

Surface Water Drainage Calculations

For a site referred to as

Talbot Mill

Undertaken on behalf of

Capital & Centric

Job No: 10531

Document No: 10531-WML-ZZ-XX-CA-C-9001

Date: September 2024

Project No. & Name:	10531 – Talbot Mill	Status:	Prepared by:	Rev:	Date:
Document Ref:	10531-WML-ZZ-XX-CA-C-9001	Preliminary	Daniel Baker	P01	September 2024

General Notes

1. The calculations within this document have been undertaken using MicroDrainage Software version 2020.
2. This document is to be read in conjunction with the following documents;
 - a. 10531-WML-ZZ-XX-DR-C-9001 – Proposed Drainage Layout

Summary of Results

1. The following summary demonstrates that the outgoing flow rates for the new development works are less than or equal to those of the pre-development (Greenfield) site.

Pre-development Runoff Rate (l/s)	Proposed Site Runoff Rate (l/s)
55.7 (Based upon 54.04 mm/Hr rainfall intensity)	1: 12.8 30: 23.9 100+45%: 24.0

Proposed Surface Water Network Calculation

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No. 8 Oak Green Stanley Green Business Park Earl Rd, Cheadle Hulme, SK8 6QL												
Date 11/09/2024 14:09 File 10531 - Surface Water 0...												
Innovyze												
Designed by DBaker Checked by						Network 2020.1.3						
Network Design Table for Storm												
PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type	Auto Design	
S1.003	12.003	0.050	240.1	0.029	0.00	0.0	0.600	o	300	Pipe/Conduit		
S1.004	11.815	0.000	0.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit		
S4.000	8.750	0.100	87.5	0.019	5.00	0.0	0.600	o	225	Pipe/Conduit		
S4.001	5.750	0.050	115.0	0.016	0.00	0.0	0.600	o	225	Pipe/Conduit		
S4.002	6.750	0.050	135.0	0.024	0.00	0.0	0.600	o	225	Pipe/Conduit		
S5.000	13.500	0.125	108.0	0.057	5.00	0.0	0.600	o	150	Pipe/Conduit		
S4.003	9.000	0.250	36.0	0.000	0.00	0.0	0.600	o	225	Pipe/Conduit		
S6.000	14.588	0.450	32.4	0.034	5.00	0.0	0.600	o	225	Pipe/Conduit		
S7.000	5.000	0.150	33.3	0.009	5.00	0.0	0.600	o	225	Pipe/Conduit		
S1.005	4.000	0.050	80.0	0.037	0.00	0.0	0.600	o	225	Pipe/Conduit		
Network Results Table												
PN	Rain (mm/hr)	T.C. (mins)	US/IL (m)	Σ I.Area (ha)	Σ Base Flow (l/s)	Foul (l/s)	Add Flow (l/s)	Vel (m/s)	Cap (l/s)	Flow (l/s)		
S1.003	44.49	5.63	24.900	0.158	0.0	0.0	0.0	1.01	71.4	19.0		
S1.004	40.37	6.95	24.850	0.158	0.0	0.0	0.0	0.15	10.5«	19.0		
S4.000	46.40	5.10	25.300	0.019	0.0	0.0	0.0	1.40	55.6	2.4		
S4.001	46.10	5.18	25.200	0.035	0.0	0.0	0.0	1.22	48.4	4.4		
S4.002	45.72	5.28	25.150	0.059	0.0	0.0	0.0	1.12	44.7	7.3		
S5.000	45.91	5.23	25.300	0.057	0.0	0.0	0.0	0.97	17.1	7.1		
S4.003	45.47	5.35	25.100	0.116	0.0	0.0	0.0	2.19	87.0	14.3		
S6.000	46.39	5.11	25.300	0.034	0.0	0.0	0.0	2.31	91.7	4.3		
S7.000	46.66	5.04	25.000	0.009	0.0	0.0	0.0	2.27	90.4	1.1		
S1.005	40.25	6.99	24.850	0.354	0.0	0.0	0.0	1.46	58.2	38.6		
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Manhole Schedules for Storm											
MH Name	MH CL (m)	MH Depth (m)	MH Connection	MH Diam., L*W (mm)	PN	Pipe Out Invert Level (m)	Pipe Out Diameter (mm)	PN	Pipes In Invert Level (m)	Pipes In Diameter (mm)	Backdrop (mm)

