

Meinhardt (UK) Ltd Co. Reg. No. 4131858

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03 May 2022

Our Ref: 2750 – Camden Lifestyle, Bayham St. Your Ref: 2020/5647/P

Camden Council

Dear Sir/Madam,

RE: Camden Lifestyle, Bayham St – Discharge of Condition 9

We have been commissioned by our client (Camden Lifestyle (UK) Limited to discharge **Planning Condition 9** associated with the consented planning application reference 2018/3647/P.

This specific pre-commencement condition stated:

Prior to commencement of any development other then works of demolition, site clearance & preparation, details of a sustainable urban drainage system shall be submitted to and approved in writing by the local planning authority. Such system shall be based on a 1:100 year event with 30% provision for climate change demonstrating 50% attenuation of all runoff. The system shall be implemented as part of the development and thereafter retained and maintained.

The existing site has been calcauted to have an existing discharge rate of 25.0 l/s for the 1:100 year event period, refer to Appendix A for MicroDrainage Calculations. As such the scheme has been designed on the basis of limiting the surface water discharge rate to 12.5 l/s for the 1:100 year + 30% climate change event.

This will be soley achieved by the use of a blue roof system, with some of the roof areas and a small area of hardstanding outside the building footprint draining unrestricted towards the outfall manhole from the site. The total blue roof plan extent is $201m^2$ and 100mm deep blue roof crates are proposed. The proposed drainage strategy (Appendix B), shows that the site will discharge at a rate of 12.4 l/s or lower for the 1:100 year + 30% climate change event. Refer to Appendix C for Bauder blue roof caclautions.

A summary of the proposed discharge rates are provided below:

- 1:1 Year Event = 2.1 l/s
- 1:30 Year Event = 7.1 l/s
- 1:100 + 30% CC Year Event = 12.4 l/s

Therefore the proposed drainage strategy complies with the requirement of 50% reduction on existing rates. Table 1 outlines each catchment area and the breakdown of discharge rates from the site.



Catment Area Name	Catchment Area (m ²)	Blue Roof Area (m²)	Discharge Rate (I/s)
Roof 1	73	48	0.18 (discharge rate calculated by Bauder)
Roof 2a	24	12	0.18 (discharge rate calculated by Bauder)
Roof 2b	96 + (102 from roof 3b) = 198	77	1.74 (discharge rate calculated by Bauder)
Roof 2c	16	7	0.18 (discharge rate calculated by Bauder)
Roof 3a	104	57	0.37 (discharge rate calculated by Bauder)
Roof 3b	102	0	Routed to roof 2b
Roof 4	40	0	Modified rational method used: Q=2.78iA = 2.78 x137x0.0040 = 1.523
External areas at ground level	185	0	Modified rational method used: Q=2.78iA =2.78x137x0.0185 = 7.046
Total	640	201	11.22

Table 1: Catchment areas and discharge rates

Drainage exceedance routes have also been considered and allowed for as part of the development of parameters to ensure that any surface water runoff exceeding the drainage network capacity would naturally flow away towards the existing highway drainage network. These exceedance routes are shown on drawing BST-MHT-XX-GF-DR-CV-0100 in Appendix B

Thames Water have confirmed that a discharge rate of 12.4 l/s from the site is acceptable, refer to the Thames Water correspondence in Appendix D.

A Drainage Maintenance and Management Strategy has been produced based on the information provided within the SUDS Manual, this is outlined in Appendix E. Camden Lifestyle (UK) Limited will be responsible for maintaining the drainage systems on-site once operational. Accordingly Camden Lifestyle (UK) Limited will 'appoint suitably qualified maintenance specialists directly or via a management agreement to undertake the maintenance work'.



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As part of this package of information we have provided the following:

Appendix A – Existing Surface Water Dicharge Rates Model (1:100 Year)

- Appendix B Drainage Strategy Drawings
- Appendix C Bauder Blue Roof Design
- Appendix D Thames Water Consultation
- Appendix E Drainage Maintenance and Management Strategy

If you have any queries we would be very pleased to discuss these with you.

Yours sincerely

Jasmine Houze Senior Civil Engineer



Meinhardt (UK) Ltd, 10 Aldersgate Street, London, EC1A 4HJ TEL: 020 7831 7969



Appendix A – Existing Surface Water Dicharge Rates Model (1:100 Year)

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10 Aldersgate Street	Camden Lifestyle	
London	2750	
EC1A 4HJ	Existing 1:100 Year	Micro
Date 06/10/2015	Designed by MB	Drainage
File 2750Existing Surface	Checked by GB	Diamaye
Innovyze	Network 2020.1	1

PIPELINE SCHEDULES for Storm

<u>Upstream Manhole</u>

- Indicates pipe length does not match coordinates

PN	-	Diam (mm)		C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)
1.000	0	150	1	100.000	98.800	1.050	Open Manhole	1200
1.001	0	150	2	100.000	98.425	1.425	Open Manhole	1200

