

Infrastruct CS Ltd

File: 6593-45BR-FLOW.pfd

Network: Storm Network

Richard White

24/03/2026

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Design Settings

Rainfall Methodology

FSR

Return Period (years)

100

Additional Flow (%)

40

FSR Region

England and Wales

M5-60 (mm)

20.000

Ratio-R

0.335

CV

1.000

Time of Entry (mins)

5.00

Maximum Time of Concentration (mins)

30.00

Maximum Rainfall (mm/hr)

50.0

Minimum Velocity (m/s)

1.00

Connection Type

Level Soffits

Minimum Backdrop Height (m)

0.200

Preferred Cover Depth (m)

0.500

Include Intermediate Ground

✓

Enforce best practice design rules

✓

Links

Name

US Node

DS Node

Length (m)

ks (mm) / n

US IL (m)

DS IL (m)

Fall (m)

Slope (1:X)

Dia (mm)

T of C (mins)

Rain (mm/hr)

1

PPS

MAC

21.000

0.600

48.150

47.800

0.350

60.0

100

5.35

50.0

2

MAC

HydroBrake

6.000

0.600

47.750

47.140

0.610

9.8

150

5.38

50.0

3

HydroBrake

Sewer

8.000

0.600

47.140

44.640

2.500

3.2

150

5.41

50.0

Name

Vel (m/s)

Cap (l/s)

Flow (l/s)

US Depth (m)

DS Depth (m)

Σ Area (ha)

Σ Add Inflow (l/s)

Pro Depth (mm)

Pro Velocity (m/s)

1

0.996

7.8

3.8

0.900

0.300

0.015

0.0

49

0.986

2

3.231

57.1

5.3

0.300

1.150

0.021

0.0

31

2.030

3

5.675

100.3

7.1

1.150

3.210

0.028

0.0

27

3.275

Pipeline Schedule

Link

Length (m)

Slope (1:X)

Dia (mm)

Link Type

US CL (m)

US IL (m)

US Depth (m)

DS CL (m)

DS IL (m)

DS Depth (m)

1

21.000

60.0

100

Circular_Default Sewer Type

49.150

48.150

0.900

48.200

47.800

0.300

2

6.000

9.8

150

Circular_Default Sewer Type

48.200

47.750

0.300

48.440

47.140

1.150

3

8.000

3.2

150

Circular_Default Sewer Type

48.440

47.140

1.150

48.000

44.640

3.210

Link

US Node

Dia (mm)

Node Type

MH Type

DS Node

Dia (mm)

Node Type

MH Type

1

PPS

450

Manhole

Private

MAC

450

Manhole

Private

2

MAC

450

Manhole

Private

HydroBrake

450

Manhole

Private

3

HydroBrake

450

Manhole

Private

Sewer

1200

Manhole

Private

Manhole Schedule

Node

CL (m)

Depth (m)

Dia (mm)

Connections

Link

IL (m)

Dia (mm)

PPS

49.150

1.000

450

0

1

48.150

100

MAC

48.200

0.450

450

1

1

47.800

100

HydroBrake

48.440

1.300

450

0

2

47.750

150

1

2

47.140

150

Sewer

48.000

3.360

1200

0

3

47.140

150

1

3

44.640

150

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	Infrastruct CS Ltd	File: 6593-45BR-FLOW.pfd Network: Storm Network Richard White 24/03/2026	Page 3																																																																																	
Results for 100 year +40% CC Critical Storm Duration. Lowest mass balance: 99.78% <table><thead><tr><th>Node Event</th><th>US Node</th><th>Peak (mins)</th><th>Level (m)</th><th>Depth (m)</th><th>Inflow (l/s)</th><th>Node Vol (m³)</th><th>Flood (m³)</th><th>Status</th></tr></thead><tbody><tr><td>180 minute winter</td><td>PPS</td><td>176</td><td>49.128</td><td>0.978</td><td>2.7</td><td>8.4587</td><td>0.0000</td><td>FLOOD RISK</td></tr><tr><td>720 minute summer</td><td>MAC</td><td>435</td><td>48.123</td><td>0.373</td><td>0.9</td><td>0.1588</td><td>0.0000</td><td>FLOOD RISK</td></tr><tr><td>720 minute summer</td><td>HydroBrake</td><td>435</td><td>48.123</td><td>0.983</td><td>1.6</td><td>8.8231</td><td>0.0000</td><td>SURCHARGED</td></tr><tr><td>720 minute summer</td><td>Sewer</td><td>435</td><td>44.650</td><td>0.010</td><td>0.8</td><td>0.0000</td><td>0.0000</td><td>OK</td></tr></tbody></table> <table><thead><tr><th>Link Event (Upstream Depth)</th><th>US Node</th><th>Link</th><th>DS Node</th><th>Outflow (l/s)</th><th>Velocity (m/s)</th><th>Flow/Cap</th><th>Link Vol (m³)</th><th>Discharge Vol (m³)</th></tr></thead><tbody><tr><td>180 minute winter</td><td>PPS</td><td>Depth/Flow</td><td>MAC</td><td>0.3</td><td></td><td></td><td></td><td></td></tr><tr><td>720 minute summer</td><td>MAC</td><td>2</td><td>HydroBrake</td><td>0.9</td><td>0.503</td><td>0.016</td><td>0.1056</td><td></td></tr><tr><td>720 minute summer</td><td>HydroBrake</td><td>3</td><td>Sewer</td><td>0.8</td><td>1.708</td><td>0.008</td><td>0.0039</td><td>24.8</td></tr></tbody></table>				Node Event	US Node	Peak (mins)	Level (m)	Depth (m)	Inflow (l/s)	Node Vol (m³)	Flood (m³)	Status	180 minute winter	PPS	176	49.128	0.978	2.7	8.4587	0.0000	FLOOD RISK	720 minute summer	MAC	435	48.123	0.373	0.9	0.1588	0.0000	FLOOD RISK	720 minute summer	HydroBrake	435	48.123	0.983	1.6	8.8231	0.0000	SURCHARGED	720 minute summer	Sewer	435	44.650	0.010	0.8	0.0000	0.0000	OK	Link Event (Upstream Depth)	US Node	Link	DS Node	Outflow (l/s)	Velocity (m/s)	Flow/Cap	Link Vol (m³)	Discharge Vol (m³)	180 minute winter	PPS	Depth/Flow	MAC	0.3					720 minute summer	MAC	2	HydroBrake	0.9	0.503	0.016	0.1056		720 minute summer	HydroBrake	3	Sewer	0.8	1.708	0.008	0.0039	24.8
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