

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations	Date: 29/04/2026			
	Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
Report Details: Type: Outfall Details Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			

Outfalls

Outfall	Outfall Type	Gated	Fixed Surcharged Level (m)	Level Curve
SW029	Fixed Surcharged Level	☐	38.540	
FEH 2022 : 2 years: +0 %: 15 mins: Summer			38.540	
FEH 2022 : 2 years: +0 %: 15 mins: Winter			38.540	
FEH 2022 : 30 years: +40 %: 15 mins: Summer			38.540	
FEH 2022 : 30 years: +40 %: 15 mins: Winter			38.540	
FEH 2022 : 100 years: +45 %: 15 mins: Summer			38.540	
FEH 2022 : 100 years: +45 %: 15 mins: Winter			38.540	
FEH 2022 : 2 years: +0 %: 30 mins: Summer			38.540	
FEH 2022 : 2 years: +0 %: 30 mins: Winter			38.540	
FEH 2022 : 30 years: +40 %: 30 mins: Summer			38.540	
FEH 2022 : 30 years: +40 %: 30 mins: Winter			38.540	
FEH 2022 : 100 years: +45 %: 30 mins: Summer			38.540	
FEH 2022 : 100 years: +45 %: 30 mins: Winter			38.540	
FEH 2022 : 2 years: +0 %: 60 mins: Summer			38.540	
FEH 2022 : 2 years: +0 %: 60 mins: Winter			38.540	
FEH 2022 : 30 years: +40 %: 60 mins: Summer			38.540	
FEH 2022 : 30 years: +40 %: 60 mins: Winter			38.540	
FEH 2022 : 100 years: +45 %: 60 mins: Summer			38.540	
FEH 2022 : 100 years: +45 %: 60 mins: Winter			38.540	
FEH 2022 : 2 years: +0 %: 120 mins: Summer			38.540	
FEH 2022 : 2 years: +0 %: 120 mins: Winter			38.540	
FEH 2022 : 30 years: +40 %: 120 mins: Summer			38.540	
FEH 2022 : 30 years: +40 %: 120 mins: Winter			38.540	
FEH 2022 : 100 years: +45 %: 120 mins: Summer			38.540	
FEH 2022 : 100 years: +45 %: 120 mins: Winter			38.540	
FEH 2022 : 2 years: +0 %: 240 mins: Summer			38.540	
FEH 2022 : 2 years: +0 %: 240 mins: Winter			38.540	
FEH 2022 : 30 years: +40 %: 240 mins: Summer			38.540	
FEH 2022 : 30 years: +40 %: 240 mins: Winter			38.540	
FEH 2022 : 100 years: +45 %: 240 mins: Summer			38.540	
FEH 2022 : 100 years: +45 %: 240 mins: Winter			38.540	
FEH 2022 : 2 years: +0 %: 360 mins: Summer			38.540	
FEH 2022 : 2 years: +0 %: 360 mins: Winter			38.540	
FEH 2022 : 30 years: +40 %: 360 mins: Summer			38.540	
FEH 2022 : 30 years: +40 %: 360 mins: Winter			38.540	
FEH 2022 : 100 years: +45 %: 360 mins: Summer			38.540	

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FEH 2022 : 100 years: +45 %: 360 mins: Winter			38.540	
FEH 2022 : 2 years: +0 %: 480 mins: Summer			38.540	
FEH 2022 : 2 years: +0 %: 480 mins: Winter			38.540	
FEH 2022 : 30 years: +40 %: 480 mins: Summer			38.540	
FEH 2022 : 30 years: +40 %: 480 mins: Winter			38.540	
FEH 2022 : 100 years: +45 %: 480 mins: Summer			38.540	
FEH 2022 : 100 years: +45 %: 480 mins: Winter			38.540	
FEH 2022 : 2 years: +0 %: 960 mins: Summer			38.540	
FEH 2022 : 2 years: +0 %: 960 mins: Winter			38.540	
FEH 2022 : 30 years: +40 %: 960 mins: Summer			38.540	
FEH 2022 : 30 years: +40 %: 960 mins: Winter			38.540	
FEH 2022 : 100 years: +45 %: 960 mins: Summer			38.540	
FEH 2022 : 100 years: +45 %: 960 mins: Winter			38.540	
FEH 2022 : 2 years: +0 %: 1440 mins: Summer			38.540	
FEH 2022 : 2 years: +0 %: 1440 mins: Winter			38.540	
FEH 2022 : 30 years: +40 %: 1440 mins: Summer			38.540	
FEH 2022 : 30 years: +40 %: 1440 mins: Winter			38.540	
FEH 2022 : 100 years: +45 %: 1440 mins: Summer			38.540	
FEH 2022 : 100 years: +45 %: 1440 mins: Winter			38.540	

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations		Date: 29/04/2026		
Report Title: Rainfall Analysis Criteria		Designed by: Nour Rashdan	Checked by: Johnny Hunt	
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		Company Address: 20 Market Street Altrincham WA14 1PF		

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
Perform No Discharge Analysis	☐

Rainfall		
FEH 2022		Type: FEH
Site Location	GB 385550 394000 SJ 85550 94000	
Rainfall Version	2022	
Summer	☒	
Winter	☒	

Return Period	
Return Period (years)	Increase Rainfall (%)
2.0	0.000
30.0	40.000
100.0	45.000