Downstream Manhole

PN	Length	Slope	MH	C.Level	I.Level	D.Depth	MH	MH DIAM., L*W
	(m)	(1:X)	Name	(m)	(m)	(m)	Connection	(mm)
	30.000# 30.000#						Open Manhole Open Manhole	1200 0

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10 Aldersgate Street	Camden Lifestyle	
London	2750	
EC1A 4HJ	Existing 1:100 Year	— Micro
Date 06/10/2015	Designed by MB	
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119	Surcharge /MH Depth	ed Flooded	Flow /	I Overflow	Half Drain Time	n Pipe Flow		Level
	ume (m)	(m ³)	Cap.	(1/s)	(mins)	(1/s)	Status	Exceeded
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einhardt (UK) Ltd			Page 7
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1.001 2 0.357 0.	.000 1.47	25.0	SURCHARGED



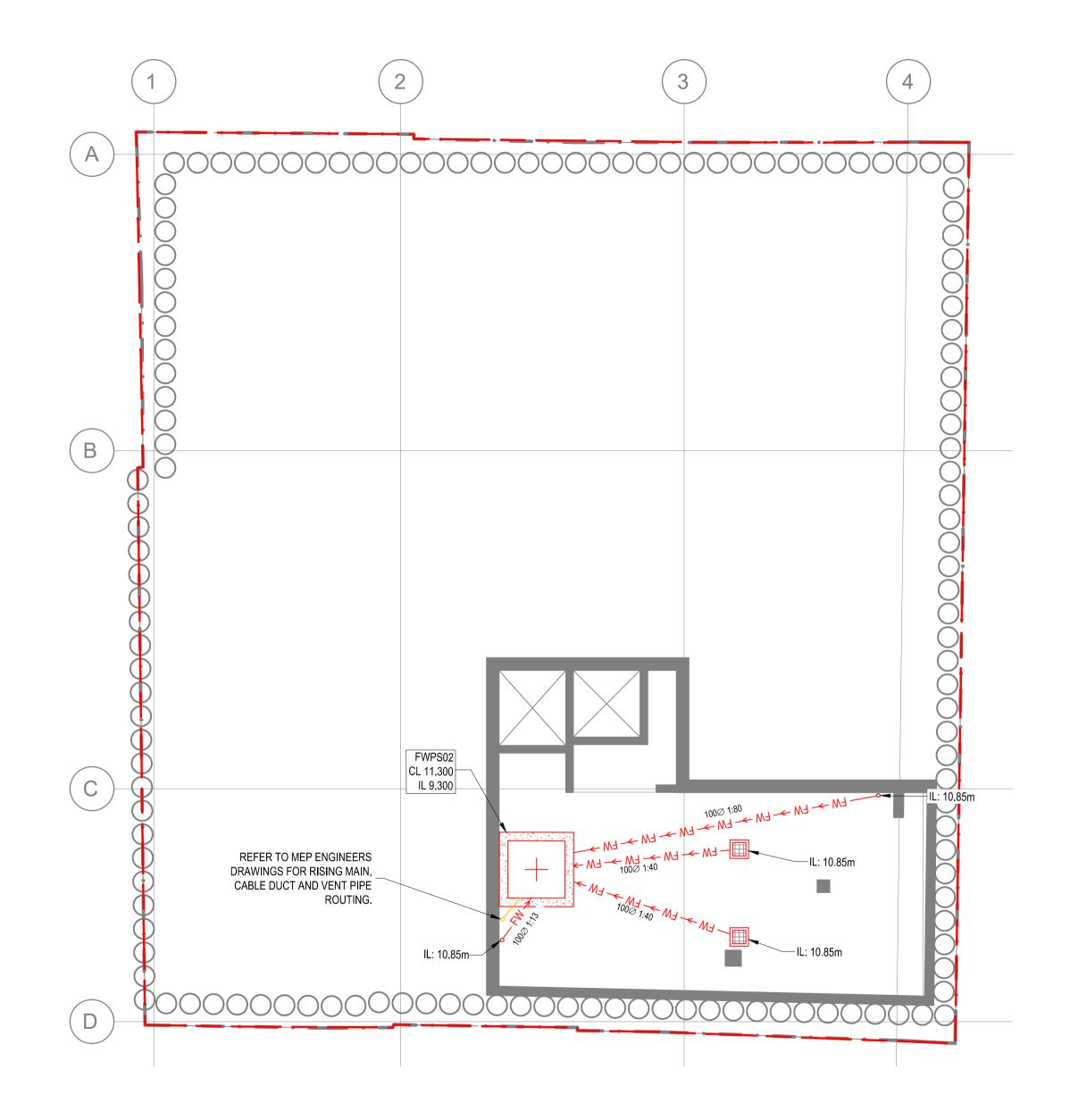
Appendix B – Drainage Strategy Drawings



 CAVITY DRAINAGE NETWORK AND ASSOCIATED PUMP REQUIREMENTS DESIGNED BY DELTA MEMBRANES. REFER TO DELTA MEMBRANES DRAWINGS FOR LOCATIONS OF SUMPS AND CAVITY DRAINAGE SYSTEMS.
 FOUL WATER PUMP STATION ELECTRICAL SUPPLY TO BE CONNECTED TO BACK UP

GENERATOR.