S1	26.635	1.205	Open Manhole	600	S1.000	25.430	225				
S2	26.635	1.335	Open Manhole	600	S1.001	25.300	225	S1.000	25.300	225	
S3	26.635	1.435	Open Manhole	600	S1.002	25.200	225	S1.001	25.200	225	
S4	26.790	0.940	Open Manhole	450	S2.000	25.850	150				
S5	26.790	1.490	Open Manhole	450	S2.001	25.300	150	S2.000	25.800	150	500
S6	26.790	1.640	Open Manhole	600	S2.002	25.150	150	S2.001	25.150	150	
S7	28.710	1.060	Open Manhole	1200	S3.000	27.650	150				
S8	27.510	1.060	Open Manhole	1200	S3.001	26.450	150	S3.000	26.450	150	
S9	26.540	1.640	Open Manhole	1200	S1.003	24.900	300	S1.002	24.975	225	
								S2.002	25.050	150	
								S3.001	25.050	150	
S-TANK	26.500	1.650	Junction		S1.004	24.850	300	S1.003	24.850	300	
S10	26.710	1.410	Open Manhole	600	S4.000	25.300	225				
S11	26.710	1.510	Open Manhole	600	S4.001	25.200	225	S4.000	25.200	225	
S12	26.710	1.560	Open Manhole	600	S4.002	25.150	225	S4.001	25.150	225	
S13	26.715	1.415	Open Manhole	600	S5.000	25.300	150				
S14	26.710	1.610	Open Manhole	600	S4.003	25.100	225	S4.002	25.100	225	
								S5.000	25.175	150	
S15	26.475	1.175	Open Manhole	600	S6.000	25.300	225				
S16A	26.470	1.470	Open Manhole	600	S7.000	25.000	225				
S16	26.470	1.620	Open Manhole	1350	S1.005	24.850	225	S1.004	24.850	300	
								S4.003	24.850	225	
								S6.000	24.850	225	
								S7.000	24.850	225	
S	26.660	1.860	Open Manhole	0		OUTFALL		S1.005	24.800	225	

MH Name	Manhole Easting (m)	Manhole Northing (m)	Intersection Easting (m)	Intersection Northing (m)	Manhole Access	Layout (North)
S1	382708.277	397311.270	382708.277	397311.270	Required	
S2	382698.808	397305.852	382698.808	397305.852	Required	
S3	382691.880	397301.889	382691.880	397301.889	Required	

