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Date 19/09/2024 12:25  
File Surface Water Phase 3 D...

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Network 2020.1.3

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

PN	US/MH Name	Overflow Act.	Water Surcharged Flooded			Flow / Cap. (l/s)	Half Drain Time (mins)
			Level (m)	Depth (m)	Volume (m <sup>3</sup> )		
S6.013	SHW5 to S55		64.656	-0.619	0.000	0.02	

PN	US/MH Name	Pipe Flow (l/s)	Status	Level Exceeded
S1.007	SS11	88.7	OK	
S1.008	SS60	92.2	OK	
S1.009	SS12 to INT1 IN	104.6	OK	
S1.010	SINT1 OUT to S13	104.6	OK	
S1.011	SS13 to AT1	27.7	OK	
S4.000	SS14	13.1	OK	
S4.001	SS15	26.4	OK	
S4.002	SS16	33.3	OK	
S4.003	SS17	34.2	OK	
S4.004	SS18	34.2	OK	
S4.005	SS19 to AT1	34.1	OK	
S5.000	SS20	16.9	OK	
S5.001	SS21	39.9	OK	
S5.002	SS22	62.9	OK	
S5.003	SS23	74.4	OK	
S5.004	SS24 to AT1	74.6	OK	
S1.012	SAT1 to S25 PUMP1	9.1	SURCHARGED	
S1.013	SS25 PUMP1 to S26	7.4	SURCHARGED	
S1.014	SS26 to HW3	7.4	OK	
S6.000	SS27	1.5	OK	
S6.001	SS28	10.8	OK	
S6.002	SS29	13.6	OK	
S6.003	SS30	23.5	OK	
S6.004	SS31	31.4	OK	
S6.005	SS32	47.8	OK	
S7.000	SS33	28.4	OK	
S8.000	SS35	18.3	OK	
S7.001	SS36	73.4	OK	
S6.006	SS37 to INT2 IN	120.5	OK	
S6.007	SINT2 OUT to S38	31.6	OK	
S9.000	SS39	14.0	OK	
S9.001	SS40	40.4	OK	
S9.002	SS41	40.4	OK	
S9.003	SS42	40.3	OK	
S9.004	SS43	53.4	OK	
S9.005	SS44	79.3	OK	
S6.008	SS38 to AT2	52.3	OK	
S10.000	SS45	10.8	OK	
S10.001	SS46	31.5	OK	
S10.002	SS47	51.4	OK	
S10.003	SS48	61.5	OK	

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2 year Return Period Summary of Critical Results by Maximum Level (Rank 1)  
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<b>PN</b>	<b>US/MH Name</b>	<b>Pipe Flow (l/s)</b>	<b>Status</b>	<b>Level Exceeded</b>
S10.004		SS49 61.6		OK
S10.005		SS50 61.4		OK
S6.009	SAT2 to S51	12.6		OK
S6.010	SS51 to S52 PUMP2	11.1	SURCHARGED	
S6.011	SS52 PUMP2 to HW4	9.4		OK
S6.012	SHW4 to HW5	9.4		OK
S6.013	SHW5 to S55	9.4		OK

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surchage	First (Y) Flood	First (Z) Overflow	Overflow Act.
S6.014	SS55 to HW6	8640 Summer	2	+0%				

PN	US/MH Name	Water			Flooded		Half Drain Pipe		Status
		Level (m)	Depth (m)	Volume (m <sup>3</sup> )	Flow / Cap. (l/s)	Overflow (l/s)	Time (mins)	Flow (l/s)	
S6.014	SS55 to HW6	64.484	-0.611	0.000	0.02		9.4	OK	

PN	US/MH Name	Level Exceeded
S6.014	SS55 to HW6	

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**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 * 10m <sup>3</sup> /ha Storage	0.000
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	4
Number of Online Controls	2	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	2013
Site Location	GB 460400 220850 SP 60400 20850
Data Type	Catchment
Cv (Summer)	1.000
Cv (Winter)	1.000
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)	120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	2, 30, 100
Climate Change (%)	0, 0, 40

**WARNING: Half Drain Time has not been calculated as the structure is too full.**

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow
S1.000	SS01	120 Summer	30	+0%	100/120 Summer		
S2.000	SS02	120 Summer	30	+0%	100/120 Summer	100/120 Summer	
S1.001	SS03	120 Summer	30	+0%	100/120 Summer		
S1.002	SS05	120 Summer	30	+0%	100/120 Summer		
S1.003	SS06	120 Summer	30	+0%	100/120 Summer		
S1.004	SS07	120 Summer	30	+0%	100/120 Summer		
S3.000	SS08 to HW1	120 Summer	30	+0%	100/120 Summer		
S3.001	SHW1 to HW2	120 Summer	30	+0%	2/120 Summer		
S3.002	SHW2 to S09	120 Summer	30	+0%			
S1.005	SS09	120 Summer	30	+0%	100/120 Summer		
S1.006	SS10	240 Winter	30	+0%	100/120 Summer		

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

PN	US/MH Name	Overflow Act.	Water Surcharged Flooded			Flow / Overflow Cap. (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)
			Level (m)	Depth (m)	Volume (m <sup>3</sup> )			
S1.000	SS01	63.022	-0.158	0.000	0.46		45.8	
S2.000	SS02	62.860	-0.180	0.000	0.34		25.8	
S1.001	SS03	62.705	-0.235	0.000	0.46		107.8	
S1.002	SS05	62.479	-0.211	0.000	0.55		107.4	
S1.003	SS06	62.365	-0.205	0.000	0.58		107.6	
S1.004	SS07	62.262	-0.198	0.000	0.60		107.6	
S3.000	SS08 to HW1	63.841	-0.109	0.000	0.73		44.7	
S3.001	SHW1 to HW2	63.701	0.430	0.000	1.25		44.8	
S3.002	SHW2 to S09	63.675	-0.225	0.000	0.14		44.8	
S1.005	SS09	62.172	-0.188	0.000	0.64		153.8	
S1.006	SS10	62.120	0.000	0.000	0.27		64.4	

