



FOR INFORMATION ONLY

REV	DESCRIPTION	BY	DATE
P01	FOR INFORMATION ONLY	SA	14.02.22
P02	REVISED ISSUE	LB	01.04.22

- NOTES:
- DO NOT SCALE FROM THIS DRAWING
  - ALL DIMENSIONS ARE IN METRES UNLESS NOTED OTHERWISE.
  - THIS DRAWING IS FOR INFORMATION ONLY.
  - DRAWINGS ARE TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS, ENGINEERS AND CONSULTANTS DRAWINGS AND SPECIFICATIONS
  - PERMEABLE PAVING TO BE UTILIZED IN PRIVATELY MANAGED PUBLIC SPACE WHERE FEASIBLE.
  - THIS DRAWING IS BASED ON:
    - LEVITT BERNSTEIN ARCHITECTURAL MASTERPLAN 3663 - 100A - Proposed LGF Plan - Scenario A - P10, DATED: 10/08/21
    - TOPOGRAPHICAL & UTILITIES COMBINED SURVEY FULL SITE V2

- KEY:
- PROPOSED BLOCK BOUNDARY
  - PROPOSED GREEN SPACE BOUNDARY
  - OVERLAND FLOW ROUTE

CDM RESIDUAL CIVIL / STRUCTURAL DESIGN RISKS



PROJECT  
**ABERFELDY VILLAGE**

CLIENT  
ECOWORLD

TITLE  
OVERLAND FLOW ROUTES

DISCIPLINE	SCALE		
CIVIL	1:1000		
DRAWN	DESIGNED	CHECKED	APPROVED
SA	LB	LB	GB
DRAWING No	2812-MHT-CV-BG-DR-109		ISSUE
			P02

DATE: 10/02/2022  
 FILE LOCATION: \\MEINHARDT-DC\PROJECTDATA\PROJECTS\812 - ABERFELDY VILLAGE\1\_MHT\CIVIL\DRAWINGS\DRAWINGS\2812-MHT-CV-BG-DR-109.DWG  
 SCALE 1:1000 AT A1  
 SCALE 1:2000 AT A3  
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10 Aldersgate Street  
London  
EC1A 4HJ

Aberfeldy Village  
Block A1, A2



Date 08/02/2022

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Innovyze

Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	9.286	0.286	1.4	91.5	O K
30 min Summer	9.374	0.374	1.4	119.5	O K
60 min Summer	9.463	0.463	1.4	148.2	O K
120 min Summer	9.551	0.551	1.4	176.3	O K
180 min Summer	9.598	0.598	1.4	191.3	O K
240 min Summer	9.627	0.627	1.4	200.6	O K
360 min Summer	9.664	0.664	1.4	212.3	O K
480 min Summer	9.685	0.685	1.4	219.3	O K
600 min Summer	9.698	0.698	1.4	223.5	O K
720 min Summer	9.705	0.705	1.4	225.7	Flood Risk
960 min Summer	9.708	0.708	1.4	226.7	Flood Risk
1440 min Summer	9.692	0.692	1.4	221.4	O K
2160 min Summer	9.660	0.660	1.4	211.2	O K
2880 min Summer	9.629	0.629	1.4	201.1	O K
4320 min Summer	9.568	0.568	1.4	181.6	O K
5760 min Summer	9.504	0.504	1.4	161.2	O K
7200 min Summer	9.440	0.440	1.4	140.8	O K
8640 min Summer	9.385	0.385	1.4	123.3	O K
10080 min Summer	9.337	0.337	1.4	107.9	O K
15 min Winter	9.320	0.320	1.4	102.5	O K
30 min Winter	9.419	0.419	1.4	134.1	O K
60 min Winter	9.520	0.520	1.4	166.4	O K
120 min Winter	9.619	0.619	1.4	198.2	O K
180 min Winter	9.673	0.673	1.4	215.2	O K
240 min Winter	9.706	0.706	1.4	226.0	Flood Risk
360 min Winter	9.749	0.749	1.4	239.8	Flood Risk
480 min Winter	9.776	0.776	1.4	248.3	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	138.153	0.0	85.6	19
30 min Summer	90.705	0.0	107.0	34
60 min Summer	56.713	0.0	148.6	64
120 min Summer	34.246	0.0	178.2	124
180 min Summer	25.149	0.0	194.4	184
240 min Summer	20.078	0.0	204.0	242
360 min Summer	14.585	0.0	211.9	362
480 min Summer	11.622	0.0	211.8	482
600 min Summer	9.738	0.0	210.3	602
720 min Summer	8.424	0.0	208.3	722
960 min Summer	6.697	0.0	203.9	960
1440 min Summer	4.839	0.0	195.0	1342
2160 min Summer	3.490	0.0	333.1	1704
2880 min Summer	2.766	0.0	350.3	2076
4320 min Summer	1.989	0.0	357.5	2900
5760 min Summer	1.573	0.0	403.6	3744
7200 min Summer	1.311	0.0	420.2	4464
8640 min Summer	1.129	0.0	433.9	5192
10080 min Summer	0.994	0.0	445.1	5952
15 min Winter	138.153	0.0	94.8	19
30 min Winter	90.705	0.0	112.5	34
60 min Winter	56.713	0.0	165.9	64
120 min Winter	34.246	0.0	197.3	122
180 min Winter	25.149	0.0	210.9	180
240 min Winter	20.078	0.0	214.7	240
360 min Winter	14.585	0.0	214.5	358
480 min Winter	11.622	0.0	212.9	474

10 Aldersgate Street  
London  
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Aberfeldy Village  
Block A1, A2



Date 08/02/2022

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Innovyze

Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
600 min Winter	9.793	0.793	1.4	253.7	Flood Risk
720 min Winter	9.803	0.803	1.4	256.9	Flood Risk
960 min Winter	9.811	0.811	1.4	259.6	Flood Risk
1440 min Winter	9.801	0.801	1.4	256.3	Flood Risk
2160 min Winter	9.760	0.760	1.4	243.1	Flood Risk
2880 min Winter	9.721	0.721	1.4	230.8	Flood Risk
4320 min Winter	9.638	0.638	1.4	204.3	O K
5760 min Winter	9.553	0.553	1.4	176.8	O K
7200 min Winter	9.452	0.452	1.4	144.7	O K
8640 min Winter	9.368	0.368	1.4	117.8	O K
10080 min Winter	9.298	0.298	1.4	95.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
600 min Winter	9.738	0.0	211.1	590
720 min Winter	8.424	0.0	209.3	706
960 min Winter	6.697	0.0	205.9	932
1440 min Winter	4.839	0.0	200.0	1370
2160 min Winter	3.490	0.0	371.8	1776
2880 min Winter	2.766	0.0	387.9	2216
4320 min Winter	1.989	0.0	370.5	3152
5760 min Winter	1.573	0.0	452.0	4088
7200 min Winter	1.311	0.0	470.7	4832
8640 min Winter	1.129	0.0	486.1	5536
10080 min Winter	0.994	0.0	498.9	6256