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Innovyze				Network 2020.1.3					
PIPELINE SCHEDULES for Storm									
Upstream Manhole									
PN	Hyd Sect	Diam (mm)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)	
S1.000	o	225	S1	26.635	25.430	0.980	Open Manhole		600
S1.001	o	225	S2	26.635	25.300	1.110	Open Manhole		600
S1.002	o	225	S3	26.635	25.200	1.210	Open Manhole		600
S2.000	o	150	S4	26.790	25.850	0.790	Open Manhole		450
S2.001	o	150	S5	26.790	25.300	1.340	Open Manhole		450
S2.002	o	150	S6	26.790	25.150	1.490	Open Manhole		600
S3.000	o	150	S7	28.710	27.650	0.910	Open Manhole		1200
S3.001	o	150	S8	27.510	26.450	0.910	Open Manhole		1200
S1.003	o	300	S9	26.540	24.900	1.340	Open Manhole		1200
S1.004	o	300	S-TANK	26.500	24.850	1.350	Junction		
S4.000	o	225	S10	26.710	25.300	1.185	Open Manhole		600
S4.001	o	225	S11	26.710	25.200	1.285	Open Manhole		600
S4.002	o	225	S12	26.710	25.150	1.335	Open Manhole		600
S5.000	o	150	S13	26.715	25.300	1.265	Open Manhole		600
S4.003	o	225	S14	26.710	25.100	1.385	Open Manhole		600
Downstream Manhole									
PN	Length (m)	Slope (1:X)	MH Name	C.Level (m)	I.Level (m)	D.Depth (m)	MH Connection	MH DIAM., L*W (mm)	
S1.000	10.909	83.9	S2	26.635	25.300	1.110	Open Manhole		600
S1.001	7.981	79.8	S3	26.635	25.200	1.210	Open Manhole		600
S1.002	6.322	28.1	S9	26.540	24.975	1.340	Open Manhole		1200
S2.000	5.666	113.3	S5	26.790	25.800	0.840	Open Manhole		450
S2.001	13.503	90.0	S6	26.790	25.150	1.490	Open Manhole		600
S2.002	7.881	78.8	S9	26.540	25.050	1.340	Open Manhole		1200
S3.000	21.803	18.2	S8	27.510	26.450	0.910	Open Manhole		1200
S3.001	22.500	16.1	S9	26.540	25.050	1.340	Open Manhole		1200
S1.003	12.003	240.1	S-TANK	26.500	24.850	1.350	Junction		
S1.004	11.815	0.0	S16	26.470	24.850	1.320	Open Manhole		1350
S4.000	8.750	87.5	S11	26.710	25.200	1.285	Open Manhole		600
S4.001	5.750	115.0	S12	26.710	25.150	1.335	Open Manhole		600
S4.002	6.750	135.0	S14	26.710	25.100	1.385	Open Manhole		600
S5.000	13.500	108.0	S14	26.710	25.175	1.385	Open Manhole		600
S4.003	9.000	36.0	S16	26.470	24.850	1.395	Open Manhole		1350
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PIPELINE SCHEDULES for Storm

Upstream Manhole

PN	Hyd	Diam	MH	C.Level	I.Level	D.Depth	MH	MH DIAM., L*W
Sect	(mm)	Name	(m)	(m)	(m)	Connection	(mm)	
S6.000	o	225	S15	26.475	25.300	0.950	Open Manhole	600
S7.000	o	225	S16A	26.470	25.000	1.245	Open Manhole	600
S1.005	o	225	S16	26.470	24.850	1.395	Open Manhole	1350

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)	
S6.000	14.588	32.4	S16	26.470	24.850	1.395	Open Manhole	1350
S7.000	5.000	33.3	S16	26.470	24.850	1.395	Open Manhole	1350
S1.005	4.000	80.0	S	26.660	24.800	1.635	Open Manhole	0

Free Flowing Outfall Details for Storm

Outfall	Outfall	C. Level	I. Level	Min	D,L	W
Pipe Number	Name	(m)	(m)	I. Level (m)	(mm)	(mm)
S1.005	S	26.660	24.800	0.000	0	0

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coefficient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.360
Return Period (years)	1	Profile Type	Summer
Region England and Wales	Cv (Summer)		0.750
M5-60 (mm)	18.000	Cv (Winter)	0.840

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Innovyze	Network 2020.1.3	
Synthetic Rainfall Details Storm Duration (mins) 30		
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Online Controls for Storm

Hydro-Brake® Optimum Manhole: S16, DS/PN: S1.005, Volume (m³): 4.1

Unit Reference	MD-SHE-0212-2400-1250-2400
Design Head (m)	1.250
Design Flow (l/s)	24.0
Flush-Flo™	Calculated
Objective	Minimise upstream storage
Application	Surface
Sump Available	Yes
Diameter (mm)	212
Invert Level (m)	24.850
Minimum Outlet Pipe Diameter (mm)	225
Suggested Manhole Diameter (mm)	1500

Control Points	Head (m)	Flow (l/s)
Design Point (Calculated)	1.250	24.0
Flush-Flo™	0.397	24.0
Kick-Flo®	0.867	20.2
Mean Flow over Head Range	-	20.4