NOTE:



STAGE 4+ ISSUE		
REV DESCRIPTION P01 STAGE 3 ISSUE P02 STAGE 4 ISSUE P03 STAGE 4 ISSUE	DHF JH	DATE 23.07.21 17.12.21
P03 STAGE 4+ ISSUE	JH	21.04.22
NOTES: 1. DO NOT SCALE FROM THIS DRAWING		
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 RISING MAIN AND VENT PIPE ROUTING FROM PU CHAMBER TO MEP ENGINEERS DESIGN. FOR BELOW GROUND DRAINAGE DETAILS REFERENCE 		инт
DRAWING SERIES 2750-MHT-CV-BG-DR-20X. 9. FOR BELOW GROUND DRAINAGE MANHOLE SCH	EDUL	ES
REFER TO MHT DRAWING SERIES 2750-MHT-CV-	3G-DF	₹-25X.
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PROPOSED FOUL WATER I CHAMBER / MANHOLE	NSPE	CTION
FOUL WATER GULLY FOUL WATER DRAIN POINT	r	
BACKDROP	I	
CDM RESIDUAL CIVIL / STRUCTURAL DESIGN F	risks	
10 Aldersgate Street, London EC1A 4JU		
Telephone: +44 (0)20 7831 7969 www.meinhardt.co.uk		
7 A,B,C BAYHAM STREET		
LONDON NW1 0EY		
CLIENT CAMDEN LIFESTYLE (UK)		
PROPOSED BELOW GROUND		
FOUL WATER DRAINAGE LAYOUT BASEMENT -2		
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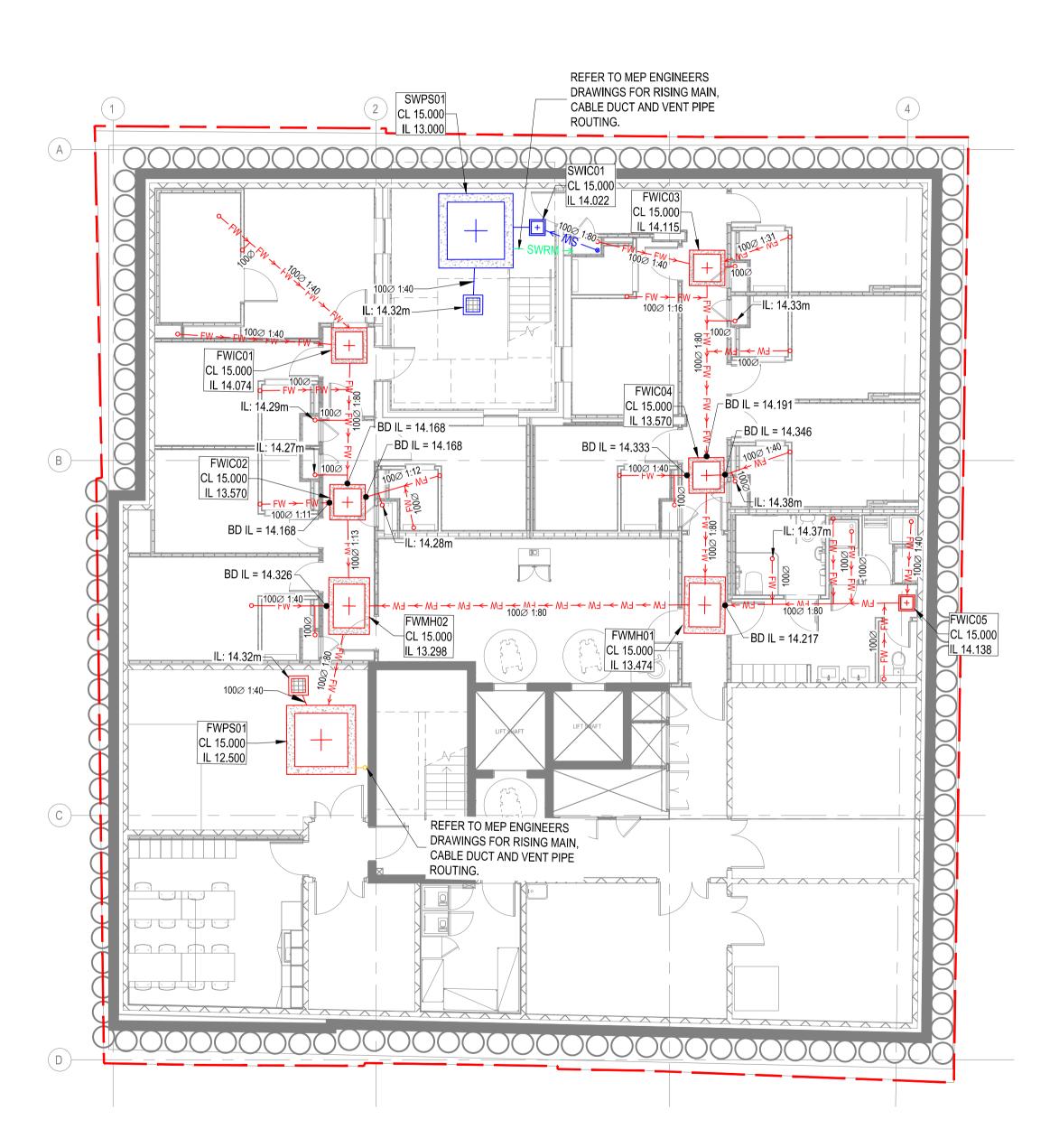
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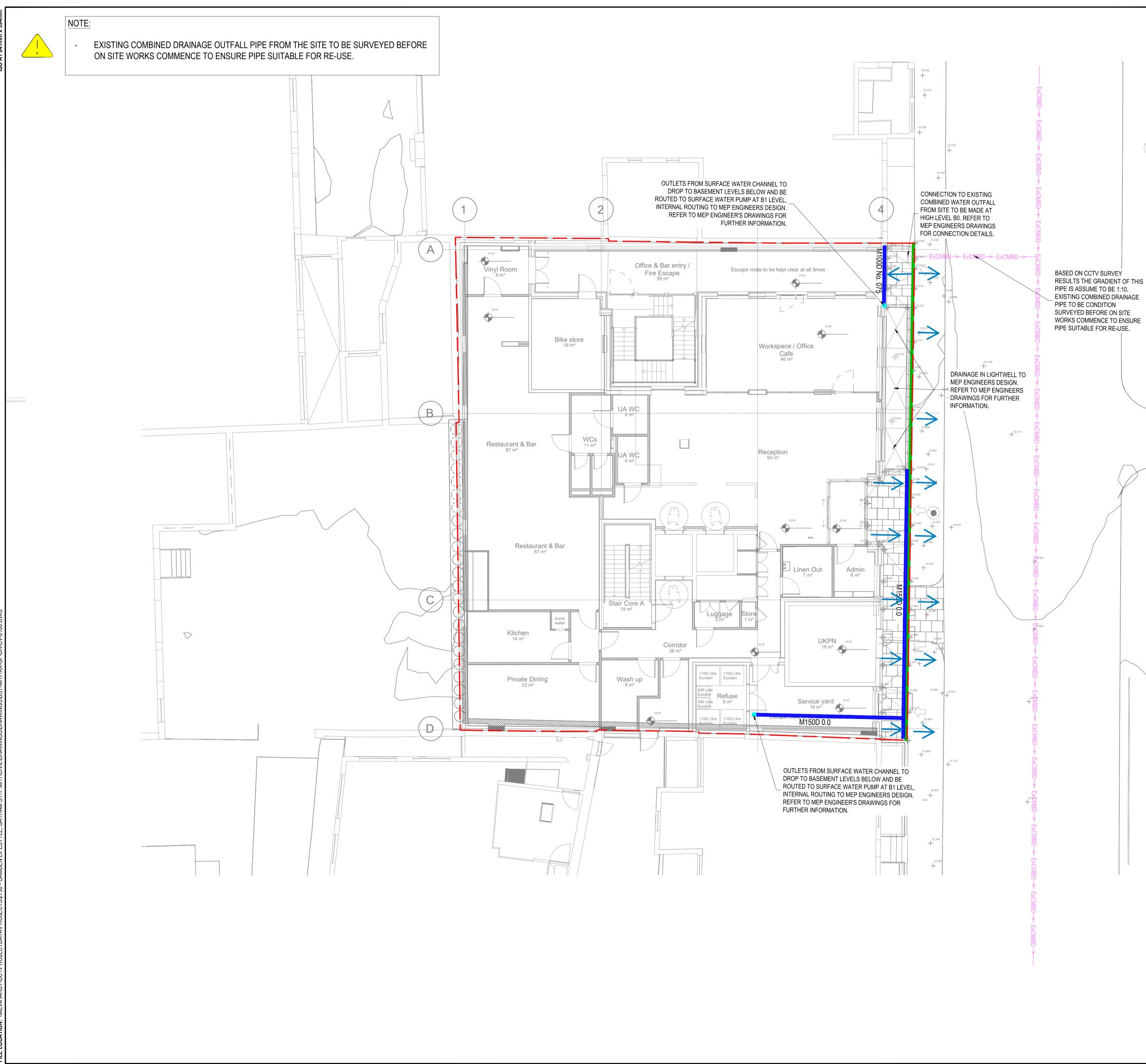
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ISO A1 841mm

