

Project: Former Merseyside Dogs Home, Greensbridge Lane, Halewood, Liverpool	Date: 19/06/2024		
	Designed by: laker	Checked by: JH	Approved By: JH
Report Details: Type: Network Design Criteria Storm Phase: Surface Network 1	Company Address: Sanan Consulting Ltd Laburnum House, 64 Chestnut Grove, Liverpool L15 8HS		



Flow Options

Peak Flow Calculation	(UK) Modified Rational Method
Min. Time of Entry (mins)	5
Max. Travel Time (mins)	30

Pipe Options

Lock Slope Options	None
Design Options	Minimise Excavation
Design Level	Level Soffits
Min. Cover Depth (m)	1.200
Min. Slope (1:X)	500.00
Max. Slope (1:X)	40.00
Min. Velocity (m/s)	1.0
Max. Velocity (m/s)	3.0
Use Flow Restriction	☐
Reduce Channel Depths	☐

Pipe Size Library

Default

Add. Increment (mm)	75
Max. Diameter (mm)	0

Manhole Options

Apply Offset	☐
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Manhole Size Library

Default

Additional Sizing

Connection (mm)	900
Diameter / Length (m)	0.900
Width (m)	0.000

Benching Requirements

Landing Width (mm)	500
Benching Width (mm)	225

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Report Details: Type: Outfall Details Storm Phase: Surface Network 1	Company Address: Sanan Consulting Ltd Laburnum House, 64 Chestnut Grove, Liverpool L15 8HS		



Outfalls

Outfall	Outfall Type	Fixed Surcharged Level (m)	Level Curve
Manhole (1)	Free Discharge		

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Runoff Type	Dynamic
Output Interval (mins)	5
Time Step	Default
Urban Creep	Use Catchment Values
Junction Flood Risk Margin (mm)	0
Perform No Discharge Analysis	☐

Project: Former Merseyside Dogs Home, Greensbridge Lane, Halewood, Liverpool		Date: 19/06/2024			
Report Details: Type: Junctions Summary Storm Phase: Surface Network 1		Designed by: lukaer	Checked by: JH		Approved By: JH
		Company Address: Sanan Consulting Ltd Laburnum House, 64 Chestnut Grove, Liverpool L15 8HS			



FSR: 2 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FSR: 2 years: +0 %: 15 mins: Winter	9.137	7.589	7.693	0.104	14.4	0.148	0.000	14.0	6.673	OK
S2	FSR: 2 years: +0 %: 15 mins: Winter	9.189	7.552	7.659	0.107	17.6	0.153	0.000	16.6	8.357	OK
S3	FSR: 2 years: +0 %: 15 mins: Winter	9.282	7.472	7.600	0.128	25.7	0.183	0.000	23.6	12.516	OK
S4	FSR: 2 years: +0 %: 15 mins: Winter	8.971	7.372	7.544	0.172	35.1	0.246	0.000	32.1	17.801	OK
S5	FSR: 2 years: +0 %: 15 mins: Winter	8.845	7.313	7.505	0.192	50.0	0.275	0.000	44.5	28.168	OK
S6	FSR: 2 years: +0 %: 15 mins: Winter	8.834	7.129	7.314	0.185	57.8	0.326	0.000	51.9	33.859	OK
S7	FSR: 2 years: +0 %: 120 mins: Winter	8.758	6.914	7.173	0.259	25.8	0.458	0.000	25.5	75.149	OK
S8	FSR: 2 years: +0 %: 15 mins: Winter	8.588	7.438	7.513	0.075	6.7	0.133	0.000	4.5	3.086	OK
S9	FSR: 2 years: +0 %: 15 mins: Winter	8.759	7.345	7.506	0.161	7.1	0.285	0.000	6.8	4.262	OK
Manhole	FSR: 2 years: +0 %: 120 mins: Winter	7.877	6.896	7.173	0.277	5.9	0.705	0.000	5.8	55.046	Surcharged
Manhole (1)	FSR: 2 years: +0 %: 120 mins: Winter	7.100	6.810	6.876	0.066	5.8	0.000	0.000	5.8	54.995	OK