PN	US/MH Name	Status	Level Exceeded
S1.000	SS01	OK	
S2.000	SS02	OK	1
S1.001	SS03	OK	
S1.002	SS05	OK	
S1.003	SS06	OK	
S1.004	SS07	OK	
S3.000	SS08 to HW1	OK	
S3.001	SHW1 to HW2	SURCHARGED	
S3.002	SHW2 to S09	OK	
S1.005	SS09	OK	
S1.006	SS10	OK	

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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)  
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PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow
S1.007	SS11	240 Winter	30	+0%	30/120 Summer		
S1.008	SS60	240 Winter	30	+0%	30/120 Summer		
S1.009	SS12 to INT1 IN	360 Winter	30	+0%	30/120 Summer		
S1.010	SINT1 OUT to S13	360 Winter	30	+0%	30/120 Summer		
S1.011	SS13 to AT1	480 Winter	30	+0%	30/120 Summer		
S4.000	SS14	120 Summer	30	+0%			
S4.001	SS15	120 Summer	30	+0%			
S4.002	SS16	120 Summer	30	+0%			
S4.003	SS17	120 Summer	30	+0%	100/600 Winter		
S4.004	SS18	120 Summer	30	+0%	100/180 Summer		
S4.005	SS19 to AT1	120 Summer	30	+0%	100/120 Summer		
S5.000	SS20	120 Summer	30	+0%			
S5.001	SS21	120 Summer	30	+0%			
S5.002	SS22	120 Summer	30	+0%			
S5.003	SS23	120 Summer	30	+0%			
S5.004	SS24 to AT1	120 Summer	30	+0%	100/120 Summer		
S1.012	SAT1 to S25 PUMP1	480 Winter	30	+0%	2/360 Summer		
S1.013	SS25 PUMP1 to S26	480 Winter	30	+0%	2/120 Summer		
S1.014	SS26 to HW3	10080 Winter	30	+0%			
S6.000	SS27	120 Summer	30	+0%			
S6.001	SS28	120 Summer	30	+0%			
S6.002	SS29	120 Summer	30	+0%	100/120 Summer		
S6.003	SS30	120 Summer	30	+0%	100/120 Summer		
S6.004	SS31	480 Winter	30	+0%	100/120 Summer		
S6.005	SS32	480 Winter	30	+0%	100/120 Summer		
S7.000	SS33	120 Summer	30	+0%	100/120 Summer		
S8.000	SS35	120 Summer	30	+0%	30/120 Summer		
S7.001	SS36	120 Summer	30	+0%	30/120 Summer		
S6.006	SS37 to INT2 IN	480 Winter	30	+0%	30/120 Summer		
S6.007	SINT2 OUT to S38	480 Winter	30	+0%	30/120 Summer		
S9.000	SS39	120 Summer	30	+0%	100/120 Summer		
S9.001	SS40	120 Summer	30	+0%	100/120 Summer		
S9.002	SS41	120 Summer	30	+0%	100/120 Summer		
S9.003	SS42	120 Summer	30	+0%	30/120 Summer		
S9.004	SS43	120 Summer	30	+0%	30/120 Summer		
S9.005	SS44	480 Winter	30	+0%	30/120 Summer		
S6.008	SS38 to AT2	480 Winter	30	+0%	30/120 Summer		
S10.000	SS45	120 Summer	30	+0%			
S10.001	SS46	120 Summer	30	+0%			
S10.002	SS47	120 Summer	30	+0%			
S10.003	SS48	120 Summer	30	+0%			
S10.004	SS49	120 Summer	30	+0%			
S10.005	SS50	120 Summer	30	+0%	100/360 Summer		
S6.009	SAT2 to S51	480 Winter	30	+0%	30/120 Summer		
S6.010	SS51 to S52 PUMP2	480 Winter	30	+0%	2/240 Summer		
S6.011	SS52 PUMP2 to HW4	480 Winter	30	+0%	30/120 Summer		
S6.012	SHW4 to HW5	10080 Summer	30	+0%			
S6.013	SHW5 to S55	10080 Summer	30	+0%			