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 Block A1, A2



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Source Control 2020.1

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)	20.000	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.357

**Time (mins) Area**  
**From: To: (ha)**

0 4 0.357

10 Aldersgate Street  
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Block A1, A2



Date 08/02/2022  
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Innovyze Source Control 2020.1

Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 9.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	320.0	1.000	320.0

Hydro-Brake® Optimum Outflow Control

Unit Reference MD-SHE-0058-1500-1000-1500  
 Design Head (m) 1.000  
 Design Flow (l/s) 1.5  
 Flush-Flo™ Calculated  
 Objective Minimise upstream storage  
 Application Surface  
 Sump Available Yes  
 Diameter (mm) 58  
 Invert Level (m) 9.000  
 Minimum Outlet Pipe Diameter (mm) 75  
 Suggested Manhole Diameter (mm) 1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	1.5	Kick-Flo®	0.515	1.1
Flush-Flo™	0.253	1.4	Mean Flow over Head Range	-	1.2

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.2	0.800	1.4	2.000	2.0	4.000	2.8	7.000	3.7
0.200	1.4	1.000	1.5	2.200	2.1	4.500	3.0	7.500	3.8
0.300	1.4	1.200	1.6	2.400	2.2	5.000	3.1	8.000	3.9
0.400	1.3	1.400	1.7	2.600	2.3	5.500	3.3	8.500	4.0
0.500	1.2	1.600	1.9	3.000	2.5	6.000	3.4	9.000	4.1
0.600	1.2	1.800	2.0	3.500	2.7	6.500	3.5	9.500	4.2

10 Aldersgate Street  
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 Block A3



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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	9.329	0.329	0.8	32.3	O K
30 min Summer	9.429	0.429	0.8	42.1	O K
60 min Summer	9.528	0.528	0.8	51.7	O K
120 min Summer	9.618	0.618	0.8	60.5	O K
180 min Summer	9.660	0.660	0.8	64.7	O K
240 min Summer	9.682	0.682	0.8	66.8	O K
360 min Summer	9.701	0.701	0.9	68.7	Flood Risk
480 min Summer	9.703	0.703	0.9	68.9	Flood Risk
600 min Summer	9.696	0.696	0.8	68.2	O K
720 min Summer	9.687	0.687	0.8	67.3	O K
960 min Summer	9.667	0.667	0.8	65.4	O K
1440 min Summer	9.628	0.628	0.8	61.5	O K
2160 min Summer	9.571	0.571	0.8	56.0	O K
2880 min Summer	9.519	0.519	0.8	50.9	O K
4320 min Summer	9.414	0.414	0.8	40.5	O K
5760 min Summer	9.308	0.308	0.8	30.2	O K
7200 min Summer	9.233	0.233	0.8	22.9	O K
8640 min Summer	9.178	0.178	0.8	17.4	O K
10080 min Summer	9.139	0.139	0.8	13.6	O K
15 min Winter	9.369	0.369	0.8	36.2	O K
30 min Winter	9.482	0.482	0.8	47.2	O K
60 min Winter	9.593	0.593	0.8	58.2	O K
120 min Winter	9.696	0.696	0.8	68.2	O K
180 min Winter	9.746	0.746	0.9	73.1	Flood Risk
240 min Winter	9.773	0.773	0.9	75.8	Flood Risk
360 min Winter	9.800	0.800	0.9	78.4	Flood Risk
480 min Winter	9.808	0.808	0.9	79.2	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	138.153	0.0	32.4	19
30 min Summer	90.705	0.0	42.5	34
60 min Summer	56.713	0.0	53.8	64
120 min Summer	34.246	0.0	65.0	122
180 min Summer	25.149	0.0	71.6	182
240 min Summer	20.078	0.0	76.2	242
360 min Summer	14.585	0.0	83.0	362
480 min Summer	11.622	0.0	88.2	480
600 min Summer	9.738	0.0	92.3	594
720 min Summer	8.424	0.0	95.8	640
960 min Summer	6.697	0.0	101.4	760
1440 min Summer	4.839	0.0	109.5	1022
2160 min Summer	3.490	0.0	119.5	1432
2880 min Summer	2.766	0.0	126.3	1848
4320 min Summer	1.989	0.0	136.2	2680
5760 min Summer	1.573	0.0	143.8	3352
7200 min Summer	1.311	0.0	149.7	4040
8640 min Summer	1.129	0.0	154.7	4752
10080 min Summer	0.994	0.0	158.8	5352
15 min Winter	138.153	0.0	36.3	19
30 min Winter	90.705	0.0	47.5	33
60 min Winter	56.713	0.0	60.3	62
120 min Winter	34.246	0.0	72.8	122
180 min Winter	25.149	0.0	80.2	180
240 min Winter	20.078	0.0	85.3	238
360 min Winter	14.585	0.0	92.9	352
480 min Winter	11.622	0.0	98.7	466

10 Aldersgate Street  
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Aberfeldy Village  
Block A3



Date 08/02/2022

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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
600 min Winter	9.805	0.805	0.9	78.9	Flood Risk
720 min Winter	9.797	0.797	0.9	78.1	Flood Risk
960 min Winter	9.770	0.770	0.9	75.4	Flood Risk
1440 min Winter	9.721	0.721	0.9	70.6	Flood Risk
2160 min Winter	9.642	0.642	0.8	62.9	O K
2880 min Winter	9.565	0.565	0.8	55.4	O K
4320 min Winter	9.403	0.403	0.8	39.5	O K
5760 min Winter	9.253	0.253	0.8	24.8	O K
7200 min Winter	9.162	0.162	0.8	15.8	O K
8640 min Winter	9.109	0.109	0.8	10.7	O K
10080 min Winter	9.080	0.080	0.7	7.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
600 min Winter	9.738	0.0	103.3	576
720 min Winter	8.424	0.0	107.2	684
960 min Winter	6.697	0.0	113.4	802
1440 min Winter	4.839	0.0	121.5	1094
2160 min Winter	3.490	0.0	133.9	1556
2880 min Winter	2.766	0.0	141.4	2016
4320 min Winter	1.989	0.0	152.5	2892
5760 min Winter	1.573	0.0	161.1	3512
7200 min Winter	1.311	0.0	167.7	4112
8640 min Winter	1.129	0.0	173.2	4752
10080 min Winter	0.994	0.0	178.0	5344

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Source Control 2020.1

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)	20.000	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.127

