

Project: One City Road, M15 4PN
Project ID: SP130885 BC1
Date of issue: 01/03/2023
Pages: 1 of 2

ROOF NAME: Block 01
Calculation No: 1

PROJECT DETAILS

Location: Manchester
Attenuation Area: 800 m² x 100 %
Additional Area: 1200 m² x 100 %
Total Catchment: 2000 m²
Inflow From Other Roof/s: 0 l/s

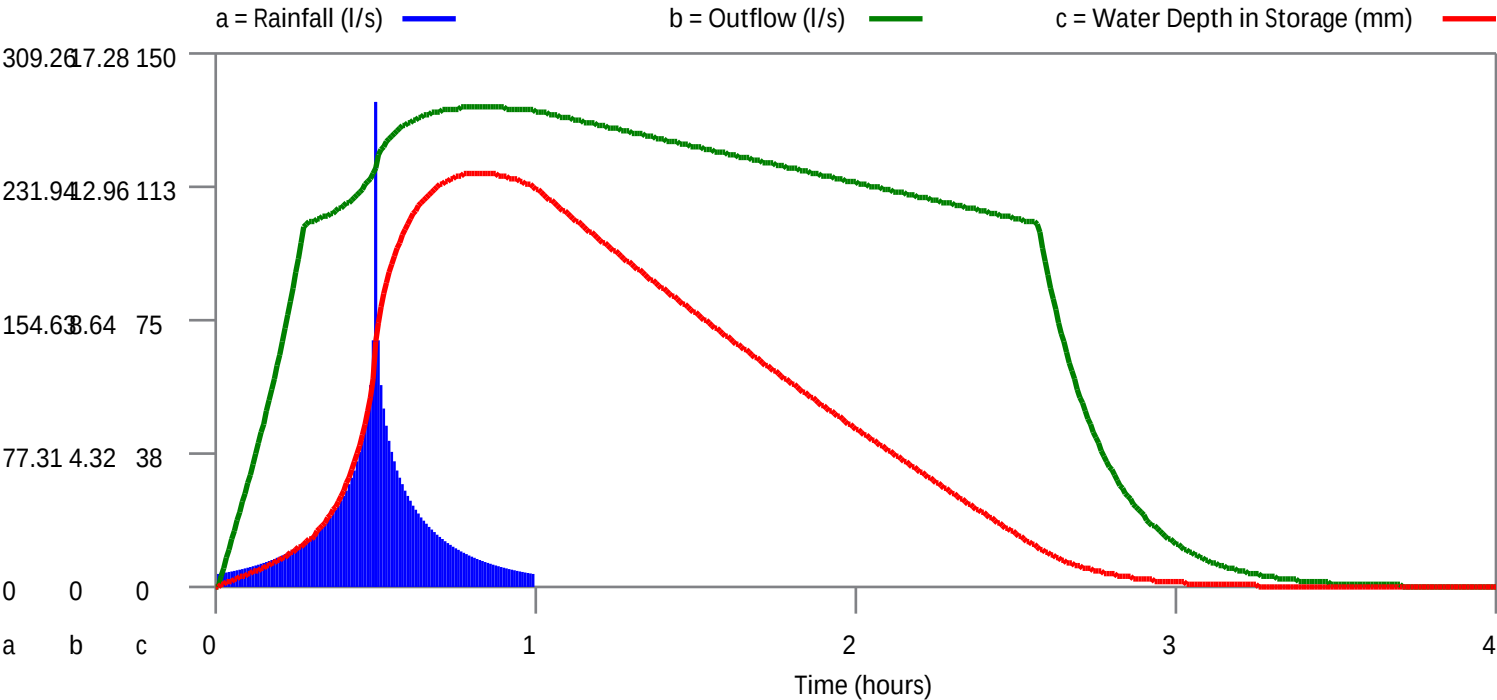
DESIGN STORM INPUTRAINFALL PROFILE

Rainfall Method:	FEH	Duration	Intensity		Detention storage(m ³)
			mm	mm/h	
Return Period:	100 years	5 min	20.3	243.7	37.79
Climate Change Factor:	40 %	10 min	29.8	178.6	53.33
Intensity Profile:	50% Summer	15 min	37.2	148.9	64.65
Data File For Grid Point:	X = 384709 Y = 397715	30 min	49.7	99.3	78.79
		45 min	57.4	76.5	84.27
		60 min	63.1	63.1	86.44
		2 hours	75.6	37.8	81.11
Length:	800 m	6 hours	97.6	16.3	52.81
Width:	1 m	24 hours	129.4	5.4	13.60
Depth:	150 mm	48 hours	148.9	3.1	7.97
Porosity	95 %				
Slope	0 %				

STORAGE DETAILS

BLUE ROOF RESPONSE

Design Outcome:	Pass	Attenuation Control:	Alumasc Orifice Restrictor
Critical Storm Duration:	1 hrs	Control Diameter:	50mm
Critical Rainfall:	63.1 mm/h	Discharge rate:	15.71 l/s
Detention Volume:	86.4 m ³	No. of Outlets:	4
Maximum Stage Depth:	114 mm	Flow Per Outlet:	3.93 l/s
Time to Half Empty:	45.8 min		



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Pages: 2 of 2

ROOF NAME: Block 02
Calculation No: 2

PROJECT DETAILS

Location: Manchester
Attenuation Area: 800 m² x 100 %
Additional Area: 1000 m² x 100 %
Total Catchment: 1800 m²
Inflow From Other Roof/s: 0 l/s

DESIGN STORM INPUTRAINFALL PROFILE

Rainfall Method:	FEH	Duration	Intensity		Detention storage(m ³)
			mm	mm/h	
Return Period:	100 years	5 min	20.3	243.7	33.80
Climate Change Factor:	40 %	10 min	29.8	178.6	47.55
Intensity Profile:	50% Summer	15 min	37.2	148.9	57.49
Data File For Grid Point:	X = 384709 Y = 397715	30 min	49.7	99.3	69.61
		45 min	57.4	76.5	74.09
		60 min	63.1	63.1	75.66
		2 hours	75.6	37.8	69.88
		6 hours	97.6	16.3	43.58
		24 hours	129.4	5.4	11.35
		48 hours	148.9	3.1	7.17

STORAGE DETAILS

Length: 800 m
Width: 1 m
Depth: 150 mm
Porosity 95 %
Slope 0 %

BLUE ROOF RESPONSE

Design Outcome:	Pass	Attenuation Control:	Alumasc Orifice Restrictor
Critical Storm Duration:	1 hrs	Control Diameter:	50mm
Critical Rainfall:	63.1 mm/h	Discharge rate:	15.25 l/s
Detention Volume:	75.6 m ³	No. of Outlets:	4
Maximum Stage Depth:	99 mm	Flow Per Outlet:	3.81 l/s
Time to Half Empty:	41.3 min		