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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FEH 2022: 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
SW603	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.630	43.532	43.588	0.056	4.7	0.009	0.000	4.6	2.648	OK
SW604	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.640	43.389	43.443	0.054	5.8	0.015	0.000	5.6	3.611	OK
SW605	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.620	43.259	43.319	0.060	6.4	0.017	0.000	6.2	3.937	OK
SW606	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.640	43.203	43.265	0.061	6.7	0.017	0.000	6.5	4.494	OK
SW608	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.630	43.079	43.141	0.062	7.3	0.017	0.000	7.0	5.192	OK
SW609	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.780	42.937	42.981	0.044	8.3	0.050	0.000	8.0	5.963	OK
SW006	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.670	42.558	42.617	0.059	9.7	0.067	0.000	9.6	11.461	OK
SW007	FEH 2022: 2 years: +0 %: 240 mins: Winter	44.500	42.008	42.201	0.193	8.9	0.341	0.000	8.8	63.314	OK
SW008	FEH 2022: 2 years: +0 %: 240 mins: Winter	44.400	41.800	42.201	0.401	10.5	0.708	0.000	6.5	144.766	Surcharged
SW009	FEH 2022: 2 years: +0 %: 480 mins: Winter	44.250	41.433	41.511	0.078	6.8	0.022	0.000	6.8	187.312	OK
SW010	FEH 2022: 2 years: +0 %: 480 mins: Winter	44.390	41.407	41.506	0.100	6.8	0.028	0.000	6.8	187.295	OK
SW011a	FEH 2022: 2 years: +0 %: 480 mins: Winter	44.380	41.360	41.501	0.141	8.7	0.159	0.000	8.7	212.887	OK
SW012	FEH 2022: 2 years: +0 %: 480 mins: Winter	43.260	41.115	41.493	0.378	11.8	0.668	0.000	6.7	326.302	Surcharged
SW013	FEH 2022: 2 years: +0 %: 480 mins: Winter	43.170	41.011	41.478	0.467	6.7	0.528	0.000	6.7	274.853	Surcharged
SW1306	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.620	40.694	40.774	0.080	13.1	0.090	0.000	12.6	13.494	OK
SW1308	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.950	40.266	40.372	0.106	21.6	0.120	0.000	20.4	18.905	OK
SW1405	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.600	38.965	39.077	0.112	30.9	0.127	0.000	30.2	24.863	OK
SW017	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.530	38.747	38.858	0.112	31.5	0.126	0.000	29.3	25.750	OK
SW018	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.980	38.351	38.837	0.486	14.5	0.858	0.000	12.1	586.574	Surcharged
SW019	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.680	38.310	38.836	0.526	14.3	0.930	0.000	13.5	690.269	Surcharged
SW020	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.000	38.241	38.836	0.595	14.5	3.405	0.000	14.5	633.173	Surcharged
SW021	FEH 2022: 2 years: +0 %: 480 mins: Summer	39.900	38.170	38.727	0.557	11.5	0.797	0.000	11.5	360.958	Surcharged
SW022	FEH 2022: 2 years: +0 %: 480 mins: Summer	40.000	38.141	38.727	0.586	11.6	0.839	0.000	11.6	362.443	Surcharged
SW023	FEH 2022: 2 years: +0 %: 480 mins: Summer	40.000	38.063	38.727	0.664	11.6	0.950	0.000	11.6	360.461	Surcharged
SW024	FEH 2022: 2 years: +0 %: 480 mins: Summer	40.000	38.017	38.727	0.710	11.7	1.016	0.000	11.7	364.478	Surcharged
SW025	FEH 2022: 2 years: +0 %: 480 mins: Summer	39.800	37.956	38.727	0.771	11.8	1.103	0.000	11.8	365.611	Surcharged
SW026	FEH 2022: 2 years: +0 %: 480 mins: Summer	40.100	37.913	38.727	0.814	25.3	1.165	0.000	25.3	540.046	Surcharged
SW027	FEH 2022: 2 years: +0 %: 480 mins: Summer	40.130	37.851	38.725	0.874	26.2	1.544	0.000	26.1	516.005	Surcharged
SW028	FEH 2022: 2 years: +0 %: 480 mins: Summer	39.600	37.824	38.722	0.898	62.5	5.145	0.000	26.2	741.059	Surcharged
SW029	FEH 2022: 2 years: +0 %: 15 mins: Summer	39.580	37.640	38.540	0.900	62.1	0.000	0.000	62.1	97.967	OK
SW611	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.780	43.120	43.150	0.030	1.4	0.005	0.000	1.3	0.810	OK
SW031	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.490	43.070	43.094	0.024	1.2	0.027	0.000	1.2	1.365	OK

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SW032	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.480	42.813	42.848	0.035	2.1	0.039	0.000	2.0	2.246	OK
SW500	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.770	43.420	43.469	0.049	4.4	0.008	0.000	4.3	2.020	OK
SW501	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.650	43.256	43.309	0.053	4.8	0.008	0.000	4.7	2.594	OK
SW503	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.780	43.109	43.164	0.055	4.9	0.009	0.000	4.8	2.925	OK
SW504	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.790	43.050	43.101	0.051	4.8	0.008	0.000	4.7	2.907	OK
SW505	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.800	42.871	42.925	0.055	5.3	0.009	0.000	5.1	3.571	OK
SW506	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.640	42.755	42.807	0.051	5.1	0.008	0.000	4.8	3.537	OK
SW507	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.550	42.461	42.502	0.041	7.8	0.012	0.000	7.7	5.987	OK
SW509	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.790	43.331	43.367	0.036	2.2	0.006	0.000	2.2	1.445	OK
SW511	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.750	43.182	43.212	0.029	3.0	0.005	0.000	2.9	2.474	OK
SW300	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.380	42.925	42.974	0.049	5.5	0.014	0.000	5.4	3.038	OK
SW301	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.500	42.826	42.884	0.058	7.7	0.016	0.000	7.6	4.135	OK
SW508	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.790	43.440	43.460	0.020	0.8	0.003	0.000	0.8	0.376	OK
SW302	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.740	42.699	42.755	0.055	7.6	0.016	0.000	7.3	4.117	OK
SW303	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.650	42.432	42.487	0.055	7.6	0.016	0.000	7.2	4.263	OK
SW304	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.550	42.202	42.258	0.056	14.1	0.016	0.000	13.7	9.657	OK
SW305	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.450	43.100	43.131	0.031	1.9	0.005	0.000	1.8	0.868	OK
SW307	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.650	42.643	42.687	0.044	4.1	0.012	0.000	4.0	3.016	OK
SW308	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.780	42.557	42.606	0.049	4.6	0.014	0.000	4.5	3.274	OK
SW311	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.650	42.385	42.440	0.055	7.1	0.015	0.000	6.9	5.459	OK
SW100	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.680	43.425	43.447	0.022	0.9	0.004	0.000	0.9	1.545	OK
SW102	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.550	43.263	43.291	0.027	1.4	0.004	0.000	1.4	2.579	OK
SW103	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.470	43.116	43.149	0.032	2.0	0.005	0.000	2.0	3.616	OK
SW104	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.490	42.938	42.978	0.041	3.8	0.006	0.000	3.8	6.219	OK
SW059	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.220	42.687	42.726	0.039	3.8	0.068	0.000	3.7	6.174	OK
SW060	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.400	42.237	42.271	0.033	8.1	0.038	0.000	8.1	11.371	OK
SW200	FEH 2022: 2 years: +0 %: 15 mins: Summer	44.700	43.650	43.679	0.029	1.6	0.005	0.000	1.5	0.673	OK
SW201	FEH 2022: 2 years: +0 %: 15 mins: Summer	44.680	43.481	43.508	0.027	1.5	0.004	0.000	1.4	0.671	OK
SW202	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.610	43.273	43.317	0.044	3.2	0.007	0.000	3.1	1.533	OK
SW203	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.600	43.175	43.225	0.051	3.9	0.008	0.000	3.7	2.385	OK
SW700	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.350	43.500	43.517	0.017	0.6	0.003	0.000	0.6	1.009	OK
SW702	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.460	43.399	43.434	0.035	2.2	0.006	0.000	2.2	3.471	OK
SW703	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.480	43.319	43.353	0.034	2.2	0.005	0.000	2.1	3.454	OK
SW704	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.470	43.158	43.190	0.032	2.9	0.005	0.000	2.8	4.477	OK
SW705	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.000	42.782	42.821	0.039	4.2	0.006	0.000	4.1	3.208	OK
SW706	FEH 2022: 2 years: +0 %: 15 mins: Winter	43.970	42.586	42.642	0.056	7.7	0.009	0.000	7.5	5.328	OK
SW707	FEH 2022: 2 years: +0 %: 30 mins: Summer	43.980	42.750	42.774	0.024	1.0	0.004	0.000	1.0	1.583	OK