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)
0.100	7.2	1.200	23.5	3.000	36.5	7.000	55.0
0.200	20.5	1.400	25.3	3.500	39.3	7.500	56.9
0.300	23.7	1.600	27.0	4.000	41.9	8.000	58.7
0.400	24.0	1.800	28.6	4.500	44.4	8.500	60.4
0.500	23.8	2.000	30.0	5.000	46.7	9.000	62.1
0.600	23.4	2.200	31.4	5.500	48.9	9.500	63.8
0.800	21.6	2.400	32.8	6.000	51.0		
1.000	21.6	2.600	34.1	6.500	53.1		

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Storage Structures for Storm Cellular Storage Manhole: S-TANK, DS/PN: S1.004 Invert Level (m) 24.850 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.00000 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.00000 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>95.0</td><td>95.0</td><td>5.200</td><td>0.0</td><td>134.0</td></tr><tr><td>0.400</td><td>95.0</td><td>110.6</td><td>5.600</td><td>0.0</td><td>134.0</td></tr><tr><td>0.800</td><td>95.0</td><td>126.2</td><td>6.000</td><td>0.0</td><td>134.0</td></tr><tr><td>1.200</td><td>0.0</td><td>134.0</td><td>6.400</td><td>0.0</td><td>134.0</td></tr><tr><td>1.600</td><td>0.0</td><td>134.0</td><td>6.800</td><td>0.0</td><td>134.0</td></tr><tr><td>2.000</td><td>0.0</td><td>134.0</td><td>7.200</td><td>0.0</td><td>134.0</td></tr><tr><td>2.400</td><td>0.0</td><td>134.0</td><td>7.600</td><td>0.0</td><td>134.0</td></tr><tr><td>2.800</td><td>0.0</td><td>134.0</td><td>8.000</td><td>0.0</td><td>134.0</td></tr><tr><td>3.200</td><td>0.0</td><td>134.0</td><td>8.400</td><td>0.0</td><td>134.0</td></tr><tr><td>3.600</td><td>0.0</td><td>134.0</td><td>8.800</td><td>0.0</td><td>134.0</td></tr><tr><td>4.000</td><td>0.0</td><td>134.0</td><td>9.200</td><td>0.0</td><td>134.0</td></tr><tr><td>4.400</td><td>0.0</td><td>134.0</td><td>9.600</td><td>0.0</td><td>134.0</td></tr><tr><td>4.800</td><td>0.0</td><td>134.0</td><td>10.000</td><td>0.0</td><td>134.0</td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	95.0	95.0	5.200	0.0	134.0	0.400	95.0	110.6	5.600	0.0	134.0	0.800	95.0	126.2	6.000	0.0	134.0	1.200	0.0	134.0	6.400	0.0	134.0	1.600	0.0	134.0	6.800	0.0	134.0	2.000	0.0	134.0	7.200	0.0	134.0	2.400	0.0	134.0	7.600	0.0	134.0	2.800	0.0	134.0	8.000	0.0	134.0	3.200	0.0	134.0	8.400	0.0	134.0	3.600	0.0	134.0	8.800	0.0	134.0	4.000	0.0	134.0	9.200	0.0	134.0	4.400	0.0	134.0	9.600	0.0	134.0	4.800	0.0	134.0	10.000	0.0	134.0
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Micro
Drainage

1 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

Simulation Criteria

Areal Reduction Factor 1.000

Additional Flow - % of Total Flow 0.000

Hot Start (mins) 0

MADD Factor * 10m³/ha Storage 2.000

Hot Start Level (mm) 0

Inlet Coefficient 0.800

Manhole Headloss Coeff (Global) 0.500

Flow per Person per Day (l/per/day) 0.000

Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0

Number of Storage Structures 1

Number of Online Controls 1

Number of Time/Area Diagrams 0

Number of Offline Controls 0

Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR

Ratio R 0.360

Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 18.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS Status OFF