Time (mins)		Area
From:	To:	(ha)
0	4	0.127



10 Aldersgate Street  
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Source Control 2020.1

### Model Details

Storage is Online Cover Level (m) 10.000

### Tank or Pond Structure

Invert Level (m) 9.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	98.0	1.000	98.0

### Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0047-1000-1000-1000
Design Head (m)	1.000
Design Flow (l/s)	1.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	47
Invert Level (m)	9.000
Minimum Outlet Pipe Diameter (mm)	75
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	1.0	Kick-Flo®	0.415	0.7
Flush-Flo™	0.205	0.8	Mean Flow over Head Range	-	0.8

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	0.8	0.800	0.9	2.000	1.4	4.000	1.9	7.000	2.4
0.200	0.8	1.000	1.0	2.200	1.4	4.500	2.0	7.500	2.5
0.300	0.8	1.200	1.1	2.400	1.5	5.000	2.1	8.000	2.6
0.400	0.7	1.400	1.2	2.600	1.5	5.500	2.2	8.500	2.7
0.500	0.7	1.600	1.2	3.000	1.6	6.000	2.3	9.000	2.7
0.600	0.8	1.800	1.3	3.500	1.8	6.500	2.3	9.500	2.8

10 Aldersgate Street  
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Aberfeldy Village  
Block B1, B2



Date 08/02/2022

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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	9.315	0.315	1.4	56.7	O K
30 min Summer	9.411	0.411	1.4	73.9	O K
60 min Summer	9.507	0.507	1.4	91.2	O K
120 min Summer	9.596	0.596	1.4	107.4	O K
180 min Summer	9.640	0.640	1.4	115.3	O K
240 min Summer	9.665	0.665	1.4	119.6	O K
360 min Summer	9.689	0.689	1.4	124.1	O K
480 min Summer	9.698	0.698	1.4	125.6	O K
600 min Summer	9.697	0.697	1.4	125.4	O K
720 min Summer	9.690	0.690	1.4	124.2	O K
960 min Summer	9.673	0.673	1.4	121.1	O K
1440 min Summer	9.637	0.637	1.4	114.7	O K
2160 min Summer	9.584	0.584	1.4	105.2	O K
2880 min Summer	9.531	0.531	1.4	95.6	O K
4320 min Summer	9.421	0.421	1.4	75.7	O K
5760 min Summer	9.333	0.333	1.4	59.9	O K
7200 min Summer	9.263	0.263	1.4	47.4	O K
8640 min Summer	9.210	0.210	1.4	37.8	O K
10080 min Summer	9.170	0.170	1.3	30.6	O K
15 min Winter	9.354	0.354	1.4	63.6	O K
30 min Winter	9.461	0.461	1.4	83.0	O K
60 min Winter	9.570	0.570	1.4	102.6	O K
120 min Winter	9.672	0.672	1.4	120.9	O K
180 min Winter	9.723	0.723	1.4	130.1	Flood Risk
240 min Winter	9.752	0.752	1.4	135.3	Flood Risk
360 min Winter	9.783	0.783	1.4	141.0	Flood Risk
480 min Winter	9.797	0.797	1.4	143.4	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	138.153	0.0	56.3	19
30 min Summer	90.705	0.0	73.8	34
60 min Summer	56.713	0.0	94.2	64
120 min Summer	34.246	0.0	113.7	124
180 min Summer	25.149	0.0	125.2	182
240 min Summer	20.078	0.0	133.3	242
360 min Summer	14.585	0.0	145.1	362
480 min Summer	11.622	0.0	154.1	482
600 min Summer	9.738	0.0	161.3	600
720 min Summer	8.424	0.0	167.2	716
960 min Summer	6.697	0.0	176.7	818
1440 min Summer	4.839	0.0	188.6	1070
2160 min Summer	3.490	0.0	209.7	1476
2880 min Summer	2.766	0.0	221.5	1904
4320 min Summer	1.989	0.0	238.8	2640
5760 min Summer	1.573	0.0	252.4	3400
7200 min Summer	1.311	0.0	262.8	4104
8640 min Summer	1.129	0.0	271.4	4760
10080 min Summer	0.994	0.0	278.6	5448
15 min Winter	138.153	0.0	63.1	19
30 min Winter	90.705	0.0	82.5	33
60 min Winter	56.713	0.0	105.5	62
120 min Winter	34.246	0.0	127.3	122
180 min Winter	25.149	0.0	140.2	180
240 min Winter	20.078	0.0	149.2	238
360 min Winter	14.585	0.0	162.4	354
480 min Winter	11.622	0.0	172.3	468

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Block B1, B2



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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
600 min Winter	9.800	0.800	1.4	144.0	Flood Risk
720 min Winter	9.797	0.797	1.4	143.4	Flood Risk
960 min Winter	9.779	0.779	1.4	140.2	Flood Risk
1440 min Winter	9.732	0.732	1.4	131.8	Flood Risk
2160 min Winter	9.662	0.662	1.4	119.2	O K
2880 min Winter	9.589	0.589	1.4	106.0	O K
4320 min Winter	9.422	0.422	1.4	75.9	O K
5760 min Winter	9.292	0.292	1.4	52.6	O K
7200 min Winter	9.202	0.202	1.4	36.3	O K
8640 min Winter	9.144	0.144	1.3	25.9	O K
10080 min Winter	9.107	0.107	1.2	19.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
600 min Winter	9.738	0.0	180.2	582
720 min Winter	8.424	0.0	186.6	692
960 min Winter	6.697	0.0	196.4	904
1440 min Winter	4.839	0.0	201.0	1126
2160 min Winter	3.490	0.0	234.9	1600
2880 min Winter	2.766	0.0	248.0	2052
4320 min Winter	1.989	0.0	267.5	2852
5760 min Winter	1.573	0.0	282.7	3568
7200 min Winter	1.311	0.0	294.3	4184
8640 min Winter	1.129	0.0	304.0	4840
10080 min Winter	0.994	0.0	312.2	5448

10 Aldersgate Street  
 London  
 EC1A 4HJ

Aberfeldy Village  
 Block B1, B2



Date 08/02/2022

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Source Control 2020.1

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)	20.000	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.223

Time (mins)		Area
From:	To:	(ha)
0	4	0.223

10 Aldersgate Street  
 London  
 EC1A 4HJ

Aberfeldy Village  
 Block B1, B2



Date 08/02/2022

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Source Control 2020.1

Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 9.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	180.0	1.000	180.0

Hydro-Brake® Optimum Outflow Control

Unit Reference MD-SHE-0058-1500-1000-1500  
 Design Head (m) 1.000  
 Design Flow (l/s) 1.5  
 Flush-Flo™ Calculated  
 Objective Minimise upstream storage  
 Application Surface  
 Sump Available Yes  
 Diameter (mm) 58  
 Invert Level (m) 9.000  
 Minimum Outlet Pipe Diameter (mm) 75  
 Suggested Manhole Diameter (mm) 1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	1.5	Kick-Flo®	0.515	1.1
Flush-Flo™	0.253	1.4	Mean Flow over Head Range	-	1.2