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SW708	FEH 2022: 2 years: +0 %: 15 mins: Winter	43.960	42.694	42.731	0.037	2.3	0.006	0.000	2.2	1.556	OK
SW709	FEH 2022: 2 years: +0 %: 15 mins: Winter	43.850	42.512	42.554	0.042	3.7	0.075	0.000	3.2	2.491	OK
SW1100	FEH 2022: 2 years: +0 %: 15 mins: Summer	44.350	43.300	43.318	0.018	0.6	0.003	0.000	0.6	0.257	OK
SW1101	FEH 2022: 2 years: +0 %: 15 mins: Summer	44.490	43.125	43.148	0.023	1.0	0.004	0.000	1.0	0.449	OK
SW1103	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.350	42.886	42.921	0.035	2.3	0.006	0.000	2.3	3.577	OK
SW1104	FEH 2022: 2 years: +0 %: 15 mins: Summer	44.350	42.783	42.832	0.049	4.5	0.008	0.000	4.3	2.881	OK
SW1109	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.470	43.054	43.087	0.033	2.1	0.005	0.000	2.0	1.563	OK
SW1105	FEH 2022: 2 years: +0 %: 480 mins: Winter	44.350	41.260	41.493	0.233	1.9	0.264	0.000	1.8	22.563	Surcharged
SW1106	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.350	43.300	43.317	0.017	0.6	0.003	0.000	0.6	1.009	OK
SW1107	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.350	43.219	43.242	0.023	1.0	0.004	0.000	1.0	1.761	OK
SW1108	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.460	43.120	43.149	0.030	1.6	0.005	0.000	1.6	1.334	OK
SW1800	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.900	41.386	41.414	0.028	1.9	0.008	0.000	1.8	1.211	OK
SW1802	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.900	41.257	41.289	0.032	2.4	0.009	0.000	2.3	1.824	OK
SW1803	FEH 2022: 2 years: +0 %: 15 mins: Winter	43.000	41.188	41.218	0.030	2.3	0.009	0.000	2.2	1.806	OK
SW1804	FEH 2022: 2 years: +0 %: 15 mins: Winter	43.050	41.070	41.114	0.044	4.9	0.013	0.000	4.7	3.492	OK
SW1805	FEH 2022: 2 years: +0 %: 15 mins: Winter	43.200	40.858	40.903	0.045	5.4	0.013	0.000	5.2	3.757	OK
SW1304	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.550	41.260	41.279	0.019	1.0	0.003	0.000	0.9	0.466	OK
SW1806	FEH 2022: 2 years: +0 %: 15 mins: Summer	43.100	40.985	41.005	0.020	0.8	0.003	0.000	0.7	0.332	OK
SW1807	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.950	40.776	40.806	0.030	1.6	0.005	0.000	1.5	0.705	OK
SW1808	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.950	40.709	40.739	0.030	1.5	0.005	0.000	1.5	0.702	OK
SW1809	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.950	40.678	40.710	0.032	1.9	0.005	0.000	1.9	1.277	OK
SW1810	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.740	40.424	40.472	0.048	5.5	0.054	0.000	5.3	3.315	OK
SW1900	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.150	41.000	41.026	0.026	1.2	0.004	0.000	1.2	0.797	OK
SW1901	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.300	40.937	40.966	0.030	1.7	0.005	0.000	1.6	1.366	OK
SW1902	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.200	40.730	40.752	0.022	1.6	0.004	0.000	1.6	1.352	OK
SW1300	FEH 2022: 2 years: +0 %: 15 mins: Summer	41.500	40.450	40.450	0.000	0.0	0.000	0.000	0.0	0.000	OK
SW1302	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.050	40.186	40.221	0.035	2.5	0.006	0.000	2.4	2.158	OK
SW1303	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.530	39.947	39.986	0.039	2.9	0.006	0.000	2.8	2.379	OK
SW1305	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.600	40.804	40.825	0.021	1.7	0.006	0.000	1.6	1.330	OK
SW1401	FEH 2022: 2 years: +0 %: 15 mins: Summer	41.500	40.450	40.476	0.026	1.3	0.004	0.000	1.2	0.551	OK
SW1402	FEH 2022: 2 years: +0 %: 15 mins: Summer	41.350	40.211	40.237	0.026	1.2	0.004	0.000	1.2	0.548	OK
SW1403	FEH 2022: 2 years: +0 %: 15 mins: Summer	41.350	40.157	40.193	0.036	2.6	0.006	0.000	2.5	1.152	OK
SW1404	FEH 2022: 2 years: +0 %: 15 mins: Summer	41.480	39.880	39.931	0.051	4.4	0.008	0.000	4.2	1.999	OK
SW1500	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.480	40.430	40.454	0.024	1.1	0.004	0.000	1.1	1.978	OK
SW1501	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.480	40.326	40.353	0.028	1.4	0.004	0.000	1.4	2.275	OK
SW1200	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.100	40.870	40.904	0.034	4.6	0.005	0.000	4.6	2.009	OK
SW1202	FEH 2022: 2 years: +0 %: 15 mins: Summer	41.400	40.311	40.368	0.057	5.3	0.009	0.000	5.0	2.817	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations		Date: 29/04/2026			
Report Details: Type: Junctions Summary Storm Phase: Full Site		Designed by: Nour Rashdan	Checked by: Johnny Hunt		Approved By: Pedro Vicente
		Company Address: 20 Market Street Altrincham WA14 1PF			

