

NSugg Ltd		Page 1
19 Grosvenor Road Dorchester DT1 2BD	Old Market Street Manchester	
Date 01/08/2021 File	Designed by N Sugg Checked by	
Innovyze Source Control 2019.1		

IH 124 Mean Annual Flood

Input

Return Period (years)	100	Soil	0.450
Area (ha)	50.000	Urban	0.000
SAAR (mm)	971	Region Number	Region 10

Results l/s

QBAR Rural 322.1
QBAR Urban 322.1

Q100 years 670.0

Q1 year 280.2
Q2 years 300.0
Q5 years 383.3
Q10 years 444.5
Q20 years 506.4
Q25 years 528.3
Q30 years 546.1
Q50 years 595.9
Q100 years 670.0
Q200 years 760.2
Q250 years 789.2
Q1000 years 979.3

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<p><u>Summary of Results for 100 year Return Period (+40%)</u></p> <p>Half Drain Time : 1 minutes.</p> <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>56.537</td><td>0.537</td><td>5.5</td><td>0.6</td><td>O K</td></tr><tr><td>30 min Summer</td><td>56.485</td><td>0.485</td><td>5.2</td><td>0.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>56.335</td><td>0.335</td><td>4.1</td><td>0.4</td><td>O K</td></tr><tr><td>120 min Summer</td><td>56.169</td><td>0.169</td><td>2.9</td><td>0.2</td><td>O K</td></tr><tr><td>180 min Summer</td><td>56.083</td><td>0.083</td><td>2.3</td><td>0.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>56.047</td><td>0.047</td><td>1.9</td><td>0.1</td><td>O K</td></tr><tr><td>360 min Summer</td><td>56.035</td><td>0.035</td><td>1.4</td><td>0.0</td><td>O K</td></tr><tr><td>480 min Summer</td><td>56.028</td><td>0.028</td><td>1.1</td><td>0.0</td><td>O K</td></tr><tr><td>600 min Summer</td><td>56.024</td><td>0.024</td><td>1.0</td><td>0.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>56.021</td><td>0.021</td><td>0.8</td><td>0.0</td><td>O K</td></tr><tr><td>960 min Summer</td><td>56.017</td><td>0.017</td><td>0.7</td><td>0.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>56.013</td><td>0.013</td><td>0.5</td><td>0.0</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>56.009</td><td>0.009</td><td>0.4</td><td>0.0</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>56.008</td><td>0.008</td><td>0.3</td><td>0.0</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>56.006</td><td>0.006</td><td>0.2</td><td>0.0</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>56.005</td><td>0.005</td><td>0.2</td><td>0.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>56.004</td><td>0.004</td><td>0.2</td><td>0.0</td><td>O K</td></tr><tr><td>8640 min 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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	56.439	0.439	4.8	0.5	O K
60 min Winter	56.249	0.249	3.5	0.3	O K
120 min Winter	56.082	0.082	2.2	0.1	O K
180 min Winter	56.043	0.043	1.7	0.0	O K
240 min Winter	56.035	0.035	1.4	0.0	O K
360 min Winter	56.025	0.025	1.0	0.0	O K
480 min Winter	56.021	0.021	0.8	0.0	O K
600 min Winter	56.018	0.018	0.7	0.0	O K
720 min Winter	56.015	0.015	0.6	0.0	O K
960 min Winter	56.012	0.012	0.5	0.0	O K
1440 min Winter	56.009	0.009	0.4	0.0	O K
2160 min Winter	56.007	0.007	0.3	0.0	O K
2880 min Winter	56.006	0.006	0.2	0.0	O K
4320 min Winter	56.004	0.004	0.2	0.0	O K
5760 min Winter	56.004	0.004	0.2	0.0	O K
7200 min Winter	56.004	0.004	0.1	0.0	O K
8640 min Winter	56.003	0.003	0.1	0.0	O K
10080 min Winter	56.003	0.003	0.1	0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	81.399	0.0	19		
60 min Winter	52.299	0.0	34		
120 min Winter	32.485	0.0	64		
180 min Winter	24.241	0.0	92		
240 min Winter	19.562	0.0	122		
360 min Winter	14.373	0.0	184		
480 min Winter	11.553	0.0	240		
600 min Winter	9.745	0.0	310		
720 min Winter	8.475	0.0	358		
960 min Winter	6.792	0.0	486		
1440 min Winter	4.963	0.0	700		
2160 min Winter	3.619	0.0	1144		
2880 min Winter	2.889	0.0	1524		
4320 min Winter	2.099	0.0	2180		
5760 min Winter	1.671	0.0	3168		
7200 min Winter	1.399	0.0	3944		
8640 min Winter	1.210	0.0	3544		
10080 min Winter	1.071	0.0	4968		
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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)	18.500	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.012

Time (mins)	Area
From:	To: (ha)
0	4 0.012

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<div>Model Details</div> <div>Storage is Online Cover Level (m) 57.000</div> <div>Trench Soakaway Structure</div> <div><div>Infiltration Coefficient Base (m/hr) 10.00000</div><div>Infiltration Coefficient Side (m/hr) 10.00000</div><div><div>Safety Factor2.0</div><div>Porosity0.90</div></div><div><div>Invert Level (m)56.000</div><div>Trench Width (m)0.6</div><div>Trench Length (m)2.0</div><div>Slope (1:X)1000.0</div></div><div><div>Cap Volume Depth (m)1.000</div><div>Cap Infiltration Depth (m)1.000</div></div></div>		
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