

Document Information

Project	C&S Energy BESS
BIM Reference	MJF-JBA-XX-XX-RP-D-0003- InfoDrainage_Modelling_Outputs
Status	A2
Revision	P02
Calculation Title	InfoDrainage Modelling Outputs
No. of Calc Sheets	63

Purpose of Calculations

This report is an export of the InfoDrainage modelling. InfoDrainage is a drainage system design software program that was used to both design and audit the proposed network for the C&S Energy BESS.

Included in the report are:

- Summary of Pipes in the Critical Storm
- Half Drain Down Times for Stormwater Controls
- Summary of Inflows in Critical Storm
- Pond Flow Graphs in Critical Storm
- Rainfall Analysis Criteria
- Junctions Details
- Stormwater Control Details
- Connections Summary

Calculation Control & Revisions

Revision	Date	Description	Originator	Checker	Approver
P01	06.08.2024	Calculation Export	SC	WD	JP
P02	14.08.2024	Additional Information Provided	SC	WD	JP
P03	27.09.2024	Updated Following Layout Change	SC	WD	JP

Project:	Date: 26/03/2024		
	Designed by: SaffronCatterick	Checked by:	Approved By:
Report Details: Type: Connections Summary Storm Phase: Gravity	Company Address:		





Critical Storm Per Item: Rank By: Max. Flow

Connection	Storm Event	Connection Type	From	To	Upstream Cover Level (m)	Max. US Water Level (m)	Max. Flow Depth (m)	Discharge Volume (m³)	Max. Velocity (m/s)	Flow / Capacity	Max. Flow (L/s)	Status
P2.03	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	2.03	2.04	240.220	238.659	0.305	131.739	2.5	0.84	237.5	OK
P5.02	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	5.01	5.02	240.550	239.066	0.108	4.617	0.7	0.4	9.8	OK
P2.04	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	2.04	2.05	239.420	237.740	0.300	187.180	2.8	0.91	268.9	OK
P2.01	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	2.01	2.02	240.800	239.232	0.097	7.495	1.3	0.72	15.6	OK
P8.01	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	LD	2.03	240.200	239.254	0.194	51.188	2.9	0.86	104.8	Surcharged
P2.02	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	2.02	2.03	240.250	238.935	0.125	12.989	1.2	0.44	26.9	OK
P1.02	FEH: 100 years: +40 %: 30 mins: Winter	Pipe	1.02	1.03	237.722	237.360	0.150	27.610	1.6	1.34	27.5	Surcharged
P2.06	FEH: 100 years: +40 %: 30 mins: Winter	Pipe	2.06	2.07	236.800	235.918	0.525	535.268	1.8	1.23	394.7	Surcharged
P4.01	FEH: 100 years: +40 %: 30 mins: Winter	Pipe	4.01	4.02	240.800	239.454	0.119	15.957	1.1	0.25	14.0	OK
P2.05	FEH: 100 years: +40 %: 30 mins: Winter	Pipe	2.05	2.06	238.280	236.553	0.450	418.283	2.2	0.67	325.1	OK
P7.02	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	7.01	7.02	238.700	237.335	0.070	2.292	0.6	0.33	4.8	OK
P6.02	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	6.01	6.02	239.430	238.064	0.081	2.841	0.6	0.32	6.0	OK
P5.03	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	5.02	5.03	240.200	238.925	0.130	8.865	0.9	1.04	14.3	OK
P6.03	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	6.02	6.03	239.300	237.979	0.101	7.070	1.0	0.78	12.7	OK

Project:				Date: 26/03/2024							
				Designed by: SaffronCatterick		Checked by:					
Report Details: Type: Connections Summary Storm Phase: Gravity				Company Address:							