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FSR: 30 years: Increase Rainfall (%): +0: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FSR: 30 years: +0 %: 15 mins: Winter	9.137	7.589	7.745	0.156	27.4	0.224	0.000	26.5	12.670	OK
S2	FSR: 30 years: +0 %: 15 mins: Winter	9.189	7.552	7.724	0.172	33.5	0.247	0.000	25.4	15.890	OK
S3	FSR: 30 years: +0 %: 15 mins: Winter	9.282	7.472	7.706	0.234	42.6	0.335	0.000	34.0	23.818	OK
S4	FSR: 30 years: +0 %: 15 mins: Winter	8.971	7.372	7.680	0.308	55.8	0.441	0.000	51.6	33.872	Surcharged
S5	FSR: 30 years: +0 %: 15 mins: Winter	8.845	7.313	7.630	0.317	84.8	0.454	0.000	79.6	53.633	Surcharged
S6	FSR: 30 years: +0 %: 120 mins: Winter	8.834	7.129	7.415	0.286	43.9	0.505	0.000	43.9	126.924	OK
S7	FSR: 30 years: +0 %: 120 mins: Winter	8.758	6.914	7.415	0.501	48.5	0.885	0.000	46.6	138.394	Surcharged
S8	FSR: 30 years: +0 %: 15 mins: Winter	8.588	7.438	7.636	0.198	12.6	0.349	0.000	7.4	5.859	OK
S9	FSR: 30 years: +0 %: 15 mins: Winter	8.759	7.345	7.633	0.288	11.7	0.509	0.000	13.5	8.104	OK
Manhole	FSR: 30 years: +0 %: 120 mins: Winter	7.877	6.896	7.415	0.519	6.7	1.320	0.000	6.0	69.390	Surcharged
Manhole (1)	FSR: 30 years: +0 %: 120 mins: Summer	7.100	6.810	6.877	0.067	6.0	0.000	0.000	6.0	68.244	OK

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FSR: 100 years: Increase Rainfall (%): +45: Critical Storm Per Item: Rank By: Max. Depth

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
S1	FSR: 100 years: +45 %: 15 mins: Winter	9.137	7.589	8.652	1.063	51.6	1.521	0.000	40.3	23.870	Surcharged
S2	FSR: 100 years: +45 %: 15 mins: Winter	9.189	7.552	8.630	1.078	53.4	1.542	0.000	42.0	29.955	Surcharged
S3	FSR: 100 years: +45 %: 15 mins: Winter	9.282	7.472	8.587	1.115	74.4	1.596	0.000	63.0	44.932	Surcharged
S4	FSR: 100 years: +45 %: 15 mins: Winter	8.971	7.372	8.478	1.106	104.1	1.582	0.000	93.6	63.589	Surcharged
S5	FSR: 100 years: +45 %: 15 mins: Winter	8.845	7.313	8.321	1.008	151.7	1.442	0.000	142.2	99.237	Surcharged
S6	FSR: 100 years: +45 %: 240 mins: Winter	8.834	7.129	7.859	0.730	46.8	1.290	0.000	45.4	274.635	Surcharged
S7	FSR: 100 years: +45 %: 240 mins: Winter	8.758	6.914	7.859	0.945	50.6	1.670	0.000	49.7	299.751	Surcharged
S8	FSR: 100 years: +45 %: 15 mins: Winter	8.588	7.438	8.331	0.893	23.8	1.579	0.000	15.2	11.167	Surcharged
S9	FSR: 100 years: +45 %: 15 mins: Winter	8.759	7.345	8.324	0.979	21.6	1.729	0.000	26.4	15.271	Surcharged
Manhole	FSR: 100 years: +45 %: 240 mins: Winter	7.877	6.896	7.859	0.963	6.9	2.451	0.000	6.0	138.887	Surcharged
Manhole (1)	FSR: 100 years: +45 %: 480 mins: Summer	7.100	6.810	6.877	0.067	6.0	0.000	0.000	6.0	278.753	OK

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FSR: 2 years: Increase Rainfall (%): +0: 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)	Percentage Available (%)	Status
Pond	FSR: 2 years: +0 %: 120 mins: Winter	7.173	7.173	0.277	0.277	25.5	50.900	0.000	0.000	5.9	55.377	75.714	OK

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FSR: 30 years: Increase Rainfall (%): +0: 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. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Pond	FSR: 30 years: +0 %: 120 mins: Winter	7.415	7.415	0.519	0.519	46.6	104.744	0.000	0.000	6.7	70.136	50.024	OK

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FSR: 100 years: Increase Rainfall (%): +45: 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)	Percentage Available (%)	Status
Pond	FSR: 100 years: +45 %: 240 mins: Winter	7.859	7.859	0.963	0.963	49.7	229.487	0.000	0.000	6.9	138.741	-9.494	Flood Risk

