: Station Road, Barnsley Prelim SW Strategy Plot 2&3 Soakaway			
Date 12/06/2014 09:37 File Plots 2&3.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 : 54 minutes.					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	64.316	0.816	0.9	3.9	O K
30 min Summer	64.533	1.033	1.0	5.0	O K
60 min Summer	64.673	1.173	1.1	5.6	O K
120 min Summer	64.718	1.218	1.1	5.8	O K
180 min Summer	64.675	1.175	1.1	5.6	O K
240 min Summer	64.620	1.120	1.1	5.4	O K
360 min Summer	64.513	1.013	1.0	4.9	O K
480 min Summer	64.413	0.913	1.0	4.4	O K
600 min Summer	64.323	0.823	0.9	4.0	O K
720 min Summer	64.242	0.742	0.9	3.6	O K
960 min Summer	64.104	0.604	0.8	2.9	O K
1440 min Summer	63.902	0.402	0.7	1.9	O K
2160 min Summer	63.706	0.206	0.6	1.0	O K
2880 min Summer	63.593	0.093	0.5	0.4	O K
4320 min Summer	63.542	0.042	0.4	0.2	O K
5760 min Summer	63.534	0.034	0.3	0.2	O K
7200 min Summer	63.529	0.029	0.3	0.1	O K
8640 min Summer	63.525	0.025	0.2	0.1	O K
10080 min Summer	63.522	0.022	0.2	0.1	O K
15 min Winter	64.425	0.925	1.0	4.4	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	31		
60 min Summer	52.662	0.0	48		
120 min Summer	33.322	0.0	84		
180 min Summer	24.998	0.0	118		
240 min Summer	20.313	0.0	152		
360 min Summer	15.144	0.0	220		
480 min Summer	12.271	0.0	284		
600 min Summer	10.413	0.0	350		
720 min Summer	9.099	0.0	412		
960 min Summer	7.345	0.0	538		
1440 min Summer	5.419	0.0	780		
2160 min Summer	3.986	0.0	1144		
2880 min Summer	3.200	0.0	1476		
4320 min Summer	2.349	0.0	2188		
5760 min Summer	1.888	0.0	2888		
7200 min Summer	1.594	0.0	3584		
8640 min Summer	1.389	0.0	4264		
10080 min Summer	1.237	0.0	4984		
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	64.680	1.180	1.1	5.7	O K
60 min Winter	64.843	1.343	1.2	6.4	O K
120 min Winter	64.882	1.382	1.2	6.6	O K
180 min Winter	64.806	1.306	1.2	6.3	O K
240 min Winter	64.715	1.215	1.1	5.8	O K
360 min Winter	64.550	1.050	1.0	5.0	O K
480 min Winter	64.405	0.905	1.0	4.3	O K
600 min Winter	64.279	0.779	0.9	3.7	O K
720 min Winter	64.170	0.670	0.8	3.2	O K
960 min Winter	63.995	0.495	0.7	2.4	O K
1440 min Winter	63.753	0.253	0.6	1.2	O K
2160 min Winter	63.557	0.057	0.5	0.3	O K
2880 min Winter	63.541	0.041	0.4	0.2	O K
4320 min Winter	63.530	0.030	0.3	0.1	O K
5760 min Winter	63.525	0.025	0.2	0.1	O K
7200 min Winter	63.521	0.021	0.2	0.1	O K
8640 min Winter	63.518	0.018	0.2	0.1	O K
10080 min Winter	63.516	0.016	0.2	0.1	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	90		
180 min Winter	24.998	0.0	126		
240 min Winter	20.313	0.0	164		
360 min Winter	15.144	0.0	234		
480 min Winter	12.271	0.0	300		
600 min Winter	10.413	0.0	368		
720 min Winter	9.099	0.0	432		
960 min Winter	7.345	0.0	558		
1440 min Winter	5.419	0.0	796		
2160 min Winter	3.986	0.0	1124		
2880 min Winter	3.200	0.0	1448		
4320 min Winter	2.349	0.0	2164		
5760 min Winter	1.888	0.0	2888		
7200 min Winter	1.594	0.0	3608		
8640 min Winter	1.389	0.0	4408		
10080 min Winter	1.237	0.0	5080		
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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) 0.021

Time (mins)	Area
From:	To: (ha)
0	4 0.021

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Micro Drainage Source Control 2014.1.1																						
<u>Model Details</u> Storage is Online Cover Level (m) 66.000 <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>8.0</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>63.500</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)	8.0	Safety Factor	2.0	Slope (1:X)	0.0	Porosity	0.30	Cap Volume Depth (m)	0.000	Invert Level (m)	63.500	Cap Infiltration Depth (m)	1.500
Infiltration Coefficient Base (m/hr)	0.20400	Trench Width (m)	2.0																			
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Event: 120 min Winter

