BlueRoofDesign Software TBA_1A-BAU-Z1-RF-PD-Y-000001

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Date: 29/08/2023 Revision: G (1090)

Client:

Project: B203537_Apex aka UBB

Location: London, NW1 0QG

Roof Location: Roof Level 7

Roof Details:

BlueRoof	900 m²	x 100 %
Additional Area	220 m²	x 100 %
Effective Area	1120 m²	

Storage Details:

Length	900 m
Width	1 m
Depth	112 mm
Porosity	95 %
Slope	none

Rainfall Details - FEH Method:

Return Period	100 years
Climate Change Factor	40 %

Summer Storm Profile

Duration	Intensity mm	mm/h	Required storage(m³)
5 min	25.8	309.1	28.5
10 min	36.7	220.0	40.2
15 min	45.1	180.3	49.0
30 min	57.9	115.9	61.6
45 min	65.4	87.2	68.1
60 min	70.7	70.7	72.1
2 hours	90.6	45.3	85.9
6 hours	122.9	20.5	92.8
24 hours	150.7	6.3	64.5

Outflow Details:

Attenuation Control	BlueRoof Outlet
Control	Twist Std. Position 1
Sump Depth	None
Discharge rate	3.43 l/s
Outlet	4 No
Flow Per Outlet	0.86 l/s

Result:

Outcome	Pass
Critical Storm Duration	4.87 hrs
Hmax	109 mm
Required Volume	92.9 m³
Time to half empty	3.8 hrs
Roof Loading	103.22 Kg/m²

All results based on input data. Please check that input data has been correctly interpreted.

The Bauder Blue Flat Roof Rainwater Calculation Software will perform calculations in accordance with industry best practice for blue roof design based upon provided data relating to a specific building's dimensions geographical location and the flow rate performance of the selected Bauder rainwater outlet product.

Whilst the information contained herein is to the best of our knowledge true and accurate we specifically exclude any liability for errors omissions or otherwise arising therefrom.

Details practices principles values and calculations should be verified for accuracy and suitability for the required purpose for use.

NOTE: These calculations are valid for a zero fall roof with minimal variation in levels. Any significant variation will affect the volume of water stored and the roofs ability to attenuate extreme rain events. Typically variations in roof level should be less than 0 to +30mm with no back falls. The H-Max is measured from the mean roof level

Overflow discharge requirements based on a CAT1 storm event to BSEN12056-3:2000.

Total flow rate: 1120m2x0.023l/s/m2 = 25.76l/s.

NOTE: Roof loading data shown in the results section is for the blue roof only. For total loading of blue roof and overflows then Hmax + 35mm should be factored in.

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Client:

Project: B203537_Apex aka UBB

Location: London, NW1 0QG

Roof Location: Roof Level 5

Roof Details:

BlueRoof	308 m²	x 100 %
Additional Area	34 m²	x 100 %
Effective Area	342 m²	
Inflow From Other Roofs	3.43 l/s	

Storage Details:

Length	308 m
Width	1 m
Depth	100 mm
Porosity	95 %
Slope	none

Rainfall Details - FEH Method:

Return Period	100 years
Climate Change Factor	40 %

Summer Storm Profile

Duration	Intensity mm	Intensity mm/h	Required storage(m³)
5 min	25.8	309.1	9.1
10 min	36.7	220.0	12.8
15 min	45.1	180.3	15.5
30 min	57.9	115.9	19.3
45 min	65.4	87.2	21.0
60 min	70.7	70.7	21.9
2 hours	90.6	45.3	24.9
6 hours	122.9	20.5	25.8
24 hours	150.7	6.3	16.7

Outflow Details:

Attenuation Control	BlueRoof Outlet
Control	Twist Std. Position 2
Sump Depth	None
Discharge rate	5.75 l/s
Outlet	4 No
Flow Per Outlet	1.44 l/s

Result:

Outcome	Pass
Critical Storm Duration	4 hrs
Hmax	90 mm
Required Volume	26.4 m³
Time to half empty	1.6 hrs
Roof Loading	85.71 Kg/m²

All results based on input data. Please check that input data has been correctly interpreted.

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Overflow discharge requirements based on a CAT1 storm event to BSEN12056-3:2000.

Total flow rate: 342m2x0.023l/s/m2 = 7.87l/s (+ 3.43l/s) = 11.3l/s.

NOTE: Roof loading data shown in the results section is for the blue roof only. For total loading of blue roof and overflows then Hmax + 35mm should be factored in.