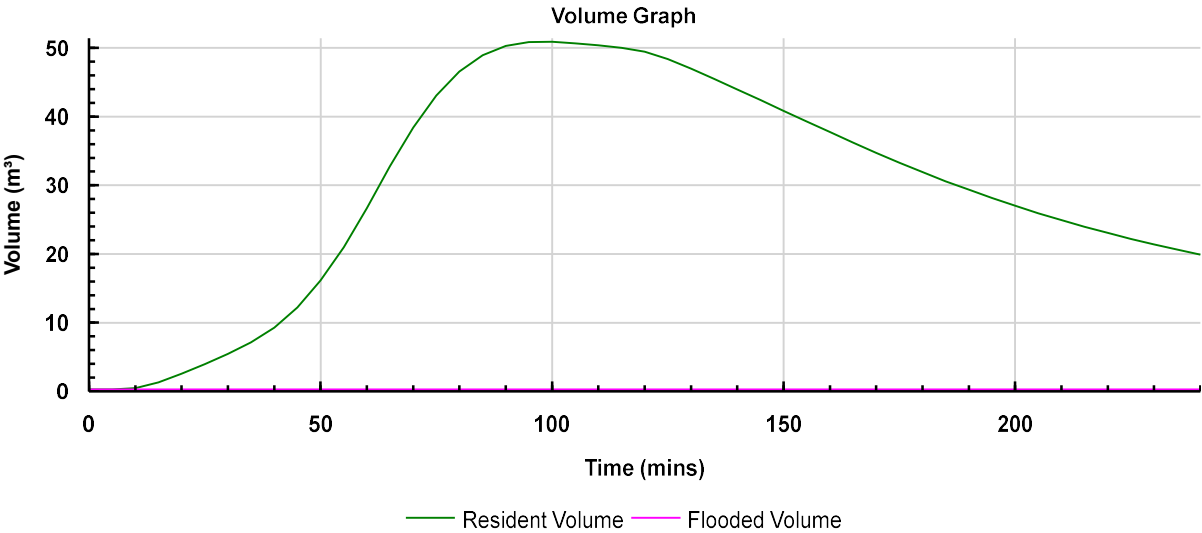
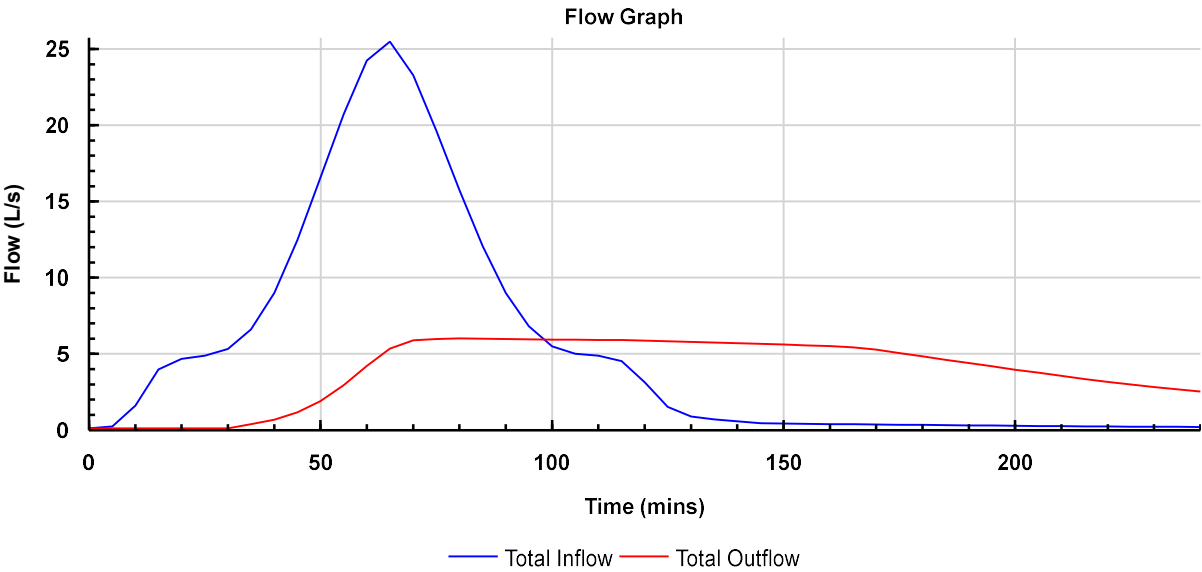
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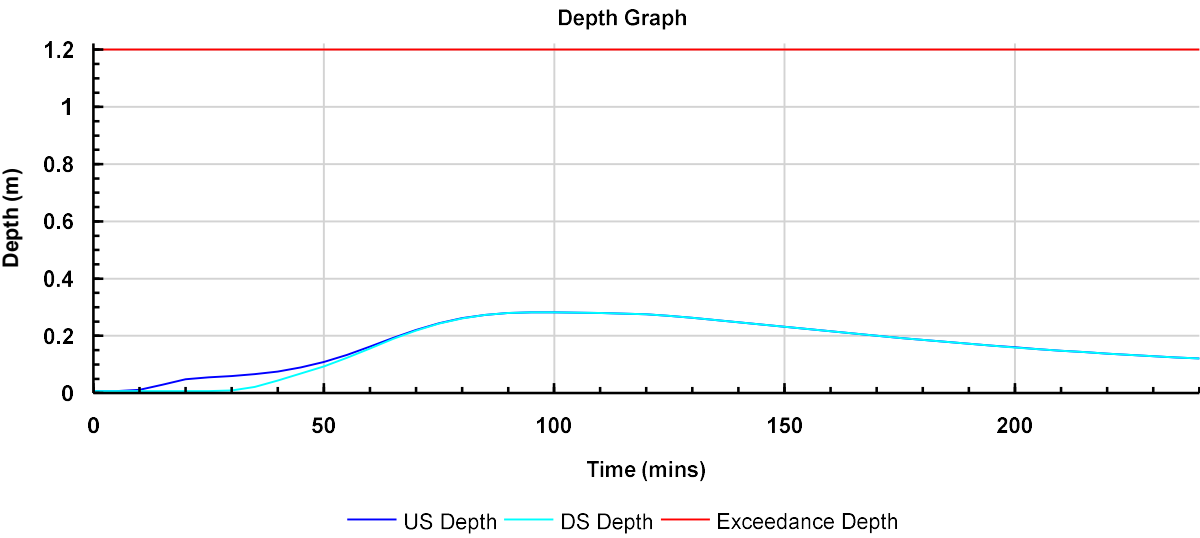
Pond
Critical by Return Period: FSR: 2 years: Increase Rainfall (%): +0: 120 mins: Winter