SW1203	FEH 2022: 2 years: +0 %: 15 mins: Summer	41.270	40.063	40.115	0.052	5.4	0.015	0.000	5.3	3.318	OK
SW1206	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.000	39.776	39.832	0.056	6.4	0.016	0.000	6.2	5.060	OK
SW1204	FEH 2022: 2 years: +0 %: 15 mins: Summer	41.250	39.997	40.048	0.051	5.4	0.014	0.000	5.3	3.348	OK
SW1205	FEH 2022: 2 years: +0 %: 15 mins: Summer	41.150	39.896	39.948	0.052	5.9	0.015	0.000	5.7	3.975	OK
SW1207	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.040	39.700	39.752	0.052	6.3	0.015	0.000	6.0	5.079	OK
SW1208	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.200	39.446	39.484	0.038	6.9	0.011	0.000	6.9	9.847	OK
SW1209	FEH 2022: 2 years: +0 %: 30 mins: Winter	39.950	39.041	39.114	0.074	11.6	0.083	0.000	11.4	15.142	OK
SW1704	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.020	38.675	38.837	0.162	3.3	0.183	0.000	3.2	77.541	OK
SW1400	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.300	39.840	39.858	0.018	0.9	0.003	0.000	0.9	1.547	OK
SW1606	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.000	39.169	39.193	0.024	1.1	0.007	0.000	1.1	1.948	OK
SW1700	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.100	39.200	39.221	0.021	0.8	0.003	0.000	0.8	0.388	OK
SW1701	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.150	39.149	39.186	0.037	2.4	0.006	0.000	2.3	1.757	OK
SW1702	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.150	38.973	39.014	0.041	2.9	0.007	0.000	2.7	2.341	OK
SW1703	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.100	38.885	38.939	0.055	4.4	0.009	0.000	4.2	3.065	OK
SW2200	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.460	39.167	39.187	0.020	0.8	0.003	0.000	0.8	0.373	OK
SW2300	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.350	39.300	39.325	0.025	1.1	0.004	0.000	1.1	1.949	OK
SW2201	FEH 2022: 2 years: +0 %: 60 mins: Winter	40.460	39.104	39.146	0.042	2.9	0.048	0.000	2.9	7.271	OK
SW2202	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.470	38.868	38.913	0.045	4.2	0.013	0.000	4.1	6.735	OK
SW2203	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.400	38.781	38.853	0.072	9.5	0.020	0.000	9.0	6.351	OK
SW2204	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.700	38.586	38.836	0.250	2.4	0.283	0.000	2.3	56.316	OK
SW1903	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.150	41.000	41.028	0.028	1.5	0.005	0.000	1.4	1.221	OK
SW1904	FEH 2022: 2 years: +0 %: 30 mins: Winter	42.150	40.846	40.875	0.029	2.0	0.005	0.000	2.0	3.253	OK
SW1600	FEH 2022: 2 years: +0 %: 30 mins: Winter	39.850	39.100	39.122	0.022	0.8	0.004	0.000	0.8	1.263	OK
SW1601	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.000	38.995	39.025	0.030	1.4	0.005	0.000	1.4	2.320	OK
SW1602	FEH 2022: 2 years: +0 %: 30 mins: Winter	39.850	38.940	38.971	0.031	1.4	0.005	0.000	1.3	2.304	OK
SW1604	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.000	38.811	38.841	0.031	1.5	0.005	0.000	1.5	2.445	OK
SW1605	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.000	38.683	38.836	0.153	0.6	0.024	0.000	0.6	16.377	Surcharged
SW2301	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.000	38.950	38.969	0.019	0.6	0.003	0.000	0.6	1.139	OK
SW1000	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.470	43.120	43.157	0.037	2.5	0.006	0.000	2.4	2.126	OK
SW1001	FEH 2022: 2 years: +0 %: 30 mins: Summer	44.470	43.009	43.045	0.036	2.5	0.041	0.000	2.5	3.676	OK
SW1002	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.460	42.780	42.829	0.049	4.6	0.008	0.000	4.4	7.421	OK
SW1003	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.080	41.025	41.110	0.085	13.3	0.096	0.000	12.9	11.108	OK
SW1005	FEH 2022: 2 years: +0 %: 15 mins: Winter	43.300	40.797	40.901	0.104	22.0	0.029	0.000	21.0	15.445	OK
SW2407	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.700	40.487	40.604	0.117	27.1	0.033	0.000	25.9	18.279	OK
SW156	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.650	40.046	40.162	0.115	41.4	0.131	0.000	39.4	29.054	OK
SW2402	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.550	39.691	39.789	0.098	42.1	0.111	0.000	41.7	30.315	OK
SW2404	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.210	38.981	39.125	0.144	43.1	0.162	0.000	42.0	31.807	OK

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SW2700	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.650	38.881	39.019	0.138	44.4	0.197	0.000	41.5	33.312	OK
SW2701	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.450	38.664	38.822	0.158	46.6	0.179	0.000	46.2	58.570	OK
SW2704	FEH 2022: 2 years: +0 %: 360 mins: Summer	40.250	38.437	38.737	0.300	24.1	0.429	0.000	24.0	161.548	OK
SW2705	FEH 2022: 2 years: +0 %: 360 mins: Summer	40.320	38.222	38.731	0.509	25.0	0.576	0.000	24.9	164.616	Surcharged
SW163	FEH 2022: 2 years: +0 %: 480 mins: Summer	40.200	37.999	38.728	0.729	24.7	1.043	0.000	24.7	204.527	Surcharged
SW1006	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.480	43.130	43.181	0.051	5.0	0.015	0.000	4.8	3.323	OK
SW1007	FEH 2022: 2 years: +0 %: 15 mins: Summer	44.470	42.764	42.827	0.063	8.1	0.018	0.000	8.0	4.651	OK
SW1008	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.380	42.658	42.717	0.059	8.0	0.017	0.000	7.5	4.799	OK
SW2405	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.620	40.790	40.835	0.045	3.6	0.007	0.000	3.5	1.671	OK
SW2406	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.640	40.680	40.730	0.050	4.4	0.008	0.000	4.2	2.070	OK
SW1906	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.050	40.718	40.760	0.042	3.1	0.007	0.000	3.0	1.343	OK
SW2102	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.270	40.776	40.830	0.054	4.7	0.009	0.000	4.5	2.733	OK
SW2104	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.250	40.482	40.554	0.072	9.3	0.020	0.000	9.1	5.480	OK
SW2106	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.280	40.355	40.437	0.082	11.1	0.023	0.000	10.7	6.896	OK
SW2107	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.270	40.249	40.337	0.088	12.2	0.025	0.000	11.8	7.522	OK
SW2105	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.250	40.422	40.498	0.076	10.5	0.086	0.000	10.2	6.532	OK
SW2108	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.180	40.181	40.265	0.084	12.7	0.024	0.000	12.1	7.896	OK
SW2109	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.280	40.500	40.500	0.000	0.0	0.000	0.000	0.0	0.000	OK
SW2400	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.690	40.340	40.361	0.021	0.9	0.003	0.000	0.8	0.404	OK
SW2403	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.570	39.360	39.461	0.101	42.6	0.029	0.000	41.9	31.349	OK
SW2401	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.650	40.066	40.093	0.027	1.5	0.004	0.000	1.4	0.707	OK
SW2500	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.570	40.620	40.639	0.019	0.6	0.003	0.000	0.6	1.142	OK
SW2501	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.570	40.462	40.489	0.026	1.2	0.004	0.000	1.2	2.198	OK
SW2502	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.620	40.388	40.413	0.026	1.2	0.004	0.000	1.2	2.184	OK
SW2503	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.640	40.196	40.225	0.029	2.0	0.005	0.000	2.0	3.552	OK
SW2504	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.150	40.019	40.049	0.030	2.0	0.005	0.000	2.0	3.536	OK
SW2505	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.110	39.926	39.952	0.026	2.6	0.004	0.000	2.6	4.661	OK
SW2506	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.550	40.150	40.167	0.017	0.6	0.003	0.000	0.6	1.143	OK
SW2706	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.780	39.730	39.758	0.028	2.1	0.004	0.000	2.1	1.338	OK
SW2900	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.530	39.480	39.508	0.028	1.5	0.004	0.000	1.4	1.040	OK
SW2901	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.380	39.336	39.371	0.035	2.4	0.005	0.000	2.3	2.097	OK
SW2902	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.500	39.119	39.164	0.046	3.8	0.007	0.000	3.7	3.143	OK
SW2904	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.230	38.949	38.989	0.040	5.8	0.006	0.000	5.7	4.110	OK
SW196	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.290	38.940	38.985	0.045	3.7	0.007	0.000	3.6	2.082	OK
SW2800	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.300	39.250	39.257	0.007	0.1	0.001	0.000	0.1	0.076	OK
SW2801	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.320	39.101	39.122	0.021	0.7	0.003	0.000	0.7	1.215	OK
SW2803	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.280	39.020	39.041	0.021	0.8	0.003	0.000	0.8	1.290	OK