P7.03	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	7.02	7.03	238.660	237.240	0.079	5.297	1.0	0.53	9.7	OK
P1.01	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	1.01	1.02	239.465	238.125	0.150	6.937	0.8	0.6	14.6	OK
PP.05	FEH: 100 years: +40 %: 60 mins: Winter	Pipe	BS.05	7.03	239.842	238.877	0.047	95.211	5.3	0.2	25.4	OK
PP.01	FEH: 100 years: +40 %: 60 mins: Winter	Pipe	BS.01	5.03	239.852	238.885	0.077	95.330	2.6	0.46	24.0	OK
PP.03	FEH: 100 years: +40 %: 60 mins: Winter	Pipe	BS.03	6.03	239.846	238.880	0.058	96.534	4.4	0.25	25.4	OK
P6.04	FEH: 100 years: +40 %: 30 mins: Winter	Pipe	6.03	2.05	238.750	237.394	0.141	63.527	1.5	0.7	38.3	OK
PP.04	FEH: 100 years: +40 %: 60 mins: Winter	Pipe	BS.04	2.05	239.899	238.880	0.048	100.876	5.4	0.21	26.7	OK
P5.04	FEH: 100 years: +40 %: 30 mins: Winter	Pipe	5.03	2.04	239.910	238.346	0.166	63.738	1.3	0.3	34.9	OK
PP.02	FEH: 100 years: +40 %: 60 mins: Winter	Pipe	BS.02	2.04	239.894	238.882	0.059	98.913	3.9	0.3	25.5	OK
P4.02	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	4.02	2.03	240.490	239.246	0.245	59.926	1.5	0.97	90.7	OK
P7.04	FEH: 100 years: +40 %: 30 mins: Winter	Pipe	7.03	2.06	237.900	236.501	0.300	60.453	1.4	0.25	36.0	OK
PP.06	FEH: 100 years: +40 %: 30 mins: Winter	Pipe	BS.06	2.06	239.894	238.870	0.150	51.438	5.5	0.2	28.3	OK
Rising Main 3.02	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	3.02	4.02	235.000	234.443	0.144	39.211	0.0	2.35	70.0	OK
Rising Main 3.01	FEH: 100 years: +40 %: 15 mins: Summer	Pipe	3.01	4.01	234.000	233.765	0.066	10.932	0.0	0.47	14.0	Flood Risk
Outfall	FEH: 30 years: +0 %: 1440 mins: Summer	Pipe	POND	Outfall	235.060	234.163	0.086	1283.807	1.3	0.3	17.8	Surcharged
P2.07	FEH: 100 years: +40 %: 30 mins: Winter	Pipe	2.07	POND	237.950	235.604	0.525	530.757	1.8	1.37	391.4	Surcharged
P1.03	FEH: 100 years: +40 %: 15 mins: Winter	Pipe	1.03	POND	236.072	235.089	0.140	20.446	1.1	0.7	29.2	OK

Project:	Date: 26/03/2024		
	Designed by: SaffronCatterick	Checked by:	Approved By:
Report Details: Type: Inflows Summary Storm Phase: Gravity	Company Address:		



Critical Storm Per Item: Rank By: Max. Inflow

Inflow	Storm Event	Inflow Area (ha)	Max. Inflow (L/s)	Total Inflow Volume (m³)
CA.BS.03	FEH: 100 years: +40 %: 15 mins: Winter	0.20	117.0	54.045
CA.BS.06	FEH: 100 years: +40 %: 15 mins: Winter	0.20	113.3	52.331
CA.BS.07	FEH: 100 years: +40 %: 15 mins: Winter	0.20	115.4	53.295
CA.BS.09	FEH: 100 years: +40 %: 15 mins: Winter	0.09	51.5	23.798
CA.BS.11	FEH: 100 years: +40 %: 15 mins: Winter	0.20	115.2	53.179
CA1.02	FEH: 100 years: +40 %: 15 mins: Winter	0.05	29.6	13.669
CA2.01	FEH: 100 years: +40 %: 15 mins: Winter	0.03	16.2	7.498
CA3.01	FEH: 100 years: +40 %: 15 mins: Winter	0.07	39.6	18.305
CA2.02	FEH: 100 years: +40 %: 15 mins: Winter	0.02	11.9	5.511
CA4.03	FEH: 100 years: +40 %: 15 mins: Winter	0.02	9.3	4.297
CA4.01	FEH: 100 years: +40 %: 15 mins: Winter	0.01	4.0	1.831
CA.BS.08	FEH: 100 years: +40 %: 15 mins: Winter	0.11	61.2	28.278
CA6.02	FEH: 100 years: +40 %: 15 mins: Winter	0.02	9.2	4.258
CA.BS.02	FEH: 100 years: +40 %: 15 mins: Winter	0.20	112.7	52.043
CA.BS.04	FEH: 100 years: +40 %: 15 mins: Winter	0.10	57.3	26.459