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

PN	US/MH Name	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m <sup>3</sup> )	Flow / Cap.	Overflow (1/s)	Half Drain Time (mins)
S1.007	SS11		62.043	0.263	0.000	0.40		
S1.008	SS60		61.925	0.285	0.000	0.40		
S1.009	SS12 to INT1 IN		61.826	0.316	0.000	0.40		
S1.010	SINT1 OUT to S13		61.723	0.373	0.000	0.39		
S1.011	SS13 to AT1		61.675	0.395	0.000	0.21		
S4.000	SS14		63.538	-0.192	0.000	0.28		
S4.001	SS15		63.109	-0.311	0.000	0.21		
S4.002	SS16		62.838	-0.302	0.000	0.24		
S4.003	SS17		62.406	-0.294	0.000	0.26		
S4.004	SS18		62.042	-0.288	0.000	0.28		
S4.005	SS19 to AT1		61.790	-0.300	0.000	0.24		
S5.000	SS20		63.568	-0.342	0.000	0.13		
S5.001	SS21		63.353	-0.277	0.000	0.32		
S5.002	SS22		63.079	-0.266	0.000	0.49		
S5.003	SS23		62.924	-0.281	0.000	0.44		
S5.004	SS24 to AT1		62.754	-0.211	0.000	0.67		
S1.012	SAT1 to S25 PUMP1		61.675	0.585	0.000	0.07		
S1.013	SS25 PUMP1 to S26		61.704	1.064	0.000	1.46		
S1.014	SS26 to HW3		64.445	-0.055	0.000	0.72		
S6.000	SS27		64.705	-0.265	0.000	0.03		
S6.001	SS28		64.256	-0.204	0.000	0.23		
S6.002	SS29		63.336	-0.354	0.000	0.10		
S6.003	SS30		62.832	-0.318	0.000	0.19		
S6.004	SS31		62.474	-0.226	0.000	0.08		
S6.005	SS32		62.474	-0.106	0.000	0.10		
S7.000	SS33		62.558	-0.262	0.000	0.25		
S8.000	SS35		62.602	0.042	0.000	0.57		
S7.001	SS36		62.512	0.022	0.000	0.67		
S6.006	SS37 to INT2 IN		62.473	0.163	0.000	0.17		
S6.007	SINT2 OUT to S38		62.472	0.262	0.000	0.19		
S9.000	SS39		62.817	-0.313	0.000	0.16		
S9.001	SS40		62.787	-0.233	0.000	0.39		
S9.002	SS41		62.737	-0.043	0.000	0.37		
S9.003	SS42		62.645	0.085	0.000	0.47		
S9.004	SS43		62.515	0.105	0.000	0.66		
S9.005	SS44		62.473	0.143	0.000	0.17		
S6.008	SS38 to AT2		62.472	0.302	0.000	0.32		
S10.000	SS45		64.408	-0.362	0.000	0.09		
S10.001	SS46		64.202	-0.298	0.000	0.25		
S10.002	SS47		63.962	-0.248	0.000	0.41		
S10.003	SS48		63.622	-0.303	0.000	0.37		
S10.004	SS49		63.375	-0.320	0.000	0.32		
S10.005	SS50		63.049	-0.246	0.000	0.55		
S6.009	SAT2 to S51		62.471	0.436	0.000	0.06		
S6.010	SS51 to S52 PUMP2		62.506	0.611	0.000	0.06		
S6.011	SS52 PUMP2 to HW4		62.514	0.559	0.000	0.05		
S6.012	SHW4 to HW5		64.680	-0.595	0.000	0.03		

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

PN	US/MH Name	Overflow Act.	Water Surcharged Flooded			Flow / Overflow Cap. (l/s)	Half Drain Time (mins)
			Level (m)	Depth (m)	Volume (m <sup>3</sup> )		
S6.013	SHW5 to S55		64.656	-0.619	0.000	0.02	

PN	US/MH Name	Pipe Flow (l/s)	Status	Level Exceeded
S1.007	SS11	78.2	SURCHARGED	
S1.008	SS60	81.2	SURCHARGED	
S1.009	SS12 to INT1 IN	67.0	SURCHARGED	
S1.010	SINT1 OUT to S13	66.1	SURCHARGED	
S1.011	SS13 to AT1	51.3	SURCHARGED	
S4.000	SS14	28.0	OK	
S4.001	SS15	57.8	OK	
S4.002	SS16	73.4	OK	
S4.003	SS17	75.2	OK	
S4.004	SS18	75.1	OK	
S4.005	SS19 to AT1	75.3	OK	
S5.000	SS20	36.1	OK	
S5.001	SS21	87.8	OK	
S5.002	SS22	139.5	OK	
S5.003	SS23	165.8	OK	
S5.004	SS24 to AT1	165.7	OK	
S1.012	SAT1 to S25 PUMP1	16.3	SURCHARGED	
S1.013	SS25 PUMP1 to S26	7.4	SURCHARGED	
S1.014	SS26 to HW3	7.4	OK	
S6.000	SS27	3.3	OK	
S6.001	SS28	24.1	OK	
S6.002	SS29	30.4	OK	
S6.003	SS30	52.5	OK	
S6.004	SS31	15.9	OK	
S6.005	SS32	24.3	OK	
S7.000	SS33	60.2	OK	
S8.000	SS35	37.8	SURCHARGED	
S7.001	SS36	149.2	SURCHARGED	
S6.006	SS37 to INT2 IN	58.9	SURCHARGED	
S6.007	SINT2 OUT to S38	57.9	SURCHARGED	
S9.000	SS39	30.0	OK	
S9.001	SS40	89.4	OK	
S9.002	SS41	84.4	OK	
S9.003	SS42	101.0	SURCHARGED	
S9.004	SS43	111.9	SURCHARGED	
S9.005	SS44	39.8	SURCHARGED	
S6.008	SS38 to AT2	95.6	SURCHARGED	
S10.000	SS45	23.1	OK	
S10.001	SS46	69.4	OK	
S10.002	SS47	114.5	OK	
S10.003	SS48	137.4	OK	



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30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)  
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<b>PN</b>	<b>US/MH Name</b>	<b>Pipe Flow (l/s)</b>	<b>Status</b>	<b>Level Exceeded</b>
S10.004		SS49 137.1		OK
S10.005		SS50 137.0		OK
S6.009	SAT2 to S51	16.9	SURCHARGED	
S6.010	SS51 to S52 PUMP2	14.0	SURCHARGED	
S6.011	SS52 PUMP2 to HW4	9.4	SURCHARGED	
S6.012	SHW4 to HW5	9.4		OK
S6.013	SHW5 to S55	9.4		OK

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
S6.014	SS55 to HW6	10080 Summer	30	+0%				

PN	US/MH Name	Water			Surcharged		Flooded		Half Drain Pipe	
		Level (m)	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)	Status	
S6.014	SS55 to HW6	64.484	-0.611	0.000	0.02			9.4	OK	