 CAVITY DRAINAGE NETWORK AND ASSOCIATED PUMP REQUIREMENTS DESIGNED BY DELTA MEMBRANES. REFER TO DELTA MEMBRANES DRAWINGS FOR LOCATIONS OF SUMPS AND CAVITY DRAINAGE SYSTEMS.
 FOUL WATER PUMP STATION ELECTRICAL SUPPLY TO BE CONNECTED TO BACK UP



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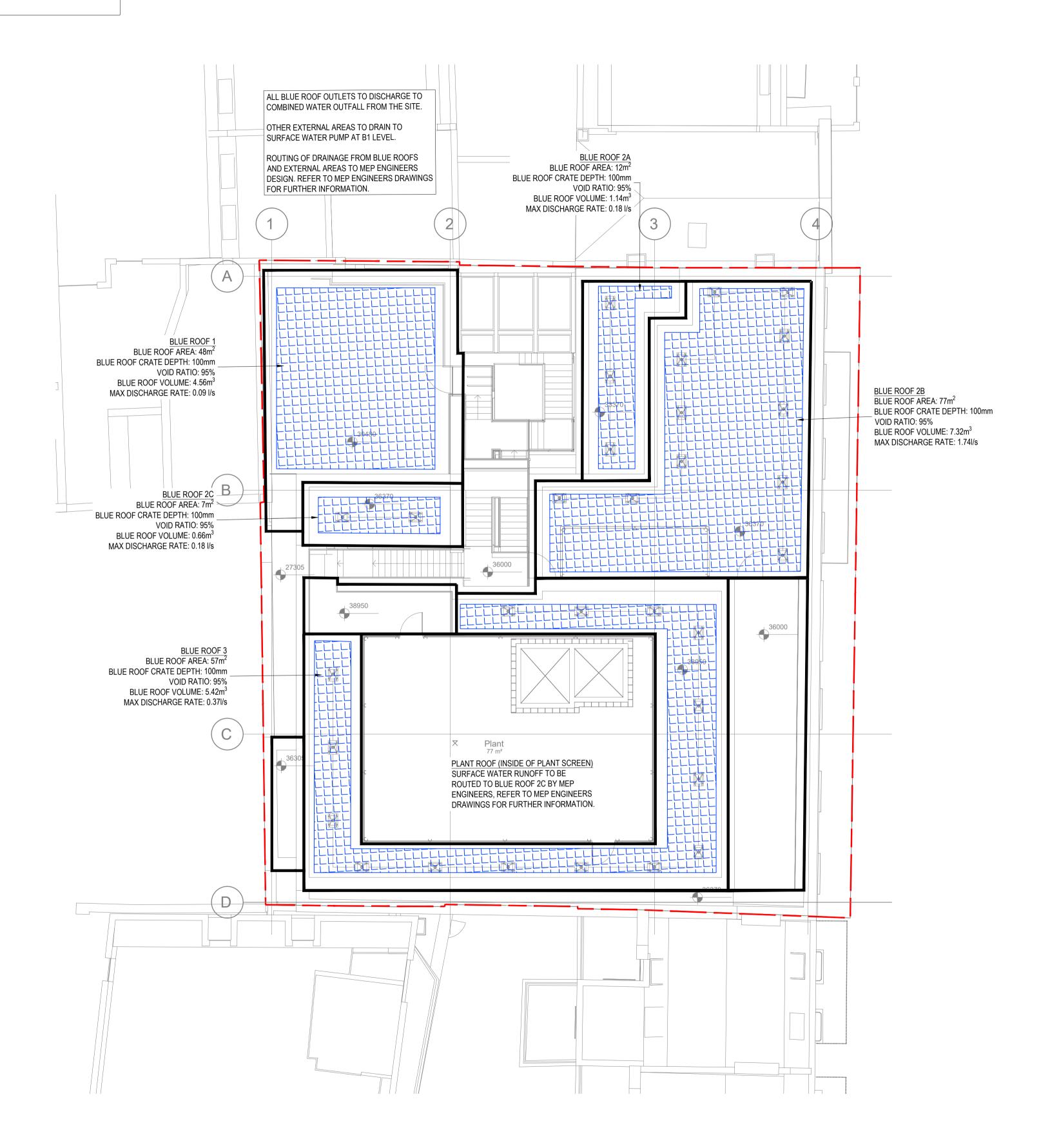
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	REV DESCRIPTION P01 STAGE 3 ISSUE P02 STAGE 4 ISSUE P03 STAGE 4+ ISSUE
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	 RELEVANT ARCHITECTS, ENGINEER: DRAWINGS AND SPECIFICATIONS. 5. DRAWING BASED ON: TOPOGRAPHICAL SURVEY RECPOINT 2 SURVEYORS THAMES WATER ASSET RECOFDINT 2 SURVEYORS DEXTER MOREN ASSOCIATES A LAYOUTS RECEIVED 30.03.22. MEINHARDT STRUCTURAL DRA MEINHARDT MEP LAYOUTS ISS 6. FOR BELOW GROUND DRAINAGE DE DRAWING SERIES 2750-MHT-CV-BG-ID
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	EXCMBD EXISTING COME EXISTING COME SURFACE WATE OUTLET TO BAS FLUSH KERB SURFACE WATE ROUTES
	CDM RESIDUAL CIVIL / STRUCTURA
	10 Aldersgate Street, London EC Telephone: +44 (0)20 7831 79 www.meinhardt.co.uk
	PROJECT 7 A, B, C BAYHAM STR LONDON NW1 0EY
	CLIENT CAMDEN LIFESTYLE (UK)
	TITLE PROPOSED BELOW GROUND COMBINED WATER DRAINAGE LAYOUT GROUND
	DRAWN DESIGNED CHECKE JH JH CM DRAWING №
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		Telephone: +4	eet, London EC1A 4JU 44 (0)20 7831 7969 sinhardt.co.uk			
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NOTE:





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5.	DEXTER MOREN ASSOCIATES		URAL	
	 LAYOUT RECEIVED 23.03.2022 BAUDER BLUE ROOF CALCULA 		/ D) D/	ATED
	04.03.2022.			
KEY	<u>/:</u>			
_	SITE BOUNDAR	Y		
	PROPOSED BLU	JE ROOF CR	ATES	
	CDM RESIDUAL CIVIL / STRUCTUR	AL DESIGN	RISKS	;
	10 Aldersgate Street, London E Telephone: +44 (0)20 7831 7			
PROJI	www.meinhardt.co.uk			
	A,B,C BAYHAM STF	REET		
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	יד MDEN LIFESTYLE (UK)			
	OPOSED ROOF LEVEL			
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	^{VING No} T-MHT-XX-RF-DR-CV-0100		ISSUE PC	
				-



Appendix C – Bauder Blue Roof Design



Bauder Ltd, 70 Landseer Road, Ipswich, IP3 0DH. T: +44 (0)1473 257671 e: info@bauder.co.uk

Date: 04/	/03/2022		Revisio	n: D (1209)	Page: 1
Client:					
Project:	Cam	den Lifestyle			
Location:	Lond	lon			
Roof Loca	ition: Roof	1			
Roof Deta	ils			Storage Details:	
	113.	10 0		5	
BlueRoof		48 m ²	x 100 %	Length	48 m
Additional A		25 m ²	x 100 %	Width	1 m
Effective Are	ea	73 m²		Depth	100 mm
				Porosity	95 %
				Slope	none
Rainfall D	etails - FSF	R Method:		Outflow Details:	
Return Perio	od	100 years		Attenuation Control	BlueRoof Outlet
Climate Cha	ange Factor	30 %		Control	1 hole
r value	-	0.44		Sump Depth	None
M5-60		20.7 mm		Discharge rate	0.18 l/s
Summer Sto	orm Profile			Outlet	2 No
Duration	Inte	nsity	Required	Flow Per Outlet	0.09 l/s
	mm	mm/h	storage(m ³)		
5 min	19.5	233.8	1.4		
10 min	28.7	172.3	2.1	Result:	
15 min	34.4	137.7	2.4		
30 min	44.4	88.9	3.1	Outcome	Pass
45 min	50.3	67.1	3.4	Critical Storm Duration	2.5 hrs
60 min	54.5	54.5	3.6	Hmax	86 mm
2 hours	64.7	32.3	3.9	Required Volume	3.9 m³
6 hours	80.6	13.4	3.8	Time to half empty	3 hrs
24 hours	104.1	4.3	2.7	Roof Loading	81.25 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: 73m2x0.023l/s/m2 = 1.68l/s



Bauder Ltd, 70 Landseer Road, Ipswich, IP3 0DH. T: +44 (0)1473 257671 e: info@bauder.co.uk

Date: 04	/03/2022		Revisio	n: D (1209)	Page: 2
Client:					
Project:	Cam	den Lifestyle			
Location:	Lond	lon			
Roof Loca	ation: Roof	2			
		-			
Roof Deta	ails:			Storage Details:	
BlueRoof		12 m²	x 100 %	Length	12 m
Additional A	Area	12 m²	x 100 %	Width	1 m
Effective A	rea	24 m²		Depth	100 mm
				Porosity	95 %
				Slope	none
Rainfall D	etails - FSF	R Method:		Outflow Details:	
Return Peri	iod	100 years		Attenuation Control	BlueRoof Outlet
Climate Ch	ange Factor	30 %		Control	1 hole
r value	-	0.44		Sump Depth	None
M5-60		20.7 mm		Discharge rate	0.18 l/s
Summer St	orm Profile			Outlet	2 No
Duration	Inte mm	nsity mm/h	Required storage(m ³)	Flow Per Outlet	0.09 l/s
E main			0.4		
5 min	19.5 28.7	233.8 172.3	-		
10 min 15 min	28.7 34.4	172.3 137.7	0.6 0.7	Result:	
15 min 30 min	34.4 44.4	88.9	0.7	Outcome	Pass
45 min	44.4 50.3	88.9 67.1	0.9	Critical Storm Duration	Pass 1.28 hrs
45 min 60 min	50.3 54.5	54.5	0.9		82 mm
2 hours	54.5 64.7	54.5 32.3	0.9	Hmax Required Volume	0.9 m ³
2 hours 6 hours	64.7 80.6	32.3 13.4	0.9 0.7	Time to half empty	44.3 min
24 hours	80.6 104.1	4.3	0.7		
24 NOUIS	104.1	4.3	0.3	Roof Loading	75 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: 24m2x0.023I/s/m2 = 0.55I/s.