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	SaffronCatterick		
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CA.BS.10	FEH: 100 years: +40 %: 15 mins: Winter	0.19	111.4	51.437
CA.BS.12	FEH: 100 years: +40 %: 15 mins: Winter	0.11	61.6	28.449
CA4.04	FEH: 100 years: +40 %: 15 mins: Winter	0.01	7.2	3.338
CA1.01	FEH: 100 years: +40 %: 15 mins: Winter	0.03	15.3	7.043
CA5.02	FEH: 100 years: +40 %: 15 mins: Winter	0.02	9.3	4.282
CA6.01	FEH: 100 years: +40 %: 15 mins: Winter	0.01	6.2	2.841
CA7.01	FEH: 100 years: +40 %: 15 mins: Winter	0.01	5.0	2.293
CA5.03	FEH: 100 years: +40 %: 15 mins: Winter	0.02	9.7	4.471
CA5.04	FEH: 100 years: +40 %: 15 mins: Winter	0.03	15.0	6.935
CA7.02	FEH: 100 years: +40 %: 15 mins: Winter	0.01	6.5	3.027
CA7.03	FEH: 100 years: +40 %: 15 mins: Winter	0.01	8.3	3.836
CA7.04	FEH: 100 years: +40 %: 15 mins: Winter	0.02	13.2	6.096
CA.LD	FEH: 100 years: +40 %: 15 mins: Winter	0.19	110.8	51.186
CA3.02	FEH: 100 years: +40 %: 15 mins: Winter	0.02	9.0	4.139
CA3.03	FEH: 100 years: +40 %: 15 mins: Winter	0.08	47.5	21.919
CA.BS.05	FEH: 100 years: +40 %: 15 mins: Winter	0.09	53.1	24.511
CA6.04	FEH: 100 years: +40 %: 15 mins: Winter	0.03	15.0	6.935

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CA.BS.01	FEH: 100 years: +40 %: 15 mins: Winter	0.10	55.3	25.554
CA4.02	FEH: 100 years: +40 %: 15 mins: Winter	0.02	10.5	4.849
CA5.01	FEH: 100 years: +40 %: 15 mins: Winter	0.01	6.0	2.787
CA6.03	FEH: 100 years: +40 %: 15 mins: Winter	0.02	9.8	4.525
GIS Sub	FEH: 100 years: +40 %: 15 mins: Winter	0.05	26.8	12.398
Pond	FEH: 100 years: +40 %: 15 mins: Winter	0.21	123.1	56.823

Project:	Date: 26/03/2024			
	Designed by: SaffronCatterick	Checked by:	Approved By:	
Report Details: Type: Junctions Storm Phase: Gravity	Company Address:			

Inlets

Junction	Inlet Name	Incoming Item(s)	Bypass Destination	Capacity Type
4.02	Inlet	P4.01 CA4.02 Rising Main 3.02	(None)	No Restriction
2.03	Inlet	P8.01 P2.02 CA4.04 CA4.03 P4.02	(None)	No Restriction
2.04	Inlet	P2.03 P5.04 PP.02 CA5.04	(None)	No Restriction
5.01	Inlet	CA4.01 CA5.01	(None)	No Restriction
5.02	Inlet	P5.02 CA5.02	(None)	No Restriction
5.03	Inlet	P5.03 PP.01 CA5.03	(None)	No Restriction
2.05	Inlet	P6.04 PP.04 CA6.04	(None)	No Restriction
	Inlet (1)	P2.04	(None)	No Restriction
6.03	Inlet	P6.03 PP.03 CA6.03	(None)	No Restriction
6.02	Inlet	P6.02 CA6.02	(None)	No Restriction
7.02	Inlet	CA7.02	(None)	No Restriction
	Inlet (1)	P7.02	(None)	No Restriction
2.06	Inlet	P2.05 CA7.04 P7.04 PP.06	(None)	No Restriction
7.01	Inlet	CA7.01	(None)	No Restriction
7.03	Inlet	P7.03 PP.05 CA7.03	(None)	No Restriction
1.02	Inlet	P1.01	(None)	No Restriction
	Inlet (1)	CA1.02	(None)	No Restriction
1.01	Inlet	CA1.01	(None)	No Restriction
2.01	Inlet	CA2.01	(None)	No Restriction
2.02	Inlet	P2.01	(None)	No Restriction
	Inlet (1)	CA2.02	(None)	No Restriction
4.01	Inlet	Rising Main 3.01	(None)	No Restriction
3.02	Inlet	CA3.01 CA3.02 CA3.03	(None)	No Restriction
LD	Inlet	CA.LD	(None)	No Restriction
1.03	Inlet	P1.02	(None)	No Restriction
2.07	Inlet	P2.06	(None)	No Restriction
6.01	Inlet	CA6.01	(None)	No Restriction
3.01	Inlet	GIS Sub	(None)	No Restriction
Outfall	Inlet	Outfall	(None)	No Restriction