PN	US/MH Name	Level Exceeded
S6.014	SS55 to HW6	

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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 * 10m <sup>3</sup> /ha Storage	0.000
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	4
Number of Online Controls	2	Number of Time/Area Diagrams	0
Number of Offline Controls	0	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	2013
Site Location	GB 460400 220850 SP 60400 20850
Data Type	Catchment
Cv (Summer)	1.000
Cv (Winter)	1.000
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)	120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080
Return Period(s) (years)	2, 30, 100
Climate Change (%)	0, 0, 40

**WARNING: Half Drain Time has not been calculated as the structure is too full.**

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow
S1.000	SS01	120 Summer	100	+40%	100/120 Summer		
S2.000	SS02	120 Summer	100	+40%	100/120 Summer	100/120 Summer	
S1.001	SS03	120 Summer	100	+40%	100/120 Summer		
S1.002	SS05	120 Summer	100	+40%	100/120 Summer		
S1.003	SS06	120 Summer	100	+40%	100/120 Summer		
S1.004	SS07	120 Summer	100	+40%	100/120 Summer		
S3.000	SS08 to HW1	120 Summer	100	+40%	100/120 Summer		
S3.001	SHW1 to HW2	120 Summer	100	+40%	2/120 Summer		
S3.002	SHW2 to S09	120 Summer	100	+40%			
S1.005	SS09	120 Summer	100	+40%	100/120 Summer		
S1.006	SS10	120 Summer	100	+40%	100/120 Summer		

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

PN	US/MH Name	Overflow Act.	Water Surcharged Flooded			Flow / Overflow Cap. (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)
			Level (m)	Depth (m)	Volume (m <sup>3</sup> )			
S1.000	SS01	64.347	1.167	0.000	0.75		74.8	
S2.000	SS02	64.310	1.270	0.024	0.53		40.7	
S1.001	SS03	64.213	1.273	0.000	0.73		170.5	
S1.002	SS05	64.074	1.384	0.000	0.85		165.7	
S1.003	SS06	63.959	1.389	0.000	0.88		165.3	
S1.004	SS07	63.850	1.390	0.000	0.92		164.7	
S3.000	SS08 to HW1	63.987	0.037	0.000	1.30		79.9	
S3.001	SHW1 to HW2	63.876	0.605	0.000	2.24		79.9	
S3.002	SHW2 to S09	63.811	-0.089	0.000	0.26		79.8	
S1.005	SS09	63.747	1.387	0.000	0.96		231.9	
S1.006	SS10	63.527	1.407	0.000	0.99		240.4	

PN	US/MH Name	Status	Level Exceeded
S1.000	SS01	SURCHARGED	
S2.000	SS02	FLOOD	1
S1.001	SS03	SURCHARGED	
S1.002	SS05	SURCHARGED	
S1.003	SS06	SURCHARGED	
S1.004	SS07	SURCHARGED	
S3.000	SS08 to HW1	SURCHARGED	
S3.001	SHW1 to HW2	SURCHARGED	
S3.002	SHW2 to S09	OK	
S1.005	SS09	SURCHARGED	
S1.006	SS10	SURCHARGED	

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

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow
S1.007	SS11	120 Summer	100	+40%	30/120 Summer		
S1.008	SS60	120 Summer	100	+40%	30/120 Summer		
S1.009	SS12 to INT1 IN	720 Winter	100	+40%	30/120 Summer		
S1.010	SINT1 OUT to S13	720 Winter	100	+40%	30/120 Summer		
S1.011	SS13 to AT1	720 Winter	100	+40%	30/120 Summer		
S4.000	SS14	120 Summer	100	+40%			
S4.001	SS15	120 Summer	100	+40%			
S4.002	SS16	120 Summer	100	+40%			
S4.003	SS17	720 Winter	100	+40%	100/600 Winter		
S4.004	SS18	720 Winter	100	+40%	100/180 Summer		
S4.005	SS19 to AT1	720 Winter	100	+40%	100/120 Summer		
S5.000	SS20	120 Summer	100	+40%			
S5.001	SS21	120 Summer	100	+40%			
S5.002	SS22	120 Summer	100	+40%			
S5.003	SS23	120 Summer	100	+40%			
S5.004	SS24 to AT1	120 Summer	100	+40%	100/120 Summer		
S1.012	SAT1 to S25 PUMP1	720 Winter	100	+40%	2/360 Summer		
S1.013	SS25 PUMP1 to S26	720 Winter	100	+40%	2/120 Summer		
S1.014	SS26 to HW3	10080 Winter	100	+40%			
S6.000	SS27	120 Summer	100	+40%			
S6.001	SS28	120 Summer	100	+40%			
S6.002	SS29	120 Summer	100	+40%	100/120 Summer		
S6.003	SS30	120 Summer	100	+40%	100/120 Summer		
S6.004	SS31	120 Summer	100	+40%	100/120 Summer		
S6.005	SS32	720 Winter	100	+40%	100/120 Summer		
S7.000	SS33	120 Summer	100	+40%	100/120 Summer		
S8.000	SS35	120 Summer	100	+40%	30/120 Summer		
S7.001	SS36	120 Summer	100	+40%	30/120 Summer		
S6.006	SS37 to INT2 IN	720 Winter	100	+40%	30/120 Summer		
S6.007	SINT2 OUT to S38	720 Winter	100	+40%	30/120 Summer		
S9.000	SS39	120 Summer	100	+40%	100/120 Summer		
S9.001	SS40	120 Summer	100	+40%	100/120 Summer		
S9.002	SS41	120 Summer	100	+40%	100/120 Summer		
S9.003	SS42	120 Summer	100	+40%	30/120 Summer		
S9.004	SS43	120 Summer	100	+40%	30/120 Summer		
S9.005	SS44	720 Winter	100	+40%	30/120 Summer		
S6.008	SS38 to AT2	720 Winter	100	+40%	30/120 Summer		
S10.000	SS45	120 Summer	100	+40%			
S10.001	SS46	120 Summer	100	+40%			
S10.002	SS47	120 Summer	100	+40%			
S10.003	SS48	120 Summer	100	+40%			
S10.004	SS49	120 Summer	100	+40%			
S10.005	SS50	720 Winter	100	+40%	100/360 Summer		
S6.009	SAT2 to S51	720 Winter	100	+40%	30/120 Summer		
S6.010	SS51 to S52 PUMP2	720 Winter	100	+40%	2/240 Summer		
S6.011	SS52 PUMP2 to HW4	720 Winter	100	+40%	30/120 Summer		
S6.012	SHW4 to HW5	360 Winter	100	+40%			
S6.013	SHW5 to S55	360 Winter	100	+40%			