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.2	0.800	1.4	2.000	2.0	4.000	2.8	7.000	3.7
0.200	1.4	1.000	1.5	2.200	2.1	4.500	3.0	7.500	3.8
0.300	1.4	1.200	1.6	2.400	2.2	5.000	3.1	8.000	3.9
0.400	1.3	1.400	1.7	2.600	2.3	5.500	3.3	8.500	4.0
0.500	1.2	1.600	1.9	3.000	2.5	6.000	3.4	9.000	4.1
0.600	1.2	1.800	2.0	3.500	2.7	6.500	3.5	9.500	4.2

10 Aldersgate Street  
London  
EC1A 4HJ

Aberfeldy Village  
Block B3



Date 08/02/2022  
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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	9.298	0.298	1.1	38.8	O K
30 min Summer	9.388	0.388	1.1	50.4	O K
60 min Summer	9.477	0.477	1.1	62.1	O K
120 min Summer	9.558	0.558	1.1	72.6	O K
180 min Summer	9.596	0.596	1.1	77.5	O K
240 min Summer	9.615	0.615	1.1	79.9	O K
360 min Summer	9.630	0.630	1.1	81.9	O K
480 min Summer	9.630	0.630	1.1	81.9	O K
600 min Summer	9.622	0.622	1.1	80.9	O K
720 min Summer	9.612	0.612	1.1	79.6	O K
960 min Summer	9.593	0.593	1.1	77.0	O K
1440 min Summer	9.552	0.552	1.1	71.8	O K
2160 min Summer	9.492	0.492	1.1	63.9	O K
2880 min Summer	9.426	0.426	1.1	55.3	O K
4320 min Summer	9.319	0.319	1.1	41.4	O K
5760 min Summer	9.237	0.237	1.1	30.9	O K
7200 min Summer	9.180	0.180	1.1	23.4	O K
8640 min Summer	9.139	0.139	1.1	18.1	O K
10080 min Summer	9.111	0.111	1.0	14.5	O K
15 min Winter	9.335	0.335	1.1	43.5	O K
30 min Winter	9.436	0.436	1.1	56.7	O K
60 min Winter	9.537	0.537	1.1	69.9	O K
120 min Winter	9.630	0.630	1.1	81.8	O K
180 min Winter	9.674	0.674	1.1	87.6	O K
240 min Winter	9.697	0.697	1.1	90.6	O K
360 min Winter	9.718	0.718	1.1	93.4	Flood Risk
480 min Winter	9.723	0.723	1.1	94.0	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	138.153	0.0	38.9	19
30 min Summer	90.705	0.0	51.1	34
60 min Summer	56.713	0.0	64.7	64
120 min Summer	34.246	0.0	78.2	122
180 min Summer	25.149	0.0	86.1	182
240 min Summer	20.078	0.0	91.7	242
360 min Summer	14.585	0.0	99.9	362
480 min Summer	11.622	0.0	106.1	480
600 min Summer	9.738	0.0	111.1	582
720 min Summer	8.424	0.0	115.3	628
960 min Summer	6.697	0.0	122.2	752
1440 min Summer	4.839	0.0	132.1	1012
2160 min Summer	3.490	0.0	144.0	1432
2880 min Summer	2.766	0.0	152.1	1816
4320 min Summer	1.989	0.0	163.9	2552
5760 min Summer	1.573	0.0	173.2	3280
7200 min Summer	1.311	0.0	180.3	3960
8640 min Summer	1.129	0.0	186.3	4592
10080 min Summer	0.994	0.0	191.3	5336
15 min Winter	138.153	0.0	43.6	19
30 min Winter	90.705	0.0	57.3	33
60 min Winter	56.713	0.0	72.5	62
120 min Winter	34.246	0.0	87.6	122
180 min Winter	25.149	0.0	96.5	180
240 min Winter	20.078	0.0	102.7	238
360 min Winter	14.585	0.0	111.9	352
480 min Winter	11.622	0.0	118.8	466

10 Aldersgate Street  
London  
EC1A 4HJ

Aberfeldy Village  
Block B3



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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
600 min Winter	9.719	0.719	1.1	93.5	Flood Risk
720 min Winter	9.709	0.709	1.1	92.2	Flood Risk
960 min Winter	9.682	0.682	1.1	88.6	O K
1440 min Winter	9.631	0.631	1.1	82.0	O K
2160 min Winter	9.548	0.548	1.1	71.2	O K
2880 min Winter	9.452	0.452	1.1	58.8	O K
4320 min Winter	9.288	0.288	1.1	37.4	O K
5760 min Winter	9.182	0.182	1.1	23.6	O K
7200 min Winter	9.120	0.120	1.1	15.6	O K
8640 min Winter	9.086	0.086	1.0	11.2	O K
10080 min Winter	9.071	0.071	0.9	9.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
600 min Winter	9.738	0.0	124.4	576
720 min Winter	8.424	0.0	129.1	680
960 min Winter	6.697	0.0	136.7	788
1440 min Winter	4.839	0.0	147.5	1084
2160 min Winter	3.490	0.0	161.3	1556
2880 min Winter	2.766	0.0	170.4	1988
4320 min Winter	1.989	0.0	183.7	2684
5760 min Winter	1.573	0.0	194.0	3352
7200 min Winter	1.311	0.0	202.0	3968
8640 min Winter	1.129	0.0	208.7	4584
10080 min Winter	0.994	0.0	214.3	5240

10 Aldersgate Street  
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Aberfeldy Village  
 Block B3



Date 08/02/2022

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Source Control 2020.1

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)	20.000	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.153

Time (mins)		Area
From:	To:	(ha)
0	4	0.153



10 Aldersgate Street  
 London  
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Aberfeldy Village  
 Block B3



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Source Control 2020.1

Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 9.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	130.0	1.000	130.0

Hydro-Brake® Optimum Outflow Control

Unit Reference MD-SHE-0053-1300-1000-1300  
 Design Head (m) 1.000  
 Design Flow (l/s) 1.3  
 Flush-Flo™ Calculated  
 Objective Minimise upstream storage  
 Application Surface  
 Sump Available Yes  
 Diameter (mm) 53  
 Invert Level (m) 9.000  
 Minimum Outlet Pipe Diameter (mm) 75  
 Suggested Manhole Diameter (mm) 1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	1.3	Kick-Flo®	0.477	0.9
Flush-Flo™	0.236	1.1	Mean Flow over Head Range	-	1.1