Type : Pond

Graphs



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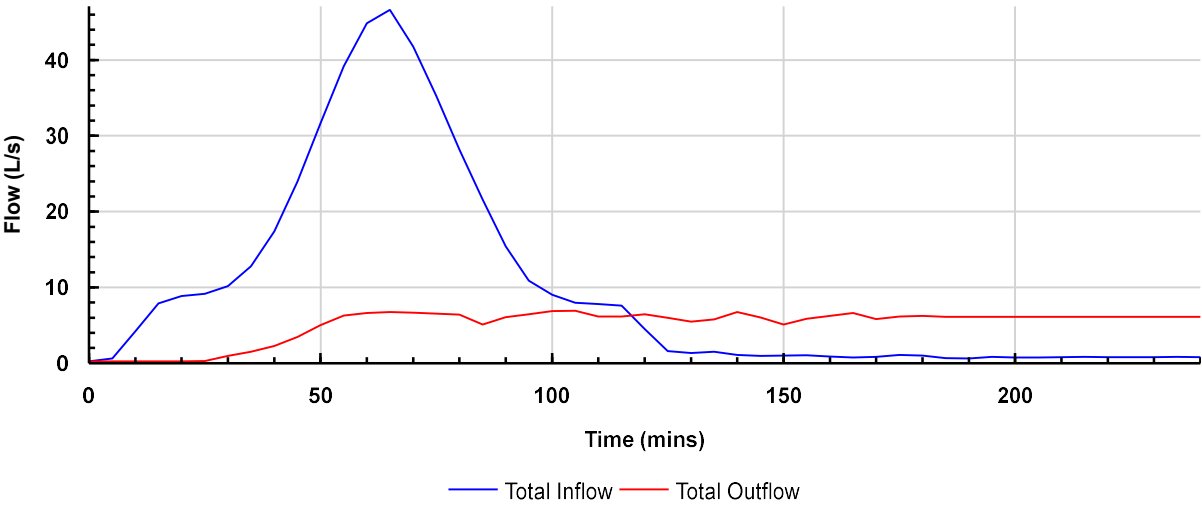