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SW2802	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.300	39.065	39.086	0.022	0.8	0.003	0.000	0.8	1.300	OK
SW2804	FEH 2022: 2 years: +0 %: 480 mins: Summer	40.280	38.649	38.725	0.077	0.4	0.012	0.000	0.4	4.034	OK
SW2805	FEH 2022: 2 years: +0 %: 480 mins: Summer	40.360	38.570	38.726	0.156	0.5	0.025	0.000	0.5	4.863	Surcharged
SW2806	FEH 2022: 2 years: +0 %: 480 mins: Summer	40.250	38.324	38.726	0.402	0.8	0.064	0.000	0.8	7.870	Surcharged
SW2807	FEH 2022: 2 years: +0 %: 480 mins: Summer	40.150	38.240	38.725	0.485	0.9	0.077	0.000	0.9	8.513	Surcharged
SW309	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.650	42.502	42.559	0.057	5.6	0.016	0.000	5.5	4.337	OK
SW306	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.650	42.849	42.892	0.043	3.4	0.007	0.000	3.2	2.649	OK
SW310	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.650	42.477	42.532	0.055	6.1	0.015	0.000	6.0	4.989	OK
SW502	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.650	43.157	43.214	0.057	5.0	0.009	0.000	4.9	2.943	OK
SW009a	FEH 2022: 2 years: +0 %: 240 mins: Winter	44.460	41.631	41.707	0.076	6.8	0.012	0.000	6.8	135.893	OK
SW009b	FEH 2022: 2 years: +0 %: 120 mins: Winter	44.350	41.535	41.596	0.061	7.1	0.017	0.000	7.1	80.652	OK
SW011	FEH 2022: 2 years: +0 %: 480 mins: Winter	43.670	41.246	41.497	0.251	9.9	0.284	0.000	9.8	227.608	Surcharged
SW900	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.350	43.350	43.372	0.022	0.9	0.003	0.000	0.9	1.670	OK
SW901	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.350	43.273	43.319	0.046	3.9	0.007	0.000	3.7	2.759	OK
SW902	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.300	43.084	43.141	0.057	6.1	0.016	0.000	6.0	3.965	OK
SW1102	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.350	42.966	42.997	0.031	1.8	0.005	0.000	1.7	1.402	OK
SW600	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.700	43.770	43.808	0.038	2.6	0.006	0.000	2.5	1.195	OK
SW602	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.620	43.640	43.676	0.036	1.9	0.006	0.000	1.8	0.883	OK
SW601	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.610	43.613	43.666	0.053	4.4	0.015	0.000	4.2	2.076	OK
SW607	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.650	43.150	43.212	0.062	7.0	0.018	0.000	6.8	5.023	OK
SW610	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.700	43.190	43.213	0.023	0.9	0.004	0.000	0.8	0.413	OK
SW701	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.350	43.428	43.461	0.033	1.7	0.005	0.000	1.7	3.001	OK
SW2101	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.270	40.828	40.857	0.029	1.5	0.005	0.000	1.5	0.989	OK
SW2100	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.270	40.920	40.945	0.025	1.1	0.004	0.000	1.1	0.472	OK
SW1801	FEH 2022: 2 years: +0 %: 15 mins: Winter	42.900	41.305	41.338	0.033	2.4	0.009	0.000	2.4	1.843	OK
SW2103	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.250	40.550	40.617	0.067	8.5	0.019	0.000	8.4	4.472	OK
SW1905	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.750	38.876	38.901	0.025	2.0	0.028	0.000	2.0	3.236	OK
SW1201	FEH 2022: 2 years: +0 %: 15 mins: Summer	41.600	40.401	40.456	0.056	5.3	0.009	0.000	5.2	2.764	OK
SW1301	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.350	40.235	40.258	0.023	1.0	0.004	0.000	1.0	1.660	OK
SW1307	FEH 2022: 2 years: +0 %: 30 mins: Winter	42.550	40.495	40.561	0.066	13.4	0.019	0.000	13.4	27.775	OK
SW101	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.550	43.361	43.382	0.021	0.9	0.003	0.000	0.8	1.534	OK
SW1603	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.000	38.899	38.928	0.030	1.3	0.005	0.000	1.3	2.289	OK
SW018a	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.010	38.584	38.837	0.253	7.5	0.286	0.000	1.2	79.057	OK
SW20a	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.000	38.281	38.836	0.555	5.9	0.627	0.000	1.1	125.562	Surcharged
SW60a	FEH 2022: 2 years: +0 %: 30 mins: Winter	44.500	42.373	42.414	0.041	3.9	0.012	0.000	3.8	6.313	OK
SW156a	FEH 2022: 2 years: +0 %: 15 mins: Winter	41.670	40.339	40.457	0.118	27.5	0.033	0.000	26.4	19.588	OK
SW2702	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.550	38.607	38.761	0.153	46.2	0.174	0.000	46.0	58.457	OK

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SW2703	FEH 2022: 2 years: +0 %: 360 mins: Summer	40.560	38.526	38.741	0.215	22.9	0.243	0.000	22.5	151.743	OK
SW2903	FEH 2022: 2 years: +0 %: 15 mins: Winter	40.350	39.001	39.050	0.049	4.0	0.008	0.000	3.9	3.256	OK
SW2905	FEH 2022: 2 years: +0 %: 30 mins: Winter	40.380	39.330	39.355	0.025	1.1	0.004	0.000	1.1	1.943	OK
SW510	FEH 2022: 2 years: +0 %: 15 mins: Winter	44.770	43.280	43.316	0.036	2.3	0.006	0.000	2.2	1.579	OK
SW1009	FEH 2022: 2 years: +0 %: 15 mins: Winter	43.490	41.290	41.336	0.046	4.8	0.007	0.000	4.6	2.207	OK
SW1004	FEH 2022: 2 years: +0 %: 15 mins: Winter	43.530	40.929	41.022	0.093	16.3	0.026	0.000	15.8	12.604	OK
SW2000	FEH 2022: 2 years: +0 %: 30 mins: Winter	42.260	40.770	40.789	0.019	0.7	0.003	0.000	0.6	1.163	OK
SW2001	FEH 2022: 2 years: +0 %: 60 mins: Summer	42.250	40.572	40.580	0.008	0.1	0.001	0.000	0.1	0.260	OK
SW2002	FEH 2022: 2 years: +0 %: 30 mins: Winter	41.640	39.462	39.481	0.019	0.6	0.003	0.000	0.6	1.139	OK
SW012a	FEH 2022: 2 years: +0 %: 480 mins: Winter	43.540	41.182	41.493	0.311	5.6	0.088	0.000	5.3	127.764	Surcharged