Outlets

Project:	Date: 26/03/2024		
	Designed by: SaffronCatterick	Checked by:	Approved By:
Report Details: Type: Junctions Storm Phase: Gravity	Company Address:		



Junction	Outlet Name	Outgoing Connection	Outlet Type
4.02	Outlet	P4.02	Free Discharge
2.03	Outlet	P2.03	Free Discharge
2.04	Outlet	P2.04	Free Discharge
5.01	Outlet	P5.02	Free Discharge
5.02	Outlet	P5.03	Free Discharge
5.03	Outlet	P5.04	Free Discharge
2.05	Outlet	P2.05	Free Discharge
6.03	Outlet	P6.04	Free Discharge
6.02	Outlet	P6.03	Free Discharge
7.02	Outlet	P7.03	Free Discharge
2.06	Outlet	P2.06	Free Discharge
7.01	Outlet	P7.02	Free Discharge
7.03	Outlet	P7.04	Free Discharge
1.02	Outlet (1)	P1.02	Free Discharge
1.01	Outlet	P1.01	Free Discharge
2.01	Outlet	P2.01	Free Discharge
2.02	Outlet	P2.02	Free Discharge
4.01	Outlet	P4.01	Free Discharge
Outlet		Rising Main 3.02	Level Controlled Pump
Invert Level (m)		233.800	
Cut In Height (m)		0.100	
Cut Out Height (m)		0.050	
Depth (m)		Outflow (L/s)	
	0.100	70.0	
	0.200	70.0	
	0.300	70.0	
	0.400	70.0	
	0.500	70.0	
	0.600	70.0	
	0.700	70.0	
	0.800	70.0	
	0.900	70.0	
	1.000	70.0	
	1.100	70.0	
	1.200	70.0	
	1.300	70.0	
	1.400	70.0	
	1.500	70.0	
	1.600	70.0	
	1.700	70.0	
	1.800	70.0	
	1.900	70.0	
	2.000	70.0	
	2.100	70.0	
	2.200	70.0	
	2.300	70.0	
	2.400	70.0	
	2.500	70.0	
	2.600	70.0	
	2.700	70.0	
	2.800	70.0	
	2.900	70.0	
	3.000	70.0	
	3.100	70.0	
	3.200	70.0	
	3.300	70.0	
	3.400	70.0	
	3.500	70.0	
	3.600	70.0	
	3.700	70.0	
	3.800	70.0	
	3.900	70.0	
	4.000	70.0	
	4.100	70.0	
	4.200	70.0	
	4.300	70.0	
	4.400	70.0	

Project:	Date: 26/03/2024			
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Report Details:	Company Address:			
Type: Junctions Storm Phase: Gravity				