DVD Status ON

Inertia Status ON

Profile(s) Summer and Winter

Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440

Return Period(s) (years) 1, 30, 100

Climate Change (%) 0, 0, 45

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.000	S1	15 Winter	1	+0%	100/30	Winter			25.459
S1.001	S2	15 Winter	1	+0%	100/15	Winter			25.340
S1.002	S3	15 Winter	1	+0%	100/15	Summer			25.244
S2.000	S4	15 Winter	1	+0%					25.897
S2.001	S5	15 Winter	1	+0%	100/15	Summer			25.353
S2.002	S6	15 Winter	1	+0%	100/15	Summer			25.212
S3.000	S7	15 Winter	1	+0%					27.667
S3.001	S8	15 Winter	1	+0%					26.473
S1.003	S9	15 Winter	1	+0%	30/30	Winter			25.012
S1.004	S-TANK	60 Winter	1	+0%	30/15	Winter			24.996
S4.000	S10	15 Winter	1	+0%	100/15	Summer			25.333
S4.001	S11	15 Winter	1	+0%	100/15	Summer			25.253
S4.002	S12	15 Winter	1	+0%	100/15	Summer			25.219
S5.000	S13	15 Winter	1	+0%	30/15	Winter			25.370
S4.003	S14	15 Winter	1	+0%	100/15	Summer			25.166
S6.000	S15	15 Winter	1	+0%	100/15	Winter			25.333
S7.000	S16A	15 Winter	1	+0%	100/15	Summer			25.021
S1.005	S16	60 Winter	1	+0%	30/15	Summer			24.991

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No. 8 Oak Green

Stanley Green Business Park

Earl Rd, Cheadle Hulme, SK8 6QL

Date 11/09/2024 14:09

File 10531 - Surface Water 0...

Designed by DBaker

Checked by

Innovyze

Network 2020.1.3

Micro Drainage

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)

for Storm

Simulation Criteria

Areal Reduction Factor 1.000

Additional Flow - % of Total Flow 0.000

Hot Start (mins) 0

MADD Factor * 10m³/ha Storage 2.000

Hot Start Level (mm) 0

Inlet Coefficient 0.800

Manhole Headloss Coeff (Global) 0.500

Flow per Person per Day (l/per/day) 0.000

Foul Sewage per hectare (l/s) 0.000

Number of Input Hydrographs 0

Number of Storage Structures 1

Number of Online Controls 1

Number of Time/Area Diagrams 0

Number of Offline Controls 0

Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model

FSR

Ratio R 0.360

Region England and Wales Cv (Summer) 0.750

M5-60 (mm)

18.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS Status OFF

DVD Status ON

Inertia Status ON

Profile(s) Summer and Winter

Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440

Return Period(s) (years) 1, 30, 100

Climate Change (%) 0, 0, 45

PN

US/MH Name

Storm

Return Period

Climate Change

First (X) Surge

First (Y) Flood

First (Z) Overflow

Overflow Act.

Water Level (m)

S1.000

S1

15 Winter

30

+0%

100/30 Winter

25.477

S1.001

S2

15 Winter

30

+0%

100/15 Winter

25.368

S1.002

S3

15 Winter

30

+0%

100/15 Summer

25.275

S2.000

S4

15 Winter

30

+0%

25.927

S2.001

S5

15 Winter

30

+0%

100/15 Summer

25.396

S2.002

S6

15 Winter

30

+0%

100/15 Summer

25.270

S3.000

S7

15 Winter

30

+0%

27.677

S3.001

S8

15 Winter

30

+0%

26.489

S1.003

S9

30 Winter

30

+0%

30/30 Winter

25.244

S1.004

S-TANK

60 Winter

30

+0%

30/15 Winter

25.220

S4.000

S10

15 Winter

30

+0%

100/15 Summer

25.353

S4.001

S11

15 Winter

30

+0%

100/15 Summer

25.296

S4.002

S12

15 Summer

30

+0%

100/15 Summer

25.280

S5.000

S13

15 Winter

30

+0%

30/15 Winter

25.469

S4.003

S14

15 Summer

30

+0%

100/15 Summer

25.259

S6.000

S15

15 Winter

30

+0%

100/15 Winter

25.353

S7.000

S16A

60 Winter

30

+0%

100/15 Summer

25.214

S1.005

S16

60 Winter

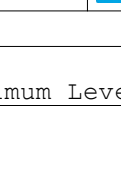
30

+0%

30/15 Summer

25.213

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No. 8 Oak Green Stanley Green Business Park Earl Rd, Cheadle Hulme, SK8 6QL		
Date 11/09/2024 14:09 File 10531 - Surface Water 0...		
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Innovyze		Network 2020.1.3