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.0	0.800	1.2	2.000	1.8	4.000	2.4	7.000	3.2
0.200	1.1	1.000	1.3	2.200	1.9	4.500	2.6	7.500	3.3
0.300	1.1	1.200	1.4	2.400	1.9	5.000	2.7	8.000	3.4
0.400	1.1	1.400	1.5	2.600	2.0	5.500	2.8	8.500	3.5
0.500	1.0	1.600	1.6	3.000	2.1	6.000	2.9	9.000	3.6
0.600	1.0	1.800	1.7	3.500	2.3	6.500	3.1	9.500	3.6

10 Aldersgate Street  
London  
EC1A 4HJ

Aberfeldy Village  
Block B4



Date 08/02/2022  
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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	9.320	0.320	0.8	32.0	O K
30 min Summer	9.417	0.417	0.8	41.7	O K
60 min Summer	9.513	0.513	0.8	51.3	O K
120 min Summer	9.601	0.601	0.8	60.1	O K
180 min Summer	9.642	0.642	0.8	64.2	O K
240 min Summer	9.663	0.663	0.8	66.3	O K
360 min Summer	9.682	0.682	0.8	68.2	O K
480 min Summer	9.684	0.684	0.8	68.4	O K
600 min Summer	9.677	0.677	0.8	67.7	O K
720 min Summer	9.668	0.668	0.8	66.8	O K
960 min Summer	9.649	0.649	0.8	64.9	O K
1440 min Summer	9.611	0.611	0.8	61.1	O K
2160 min Summer	9.556	0.556	0.8	55.6	O K
2880 min Summer	9.504	0.504	0.8	50.4	O K
4320 min Summer	9.396	0.396	0.8	39.6	O K
5760 min Summer	9.298	0.298	0.8	29.8	O K
7200 min Summer	9.225	0.225	0.8	22.5	O K
8640 min Summer	9.172	0.172	0.8	17.2	O K
10080 min Summer	9.135	0.135	0.8	13.5	O K
15 min Winter	9.359	0.359	0.8	35.9	O K
30 min Winter	9.469	0.469	0.8	46.9	O K
60 min Winter	9.577	0.577	0.8	57.7	O K
120 min Winter	9.677	0.677	0.8	67.7	O K
180 min Winter	9.726	0.726	0.9	72.6	Flood Risk
240 min Winter	9.752	0.752	0.9	75.2	Flood Risk
360 min Winter	9.778	0.778	0.9	77.8	Flood Risk
480 min Winter	9.786	0.786	0.9	78.6	Flood Risk

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	138.153	0.0	32.1	19
30 min Summer	90.705	0.0	42.2	34
60 min Summer	56.713	0.0	53.4	64
120 min Summer	34.246	0.0	64.4	122
180 min Summer	25.149	0.0	71.0	182
240 min Summer	20.078	0.0	75.6	242
360 min Summer	14.585	0.0	82.3	362
480 min Summer	11.622	0.0	87.4	480
600 min Summer	9.738	0.0	91.6	594
720 min Summer	8.424	0.0	95.0	642
960 min Summer	6.697	0.0	100.6	760
1440 min Summer	4.839	0.0	108.6	1024
2160 min Summer	3.490	0.0	118.6	1444
2880 min Summer	2.766	0.0	125.3	1848
4320 min Summer	1.989	0.0	135.1	2640
5760 min Summer	1.573	0.0	142.7	3344
7200 min Summer	1.311	0.0	148.5	4040
8640 min Summer	1.129	0.0	153.4	4680
10080 min Summer	0.994	0.0	157.6	5352
15 min Winter	138.153	0.0	36.0	19
30 min Winter	90.705	0.0	47.1	33
60 min Winter	56.713	0.0	59.8	62
120 min Winter	34.246	0.0	72.2	122
180 min Winter	25.149	0.0	79.5	180
240 min Winter	20.078	0.0	84.6	238
360 min Winter	14.585	0.0	92.2	352
480 min Winter	11.622	0.0	97.9	466

10 Aldersgate Street  
London  
EC1A 4HJ

Aberfeldy Village  
Block B4



Date 08/02/2022

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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
600 min Winter	9.783	0.783	0.9	78.3	Flood Risk
720 min Winter	9.775	0.775	0.9	77.5	Flood Risk
960 min Winter	9.749	0.749	0.9	74.9	Flood Risk
1440 min Winter	9.701	0.701	0.9	70.1	Flood Risk
2160 min Winter	9.624	0.624	0.8	62.4	O K
2880 min Winter	9.548	0.548	0.8	54.8	O K
4320 min Winter	9.384	0.384	0.8	38.4	O K
5760 min Winter	9.244	0.244	0.8	24.4	O K
7200 min Winter	9.156	0.156	0.8	15.6	O K
8640 min Winter	9.106	0.106	0.8	10.6	O K
10080 min Winter	9.078	0.078	0.7	7.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
600 min Winter	9.738	0.0	102.5	576
720 min Winter	8.424	0.0	106.3	684
960 min Winter	6.697	0.0	112.5	810
1440 min Winter	4.839	0.0	120.6	1094
2160 min Winter	3.490	0.0	132.8	1556
2880 min Winter	2.766	0.0	140.3	2016
4320 min Winter	1.989	0.0	151.3	2852
5760 min Winter	1.573	0.0	159.8	3512
7200 min Winter	1.311	0.0	166.4	4112
8640 min Winter	1.129	0.0	171.9	4752
10080 min Winter	0.994	0.0	176.5	5344

10 Aldersgate Street  
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Aberfeldy Village  
Block B4



Date 08/02/2022

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Source Control 2020.1

### 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)	20.000	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

### Time Area Diagram

Total Area (ha) 0.126

Time (mins)	Area
From:	To: (ha)

0	4 0.126
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10 Aldersgate Street  
London  
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Aberfeldy Village  
Block B4



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Source Control 2020.1

Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 9.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	100.0	1.000	100.0

Hydro-Brake® Optimum Outflow Control

Unit Reference MD-SHE-0047-1000-1000-1000  
 Design Head (m) 1.000  
 Design Flow (l/s) 1.0  
 Flush-Flo™ Calculated  
 Objective Minimise upstream storage  
 Application Surface  
 Sump Available Yes  
 Diameter (mm) 47  
 Invert Level (m) 9.000  
 Minimum Outlet Pipe Diameter (mm) 75  
 Suggested Manhole Diameter (mm) 1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	1.0	Kick-Flo®	0.415	0.7
Flush-Flo™	0.205	0.8	Mean Flow over Head Range	-	0.8