Junction	Outlet Name	Outgoing Connection	Outlet Type
3.02	4.500	70.0	
	4.600	70.0	
	4.700	70.0	
	4.800	70.0	
	4.900	70.0	
	5.000	70.0	
	5.100	70.0	
	5.200	70.0	
	5.300	70.0	
	5.400	70.0	
	5.500	70.0	
	5.600	70.0	
	5.700	70.0	
	5.800	70.0	
	5.900	70.0	
	6.000	70.0	
	6.100	70.0	
	6.200	70.0	
	6.300	70.0	
	6.400	70.0	
	6.500	70.0	
	6.600	70.0	
	6.700	70.0	
	6.800	70.0	
	6.900	70.0	
	7.000	70.0	
	7.100	70.0	
	7.200	70.0	
	7.300	70.0	
	7.400	70.0	
	7.500	70.0	
	7.600	70.0	
	7.700	70.0	
	7.800	70.0	
	7.900	70.0	
	8.000	70.0	
	8.100	70.0	
	8.200	70.0	
	8.300	70.0	
	8.400	70.0	
	8.500	70.0	
	8.600	70.0	
	8.700	70.0	
	8.800	70.0	
	8.900	70.0	
	9.000	70.0	
	9.100	70.0	
	9.200	70.0	
	9.300	70.0	
	9.400	70.0	
	9.500	70.0	
	9.600	70.0	
	9.700	70.0	
	9.800	70.0	
	9.900	70.0	
	10.000	70.0	
LD	Outlet	P8.01	Free Discharge
1.03	Outlet	P1.03	Free Discharge
2.07	Outlet	P2.07	Free Discharge
6.01	Outlet	P6.02	Free Discharge
	Outlet	Rising Main 3.01	Level Controlled Pump
	Invert Level (m)	232.800	
	Cut In Height (m)	0.100	
	Cut Out Height (m)	0.050	
	Depth (m)	Outflow (L/s)	
	0.100	14.0	
	0.200	14.0	
	0.300	14.0	

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Junction	Outlet Name	Outgoing Connection	Outlet Type
3.01	0.400	14.0	
	0.500	14.0	
	0.600	14.0	
	0.700	14.0	
	0.800	14.0	
	0.900	14.0	
	1.000	14.0	
	1.100	14.0	
	1.200	14.0	
	1.300	14.0	
	1.400	14.0	
	1.500	14.0	
	1.600	14.0	
	1.700	14.0	
	1.800	14.0	
	1.900	14.0	
	2.000	14.0	
	2.100	14.0	
	2.200	14.0	
	2.300	14.0	
	2.400	14.0	
	2.500	14.0	
	2.600	14.0	
	2.700	14.0	
	2.800	14.0	
	2.900	14.0	
	3.000	14.0	
	3.100	14.0	
	3.200	14.0	
	3.300	14.0	
	3.400	14.0	
	3.500	14.0	
	3.600	14.0	
	3.700	14.0	
	3.800	14.0	
	3.900	14.0	
	4.000	14.0	
	4.100	14.0	
	4.200	14.0	
	4.300	14.0	
	4.400	14.0	
	4.500	14.0	
	4.600	14.0	
	4.700	14.0	
	4.800	14.0	
	4.900	14.0	
	5.000	14.0	
	5.100	14.0	
	5.200	14.0	
	5.300	14.0	
	5.400	14.0	
	5.500	14.0	
	5.600	14.0	
	5.700	14.0	
	5.800	14.0	
	5.900	14.0	
	6.000	14.0	
	6.100	14.0	
	6.200	14.0	
	6.300	14.0	
	6.400	14.0	
	6.500	14.0	
	6.600	14.0	
	6.700	14.0	
	6.800	14.0	
	6.900	14.0	
	7.000	14.0	
	7.100	14.0	
	7.200	14.0	

Project:	Date: 26/03/2024			
	Designed by: SaffronCatterick	Checked by:	Approved By:	
Report Details:	Company Address:			
Type: Junctions Storm Phase: Gravity				

Junction	Outlet Name	Outgoing Connection	Outlet Type
	7.300	14.0	
	7.400	14.0	
	7.500	14.0	
	7.600	14.0	
	7.700	14.0	
	7.800	14.0	
	7.900	14.0	
	8.000	14.0	
	8.100	14.0	
	8.200	14.0	
	8.300	14.0	
	8.400	14.0	
	8.500	14.0	
	8.600	14.0	
	8.700	14.0	
	8.800	14.0	
	8.900	14.0	
	9.000	14.0	
	9.100	14.0	
	9.200	14.0	
	9.300	14.0	
	9.400	14.0	
	9.500	14.0	
	9.600	14.0	
	9.700	14.0	
	9.800	14.0	
	9.900	14.0	
	10.000	14.0	