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

PN	US/MH Name	Overflow Act.	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m <sup>3</sup> )	Flow / Overflow Cap. (l/s)	Half Drain Time (mins)
S1.007	SS11		63.190	1.410	0.000	1.48	
S1.008	SS60		62.888	1.248	0.000	1.49	
S1.009	SS12 to INT1 IN		62.802	1.292	0.000	0.36	
S1.010	SINT1 OUT to S13		62.801	1.451	0.000	0.36	
S1.011	SS13 to AT1		62.800	1.520	0.000	0.25	
S4.000	SS14		63.580	-0.150	0.000	0.50	
S4.001	SS15		63.161	-0.259	0.000	0.37	
S4.002	SS16		62.893	-0.247	0.000	0.42	
S4.003	SS17		62.801	0.101	0.000	0.07	
S4.004	SS18		62.800	0.470	0.000	0.08	
S4.005	SS19 to AT1		62.800	0.710	0.000	0.07	
S5.000	SS20		63.607	-0.303	0.000	0.23	
S5.001	SS21		63.423	-0.207	0.000	0.56	
S5.002	SS22		63.220	-0.125	0.000	0.86	
S5.003	SS23		63.134	-0.071	0.000	0.78	
S5.004	SS24 to AT1		62.986	0.021	0.000	1.18	
S1.012	SAT1 to S25 PUMP1		62.800	1.710	0.000	0.06	
S1.013	SS25 PUMP1 to S26		62.799	2.159	0.000	1.46	
S1.014	SS26 to HW3		64.445	-0.055	0.000	0.72	
S6.000	SS27		64.716	-0.254	0.000	0.06	
S6.001	SS28		64.292	-0.168	0.000	0.40	
S6.002	SS29		63.726	0.036	0.000	0.18	
S6.003	SS30		63.571	0.421	0.000	0.29	
S6.004	SS31		63.401	0.701	0.000	0.53	
S6.005	SS32		63.364	0.784	0.000	0.12	
S7.000	SS33		63.533	0.713	0.000	0.44	
S8.000	SS35		63.479	0.919	0.000	1.02	
S7.001	SS36		63.392	0.902	0.000	1.24	
S6.006	SS37 to INT2 IN		63.363	1.053	0.000	0.21	
S6.007	SINT2 OUT to S38		63.362	1.152	0.000	0.24	
S9.000	SS39		63.891	0.761	0.000	0.27	
S9.001	SS40		63.781	0.761	0.000	0.67	
S9.002	SS41		63.643	0.863	0.000	0.67	
S9.003	SS42		63.507	0.947	0.000	0.70	
S9.004	SS43		63.378	0.968	0.000	1.19	
S9.005	SS44		63.363	1.033	0.000	0.20	
S6.008	SS38 to AT2		63.361	1.191	0.000	0.40	
S10.000	SS45		64.437	-0.333	0.000	0.15	
S10.001	SS46		64.261	-0.239	0.000	0.45	
S10.002	SS47		64.050	-0.160	0.000	0.74	
S10.003	SS48		63.714	-0.211	0.000	0.67	
S10.004	SS49		63.457	-0.238	0.000	0.58	
S10.005	SS50		63.361	0.066	0.000	0.15	
S6.009	SAT2 to S51		63.361	1.326	0.000	0.07	
S6.010	SS51 to S52 PUMP2		63.399	1.504	0.000	0.06	
S6.011	SS52 PUMP2 to HW4		63.407	1.452	0.000	0.05	
S6.012	SHW4 to HW5		64.680	-0.595	0.000	0.03	

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

PN	US/MH Name	Overflow Act.	Water Surcharged Flooded			Flow / Overflow Cap. (l/s)	Half Drain Time (mins)
			Level (m)	Depth (m)	Volume (m <sup>3</sup> )		
S6.013	SHW5 to S55		64.656	-0.619	0.000	0.02	

