

Odyssey		Page 1																																																																																																																																																																																																																		
Tuscany House	Stakers Farm, Yapton																																																																																																																																																																																																																			
White Hart Lane	19-156																																																																																																																																																																																																																			
Baskingstoke RG21 4AF	Road 2 and Plots 23,25-28_RevB																																																																																																																																																																																																																			
Date 10/12/2020 14:56	Designed by AK																																																																																																																																																																																																																			
File Road 2_including Plots	Checked by																																																																																																																																																																																																																			
XP Solutions	Source Control 2020.1																																																																																																																																																																																																																			
<u>Summary of Results for 10 year Return Period (+40%)</u> Half Drain Time : 1418 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>0.049</td><td>0.049</td><td>0.3</td><td>15.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>0.066</td><td>0.066</td><td>0.3</td><td>21.1</td><td>O K</td></tr><tr><td>60 min Summer</td><td>0.084</td><td>0.084</td><td>0.3</td><td>26.9</td><td>O K</td></tr><tr><td>120 min Summer</td><td>0.104</td><td>0.104</td><td>0.3</td><td>33.2</td><td>O K</td></tr><tr><td>180 min Summer</td><td>0.116</td><td>0.116</td><td>0.3</td><td>36.9</td><td>Flood Risk</td></tr><tr><td>240 min Summer</td><td>0.123</td><td>0.123</td><td>0.3</td><td>39.3</td><td>Flood Risk</td></tr><tr><td>360 min Summer</td><td>0.132</td><td>0.132</td><td>0.3</td><td>42.0</td><td>Flood Risk</td></tr><tr><td>480 min Summer</td><td>0.136</td><td>0.136</td><td>0.3</td><td>43.4</td><td>Flood Risk</td></tr><tr><td>600 min Summer</td><td>0.138</td><td>0.138</td><td>0.3</td><td>44.1</td><td>Flood Risk</td></tr><tr><td>720 min Summer</td><td>0.139</td><td>0.139</td><td>0.3</td><td>44.4</td><td>Flood Risk</td></tr><tr><td>960 min Summer</td><td>0.139</td><td>0.139</td><td>0.3</td><td>44.3</td><td>Flood Risk</td></tr><tr><td>1440 min Summer</td><td>0.136</td><td>0.136</td><td>0.3</td><td>43.5</td><td>Flood Risk</td></tr><tr><td>2160 min Summer</td><td>0.133</td><td>0.133</td><td>0.3</td><td>42.4</td><td>Flood Risk</td></tr><tr><td>2880 min Summer</td><td>0.130</td><td>0.130</td><td>0.3</td><td>41.5</td><td>Flood Risk</td></tr><tr><td>4320 min Summer</td><td>0.125</td><td>0.125</td><td>0.3</td><td>40.0</td><td>Flood Risk</td></tr><tr><td>5760 min Summer</td><td>0.121</td><td>0.121</td><td>0.3</td><td>38.7</td><td>Flood Risk</td></tr><tr><td>7200 min Summer</td><td>0.118</td><td>0.118</td><td>0.3</td><td>37.6</td><td>Flood Risk</td></tr><tr><td>8640 min Summer</td><td>0.115</td><td>0.115</td><td>0.3</td><td>36.8</td><td>Flood Risk</td></tr><tr><td>10080 min Summer</td><td>0.113</td><td>0.113</td><td>0.3</td><td>36.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>0.056</td><td>0.056</td><td>0.3</td><td>17.8</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>87.620</td><td>0.0</td><td>19</td></tr><tr><td>30 min Summer</td><td>57.683</td><td>0.0</td><td>34</td></tr><tr><td>60 min Summer</td><td>36.448</td><td>0.0</td><td>64</td></tr><tr><td>120 min Summer</td><td>22.639</td><td>0.0</td><td>124</td></tr><tr><td>180 min Summer</td><td>16.928</td><td>0.0</td><td>182</td></tr><tr><td>240 min Summer</td><td>13.676</td><td>0.0</td><td>242</td></tr><tr><td>360 min Summer</td><td>10.003</td><td>0.0</td><td>362</td></tr><tr><td>480 min Summer</td><td>7.960</td><td>0.0</td><td>482</td></tr><tr><td>600 min Summer</td><td>6.652</td><td>0.0</td><td>602</td></tr><tr><td>720 min Summer</td><td>5.738</td><td>0.0</td><td>720</td></tr><tr><td>960 min Summer</td><td>4.539</td><td>0.0</td><td>960</td></tr><tr><td>1440 min Summer</td><td>3.269</td><td>0.0</td><td>1186</td></tr><tr><td>2160 min Summer</td><td>2.374</td><td>0.0</td><td>1556</td></tr><tr><td>2880 min Summer</td><td>1.907</td><td>0.0</td><td>1960</td></tr><tr><td>4320 min Summer</td><td>1.430</td><td>0.0</td><td>2808</td></tr><tr><td>5760 min Summer</td><td>1.183</td><td>0.0</td><td>3632</td></tr><tr><td>7200 min Summer</td><td>1.034</td><td>0.0</td><td>4400</td></tr><tr><td>8640 min Summer</td><td>0.933</td><td>0.0</td><td>5264</td></tr><tr><td>10080 min Summer</td><td>0.861</td><td>0.0</td><td>6048</td></tr><tr><td>15 min Winter</td><td>87.620</td><td>0.0</td><td>19</td></tr></table>			Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	0.049	0.049	0.3	15.7	O K	30 min Summer	0.066	0.066	0.3	21.1	O K	60 min Summer	0.084	0.084	0.3	26.9	O K	120 min Summer	0.104	0.104	0.3	33.2	O K	180 min Summer	0.116	0.116	0.3	36.9	Flood Risk	240 min Summer	0.123	0.123	0.3	39.3	Flood Risk	360 min Summer	0.132	0.132	0.3	42.0	Flood Risk	480 min Summer	0.136	0.136	0.3	43.4	Flood Risk	600 min Summer	0.138	0.138	0.3	44.1	Flood Risk	720 min Summer	0.139	0.139	0.3	44.4	Flood Risk	960 min Summer	0.139	0.139	0.3	44.3	Flood Risk	1440 min Summer	0.136	0.136	0.3	43.5	Flood Risk	2160 min Summer	0.133	0.133	0.3	42.4	Flood Risk	2880 min Summer	0.130	0.130	0.3	41.5	Flood Risk	4320 min Summer	0.125	0.125	0.3	40.0	Flood Risk	5760 min Summer	0.121	0.121	0.3	38.7	Flood Risk	7200 min Summer	0.118	0.118	0.3	37.6	Flood Risk	8640 min Summer	0.115	0.115	0.3	36.8	Flood Risk	10080 min Summer	0.113	0.113	0.3	36.1	O K	15 min Winter	0.056	0.056	0.3	17.8	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	87.620	0.0	19	30 min Summer	57.683	0.0	34	60 min Summer	36.448	0.0	64	120 min Summer	22.639	0.0	124	180 min Summer	16.928	0.0	182	240 min Summer	13.676	0.0	242	360 min Summer	10.003	0.0	362	480 min Summer	7.960	0.0	482	600 min Summer	6.652	0.0	602	720 min Summer	5.738	0.0	720	960 min Summer	4.539	0.0	960	1440 min Summer	3.269	0.0	1186	2160 min Summer	2.374	0.0	1556	2880 min Summer	1.907	0.0	1960	4320 min Summer	1.430	0.0	2808	5760 min Summer	1.183	0.0	3632	7200 min Summer	1.034	0.0	4400	8640 min Summer	0.933	0.0	5264	10080 min Summer	0.861	0.0	6048	15 min Winter	87.620	0.0	19
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																															
15 min Summer	0.049	0.049	0.3	15.7	O K																																																																																																																																																																																																															
30 min Summer	0.066	0.066	0.3	21.1	O K																																																																																																																																																																																																															
60 min Summer	0.084	0.084	0.3	26.9	O K																																																																																																																																																																																																															
120 min Summer	0.104	0.104	0.3	33.2	O K																																																																																																																																																																																																															
180 min Summer	0.116	0.116	0.3	36.9	Flood Risk																																																																																																																																																																																																															
240 min Summer	0.123	0.123	0.3	39.3	Flood Risk																																																																																																																																																																																																															