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

Simulation Criteria

Areal Reduction Factor	1.000	Additional Flow - % of Total Flow	0.000
Hot Start (mins)	0	MADD Factor * 10m³/ha Storage	2.000
Hot Start Level (mm)	0	Inlet Coefficient	0.800
Manhole Headloss Coeff (Global)	0.500	Flow per Person per Day (l/per/day)	0.000
Foul Sewage per hectare (l/s)	0.000		

Number of Input Hydrographs	0	Number of Storage Structures	1
Number of Online Controls	1	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR	Ratio R	0.360
Region	England and Wales	Cv (Summer)	0.750
M5-60 (mm)	18.000	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	300.0
Analysis Timestep	2.5 Second Increment (Extended)
DTS Status	OFF
DVD Status	ON
Inertia Status	ON

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 45

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.000	S1	60 Winter	100	+45%	100/30 Winter				25.879
S1.001	S2	60 Winter	100	+45%	100/15 Winter				25.878
S1.002	S3	60 Winter	100	+45%	100/15 Summer				25.876
S2.000	S4	15 Winter	100	+45%					25.968
S2.001	S5	15 Winter	100	+45%	100/15 Summer				25.896
S2.002	S6	60 Winter	100	+45%	100/15 Summer				25.883
S3.000	S7	15 Winter	100	+45%					27.687
S3.001	S8	15 Winter	100	+45%					26.505
S1.003	S9	60 Winter	100	+45%	30/30 Winter				25.873
S1.004	S-TANK	60 Winter	100	+45%	30/15 Winter				25.866
S4.000	S10	60 Winter	100	+45%	100/15 Summer				25.875
S4.001	S11	60 Winter	100	+45%	100/15 Summer				25.874
S4.002	S12	60 Winter	100	+45%	100/15 Summer				25.872
S5.000	S13	15 Winter	100	+45%	30/15 Winter				26.001
S4.003	S14	60 Winter	100	+45%	100/15 Summer				25.868
S6.000	S15	60 Winter	100	+45%	100/15 Winter				25.864
S7.000	S16A	60 Winter	100	+45%	100/15 Summer				25.860
S1.005	S16	60 Winter	100	+45%	30/15 Summer				25.860

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Hydrobrake Flow Control Design & Characteristics

