

Date: 23/09/2024

Revision: A

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Client:

Project: Uxbridge High Street

Location: Uxbridge, UB8 1JY

Roof Location: Bakers Road Upper (STORMcell)

Roof Details:

BlueRoof	569 m ²	x 100 %
Additional Catchment	17 m ²	x 100 %
Effective Area	586 m ²	

Storage Details:

Area	569 m ²
Depth	100 mm
Porosity	95 %
Slope	none

Rainfall Details - FEH Method:

Return Period	100 years
Climate Change Factor	40 %

Summer Storm Profile

Duration	Intensity		Required storage(m ³)
	mm	mm/h	
5 min	22.8	274.1	13.3
10 min	33.0	197.8	19.1
15 min	40.9	163.4	23.6
30 min	53.5	107.0	30.6
45 min	61.1	81.4	34.6
60 min	66.6	66.6	37.4
2 hours	83.5	41.8	45.4
6 hours	111.4	18.6	53.7
24 hours	135.3	5.6	45.0
48 hours	144.0	3.0	34.5

Outflow Details:

Attenuation Control	BlueRoof Outlet
Control	Twist Std. Position 1
Sump Depth	None
Discharge rate	0.82 l/s
Outlet*	1 No

** For emergency overflow requirements, refer to the bottom of the page **

Result:

Outcome	Pass
Critical Storm Duration	6 hrs
Hmax	99 mm
Required Volume	53.7 m ³
Time to half empty	9.1 hrs
Roof Loading*	94.38 Kg/m ²

Industry best practices recommend the provision of a minimum of two outlets per roof area. Where a single blue roof outlet is specified a second overflow only outlet should be installed.

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.

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 roof's 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. Please ensure roof is sealed to a minimum level of H-Max + 35mm plus the required waterproofing upstand. Calculations meet the requirements of CIRIA guide RP1099

*The roof loading refers only to the weight of the water on the roof.

Overflow discharge requirement in accordance with BSEN12056-3:2000 for a category 1 storm event:

Total overflow discharge rate: 586m² x 0.021l/s/m² = 12.31l/s.

NOTE: To determine the total loading of the blue roof and overflows then the maximum head height (Hmax) plus an additional 35mm should be included in the assessment.

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Client:

Project: Uxbridge High Street

Location: Uxbridge, UB8 1JY

Roof Location: Bakers Road Lower (STORMsub)

Roof Details:

BlueRoof	115 m ²	x 100 %
Additional Catchment	0 m ²	x 100 %
Effective Area	115 m ²	

Storage Details:

Area	115 m ²
Depth	100 mm
Porosity	46 %
Slope	none

Rainfall Details - FEH Method:

Return Period	100 years
Climate Change Factor	40 %

Summer Storm Profile

Duration	Intensity		Required storage(m ³)
	mm	mm/h	
5 min	22.8	274.1	2.5
10 min	33.0	197.8	3.4
15 min	40.9	163.4	4.0
30 min	53.5	107.0	4.7
45 min	61.1	81.4	4.9
60 min	66.6	66.6	5.0
2 hours	83.5	41.8	5.0
6 hours	111.4	18.6	3.7
24 hours	135.3	5.6	0.7
48 hours	144.0	3.0	0.4

Outflow Details:

Attenuation Control	BlueRoof Outlet
Control	Twist Std. Position 1.5
Sump Depth	None
Discharge rate	1.21 l/s
Outlet*	1 No

** For emergency overflow requirements, refer to the bottom of the page **

Result:

Outcome	Pass
Critical Storm Duration	1.55 hrs
Hmax	96 mm
Required Volume	5.1 m ³
Time to half empty	34.7 min
Roof Loading*	44.35 Kg/m ²

Industry best practices recommend the provision of a minimum of two outlets per roof area. Where a single blue roof outlet is specified a second overflow only outlet should be installed.

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

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*The roof loading refers only to the weight of the water on the roof.

Overflow discharge requirement in accordance with BSEN12056-3:2000 for a category 1 storm event.

Total overflow discharge rate: 115m² x 0.021l/s/m² = 2.42l/s.