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Calculations	Date: 29/04/2026			
	Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			



FEH 2022: 30 years: Increase Rainfall (%): +40: 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
SW603	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.630	43.532	43.646	0.114	14.6	0.018	0.000	14.2	8.211	OK
SW604	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.640	43.389	43.492	0.103	18.0	0.029	0.000	17.7	11.201	OK
SW605	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.620	43.259	43.378	0.119	20.0	0.034	0.000	19.4	12.236	OK
SW606	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.640	43.203	43.326	0.122	21.0	0.035	0.000	20.6	13.992	OK
SW608	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.630	43.079	43.195	0.116	23.0	0.033	0.000	22.4	16.211	OK
SW609	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.780	42.937	43.022	0.085	27.2	0.096	0.000	26.5	18.801	OK
SW006	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.670	42.558	42.899	0.341	8.2	0.386	0.000	8.2	124.169	Surcharged
SW007	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.500	42.008	42.899	0.891	15.8	1.574	0.000	13.5	246.880	Surcharged
SW008	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.400	41.800	42.898	1.098	18.1	1.940	0.000	6.7	426.271	Surcharged
SW009	FEH 2022: 30 years: +40 %: 1440 mins: Winter	44.250	41.433	42.418	0.985	7.2	0.279	0.000	7.2	714.564	Surcharged
SW010	FEH 2022: 30 years: +40 %: 1440 mins: Winter	44.390	41.407	42.417	1.010	7.2	0.286	0.000	7.1	714.553	Surcharged
SW011a	FEH 2022: 30 years: +40 %: 1440 mins: Winter	44.380	41.360	42.416	1.056	9.7	1.194	0.000	9.7	804.263	Surcharged
SW012	FEH 2022: 30 years: +40 %: 1440 mins: Winter	43.260	41.115	42.410	1.295	13.7	2.288	0.000	6.7	1211.439	Surcharged
SW013	FEH 2022: 30 years: +40 %: 1440 mins: Winter	43.170	41.011	42.398	1.387	6.7	1.569	0.000	6.7	982.654	Surcharged
SW1306	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.620	40.694	40.818	0.124	28.1	0.141	0.000	27.3	25.648	OK
SW1308	FEH 2022: 30 years: +40 %: 15 mins: Winter	41.950	40.266	40.493	0.227	56.4	0.257	0.000	51.2	43.138	Surcharged
SW1405	FEH 2022: 30 years: +40 %: 360 mins: Winter	41.600	38.965	39.359	0.394	26.7	0.445	0.000	26.8	423.227	Surcharged
SW017	FEH 2022: 30 years: +40 %: 360 mins: Winter	41.530	38.747	39.354	0.607	28.6	0.686	0.000	28.0	439.401	Surcharged
SW018	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.980	38.351	39.347	0.996	45.6	1.760	0.000	32.9	712.020	Surcharged
SW019	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.680	38.310	39.346	1.036	46.5	1.831	0.000	37.0	804.676	Surcharged
SW020	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	38.241	39.343	1.102	39.1	6.312	0.000	39.6	710.291	Surcharged

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations	Date: 29/04/2026			
	Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			

SW021	FEH 2022: 30 years: +40 %: 360 mins: Winter	39.900	38.170	39.156	0.986	40.0	1.410	0.000	40.1	639.678	Surcharged
SW022	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	38.141	39.154	1.013	40.5	1.449	0.000	40.7	641.031	Surcharged
SW023	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	38.063	39.150	1.088	40.7	1.557	0.000	40.8	634.001	Surcharged
SW024	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	38.017	39.149	1.131	41.2	1.619	0.000	41.4	641.824	Surcharged
SW025	FEH 2022: 30 years: +40 %: 360 mins: Winter	39.800	37.956	39.146	1.190	41.6	1.702	0.000	41.8	640.101	Surcharged
SW026	FEH 2022: 30 years: +40 %: 120 mins: Winter	40.100	37.913	39.147	1.234	108.7	1.766	0.000	84.1	643.908	Surcharged
SW027	FEH 2022: 30 years: +40 %: 120 mins: Winter	40.130	37.851	39.137	1.286	86.1	2.273	0.000	85.6	588.229	Surcharged
SW028	FEH 2022: 30 years: +40 %: 120 mins: Winter	39.600	37.824	39.123	1.299	64.0	7.439	0.000	63.0	617.203	Surcharged
SW029	FEH 2022: 30 years: +40 %: 15 mins: Summer	39.580	37.640	38.540	0.900	62.5	0.000	0.000	62.5	67.169	OK
SW611	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.780	43.120	43.180	0.060	5.1	0.010	0.000	4.8	2.665	OK
SW031	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.490	43.070	43.116	0.046	4.3	0.052	0.000	4.3	4.761	OK
SW032	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.480	42.813	42.900	0.087	2.2	0.099	0.000	2.2	47.176	OK
SW500	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.770	43.420	43.518	0.098	13.5	0.016	0.000	13.3	6.222	OK
SW501	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.650	43.256	43.368	0.112	14.8	0.018	0.000	14.5	8.019	OK
SW503	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.780	43.109	43.223	0.114	15.1	0.018	0.000	14.8	9.088	OK
SW504	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.790	43.050	43.154	0.104	14.8	0.017	0.000	14.5	9.058	OK
SW505	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.800	42.871	42.984	0.114	16.4	0.018	0.000	15.9	11.135	OK
SW506	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.640	42.755	42.899	0.144	3.6	0.023	0.000	3.6	42.062	OK
SW507	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.550	42.461	42.899	0.438	6.2	0.124	0.000	6.2	73.905	Surcharged
SW509	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.790	43.331	43.399	0.068	6.9	0.011	0.000	6.8	4.478	OK
SW511	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.750	43.182	43.236	0.053	9.5	0.008	0.000	9.2	7.672	OK
SW300	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.380	42.925	43.020	0.095	16.9	0.027	0.000	16.7	9.379	OK
SW301	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.500	42.826	42.937	0.111	24.0	0.031	0.000	23.6	12.831	OK
SW508	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.790	43.440	43.475	0.035	2.5	0.006	0.000	2.5	1.162	OK
SW302	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.740	42.699	42.899	0.199	3.8	0.056	0.000	3.8	47.430	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations	Date: 29/04/2026			
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Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			