PN	US/MH Name	Pipe Flow (l/s)	Status	Level Exceeded
S1.007		SS11 291.2	SURCHARGED	
S1.008		SS60 301.9	SURCHARGED	
S1.009	SS12 to INT1 IN	60.7	SURCHARGED	
S1.010	SINT1 OUT to S13	60.6	SURCHARGED	
S1.011	SS13 to AT1	60.4	SURCHARGED	
S4.000		SS14 50.0	OK	
S4.001		SS15 103.2	OK	
S4.002		SS16 131.1	OK	
S4.003		SS17 20.9	SURCHARGED	
S4.004		SS18 20.9	SURCHARGED	
S4.005	SS19 to AT1	20.9	SURCHARGED	
S5.000		SS20 64.5	OK	
S5.001		SS21 156.8	OK	
S5.002		SS22 247.8	OK	
S5.003		SS23 294.0	OK	
S5.004		SS24 to AT1 293.9	SURCHARGED	
S1.012	SAT1 to S25 PUMP1	12.6	SURCHARGED	
S1.013	SS25 PUMP1 to S26	7.4	SURCHARGED	
S1.014	SS26 to HW3	7.4	OK	
S6.000		SS27 5.9	OK	
S6.001		SS28 43.0	OK	
S6.002		SS29 52.6	SURCHARGED	
S6.003		SS30 80.4	SURCHARGED	
S6.004		SS31 103.6	SURCHARGED	
S6.005		SS32 29.6	SURCHARGED	
S7.000		SS33 105.4	SURCHARGED	
S8.000		SS35 67.5	SURCHARGED	
S7.001		SS36 277.6	SURCHARGED	
S6.006	SS37 to INT2 IN	71.9	SURCHARGED	
S6.007	SINT2 OUT to S38	71.7	SURCHARGED	
S9.000		SS39 51.3	SURCHARGED	
S9.001		SS40 154.2	SURCHARGED	
S9.002		SS41 151.9	SURCHARGED	
S9.003		SS42 151.2	SURCHARGED	
S9.004		SS43 201.2	SURCHARGED	
S9.005		SS44 48.4	SURCHARGED	
S6.008	SS38 to AT2	119.7	SURCHARGED	
S10.000		SS45 41.3	OK	
S10.001		SS46 124.0	OK	
S10.002		SS47 204.6	OK	
S10.003		SS48 245.3	OK	

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

<b>PN</b>	<b>US/MH Name</b>	<b>Pipe Flow (l/s)</b>	<b>Status</b>	<b>Level Exceeded</b>
S10.004		SS49 244.5		OK
S10.005		SS50 38.0	SURCHARGED	
S6.009	SAT2 to S51	18.7	SURCHARGED	
S6.010	SS51 to S52 PUMP2	14.5	SURCHARGED	
S6.011	SS52 PUMP2 to HW4	9.4	SURCHARGED	
S6.012	SHW4 to HW5	9.4		OK
S6.013	SHW5 to S55	9.4		OK



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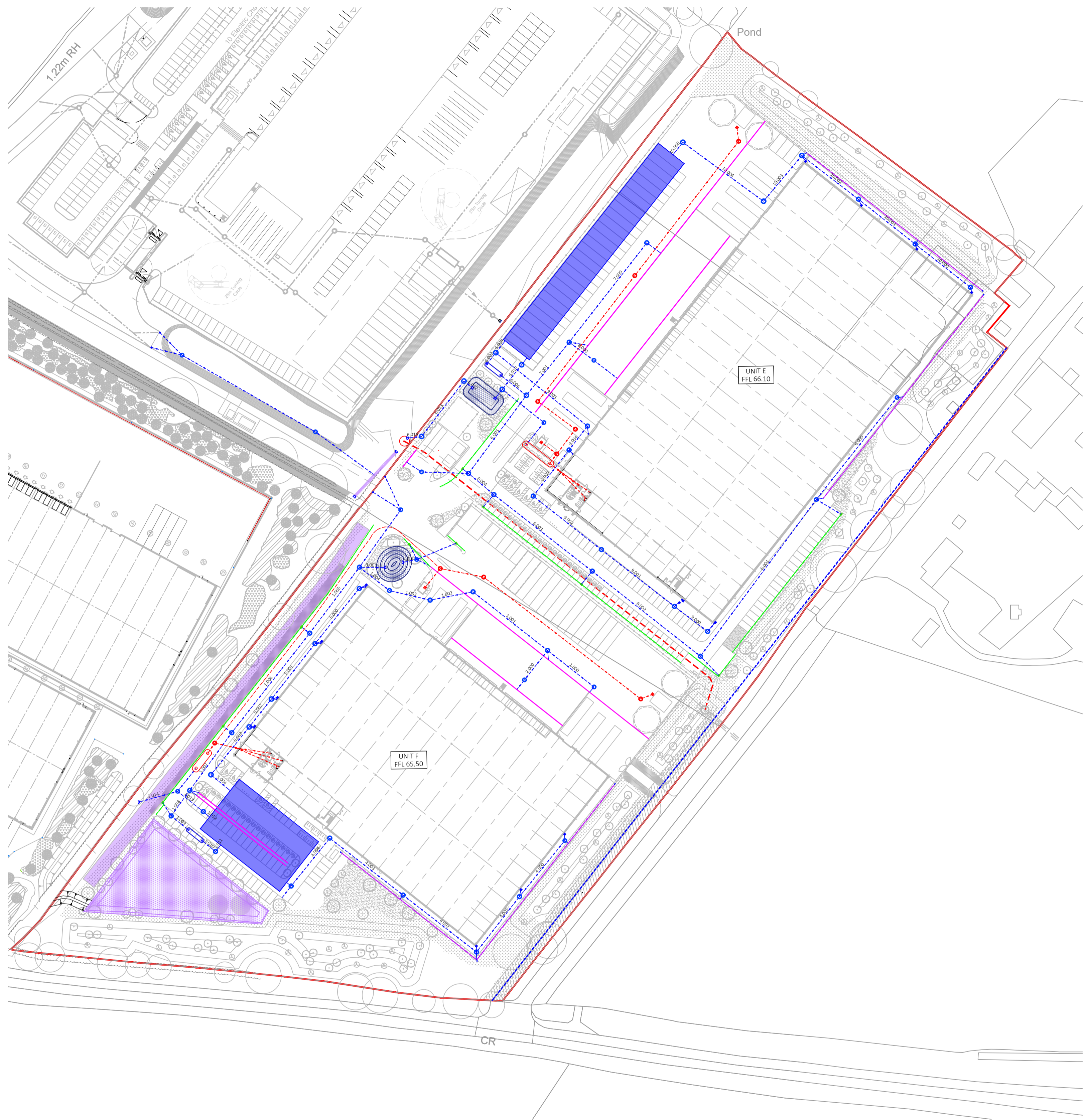
100 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.
S6.014	SS55 to HW6	360 Winter	100	+40%				