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Date: 04/	/03/2022		Revisio	n: D (1209)	Page: 3
Client:					
Project:	Cam	den Lifestyle			
Location:	Lond	lon			
Roof Loca					
		20			
Roof Deta	ils:			Storage Details:	
BlueRoof		77 m²	x 100 %	Length	77 m
Additional A	rea	121 m²	x 100 %	Width	1 m
Effective Are	ea	198 m²		Depth	100 mm
				Porosity	95 %
				Slope	none
Rainfall D	etails - FSF	R Method:		Outflow Details:	
Return Perio	bd	100 years		Attenuation Control	BlueRoof Outlet
Climate Cha	inge Factor	30 %		Control	9 holes
r value		0.44		Sump Depth	None
M5-60		20.7 mm		Discharge rate	1.74 l/s
Summer Sto	orm Profile			Outlet	2 No
Duration	Inte mm	nsity mm/h	Required storage(m³)	Flow Per Outlet	0.87 l/s
5 min	19.5	233.8	3.6		
10 min	28.7	172.3	5.0 5.1		
15 min	34.4	137.7	5.9	Result:	
30 min	44.4	88.9	6.9	Outcome	Pass
45 min	50.3	67.1	7.1	Critical Storm Duration	1.1 hrs
60 min	54.5	54.5	7.2	Hmax	99 mm
2 hours	64.7	32.3	6.9	Required Volume	7.2 m ³
6 hours	80.6	13.4	4.9	Time to half empty	34.6 min
24 hours	104.1	4.3	1.6	Roof Loading	93.51 Kg/m ²

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: 198m2x0.023l/s/m2 = 4.55l/s.



Bauder Ltd, 70 Landseer Road, Ipswich, IP3 0DH. T: +44 (0)1473 257671 e: info@bauder.co.uk

Date: 04/	03/2022		Revisio	n: D (1209)	Page: 4
Client:					
Project:	Cam	den Lifestyle			
Location:	Lond	lon			
Roof Loca					
		20			
Roof Deta	ils:			Storage Details:	
BlueRoof		7 m²	x 100 %	Length	7 m
Additional A	rea	9 m²	x 100 %	Width	1 m
Effective Are	ea	16 m²		Depth	100 mm
				Porosity	95 %
				Slope	none
Rainfall D	etails - FSF	R Method:		Outflow Details:	
Return Perio	bd	100 years		Attenuation Control	BlueRoof Outlet
Climate Cha	inge Factor	30 %		Control	1 hole
r value	-	0.44		Sump Depth	None
M5-60		20.7 mm		Discharge rate	0.18 l/s
Summer Sto	orm Profile			Outlet	2 No
Duration	Inte mm	nsity mm/h	Required storage(m³)	Flow Per Outlet	0.09 l/s
5 min	19.5	233.8	0.3		
10 min	28.7	172.3	0.3		
15 min	34.4	137.7	0.4	Result:	
30 min	44.4	88.9	0.5	Outcome	Pass
45 min	50.3	67.1	0.5	Critical Storm Duration	55 min
60 min	54.5	54.5	0.5	Hmax	81 mm
2 hours	64.7	32.3	0.5	Required Volume	0.5 m ³
6 hours	80.6	13.4	0.3	Time to half empty	25.6 min
24 hours	104.1	4.3	0.1	Roof Loading	71.43 Kg/m ²

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: 16m2x0.023l/s/m2 = 0.37l/s.



Bauder Ltd, 70 Landseer Road, Ipswich, IP3 0DH. T: +44 (0)1473 257671 e: info@bauder.co.uk

Date: 04/	/03/2022		Revisio	n: D (1209)	Page: 5
Client:					
Project:	Cam	den Lifestyle			
Location:	Lond	lon			
Roof Loca	ition: Roof	2			
		3			
Roof Deta	ils:			Storage Details:	
BlueRoof		57 m²	x 100 %	Length	58 m
Additional A	rea	47 m²	x 100 %	Width	1 m
Effective Are	ea	104 m²		Depth	100 mm
				Porosity	95 %
				Slope	none
Rainfall D	etails - FSF	R Method:		Outflow Details:	
Return Perio	bd	100 years		Attenuation Control	BlueRoof Outlet
Climate Cha	ange Factor	30 %		Control	2 holes
r value		0.44		Sump Depth	None
M5-60		20.7 mm		Discharge rate	0.37 l/s
Summer Sto	orm Profile			Outlet	2 No
Duration	Inte mm	nsity mm/h	Required storage(m³)	Flow Per Outlet	0.19 l/s
5 min	19.5	233.8	2.0		
10 min	28.7	172.3	2.9	Deput	
15 min	34.4	137.7	3.4	Result:	
30 min	44.4	88.9	4.2	Outcome	Pass
45 min	50.3	67.1	4.6	Critical Storm Duration	2.13 hrs
60 min	54.5	54.5	4.9	Hmax	92 mm
2 hours	64.7	32.3	5.1	Required Volume	5.1 m ³
6 hours	80.6	13.4	4.6	Time to half empty	1.9 hrs
24 hours	104.1	4.3	2.8	Roof Loading	89.47 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: 104m2x0.023l/s/m2 = 2.39l/s.