360 min Summer	0.132	0.132	0.3	42.0	Flood Risk																																																																																																																																																																																																															
480 min Summer	0.136	0.136	0.3	43.4	Flood Risk																																																																																																																																																																																																															
600 min Summer	0.138	0.138	0.3	44.1	Flood Risk																																																																																																																																																																																																															
720 min Summer	0.139	0.139	0.3	44.4	Flood Risk																																																																																																																																																																																																															
960 min Summer	0.139	0.139	0.3	44.3	Flood Risk																																																																																																																																																																																																															
1440 min Summer	0.136	0.136	0.3	43.5	Flood Risk																																																																																																																																																																																																															
2160 min Summer	0.133	0.133	0.3	42.4	Flood Risk																																																																																																																																																																																																															
2880 min Summer	0.130	0.130	0.3	41.5	Flood Risk																																																																																																																																																																																																															
4320 min Summer	0.125	0.125	0.3	40.0	Flood Risk																																																																																																																																																																																																															
5760 min Summer	0.121	0.121	0.3	38.7	Flood Risk																																																																																																																																																																																																															
7200 min Summer	0.118	0.118	0.3	37.6	Flood Risk																																																																																																																																																																																																															
8640 min Summer	0.115	0.115	0.3	36.8	Flood Risk																																																																																																																																																																																																															
10080 min Summer	0.113	0.113	0.3	36.1	O K																																																																																																																																																																																																															
15 min Winter	0.056	0.056	0.3	17.8	O K																																																																																																																																																																																																															
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																	
15 min Summer	87.620	0.0	19																																																																																																																																																																																																																	
30 min Summer	57.683	0.0	34																																																																																																																																																																																																																	
60 min Summer	36.448	0.0	64																																																																																																																																																																																																																	
120 min Summer	22.639	0.0	124																																																																																																																																																																																																																	
180 min Summer	16.928	0.0	182																																																																																																																																																																																																																	
240 min Summer	13.676	0.0	242																																																																																																																																																																																																																	
360 min Summer	10.003	0.0	362																																																																																																																																																																																																																	
480 min Summer	7.960	0.0	482																																																																																																																																																																																																																	
600 min Summer	6.652	0.0	602																																																																																																																																																																																																																	
720 min Summer	5.738	0.0	720																																																																																																																																																																																																																	
960 min Summer	4.539	0.0	960																																																																																																																																																																																																																	
1440 min Summer	3.269	0.0	1186																																																																																																																																																																																																																	
2160 min Summer	2.374	0.0	1556																																																																																																																																																																																																																	
2880 min Summer	1.907	0.0	1960																																																																																																																																																																																																																	
4320 min Summer	1.430	0.0	2808																																																																																																																																																																																																																	
5760 min Summer	1.183	0.0	3632																																																																																																																																																																																																																	
7200 min Summer	1.034	0.0	4400																																																																																																																																																																																																																	
8640 min Summer	0.933	0.0	5264																																																																																																																																																																																																																	
10080 min Summer	0.861	0.0	6048																																																																																																																																																																																																																	
15 min Winter	87.620	0.0	19																																																																																																																																																																																																																	
©1982-2020 Innovyze																																																																																																																																																																																																																				