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	0.8	0.800	0.9	2.000	1.4	4.000	1.9	7.000	2.4
0.200	0.8	1.000	1.0	2.200	1.4	4.500	2.0	7.500	2.5
0.300	0.8	1.200	1.1	2.400	1.5	5.000	2.1	8.000	2.6
0.400	0.7	1.400	1.2	2.600	1.5	5.500	2.2	8.500	2.7
0.500	0.7	1.600	1.2	3.000	1.6	6.000	2.3	9.000	2.7
0.600	0.8	1.800	1.3	3.500	1.8	6.500	2.3	9.500	2.8

10 Aldersgate Street  
London  
EC1A 4HJ

Aberfeldy Village  
Block B5



Date 08/02/2022  
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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Summer	9.384	0.384	0.8	7.7	O K
30 min Summer	9.488	0.488	0.8	9.8	O K
60 min Summer	9.566	0.566	0.8	11.3	O K
120 min Summer	9.592	0.592	0.8	11.8	O K
180 min Summer	9.579	0.579	0.8	11.6	O K
240 min Summer	9.559	0.559	0.8	11.2	O K
360 min Summer	9.517	0.517	0.8	10.3	O K
480 min Summer	9.476	0.476	0.8	9.5	O K
600 min Summer	9.434	0.434	0.8	8.7	O K
720 min Summer	9.387	0.387	0.8	7.7	O K
960 min Summer	9.306	0.306	0.8	6.1	O K
1440 min Summer	9.192	0.192	0.8	3.8	O K
2160 min Summer	9.105	0.105	0.8	2.1	O K
2880 min Summer	9.071	0.071	0.7	1.4	O K
4320 min Summer	9.050	0.050	0.5	1.0	O K
5760 min Summer	9.040	0.040	0.4	0.8	O K
7200 min Summer	9.035	0.035	0.3	0.7	O K
8640 min Summer	9.032	0.032	0.3	0.6	O K
10080 min Summer	9.030	0.030	0.3	0.6	O K
15 min Winter	9.434	0.434	0.8	8.7	O K
30 min Winter	9.552	0.552	0.8	11.0	O K
60 min Winter	9.644	0.644	0.8	12.9	O K
120 min Winter	9.684	0.684	0.8	13.7	O K
180 min Winter	9.667	0.667	0.8	13.3	O K
240 min Winter	9.642	0.642	0.8	12.8	O K
360 min Winter	9.584	0.584	0.8	11.7	O K
480 min Winter	9.525	0.525	0.8	10.5	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Summer	138.153	0.0	8.3	18
30 min Summer	90.705	0.0	10.9	33
60 min Summer	56.713	0.0	13.6	62
120 min Summer	34.246	0.0	16.4	116
180 min Summer	25.149	0.0	18.1	144
240 min Summer	20.078	0.0	19.3	176
360 min Summer	14.585	0.0	21.0	246
480 min Summer	11.622	0.0	22.3	316
600 min Summer	9.738	0.0	23.4	386
720 min Summer	8.424	0.0	24.3	448
960 min Summer	6.697	0.0	25.7	568
1440 min Summer	4.839	0.0	27.9	796
2160 min Summer	3.490	0.0	30.1	1128
2880 min Summer	2.766	0.0	31.9	1472
4320 min Summer	1.989	0.0	34.4	2200
5760 min Summer	1.573	0.0	36.2	2936
7200 min Summer	1.311	0.0	37.7	3584
8640 min Summer	1.129	0.0	39.0	4368
10080 min Summer	0.994	0.0	40.1	5048
15 min Winter	138.153	0.0	9.3	18
30 min Winter	90.705	0.0	12.2	32
60 min Winter	56.713	0.0	15.2	60
120 min Winter	34.246	0.0	18.4	116
180 min Winter	25.149	0.0	20.3	162
240 min Winter	20.078	0.0	21.6	188
360 min Winter	14.585	0.0	23.5	266
480 min Winter	11.622	0.0	25.0	342

10 Aldersgate Street  
London  
EC1A 4HJ

Aberfeldy Village  
Block B5



Date 08/02/2022  
File Block B5.SRCX

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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

<b>Storm Event</b>	<b>Max Level (m)</b>	<b>Max Depth (m)</b>	<b>Max Control (l/s)</b>	<b>Max Volume (m<sup>3</sup>)</b>	<b>Status</b>
600 min Winter	9.463	0.463	0.8	9.3	O K
720 min Winter	9.391	0.391	0.8	7.8	O K
960 min Winter	9.268	0.268	0.8	5.4	O K
1440 min Winter	9.129	0.129	0.8	2.6	O K
2160 min Winter	9.066	0.066	0.7	1.3	O K
2880 min Winter	9.050	0.050	0.5	1.0	O K
4320 min Winter	9.038	0.038	0.4	0.8	O K
5760 min Winter	9.032	0.032	0.3	0.6	O K
7200 min Winter	9.029	0.029	0.3	0.6	O K
8640 min Winter	9.026	0.026	0.2	0.5	O K
10080 min Winter	9.024	0.024	0.2	0.5	O K

<b>Storm Event</b>	<b>Rain (mm/hr)</b>	<b>Flooded Volume (m<sup>3</sup>)</b>	<b>Discharge Volume (m<sup>3</sup>)</b>	<b>Time-Peak (mins)</b>
600 min Winter	9.738	0.0	26.2	416
720 min Winter	8.424	0.0	27.2	484
960 min Winter	6.697	0.0	28.8	598
1440 min Winter	4.839	0.0	31.2	808
2160 min Winter	3.490	0.0	33.8	1120
2880 min Winter	2.766	0.0	35.7	1472
4320 min Winter	1.989	0.0	38.5	2164
5760 min Winter	1.573	0.0	40.6	2936
7200 min Winter	1.311	0.0	42.3	3640
8640 min Winter	1.129	0.0	43.7	4392
10080 min Winter	0.994	0.0	44.9	5016

10 Aldersgate Street  
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Aberfeldy Village  
 Block B5



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Source Control 2020.1

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)	20.000	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.032

Time (mins)		Area
From:	To:	(ha)
0	4	0.032



10 Aldersgate Street  
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Aberfeldy Village  
 Block B5



Date 08/02/2022  
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Source Control 2020.1

Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 9.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	20.0	1.000	20.0

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0047-1000-1000-1000
Design Head (m)	1.000
Design Flow (l/s)	1.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	47
Invert Level (m)	9.000
Minimum Outlet Pipe Diameter (mm)	75
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	1.0	Kick-Flo®	0.415	0.7
Flush-Flo™	0.205	0.8	Mean Flow over Head Range	-	0.8