NOTE: To determine the total loading of the blue roof and overflows then the maximum head height (Hmax) plus an additional 35mm should be included in the assessment.

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Client:

Project: Uxbridge High Street

Location: Uxbridge, UB8 1JY

Roof Location: Belmont Road Amenity (STORMcell)

Roof Details:

BlueRoof	564 m ²	x 100 %
Additional Catchment	10 m ²	x 100 %
Effective Area	574 m ²	

Storage Details:

Area	564 m ²
Depth	100 mm
Porosity	95 %
Slope	none

Rainfall Details - FEH Method:

Return Period	100 years
Climate Change Factor	40 %

Summer Storm Profile

Duration	Intensity		Required storage(m ³)
	mm	mm/h	
5 min	22.8	274.1	13.0
10 min	33.0	197.8	18.7
15 min	40.9	163.4	23.1
30 min	53.5	107.0	30.0
45 min	61.1	81.4	33.9
60 min	66.6	66.6	36.6
2 hours	83.5	41.8	44.4
6 hours	111.4	18.6	52.4
24 hours	135.3	5.6	43.8
48 hours	144.0	3.0	33.5

Outflow Details:

Attenuation Control	BlueRoof Outlet
Control	Twist Std. Position 1
Sump Depth	None
Discharge rate	0.81 l/s
Outlet*	1 No

** For emergency overflow requirements, refer to the bottom of the page **

Result:

Outcome	Pass
Critical Storm Duration	6 hrs
Hmax	98 mm
Required Volume	52.4 m ³
Time to half empty	8.9 hrs
Roof Loading*	92.91 Kg/m ²

Industry best practices recommend the provision of a minimum of two outlets per roof area. Where a single blue roof outlet is specified a second overflow only outlet should be installed.

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

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*The roof loading refers only to the weight of the water on the roof.

Overflow discharge requirement in accordance with BSEN12056-3:2000 for a category 1 storm event:

Total overflow discharge rate: 574m² x 0.021l/s/m² = 12.05l/s.

NOTE: To determine the total loading of the blue roof and overflows then the maximum head height (Hmax) plus an additional 35mm should be included in the assessment.

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Client:

Project: Uxbridge High Street

Location: Uxbridge, UB8 1JY

Roof Location: High Street Upper Roof (STORMsub)

Roof Details:

BlueRoof	501 m ²	x 100 %
Additional Catchment	16 m ²	x 100 %
Effective Area	517 m ²	

Storage Details:

Area	501 m ²
Depth	100 mm
Porosity	46 %
Slope	none

Rainfall Details - FEH Method:

Return Period	100 years
Climate Change Factor	40 %

Summer Storm Profile

Duration	Intensity	Required storage(m ³)
	mm	mm/h
5 min	22.8	274.1
10 min	33.0	197.8
15 min	40.9	163.4
30 min	53.5	107.0
45 min	61.1	81.4
60 min	66.6	66.6
2 hours	83.5	41.8
6 hours	111.4	18.6
24 hours	135.3	5.6
48 hours	144.0	3.0
		1.9

Outflow Details:

Attenuation Control	BlueRoof Outlet
Control	Twist Std. Position 3.5
Sump Depth	None
Discharge rate	5.63 l/s
Outlet*	2 No
Flow Per Outlet	2.82 l/s

** For emergency overflow requirements, refer to the bottom of the page **

Result:

Outcome	Pass
Critical Storm Duration	1.47 hrs
Hmax	97 mm
Required Volume	22.5 m ³
Time to half empty	33.2 min
Roof Loading*	44.91 Kg/m ²

Industry best practices recommend the provision of a minimum of two outlets per roof area. Where a single blue roof outlet is specified a second overflow only outlet should be installed.

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*The roof loading refers only to the weight of the water on the roof.

Overflow discharge requirement in accordance with BSEN12056-3:2000 for a category 1 storm event.

Total overflow discharge rate: 517m² x 0.021l/s/m² = 10.9l/s.

NOTE: To determine the total loading of the blue roof and overflows then the maximum head height (Hmax) plus an additional 35mm should be included in the assessment.