

Odyssey					Page 1
Tuscany House		Stakers Farm, Yapton			
White Hart Lane		1 in 100			
Basingstoke RG21 4AF		inc basin area			
Date 26/07/2020 22:19		Designed by AK			
File Infiltration Basin_70		Checked by			
Micro Drainage		Source Control 2020.1			
Summary of Results for 100 year Return Period (+40%)					
Half Drain Time : 3661 minutes.					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	0.152	0.152	1.2	179.1	O K
30 min Summer	0.202	0.202	1.2	239.9	O K
60 min Summer	0.256	0.256	1.2	307.4	O K
120 min Summer	0.299	0.299	1.3	361.9	O K
180 min Summer	0.325	0.325	1.3	394.8	Flood Risk
240 min Summer	0.342	0.342	1.3	417.1	Flood Risk
360 min Summer	0.363	0.363	1.3	444.2	Flood Risk
480 min Summer	0.376	0.376	1.3	461.4	Flood Risk
600 min Summer	0.385	0.385	1.3	473.3	Flood Risk
720 min Summer	0.392	0.392	1.3	481.7	Flood Risk
960 min Summer	0.400	0.400	1.4	492.1	Flood Risk
1440 min Summer	0.406	0.406	1.4	500.6	Flood Risk
2160 min Summer	0.406	0.406	1.4	500.4	Flood Risk
2880 min Summer	0.401	0.401	1.4	494.1	Flood Risk
4320 min Summer	0.396	0.396	1.3	487.4	Flood Risk
5760 min Summer	0.394	0.394	1.3	484.9	Flood Risk
7200 min Summer	0.395	0.395	1.3	485.7	Flood Risk
8640 min Summer	0.397	0.397	1.3	488.2	Flood Risk
10080 min Summer	0.400	0.400	1.4	492.0	Flood Risk
15 min Winter	0.170	0.170	1.2	200.7	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
15 min Summer	141.164	0.0	23		
30 min Summer	94.700	0.0	37		
60 min Summer	60.903	0.0	68		
120 min Summer	36.128	0.0	126		
180 min Summer	26.473	0.0	186		
240 min Summer	21.126	0.0	246		
360 min Summer	15.214	0.0	364		
480 min Summer	12.016	0.0	484		
600 min Summer	9.993	0.0	604		
720 min Summer	8.590	0.0	724		
960 min Summer	6.756	0.0	962		
1440 min Summer	4.823	0.0	1442		
2160 min Summer	3.462	0.0	2160		
2880 min Summer	2.754	0.0	2736		
4320 min Summer	2.025	0.0	3416		
5760 min Summer	1.648	0.0	4200		
7200 min Summer	1.419	0.0	5040		
8640 min Summer	1.264	0.0	5880		
10080 min Summer	1.153	0.0	6752		
15 min Winter	141.164	0.0	23		
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<u>Summary of Results for 100 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	0.225	0.225	1.2	268.9	O K
60 min Winter	0.286	0.286	1.3	344.7	O K
120 min Winter	0.334	0.334	1.3	406.0	Flood Risk
180 min Winter	0.362	0.362	1.3	443.3	Flood Risk
240 min Winter	0.382	0.382	1.3	468.7	Flood Risk
360 min Winter	0.405	0.405	1.4	499.8	Flood Risk
480 min Winter	0.421	0.421	1.4	519.9	Flood Risk
600 min Winter	0.431	0.431	1.4	533.9	Flood Risk
720 min Winter	0.439	0.439	1.4	544.2	Flood Risk
960 min Winter	0.449	0.449	1.4	557.4	Flood Risk
1440 min Winter	0.458	0.458	1.4	570.3	Flood Risk
2160 min Winter	0.462	0.462	1.4	575.3	Flood Risk
2880 min Winter	0.461	0.461	1.4	573.3	Flood Risk
4320 min Winter	0.453	0.453	1.4	563.6	Flood Risk
5760 min Winter	0.450	0.450	1.4	559.6	Flood Risk
7200 min Winter	0.449	0.449	1.4	558.3	Flood Risk
8640 min Winter	0.449	0.449	1.4	557.9	Flood Risk
10080 min Winter	0.450	0.450	1.4	558.6	Flood Risk
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	94.700	0.0	37		
60 min Winter	60.903	0.0	66		
120 min Winter	36.128	0.0	124		
180 min Winter	26.473	0.0	184		
240 min Winter	21.126	0.0	242		
360 min Winter	15.214	0.0	360		
480 min Winter	12.016	0.0	478		
600 min Winter	9.993	0.0	596		
720 min Winter	8.590	0.0	714		
960 min Winter	6.756	0.0	950		
1440 min Winter	4.823	0.0	1412		
2160 min Winter	3.462	0.0	2096		
2880 min Winter	2.754	0.0	2764		
4320 min Winter	2.025	0.0	3936		
5760 min Winter	1.648	0.0	4488		
7200 min Winter	1.419	0.0	5408		
8640 min Winter	1.264	0.0	6392		
10080 min Winter	1.153	0.0	7264		
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<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FEH</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> </tr> <tr> <td>FEH Rainfall Version</td> <td>2013</td> </tr> <tr> <td>Site Location</td> <td>GB 497682 103581 SU 97682 03581</td> </tr> <tr> <td>Data Type</td> <td>Point</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> </tr> <tr> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Climate Change %</td> <td>+40</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.681 <table> <thead> <tr> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From:</th> <th>To: (ha)</th> <th>From:</th> <th>To: (ha)</th> </tr> </thead> <tbody> <tr> <td>0</td> <td>4 0.553</td> <td>4</td> <td>8 0.128</td> </tr> </tbody> </table>			Rainfall Model	FEH	Return Period (years)	100	FEH Rainfall Version	2013	Site Location	GB 497682 103581 SU 97682 03581	Data Type	Point	Summer Storms	Yes	Winter Storms	Yes	Cv (Summer)	0.750	Cv (Winter)	0.840	Shortest Storm (mins)	15	Longest Storm (mins)	10080	Climate Change %	+40	Time (mins)	Area	Time (mins)	Area	From:	To: (ha)	From:	To: (ha)	0	4 0.553	4	8 0.128
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Model Details

Storage is Online Cover Level (m) 0.600

Infiltration Basin Structure

Invert Level (m) 0.000 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00648 Porosity 1.00
Infiltration Coefficient Side (m/hr) 0.00648

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	1146.0	0.600	1410.0

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