Odyssey					Page 2
Tuscany House		Stakers Farm, Yapton			
White Hart Lane		19-156			
Baskingstoke RG21 4AF		Road 2 and Plots 23,25-28_RevB			
Date 10/12/2020 14:56		Designed by AK			
File Road 2_including Plots		Checked by			
XP Solutions		Source Control 2020.1			
<u>Summary of Results for 10 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	0.075	0.075	0.3	23.9	O K
60 min Winter	0.095	0.095	0.3	30.3	O K
120 min Winter	0.118	0.118	0.3	37.5	Flood Risk
180 min Winter	0.131	0.131	0.3	41.7	Flood Risk
240 min Winter	0.139	0.139	0.3	44.4	Flood Risk
360 min Winter	0.149	0.149	0.3	47.6	Flood Risk
480 min Winter	0.155	0.155	0.3	49.3	Flood Risk
600 min Winter	0.158	0.158	0.3	50.3	Flood Risk
720 min Winter	0.159	0.159	0.3	50.8	Flood Risk
960 min Winter	0.160	0.160	0.3	51.0	Flood Risk
1440 min Winter	0.157	0.157	0.3	50.1	Flood Risk
2160 min Winter	0.151	0.151	0.3	48.3	Flood Risk
2880 min Winter	0.147	0.147	0.3	46.8	Flood Risk
4320 min Winter	0.137	0.137	0.3	43.9	Flood Risk
5760 min Winter	0.129	0.129	0.3	41.1	Flood Risk
7200 min Winter	0.121	0.121	0.3	38.7	Flood Risk
8640 min Winter	0.115	0.115	0.3	36.6	O K
10080 min Winter	0.109	0.109	0.3	34.7	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	57.683	0.0	33		
60 min Winter	36.448	0.0	64		
120 min Winter	22.639	0.0	122		
180 min Winter	16.928	0.0	180		
240 min Winter	13.676	0.0	240		
360 min Winter	10.003	0.0	356		
480 min Winter	7.960	0.0	472		
600 min Winter	6.652	0.0	588		
720 min Winter	5.738	0.0	702		
960 min Winter	4.539	0.0	926		
1440 min Winter	3.269	0.0	1354		
2160 min Winter	2.374	0.0	1684		
2880 min Winter	1.907	0.0	2136		
4320 min Winter	1.430	0.0	3064		
5760 min Winter	1.183	0.0	3920		
7200 min Winter	1.034	0.0	4760		
8640 min Winter	0.933	0.0	5616		
10080 min Winter	0.861	0.0	6448		
©1982-2020 Innovyze					