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Critical by Return Period: FSR: 30 years: Increase Rainfall (%): +0: 120 mins: Winter

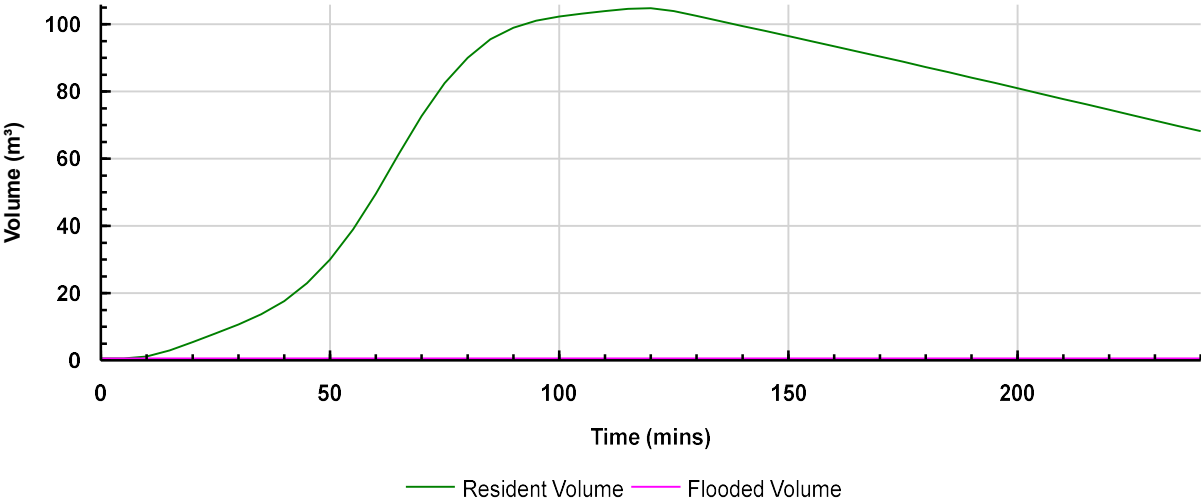
Type : Pond

Graphs

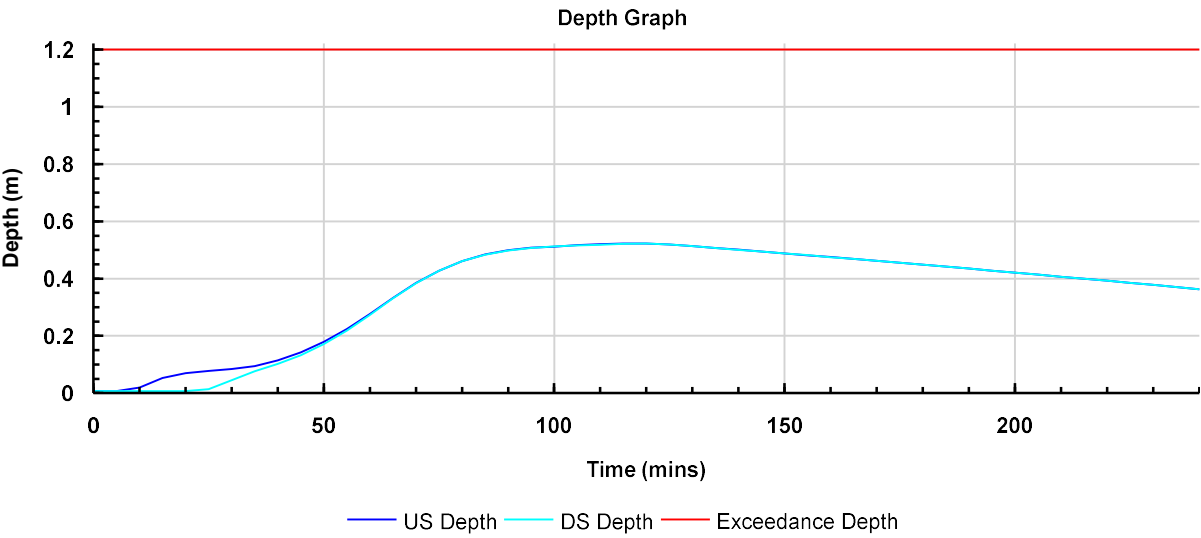
Flow Graph



Volume Graph