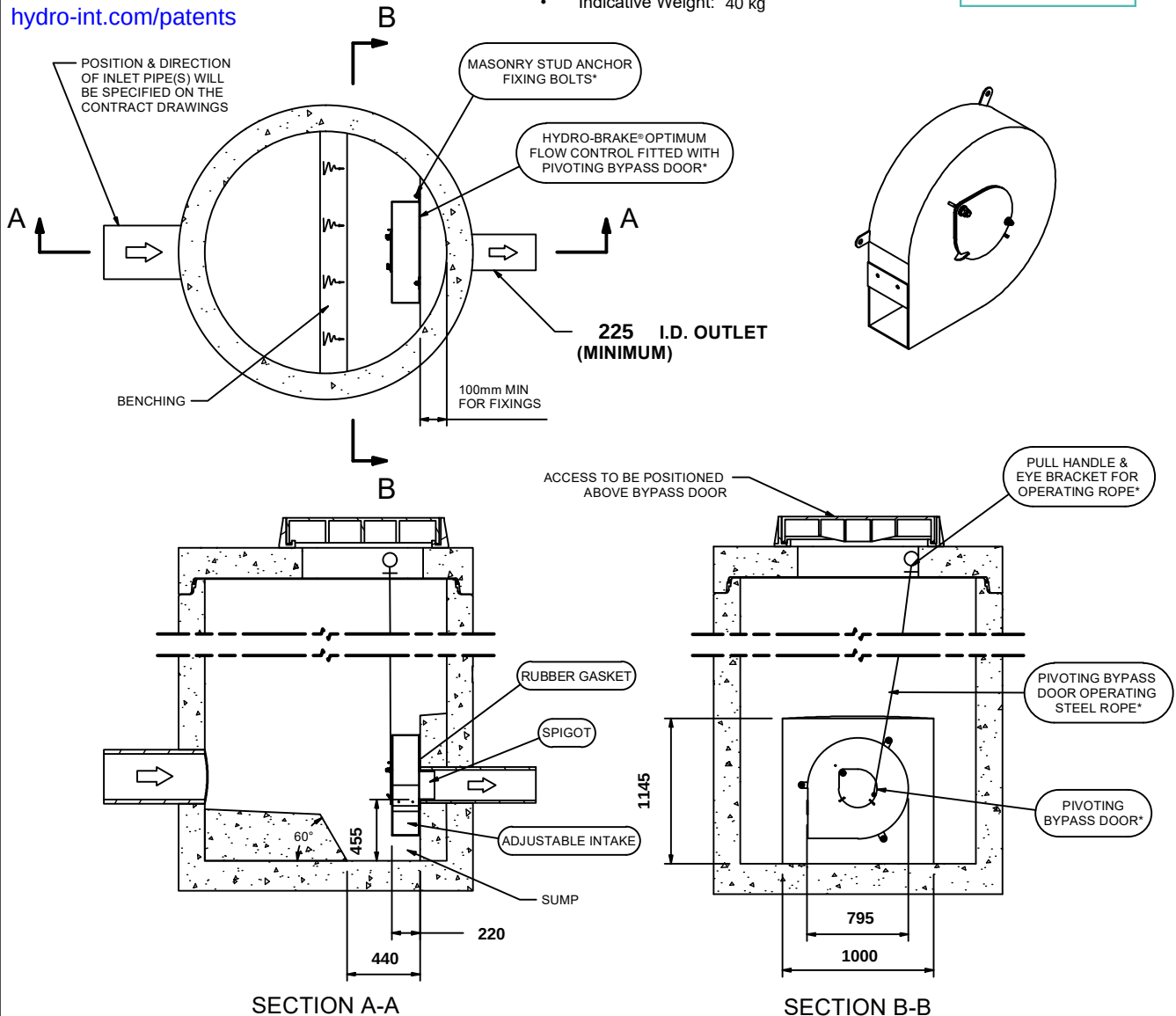
Technical Specification

Control Point	Head (m)	Flow (l/s)
Primary Design	1.250	24.000
Flush-Flo™	0.397	23.990
Kick-Flo®	0.867	20.160
Mean Flow		20.432

hydro-int.com/patents

Hydro-Brake® Optimum Flow Control including:

- 3 mm grade 304L stainless steel
- Integral stainless steel pivoting by-pass door allowing clear line of sight through to outlet, c/w stainless steel operating rope
- Beed blasted finish to maximise corrosion resistance
- Stainless steel fixings
- Rubber gasket to seal outlet
- Variable flow rate post installation via adjustable inlet
- Indicative Weight: 40 kg



IMPORTANT:

○ LIMIT OF HYDRO INTERNATIONAL SUPPLY

THE DEVICE WILL BE HANDED TO SUIT SITE CONDITIONS
FOR SITE SPECIFIC DETAILS AND MINIMUM CHAMBER SIZE REFER TO HYDRO INTERNATIONAL
ALL CIVIL AND INSTALLATION WORK BY OTHERS

* WHERE SUPPLIED

HYDRO-BRAKE® FLOW CONTROL & HYDRO-BRAKE® OPTIMUM FLOW CONTROL ARE REGISTERED TRADEMARKS FOR FLOW CONTROLS DESIGNED AND MANUFACTURED EXCLUSIVELY BY HYDRO INTERNATIONAL

THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.

**DESIGN
ADVICE**



The head/flow characteristics of this SHE-0212-2400-1250-2400 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.
The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.