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	0.8	0.800	0.9	2.000	1.4	4.000	1.9	7.000	2.4
0.200	0.8	1.000	1.0	2.200	1.4	4.500	2.0	7.500	2.5
0.300	0.8	1.200	1.1	2.400	1.5	5.000	2.1	8.000	2.6
0.400	0.7	1.400	1.2	2.600	1.5	5.500	2.2	8.500	2.7
0.500	0.7	1.600	1.2	3.000	1.6	6.000	2.3	9.000	2.7
0.600	0.8	1.800	1.3	3.500	1.8	6.500	2.3	9.500	2.8

10 Aldersgate Street  
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EC1A 4HJ

Aberfeldy Village  
Block C1, C2, C3, C4



Date 08/02/2022

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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	9.221	0.221	1.4	154.5	O K
30 min Summer	9.289	0.289	1.4	202.3	O K
60 min Summer	9.359	0.359	1.4	251.6	O K
120 min Summer	9.430	0.430	1.4	301.0	O K
180 min Summer	9.470	0.470	1.4	328.8	O K
240 min Summer	9.496	0.496	1.4	347.2	O K
360 min Summer	9.533	0.533	1.4	372.8	O K
480 min Summer	9.558	0.558	1.4	390.5	O K
600 min Summer	9.576	0.576	1.4	403.2	O K
720 min Summer	9.590	0.590	1.4	412.7	O K
960 min Summer	9.608	0.608	1.4	425.4	O K
1440 min Summer	9.624	0.624	1.4	436.5	O K
2160 min Summer	9.623	0.623	1.4	436.0	O K
2880 min Summer	9.609	0.609	1.4	426.0	O K
4320 min Summer	9.578	0.578	1.4	404.3	O K
5760 min Summer	9.546	0.546	1.4	382.5	O K
7200 min Summer	9.515	0.515	1.4	360.2	O K
8640 min Summer	9.481	0.481	1.4	336.5	O K
10080 min Summer	9.450	0.450	1.4	314.8	O K
15 min Winter	9.247	0.247	1.4	173.1	O K
30 min Winter	9.324	0.324	1.4	226.7	O K
60 min Winter	9.403	0.403	1.4	282.1	O K
120 min Winter	9.483	0.483	1.4	338.0	O K
180 min Winter	9.528	0.528	1.4	369.7	O K
240 min Winter	9.558	0.558	1.4	390.7	O K
360 min Winter	9.600	0.600	1.4	419.8	O K
480 min Winter	9.629	0.629	1.4	440.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	138.153	0.0	108.0	19
30 min Summer	90.705	0.0	114.9	34
60 min Summer	56.713	0.0	218.1	64
120 min Summer	34.246	0.0	227.4	124
180 min Summer	25.149	0.0	225.6	184
240 min Summer	20.078	0.0	222.1	244
360 min Summer	14.585	0.0	213.9	364
480 min Summer	11.622	0.0	207.7	484
600 min Summer	9.738	0.0	203.0	602
720 min Summer	8.424	0.0	199.3	722
960 min Summer	6.697	0.0	193.6	962
1440 min Summer	4.839	0.0	186.3	1442
2160 min Summer	3.490	0.0	400.6	2160
2880 min Summer	2.766	0.0	385.5	2736
4320 min Summer	1.989	0.0	355.3	3416
5760 min Summer	1.573	0.0	669.5	4160
7200 min Summer	1.311	0.0	692.6	4976
8640 min Summer	1.129	0.0	706.6	5712
10080 min Summer	0.994	0.0	700.1	6464
15 min Winter	138.153	0.0	112.0	19
30 min Winter	90.705	0.0	116.1	34
60 min Winter	56.713	0.0	226.7	64
120 min Winter	34.246	0.0	226.1	122
180 min Winter	25.149	0.0	219.0	182
240 min Winter	20.078	0.0	213.5	242
360 min Winter	14.585	0.0	206.5	360
480 min Winter	11.622	0.0	202.2	478

10 Aldersgate Street  
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Block C1, C2, C3, C4



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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
600 min Winter	9.650	0.650	1.4	454.7	O K
720 min Winter	9.666	0.666	1.4	465.9	O K
960 min Winter	9.688	0.688	1.4	481.3	O K
1440 min Winter	9.709	0.709	1.4	496.5	Flood Risk
2160 min Winter	9.714	0.714	1.4	500.0	Flood Risk
2880 min Winter	9.704	0.704	1.4	492.7	Flood Risk
4320 min Winter	9.664	0.664	1.4	464.8	O K
5760 min Winter	9.627	0.627	1.4	438.8	O K
7200 min Winter	9.587	0.587	1.4	411.0	O K
8640 min Winter	9.546	0.546	1.4	381.9	O K
10080 min Winter	9.498	0.498	1.4	348.8	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
600 min Winter	9.738	0.0	199.3	596
720 min Winter	8.424	0.0	197.4	714
960 min Winter	6.697	0.0	195.6	946
1440 min Winter	4.839	0.0	195.1	1412
2160 min Winter	3.490	0.0	401.6	2096
2880 min Winter	2.766	0.0	389.5	2740
4320 min Winter	1.989	0.0	368.8	3592
5760 min Winter	1.573	0.0	743.8	4440
7200 min Winter	1.311	0.0	753.6	5400
8640 min Winter	1.129	0.0	733.8	6312
10080 min Winter	0.994	0.0	719.2	7168

10 Aldersgate Street  
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Aberfeldy Village  
 Block C1, C2, C3, C4



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Source Control 2020.1

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)	20.000	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.600

Time (mins)		Area
From:	To:	(ha)
0	4	0.600

10 Aldersgate Street  
 London  
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Aberfeldy Village  
 Block C1, C2, C3, C4



Date 08/02/2022

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Source Control 2020.1

Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 9.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	700.0	1.000	700.0

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0058-1500-1000-1500
Design Head (m)	1.000
Design Flow (l/s)	1.5
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	58
Invert Level (m)	9.000
Minimum Outlet Pipe Diameter (mm)	75
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	1.5	Kick-Flo®	0.515	1.1
Flush-Flo™	0.253	1.4	Mean Flow over Head Range	-	1.2

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	1.2	0.800	1.4	2.000	2.0	4.000	2.8	7.000	3.7
0.200	1.4	1.000	1.5	2.200	2.1	4.500	3.0	7.500	3.8
0.300	1.4	1.200	1.6	2.400	2.2	5.000	3.1	8.000	3.9
0.400	1.3	1.400	1.7	2.600	2.3	5.500	3.3	8.500	4.0
0.500	1.2	1.600	1.9	3.000	2.5	6.000	3.4	9.000	4.1
0.600	1.2	1.800	2.0	3.500	2.7	6.500	3.5	9.500	4.2