SW303	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.650	42.432	42.898	0.466	4.1	0.132	0.000	4.1	52.684	Surcharged
SW304	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.550	42.202	42.898	0.696	9.8	0.197	0.000	9.5	120.852	Surcharged
SW305	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.450	43.100	43.155	0.055	5.8	0.009	0.000	5.7	2.672	OK
SW307	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.650	42.643	42.898	0.255	3.1	0.072	0.000	3.1	37.384	Surcharged
SW308	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.780	42.557	42.898	0.341	3.4	0.097	0.000	3.4	40.322	Surcharged
SW311	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.650	42.385	42.898	0.513	5.8	0.145	0.000	5.8	69.132	Surcharged
SW100	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.680	43.425	43.465	0.040	2.7	0.006	0.000	2.7	4.825	OK
SW102	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.550	43.263	43.313	0.050	4.5	0.008	0.000	4.5	8.092	OK
SW103	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.470	43.116	43.176	0.059	6.3	0.009	0.000	6.2	11.350	OK
SW104	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.490	42.938	43.019	0.081	12.8	0.013	0.000	12.6	19.874	OK
SW059	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.220	42.687	42.898	0.211	4.3	0.374	0.000	4.3	61.790	OK
SW060	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.400	42.237	42.899	0.661	8.2	0.748	0.000	8.0	116.545	Surcharged
SW200	FEH 2022: 30 years: +40 %: 15 mins: Summer	44.700	43.650	43.702	0.052	4.8	0.008	0.000	4.7	2.089	OK
SW201	FEH 2022: 30 years: +40 %: 15 mins: Summer	44.680	43.481	43.530	0.049	4.7	0.008	0.000	4.6	2.086	OK
SW202	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.610	43.273	43.361	0.088	10.1	0.014	0.000	9.8	4.754	OK
SW203	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.600	43.175	43.276	0.101	12.1	0.016	0.000	11.6	7.404	OK
SW700	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.350	43.500	43.530	0.030	1.8	0.005	0.000	1.8	3.160	OK
SW702	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.460	43.399	43.465	0.066	6.8	0.010	0.000	6.8	10.863	OK
SW703	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.480	43.319	43.382	0.063	6.8	0.010	0.000	6.8	10.835	OK
SW704	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.470	43.158	43.217	0.059	9.0	0.009	0.000	9.0	14.030	OK
SW705	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.000	42.782	42.861	0.079	13.2	0.013	0.000	12.9	10.065	OK
SW706	FEH 2022: 30 years: +40 %: 15 mins: Winter	43.970	42.586	42.704	0.118	24.2	0.019	0.000	23.5	16.624	OK
SW707	FEH 2022: 30 years: +40 %: 30 mins: Summer	43.980	42.750	42.795	0.045	3.1	0.007	0.000	3.0	4.953	OK
SW708	FEH 2022: 30 years: +40 %: 15 mins: Winter	43.960	42.694	42.763	0.069	7.2	0.011	0.000	7.0	4.835	OK
SW709	FEH 2022: 30 years: +40 %: 15 mins: Summer	43.850	42.512	42.597	0.085	12.1	0.151	0.000	11.0	7.741	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations	Date: 29/04/2026			
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Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			

SW1100	FEH 2022: 30 years: +40 %: 15 mins: Summer	44.350	43.300	43.331	0.031	1.8	0.005	0.000	1.8	0.796	OK
SW1101	FEH 2022: 30 years: +40 %: 15 mins: Summer	44.490	43.125	43.165	0.040	3.2	0.006	0.000	3.1	1.395	OK
SW1103	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.350	42.886	42.955	0.069	7.3	0.011	0.000	7.3	11.221	OK
SW1104	FEH 2022: 30 years: +40 %: 15 mins: Summer	44.350	42.783	42.880	0.097	14.1	0.015	0.000	13.4	8.978	OK
SW1109	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.470	43.054	43.114	0.061	6.7	0.010	0.000	6.4	4.906	OK
SW1105	FEH 2022: 30 years: +40 %: 1440 mins: Winter	44.350	41.260	42.410	1.150	2.3	1.300	0.000	2.3	79.200	Surcharged
SW1106	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.350	43.300	43.331	0.031	1.8	0.005	0.000	1.8	3.159	OK
SW1107	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.350	43.219	43.261	0.041	3.1	0.007	0.000	3.1	5.519	OK
SW1108	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.460	43.120	43.176	0.057	5.1	0.009	0.000	5.0	4.174	OK
SW1800	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.900	41.386	41.437	0.051	5.8	0.015	0.000	5.7	3.757	OK
SW1802	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.900	41.257	41.315	0.058	7.4	0.017	0.000	7.3	5.704	OK
SW1803	FEH 2022: 30 years: +40 %: 15 mins: Winter	43.000	41.188	41.244	0.056	7.3	0.016	0.000	7.1	5.672	OK
SW1804	FEH 2022: 30 years: +40 %: 15 mins: Winter	43.050	41.070	41.152	0.082	15.3	0.023	0.000	14.9	10.882	OK
SW1805	FEH 2022: 30 years: +40 %: 15 mins: Winter	43.200	40.858	40.947	0.089	16.8	0.025	0.000	16.3	11.724	OK
SW1304	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.550	41.260	41.293	0.033	3.0	0.005	0.000	2.9	1.443	OK
SW1806	FEH 2022: 30 years: +40 %: 15 mins: Summer	43.100	40.985	41.019	0.035	2.4	0.006	0.000	2.3	1.030	OK
SW1807	FEH 2022: 30 years: +40 %: 15 mins: Summer	42.950	40.776	40.832	0.056	5.0	0.009	0.000	4.9	2.198	OK
SW1808	FEH 2022: 30 years: +40 %: 15 mins: Summer	42.950	40.709	40.768	0.059	4.9	0.009	0.000	4.7	2.195	OK
SW1809	FEH 2022: 30 years: +40 %: 15 mins: Summer	42.950	40.678	40.737	0.059	6.1	0.009	0.000	5.9	3.698	OK
SW1810	FEH 2022: 30 years: +40 %: 15 mins: Summer	42.740	40.424	40.511	0.087	17.3	0.098	0.000	16.9	10.351	OK
SW1900	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.150	41.000	41.048	0.048	3.7	0.008	0.000	3.6	2.455	OK
SW1901	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.300	40.937	40.991	0.054	5.2	0.009	0.000	5.1	4.242	OK
SW1902	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.200	40.730	40.769	0.039	5.1	0.006	0.000	5.0	4.216	OK
SW1300	FEH 2022: 30 years: +40 %: 15 mins: Summer	41.500	40.450	40.450	0.000	0.0	0.000	0.000	0.0	0.000	OK
SW1302	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.050	40.186	40.251	0.065	7.6	0.010	0.000	7.4	6.715	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations		Date: 29/04/2026			
Report Details: Type: Junctions Summary Storm Phase: Full Site		Designed by: Nour Rashdan	Checked by: Johnny Hunt		Approved By: Pedro Vicente
		Company Address: 20 Market Street Altrincham WA14 1PF			