PN	US/MH Name	Water Level (m)	Surcharged Depth (m)	Flooded Volume (m <sup>3</sup> )	Flow / Overflow Cap. (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
S6.014	SS55 to HW6	64.484	-0.611	0.000	0.02		9.4	OK

PN	US/MH Name	Level Exceeded
S6.014	SS55 to HW6	

# Appendix C - Drawings



- LEGEND**
- FOUL WATER SEWER
  - FOUL WATER MANHOLE
  - FOUL WATER INSPECTION CHAMBER
  - FOUL WATER CONNECTION
  - SURFACE WATER SEWER
  - SURFACE WATER MANHOLE
  - SURFACE WATER INSPECTION CHAMBER
  - SURFACE WATER SEWER (>600mm)
  - SURFACE WATER RISING MAIN
  - FOUL WATER RISING MAIN
  - SURFACE WATER CHANNEL TO MANUFACTURER SPECIFICATION UNO
  - GULLY
  - ROAD GULLY
  - SURFACE WATER RODDING EYE
  - SURFACE WATER CONNECTION
  - ATTENUATION BASIN/TANK
  - BACK DROP
  - PROPOSED FOUL WATER FLOOR GULLY
  - LAND DRAIN (100mm DIAMETER PERFORATED PIPE)
  - HEADWALL
  - EXISTING SEWER/DRAINAGE FROM PREVIOUS PHASE
  - KERB INLET DRAIN
  - CLASS 1 FULL RETENTION SEPARATOR WITH ALARM
  - FOUL TREATMENT WORKS
  - SMALL ATTENUATION POND/BIO-RETENTION AREA
  - SWALE
  - PIPE INVERT LEVEL
  - FLOOD COMPENSATION BASIN

**NOTES**

1. THIS DRAWING IS NOT TO BE SCALED.
2. TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS.
3. ALL DIMENSIONS ARE TO BE CHECKED ON SITE BEFORE THE COMMENCEMENT OF WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT AND ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
4. 'MARKED UP' DRAWINGS ARE TO BE PROVIDED TO THE ENGINEER UPON COMPLETION TO ENABLE PRODUCTION OF 'AS BUILT' DRAWING IN ACCORDANCE WITH CONSTRUCTION (DESIGN & MANAGEMENT): 2015 REGULATIONS 22(j).
5. ALL LEVELS ARE TO TOPOGRAPHICAL SURVEY.
6. COVER LEVELS SHOWN ARE APPROXIMATE. COVER LEVELS FOR MANHOLES WITHIN LANDSCAPED AREAS SHOULD BE CHECKED WITH THE LANDSCAPE ARCHITECTS. COVERS SHOULD BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.

7. DESIGN OF THE DRAINAGE CHANNELS, FOUL AND SURFACE CONNECTIONS IS INDICATIVE ONLY AND IS SUBJECT TO DETAILED DESIGN.
8. FOR DETAILS OF MANHOLE TYPES AND PIPE BEDDING ETC, SEE STANDARD DETAIL DRAWING(S).
9. CELLULAR STORAGE IS BASED UPON A PROPRIETARY PRODUCT AND IS SUBJECT TO DETAILED DESIGN.
10. SITE LAYOUT BASED ON LATEST ARCHITECT DRAWING "PROPOSED SITE PLAN" DRAWING REF. 4036-X3-001 Phase 3 Site Layout - 18-09-24 BY pHp Architects DATED 18.09.2024.

REVISIONS

Rev.	Revision Notes	Date	Drawn By	Checked	Approved
P02	REVISED PLANNING	20/11/24	AB	AB	CK
P01	PLANNING	19/09/24	MC	AB	CK