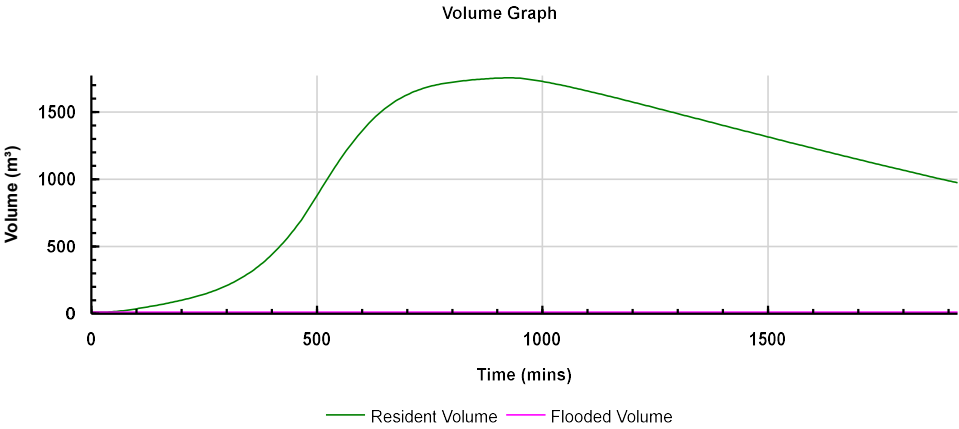
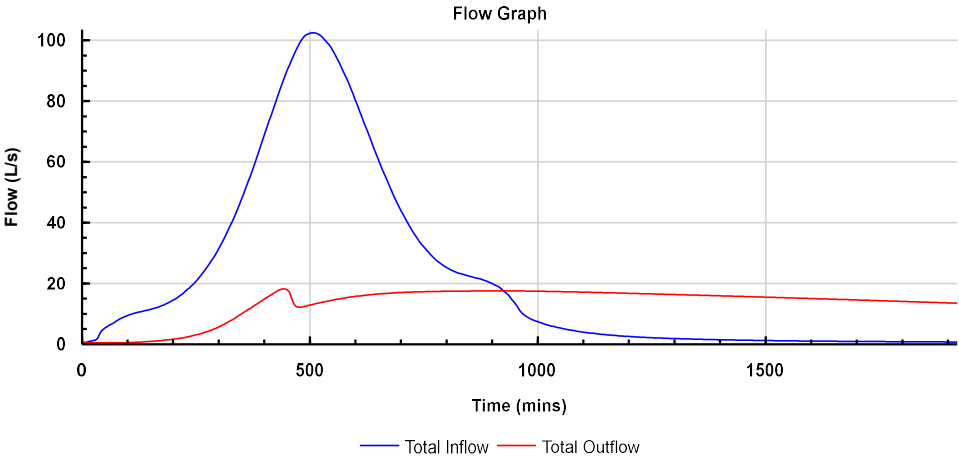
Project:	Date: 26/03/2024			
	Designed by: SaffronCatterick	Checked by:	Approved By:	
Report Details:	Company Address:			
Type: Stormwater Control Results Storm Phase: Gravity				



POND
Critical Storm: FEH: 100 years: Increase Rainfall (%): +40: 960 mins: Winter

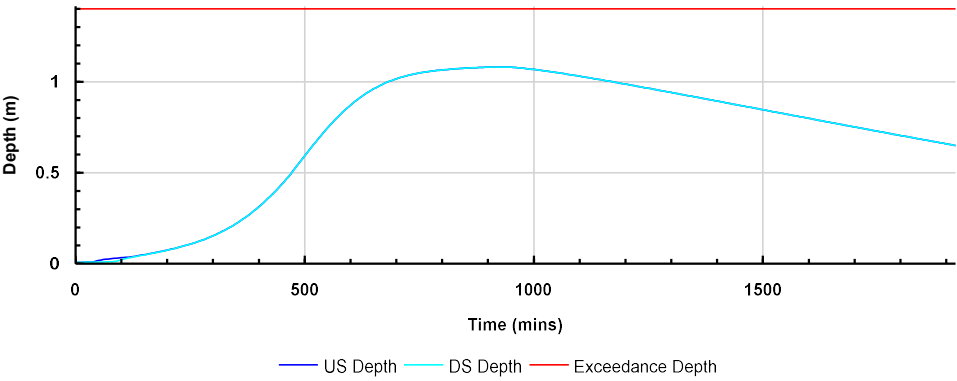
Type : Pond

Graphs



Project:	Date: 26/03/2024			
	Designed by: SaffronCatterick	Checked by:	Approved By:	
Report Details:	Company Address:			
Type: Stormwater Control Results Storm Phase: Gravity				