Odyssey		Page 3
Tuscany House White Hart Lane Baskingstoke RG21 4AF	Stakers Farm, Yapton 19-156 Road 2 and Plots 23,25-28_RevB	
Date 10/12/2020 14:56	Designed by AK	
File Road 2_including Plots	Checked by	
XP Solutions		Source Control 2020.1

Rainfall Details

Rainfall Model	FEH
Return Period (years)	10
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 Area Diagram

Total Area (ha) 0.107

	Time (mins)	Area
From:	To:	(ha)
	0	4 0.107

©1982-2020 Innovyze

Odyssey		Page 4
Tuscany House White Hart Lane Baskingstoke RG21 4AF	Stakers Farm, Yapton 19-156 Road 2 and Plots 23,25-28_RevB	
Date 10/12/2020 14:56 File Road 2_including Plots	Designed by AK Checked by	
XP Solutions Source Control 2020.1		

Model Details

Storage is Online Cover Level (m) 0.415

Complex Structure

Cellular Storage

Invert Level (m) 0.000 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 0.00648 Porosity 0.95
Infiltration Coefficient Side (m/hr) 0.00000

Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)
0.000	336.0	336.0	0.236	0.0	336.0
0.235	336.0	336.0			

Porous Car Park

Infiltration Coefficient Base (m/hr) 0.00000	Width (m) 18.3
Membrane Percolation (mm/hr) 1000	Length (m) 18.3
Max Percolation (l/s) 93.0	Slope (1:X) 0.0
Safety Factor 2.0	Depression Storage (mm) 5
Porosity 0.30	Evaporation (mm/day) 3
Invert Level (m) 0.235	Membrane Depth (m) 0

©1982-2020 Innovyze