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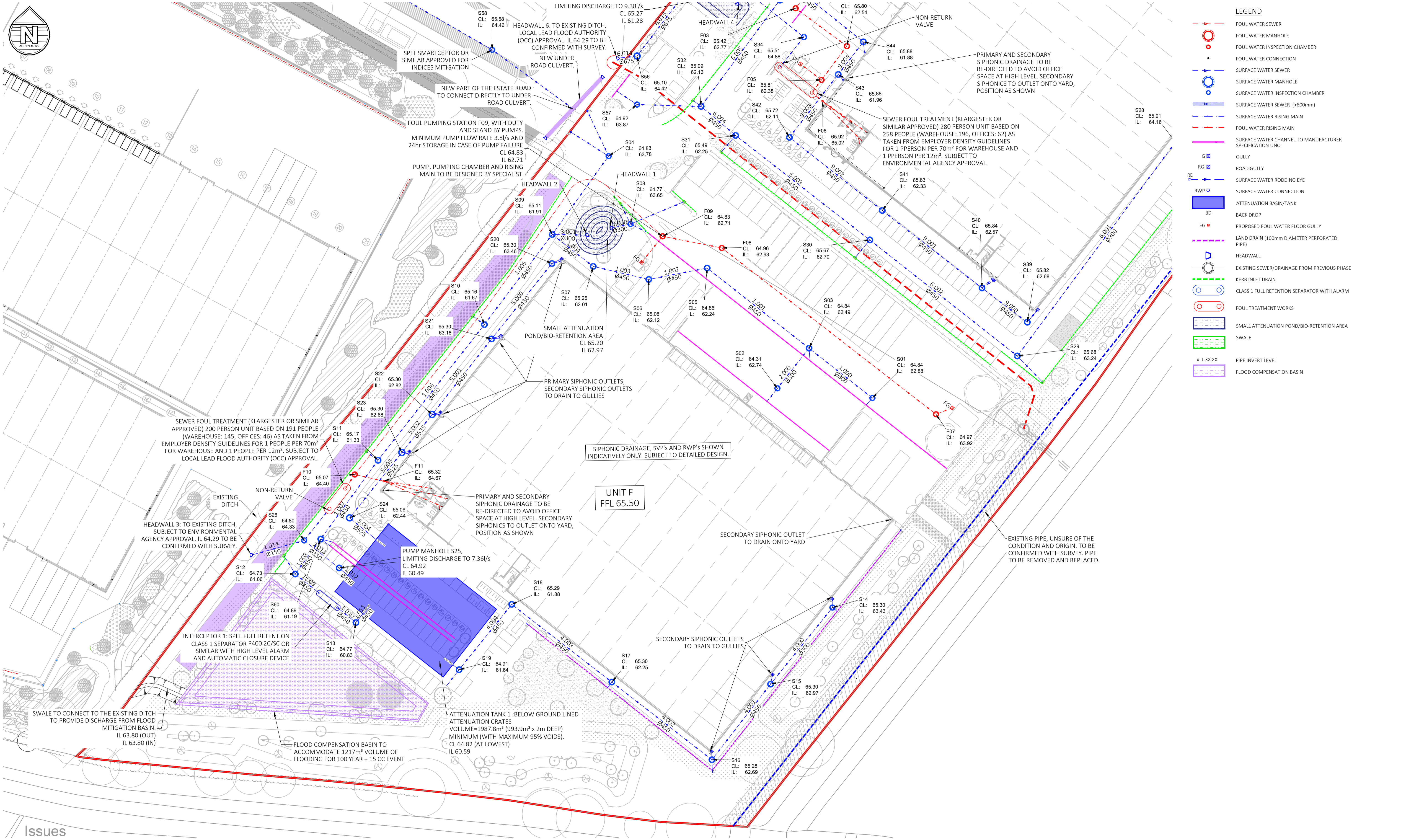
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PROJECT  
**PHASE 3, BICESTER  
SYMMETRY PARK**

TITLE <b>DRAINAGE OVERVIEW FOUL SEWER TREATMENT</b>	
HYDROCK PROJECT NO. <b>22281</b>	SCALE @ A1 <b>1:1000</b>
STATUS DESCRIPTION <b>SUITABLE FOR REVIEW &amp; COMMENT</b>	STATUS <b>S3</b>
DRAWING NO. <b>22281-HYD-XX-XX-DR-C-0500</b>	REVISION <b>P02</b>

Filename: Z:\00 - Projects\Contractors\22281-SRB Symmetry Park Bicester\_Phase 3\01 - WIP\DR - Drawing\22281-HYD-XX-XX-DR-C-0500\_Drainage\_Layout.dwg



- NOTES**
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  - TO BE READ IN CONJUNCTION WITH ALL RELEVANT DRAWINGS.
  - ALL DIMENSIONS ARE TO BE CHECKED ON SITE BEFORE THE COMMENCEMENT OF WORKS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ARCHITECT AND ENGINEER FOR VERIFICATION. FIGURED DIMENSIONS ONLY ARE TO BE TAKEN FROM THIS DRAWING.
  - 'MARKED UP' DRAWINGS ARE TO BE PROVIDED TO THE ENGINEER UPON COMPLETION TO ENABLE PRODUCTION OF 'AS BUILT' DRAWING IN ACCORDANCE WITH CONSTRUCTION (DESIGN & MANAGEMENT): 2015 REGULATIONS 22(j).
  - ALL LEVELS ARE TO TOPOGRAPHICAL SURVEY.
  - COVER LEVELS SHOWN ARE APPROXIMATE. COVER LEVELS FOR MANHOLES WITHIN LANDSCAPED AREAS SHOULD BE CHECKED WITH THE LANDSCAPE ARCHITECTS. COVERS SHOULD BE ADJUSTED TO MATCH SURROUNDING FINISH LEVELS.
  - DESIGN OF THE DRAINAGE CHANNELS, FOUL AND SURFACE CONNECTIONS IS INDICATIVE ONLY AND IS SUBJECT TO DETAILED DESIGN.
  - FOR DETAILS OF MANHOLE TYPES AND PIPE BEDDING ETC, SEE STANDARD DETAIL DRAWING(S).
  - CELLULAR STORAGE IS BASED UPON A PROPRIETARY PRODUCT AND IS SUBJECT TO DETAILED DESIGN.
  - SITE LAYOUT BASED ON LATEST ARCHITECT DRAWING "PROPOSED SITE PLAN" DRAWING REF. 4036-X3-001 Phase 3 Site Layout - 18-09-24 by pHp Architects DATED 18.09.2024.

**REVISIONS**

PO2	REVISED PLANNING	20/11/24	AB	AB   CK
PO1	PLANNING	19/09/24	MC	AB   CK
Rev.	Revision Notes	Date	Drawn By	Checked   Approved

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PROJECT  
PHASE 3, BICESTER  
SYMMETRY PARK

TITLE DRAINAGE FOUL SEWER TREATMENT SHEET 1	
HYDROCK PROJECT NO. 22281	SCALE @ A1 1:500
STATUS DESCRIPTION SUITABLE FOR REVIEW & COMMENT	STATUS S3
DRAWING NO. 22281-HYD-XX-XX-DR-C-0501	REVISION P02