Depth Graph



Project:	Date: 26/03/2024			
	Designed by: SaffronCatterick	Checked by:	Approved By:	
Report Title: Rainfall Analysis Criteria	Company Address:			

Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Apply Global Value
Urban Creep Global Value (%)	0
Junction Flood Risk Margin (mm)	300
Prefill Manhole Sumps	☐
Perform No Discharge Analysis	☐

Rainfall	
FEH	Type: FEH
Site Location	GB 395700 350000 SJ 95700 50000
Rainfall Version	2022
Summer	☒
Winter	☒

Return Period

Return Period (years)	Increase Rainfall (%)
100.0	40.000
30.0	0.000
2.0	0.000

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
240	480
360	720
480	960
960	1920
1440	2880

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Report Details: Type: Stormwater Controls Summary Storm Phase: Gravity	Company Address:		





Critical Storm Per Item: Rank By: Max. Avg. Depth

Stormwater Control	Storm Event	Max. US Level (m)	Max. DS Level (m)	Max. US Depth (m)	Max. DS Depth (m)	Max. Inflow (L/s)	Max. Residual Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Half Drain Down Time (mins)	Percentage Available (%)
BS.01	FEH: 100 years: +40 %: 60 mins: Winter	239.632	238.863	0.080	0.083	84.7	92.693	0.000	0.000	24.0	95.330	72	64.841
BS.02	FEH: 100 years: +40 %: 60 mins: Winter	239.675	238.843	0.081	0.063	87.8	93.175	0.000	0.000	25.5	98.913	65	65.953
POND	FEH: 100 years: +40 %: 960 mins: Winter	234.739	234.739	1.079	1.079	102.5	1755.080	0.000	0.000	17.8	1492.173	970	0.094
BS.05	FEH: 100 years: +40 %: 60 mins: Winter	239.621	238.831	0.079	0.051	82.1	84.162	0.000	0.000	25.4	95.211	57	67.423
BS.03	FEH: 100 years: +40 %: 60 mins: Winter	239.625	238.836	0.079	0.056	83.8	87.175	0.000	0.000	25.4	96.534	60	66.679
BS.06	FEH: 100 years: +40 %: 60 mins: Winter	239.676	238.824	0.081	0.044	89.1	91.759	0.000	0.000	27.4	101.357	57	66.554
BS.04	FEH: 100 years: +40 %: 60 mins: Winter	239.680	238.832	0.081	0.052	89.0	92.497	0.000	0.000	26.7	100.876	60	66.449

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POND

Type : Pond

Dimensions		
Exceedance Level (m)	235.060	
Depth (m)	1.400	
Base Level (m)	233.660	
Freeboard (mm)	320	
Initial Depth (m)	0.000	
Porosity (%)	100	
Average Slope (1:X)	4.00	
Total Volume (m³)	1756.725	
Depth (m)	Area (m²)	Volume (m³)
0.000	1328.00	0.000
1.400	2150.00	2411.609

Inlets	
HW1	
Inlet Type	Point Inflow
Incoming Item(s)	P2.07
Bypass Destination	(None)
Capacity Type	No Restriction
HW2	
Inlet Type	Point Inflow
Incoming Item(s)	P1.03
Bypass Destination	(None)
Capacity Type	No Restriction
Inlet	
Inlet Type	Lateral Inflow
Incoming Item(s)	Pond
Bypass Destination	(None)
Capacity Type	No Restriction

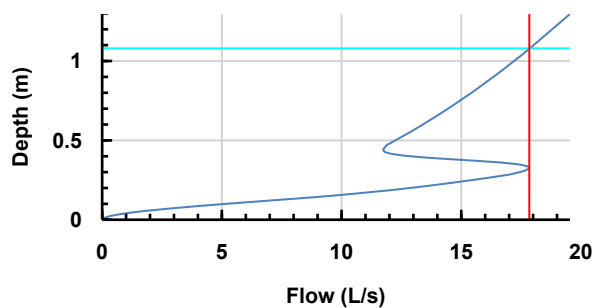
Project:	Date: 26/03/2024		
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Report Details: Type: Stormwater Controls Storm Phase: Gravity	Company Address:		