10 Aldersgate Street  
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Aberfeldy Village  
Block C5



Date 08/02/2022  
File BlockC5.SRCX

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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
15 min Summer	9.471	0.471	0.6	4.7	O K
30 min Summer	9.586	0.586	0.6	5.9	O K
60 min Summer	9.659	0.659	0.7	6.6	O K
120 min Summer	9.664	0.664	0.7	6.6	O K
180 min Summer	9.640	0.640	0.7	6.4	O K
240 min Summer	9.609	0.609	0.6	6.1	O K
360 min Summer	9.549	0.549	0.6	5.5	O K
480 min Summer	9.492	0.492	0.6	4.9	O K
600 min Summer	9.438	0.438	0.6	4.4	O K
720 min Summer	9.383	0.383	0.6	3.8	O K
960 min Summer	9.267	0.267	0.6	2.7	O K
1440 min Summer	9.141	0.141	0.6	1.4	O K
2160 min Summer	9.071	0.071	0.5	0.7	O K
2880 min Summer	9.053	0.053	0.4	0.5	O K
4320 min Summer	9.038	0.038	0.3	0.4	O K
5760 min Summer	9.032	0.032	0.3	0.3	O K
7200 min Summer	9.028	0.028	0.2	0.3	O K
8640 min Summer	9.026	0.026	0.2	0.3	O K
10080 min Summer	9.024	0.024	0.2	0.2	O K
15 min Winter	9.531	0.531	0.6	5.3	O K
30 min Winter	9.666	0.666	0.7	6.7	O K
60 min Winter	9.758	0.758	0.7	7.6	Flood Risk
120 min Winter	9.767	0.767	0.7	7.7	Flood Risk
180 min Winter	9.737	0.737	0.7	7.4	Flood Risk
240 min Winter	9.693	0.693	0.7	6.9	O K
360 min Winter	9.604	0.604	0.6	6.0	O K
480 min Winter	9.520	0.520	0.6	5.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)
15 min Summer	138.153	0.0	5.2	18
30 min Summer	90.705	0.0	6.8	32
60 min Summer	56.713	0.0	8.5	60
120 min Summer	34.246	0.0	10.3	98
180 min Summer	25.149	0.0	11.3	130
240 min Summer	20.078	0.0	12.0	164
360 min Summer	14.585	0.0	13.1	234
480 min Summer	11.622	0.0	13.9	302
600 min Summer	9.738	0.0	14.6	370
720 min Summer	8.424	0.0	15.2	440
960 min Summer	6.697	0.0	16.1	550
1440 min Summer	4.839	0.0	17.4	768
2160 min Summer	3.490	0.0	18.8	1104
2880 min Summer	2.766	0.0	19.9	1468
4320 min Summer	1.989	0.0	21.5	2192
5760 min Summer	1.573	0.0	22.6	2904
7200 min Summer	1.311	0.0	23.6	3664
8640 min Summer	1.129	0.0	24.4	4392
10080 min Summer	0.994	0.0	25.0	5144
15 min Winter	138.153	0.0	5.8	18
30 min Winter	90.705	0.0	7.6	32
60 min Winter	56.713	0.0	9.5	60
120 min Winter	34.246	0.0	11.5	108
180 min Winter	25.149	0.0	12.7	138
240 min Winter	20.078	0.0	13.5	178
360 min Winter	14.585	0.0	14.7	254
480 min Winter	11.622	0.0	15.6	326

10 Aldersgate Street  
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Block C5



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Source Control 2020.1

Summary of Results for 100 year Return Period (+40%)

<b>Storm Event</b>	<b>Max Level (m)</b>	<b>Max Depth (m)</b>	<b>Max Control (l/s)</b>	<b>Max Volume (m<sup>3</sup>)</b>	<b>Status</b>
600 min Winter	9.437	0.437	0.6	4.4	O K
720 min Winter	9.337	0.337	0.6	3.4	O K
960 min Winter	9.190	0.190	0.6	1.9	O K
1440 min Winter	9.076	0.076	0.5	0.8	O K
2160 min Winter	9.048	0.048	0.4	0.5	O K
2880 min Winter	9.038	0.038	0.3	0.4	O K
4320 min Winter	9.030	0.030	0.2	0.3	O K
5760 min Winter	9.026	0.026	0.2	0.3	O K
7200 min Winter	9.023	0.023	0.2	0.2	O K
8640 min Winter	9.021	0.021	0.1	0.2	O K
10080 min Winter	9.020	0.020	0.1	0.2	O K

<b>Storm Event</b>	<b>Rain (mm/hr)</b>	<b>Flooded Volume (m<sup>3</sup>)</b>	<b>Discharge Volume (m<sup>3</sup>)</b>	<b>Time-Peak (mins)</b>
600 min Winter	9.738	0.0	16.4	400
720 min Winter	8.424	0.0	17.0	464
960 min Winter	6.697	0.0	18.0	562
1440 min Winter	4.839	0.0	19.5	764
2160 min Winter	3.490	0.0	21.1	1104
2880 min Winter	2.766	0.0	22.3	1460
4320 min Winter	1.989	0.0	24.1	2140
5760 min Winter	1.573	0.0	25.4	2856
7200 min Winter	1.311	0.0	26.4	3592
8640 min Winter	1.129	0.0	27.3	4392
10080 min Winter	0.994	0.0	28.1	4960

10 Aldersgate Street  
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Aberfeldy Village  
 Block C5



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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)	20.000	Shortest Storm (mins)	15
Ratio R	0.400	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.020

Time (mins)		Area
From:	To:	(ha)
0	4	0.020



10 Aldersgate Street  
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 Block C5



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Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 9.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	10.0	1.000	10.0

Hydro-Brake® Optimum Outflow Control

Unit Reference	MD-SHE-0041-8000-1000-8000
Design Head (m)	1.000
Design Flow (l/s)	0.8
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	41
Invert Level (m)	9.000
Minimum Outlet Pipe Diameter (mm)	75
Suggested Manhole Diameter (mm)	1200

Control Points	Head (m)	Flow (l/s)	Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.000	0.8	Kick-Flo®	0.369	0.5
Flush-Flo™	0.184	0.6	Mean Flow over Head Range	-	0.6

The hydrological calculations have been based on the Head/Discharge relationship for the Hydro-Brake® Optimum as specified. Should another type of control device other than a Hydro-Brake Optimum® be utilised then these storage routing calculations will be invalidated

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.100	0.6	0.800	0.7	2.000	1.1	4.000	1.5	7.000	1.9
0.200	0.6	1.000	0.8	2.200	1.1	4.500	1.6	7.500	2.0
0.300	0.6	1.200	0.9	2.400	1.2	5.000	1.6	8.000	2.0
0.400	0.5	1.400	0.9	2.600	1.2	5.500	1.7	8.500	2.1
0.500	0.6	1.600	1.0	3.000	1.3	6.000	1.8	9.000	2.2
0.600	0.6	1.800	1.0	3.500	1.4	6.500	1.9	9.500	2.2