Appendix D – Thames Water Consultation



Jasmine Houze

MEINHARDT (UK) LTD 10 ALDERSGATE STREET LONDON EC1A 4HJ Wastewater pre-planning Our ref DS6094071

28 April 2022

Pre-planning enquiry: Confirmation of sufficient capacity

Site: 7 A, B & C Bayham Street, London, NW1 0EY

Dear Jasmine,

Thank you for providing information on your development.

Proposed demolished Restaurant/day care (147 cap), Offices (208m2)

Proposed Hotel (79 beds)

Existing FW discharge into d/s vent combined TQ29832425

Existing SW discharge at 25 I/s into d/s vent combined TQ29832425 with impermeable area of 640m2

Proposed FW discharge into d/s vent combined TQ29832425

Proposed SW discharge at 12.5 l/s into d/s vent combined TQ29832425 with impermeable area of 640m2

We have completed the assessment of the foul water flows and surface water run-off based on the information submitted in your application with the purpose of assessing sewerage capacity within the existing Thames Water sewer network.

Foul Water

If your proposals progress in line with the details you've provided, we're pleased to confirm that there will be sufficient sewerage capacity in the adjacent foul water sewer network to serve your development.

This confirmation is valid for 12 months or for the life of any planning approval that this information is used to support, to a maximum of three years.

You'll need to keep us informed of any changes to your design – for example, an increase in the number or density of homes. Such changes could mean there is no longer sufficient capacity.



Surface Water

In accordance with the Building Act 2000 Clause H3.3, positive connection of surface water to a public sewer will only be consented when it can be demonstrated that the hierarchy of disposal methods have been examined and proven to be impracticable. Before we can consider your surface water needs, you'll need written approval from the lead local flood authority that you have followed the sequential approach to the disposal of surface water and considered all practical means.

When developing a site, policy SI 13 of the London Plan states "Development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible. There should also be a preference for green over grey features, in line with the following drainage hierarchy:"

The disposal hierarchy being:

- 1. rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation)
- 2. rainwater infiltration to ground at or close to source
- 3. rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens)
- 4. rainwater discharge direct to a watercourse (unless not appropriate)
- 5. controlled rainwater discharge to a surface water sewer or drain
- 6. controlled rainwater discharge to a combined sewer

Where connection to the public sewerage network is still required to manage surface water flows, we will accept these flows at a discharge rate in line with CIRIA's best practice guide on SuDS or that stated within the sites planning approval.

If the above surface water hierarchy has been followed and if the flows are restricted to a total of 12.5 l/s for all storm events up to and including 1:100yr+40%CC., then Thames Water would not have any objections to the proposal. Please see the attached 'Planning your wastewater' leaflet for additional information.

What happens next?

Please make sure you submit your connection application, giving us at least 21 days' notice of the date you wish to make your new connection/s.

If you have any further questions, please contact me on 0774 764 6498.

Kind Regards,

Long Dru

Long Tran Developer Services – Adoptions Engineer, Sewer Adoptions Team Tel: 0800 009 3921 **Get advice on making your sewer connection correctly at <u>connectright.org.uk</u> Clearwater Court, Vastern Road, Reading, RG1 8DB Find us online at <u>developers.thameswater.co.uk</u>**



Appendix E - Drainage Maintenance and Management Strategy



Table 2: Proposed	l Drainage	Maintenance	Strategy
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Drainage Feature	Regular Maintenance	Occasional Maintenance	Monitoring
Drainage Channels	Inspections will be frequent and regular, depending on local conditions, but at least annually by Site management. Inspections will include gratings; covers including their locking bolts; sumps and sump buckets; exposed concrete surround and adjacent paving. Channels will be flushed with water or high-pressure jetting (no boiling water or cleaning agent will be used). All silt buckets and sumps will be cleaned out replaced back into the units ensuring they are correctly fitted.	All channel surfaces and joints will be checked and repaired as necessary.	Inspected every 6 months or after large storm.
Geo-Cellular Blue Roof	Blue roofs to be maintained in accordance way include:		
	 Remove debris from the catchmen performance (monthly). 	t surface where it may cau	use risk to
	 Inspection chambers will be check debris and silt and cleaned as nec 	-	accumulation of
	 Inspect all inlets, outlets, vents and condition and operating as designed 		they are in good
	 Inspect waterproofing membrane a 	and underside of roof for e	vidence of leakage.
Manholes / Inspection	Inspection chambers will be checked every 6 months for the accumulation of		Inspect every 6 months or after
Chambers	debris and silt and cleaned as necessary.		large storm.
Pumps	Pumps to be maintained in accordance with	pump manufacturers reco	ommendations.