Outlets

Outlet

Outgoing Connection	Outfall
Outlet Type	Hydro-Brake®
Invert Level (m)	233.660
Design Depth (m)	1.080
Design Flow (L/s)	17.87
Objective	Minimise Upstream Storage Requirements
Application	Surface Water Only
Sump Available	☐
Unit Reference	CHE-0178-1787-1080-1787



Advanced

Perimeter	Circular
Length (m)	117.230
Friction Scheme	Manning's n
n	0.03

Project:	Date: 26/03/2024		
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BS.01

Type : Porous Paving

Dimensions

Exceedance Level (m)	239.080
Depth (m)	0.300
Base Level (m)	238.780
Paving Layer Depth (mm)	1
Membrane Percolation (m/hr)	1000.0
Porosity (%)	30
Length (m)	77.192
Long. Slope (1:X)	100.00
Width (m)	38.036
Total Volume (m³)	263.639

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	1.5

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	CA.BS.01
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	PP.01
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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Project:	Date: 26/03/2024		
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BS.02

Type : Porous Paving

Dimensions

Exceedance Level (m)	239.080
Depth (m)	0.300
Base Level (m)	238.780
Paving Layer Depth (mm)	1
Membrane Percolation (m/hr)	1000.0
Porosity (%)	30
Length (m)	81.446
Long. Slope (1:X)	100.00
Width (m)	37.422
Total Volume (m³)	273.668

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	1.5

Inlets

Inlet (1)

Inlet Type	Lateral Inflow
Incoming Item(s)	CA.BS.03
	CA.BS.04
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet (1)

Outgoing Connection	PP.02
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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Project:	Date: 26/03/2024			
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BS.05

Type : Porous Paving

Dimensions

Exceedance Level (m)	239.080
Depth (m)	0.300
Base Level (m)	238.780
Paving Layer Depth (mm)	1
Membrane Percolation (m/hr)	1000.0
Porosity (%)	30
Length (m)	76.189
Long. Slope (1:X)	100.00
Width (m)	37.762
Total Volume (m³)	258.348

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	1.5

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	CA.BS.09
Bypass Destination	CA.BS.10
Capacity Type	(None)
	No Restriction

Outlets

Outlet

Outgoing Connection	PP.05
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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BS.03

Type : Porous Paving

Dimensions

Exceedance Level (m)	239.080
Depth (m)	0.300
Base Level (m)	238.780
Paving Layer Depth (mm)	1
Membrane Percolation (m/hr)	1000.0
Porosity (%)	30
Length (m)	76.555
Long. Slope (1:X)	100.00
Width (m)	38.058
Total Volume (m³)	261.619

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	1.5

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	CA.BS.06
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	PP.03
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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BS.06

Type : Porous Paving

Dimensions

Exceedance Level (m)	239.080
Depth (m)	0.300
Base Level (m)	238.780
Paving Layer Depth (mm)	1
Membrane Percolation (m/hr)	1000.0
Porosity (%)	30
Length (m)	81.436
Long. Slope (1:X)	100.00
Width (m)	37.520
Total Volume (m³)	274.351

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	1.5

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	CA.BS.12
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	PP.06
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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Project:	Date: 26/03/2024		
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BS.04

Type : Porous Paving

Dimensions

Exceedance Level (m)	239.080
Depth (m)	0.300
Base Level (m)	238.780
Paving Layer Depth (mm)	1
Membrane Percolation (m/hr)	1000.0
Porosity (%)	30
Length (m)	81.891
Long. Slope (1:X)	100.00
Width (m)	37.494
Total Volume (m³)	275.696

Under Drain

Height Above Base (m)	0.000
Diameter (mm)	150
No. of Barrels	1
Release Height (m)	0.000
Friction Scheme	Colebrook-White Roughness
Roughness (mm)	1.5

Inlets

Inlet

Inlet Type	Lateral Inflow
Incoming Item(s)	CA.BS.07
Bypass Destination	(None)
Capacity Type	No Restriction

Outlets

Outlet

Outgoing Connection	PP.04
Outlet Type	Free Discharge

Advanced

Conductivity (m/hr)	300.0
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