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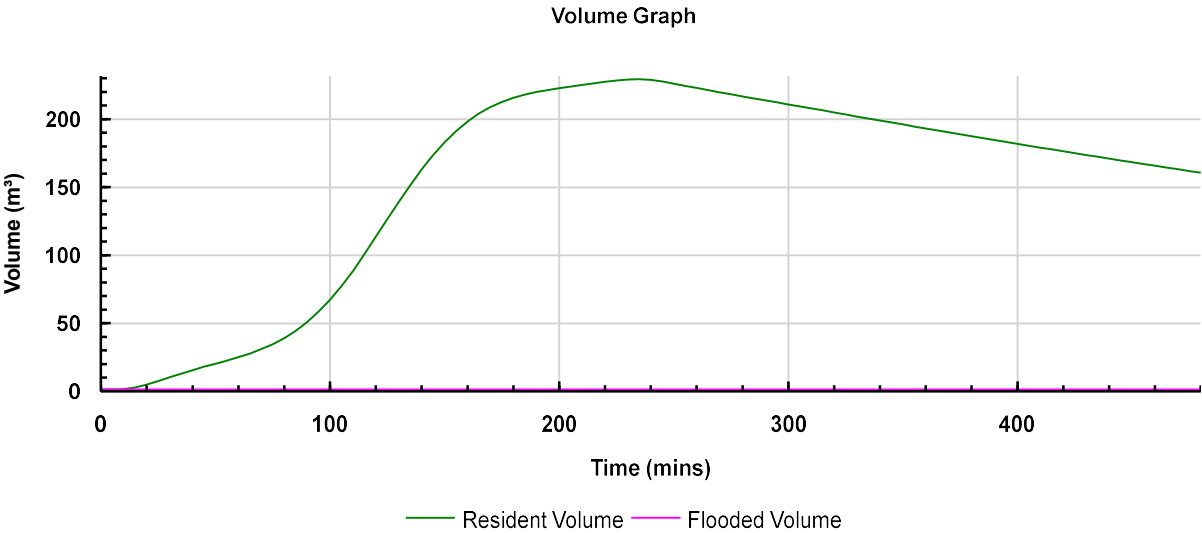
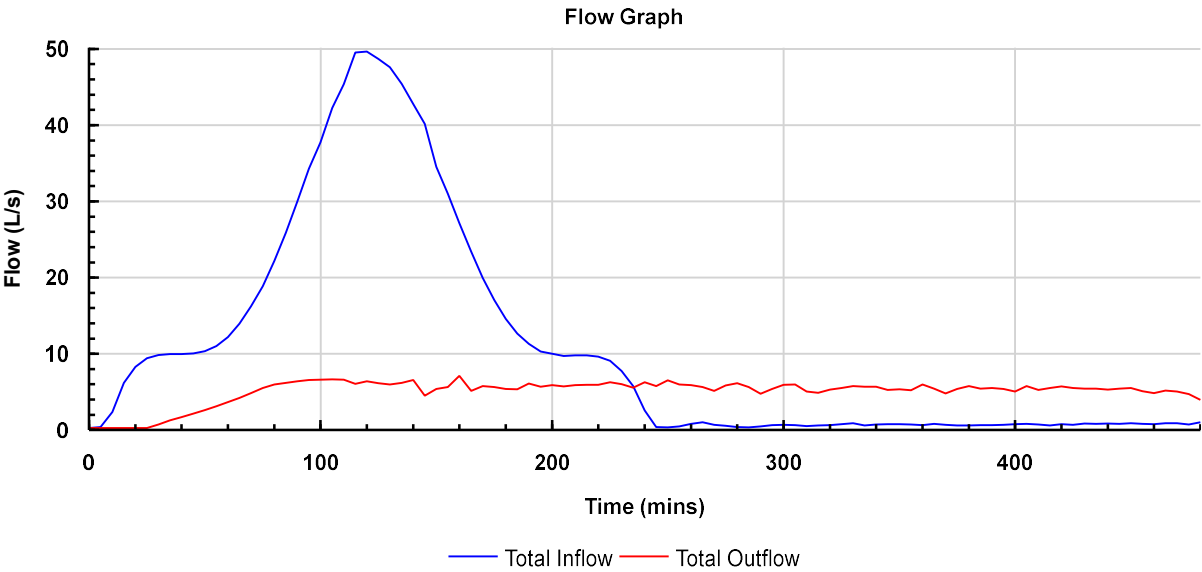
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Pond
Critical by Return Period: FSR: 100 years: Increase Rainfall (%): +45: 240 mins: Winter

Type : Pond

Graphs



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