**Hydro
International**

A CRH COMPANY

DATE 07/08/2024 13:45

SITE Talbot Mill

DESIGNER Dan Baker

REF 10531

SHE-0212-2400-1250-2400

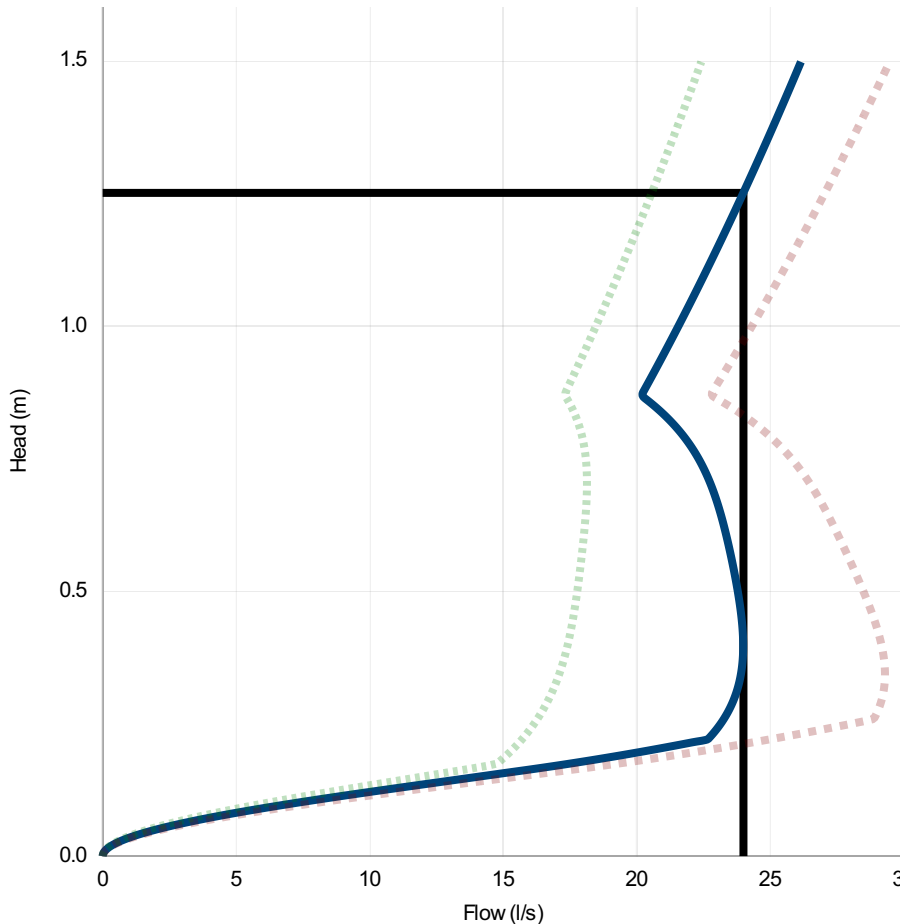
Hydro-Brake® Optimum

Technical Specification

	Original Setting		Minimum Setting		Maximum Setting	
Control Point	Head (m)	Flow (l/s)	Head (m)	Flow (l/s)	Head (m)	Flow (l/s)
Primary Design	1.250	24.000	1.250	20.565	1.250	27.052
Flush-Flo™	0.397	23.990	0.703	18.139	0.342	29.301
Kick-Flo®	0.867	20.160	0.868	17.280	0.868	22.752
Mean Flow		20.432		16.277		23.715



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Head (m)	Flow (l/s)
0.000	0.000
0.043	1.501
0.086	5.521
0.129	11.169
0.172	17.247
0.216	22.192
0.259	23.267
0.302	23.688
0.345	23.911
0.388	23.988
0.431	23.961
0.474	23.865
0.517	23.724
0.560	23.554
0.603	23.362
0.647	23.137
0.690	22.858
0.733	22.490
0.776	21.985
0.819	21.286
0.862	20.329
0.905	20.577
0.948	21.037
0.991	21.486
1.034	21.926
1.078	22.356
1.121	22.777
1.164	23.191
1.207	23.596
1.250	23.994

DESIGN ADVICE



The head/flow characteristics of this SHE-0212-2400-1250-2400 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full head/flow characteristic curve.

The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.

Hydro
International
A CRH COMPANY

DATE 07/08/2024 13:45

Site Talbot Mill

DESIGNER Dan Baker

Ref 10531

SHE-0212-2400-1250-2400

Hydro-Brake® Optimum