SW1303	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.530	39.947	40.021	0.074	9.1	0.012	0.000	8.7	7.428	OK
SW1305	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.600	40.804	40.841	0.037	5.3	0.010	0.000	5.2	4.127	OK
SW1401	FEH 2022: 30 years: +40 %: 15 mins: Summer	41.500	40.450	40.496	0.046	4.0	0.007	0.000	3.9	1.714	OK
SW1402	FEH 2022: 30 years: +40 %: 15 mins: Summer	41.350	40.211	40.261	0.049	3.9	0.008	0.000	3.7	1.712	OK
SW1403	FEH 2022: 30 years: +40 %: 15 mins: Summer	41.350	40.157	40.222	0.065	8.0	0.010	0.000	7.8	3.572	OK
SW1404	FEH 2022: 30 years: +40 %: 15 mins: Summer	41.480	39.880	39.982	0.102	13.9	0.016	0.000	13.4	6.197	OK
SW1500	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.480	40.430	40.474	0.044	3.5	0.007	0.000	3.4	6.179	OK
SW1501	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.480	40.326	40.376	0.050	4.5	0.008	0.000	4.4	7.134	OK
SW1200	FEH 2022: 30 years: +40 %: 15 mins: Summer	42.100	40.870	40.932	0.062	14.3	0.010	0.000	14.2	6.202	OK
SW1202	FEH 2022: 30 years: +40 %: 15 mins: Summer	41.400	40.311	40.429	0.118	16.3	0.019	0.000	15.5	8.751	OK
SW1203	FEH 2022: 30 years: +40 %: 15 mins: Summer	41.270	40.063	40.163	0.100	16.9	0.028	0.000	16.7	10.330	OK
SW1206	FEH 2022: 30 years: +40 %: 15 mins: Winter	41.000	39.776	39.883	0.107	20.2	0.030	0.000	19.7	15.811	OK
SW1204	FEH 2022: 30 years: +40 %: 15 mins: Summer	41.250	39.997	40.094	0.097	17.1	0.028	0.000	16.7	10.459	OK
SW1205	FEH 2022: 30 years: +40 %: 15 mins: Summer	41.150	39.896	39.997	0.101	18.5	0.028	0.000	18.0	12.421	OK
SW1207	FEH 2022: 30 years: +40 %: 15 mins: Winter	41.040	39.700	39.797	0.097	20.1	0.027	0.000	19.6	15.915	OK
SW1208	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.200	39.446	39.514	0.068	21.8	0.019	0.000	21.7	31.022	OK
SW1209	FEH 2022: 30 years: +40 %: 360 mins: Winter	39.950	39.041	39.352	0.312	12.0	0.353	0.000	12.0	111.965	Surcharged
SW1704	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.020	38.675	39.349	0.674	15.8	0.762	0.000	15.1	146.381	Surcharged
SW1400	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.300	39.840	39.872	0.032	2.7	0.005	0.000	2.7	4.849	OK
SW1606	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	39.169	39.353	0.184	1.5	0.052	0.000	1.5	14.313	OK
SW1700	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.100	39.200	39.351	0.151	0.4	0.024	0.000	0.4	3.396	Surcharged
SW1701	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.150	39.149	39.351	0.202	2.2	0.032	0.000	2.2	20.056	Surcharged
SW1702	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.150	38.973	39.351	0.377	3.0	0.060	0.000	3.0	27.948	Surcharged
SW1703	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.100	38.885	39.349	0.464	3.8	0.074	0.000	3.8	34.445	Surcharged
SW2200	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.460	39.167	39.351	0.184	0.4	0.029	0.000	0.4	3.270	Surcharged

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations				Date: 29/04/2026						
Report Details: Type: Junctions Summary Storm Phase: Full Site				Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente				
				Company Address: 20 Market Street Altrincham WA14 1PF						

SW2300	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.350	39.300	39.351	0.051	1.5	0.008	0.000	1.5	14.311	OK
SW2201	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.460	39.104	39.351	0.247	4.2	0.279	0.000	4.2	38.399	Surcharged
SW2202	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.470	38.868	39.348	0.480	5.5	0.136	0.000	5.5	50.293	Surcharged
SW2203	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.400	38.781	39.347	0.567	8.0	0.160	0.000	7.7	72.335	Surcharged
SW2204	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.700	38.586	39.347	0.761	11.5	0.860	0.000	11.2	106.642	Surcharged
SW1903	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.150	41.000	41.052	0.052	4.6	0.008	0.000	4.5	3.786	OK
SW1904	FEH 2022: 30 years: +40 %: 30 mins: Winter	42.150	40.846	40.899	0.053	6.4	0.008	0.000	6.4	10.182	OK
SW1600	FEH 2022: 30 years: +40 %: 360 mins: Winter	39.850	39.100	39.347	0.247	1.0	0.039	0.000	1.0	9.788	Surcharged
SW1601	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	38.995	39.347	0.352	1.8	0.056	0.000	1.8	17.664	Surcharged
SW1602	FEH 2022: 30 years: +40 %: 360 mins: Winter	39.850	38.940	39.347	0.407	1.8	0.065	0.000	1.8	17.696	Surcharged
SW1604	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	38.811	39.346	0.535	2.0	0.085	0.000	1.8	19.743	Surcharged
SW1605	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	38.683	39.345	0.662	2.8	0.105	0.000	2.7	30.019	Surcharged
SW2301	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	38.950	39.146	0.196	0.9	0.031	0.000	0.9	8.387	Surcharged
SW1000	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.470	43.120	43.189	0.069	7.6	0.011	0.000	7.5	6.589	OK
SW1001	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.470	43.009	43.077	0.067	8.2	0.076	0.000	7.9	6.933	OK
SW1002	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.460	42.780	42.876	0.095	14.4	0.015	0.000	13.8	23.307	OK
SW1003	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.080	41.025	41.734	0.709	40.5	0.802	0.000	38.5	57.887	Surcharged
SW1005	FEH 2022: 30 years: +40 %: 15 mins: Winter	43.300	40.797	41.555	0.758	55.8	0.215	0.000	51.5	48.217	Surcharged
SW2407	FEH 2022: 30 years: +40 %: 15 mins: Winter	41.700	40.487	41.231	0.744	61.6	0.210	0.000	63.9	57.101	Surcharged
SW156	FEH 2022: 30 years: +40 %: 15 mins: Winter	41.650	40.046	40.469	0.423	101.9	0.478	0.000	102.9	91.045	Surcharged
SW2402	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.550	39.691	39.870	0.179	107.4	0.203	0.000	107.3	146.934	OK
SW2404	FEH 2022: 30 years: +40 %: 60 mins: Winter	41.210	38.981	39.603	0.622	98.7	0.703	0.000	98.9	211.371	Surcharged
SW2700	FEH 2022: 30 years: +40 %: 60 mins: Winter	40.650	38.881	39.565	0.684	104.5	0.979	0.000	104.4	223.608	Surcharged
SW2701	FEH 2022: 30 years: +40 %: 60 mins: Winter	40.450	38.664	39.492	0.829	115.9	0.937	0.000	113.6	253.799	Surcharged
SW2704	FEH 2022: 30 years: +40 %: 60 mins: Winter	40.250	38.437	39.355	0.917	116.6	1.313	0.000	114.0	269.385	Surcharged

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations	Date: 29/04/2026			
	Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			

SW2705	FEH 2022: 30 years: +40 %: 120 mins: Summer	40.320	38.222	39.245	1.023	105.5	1.157	0.000	105.5	316.509	Surcharged
SW163	FEH 2022: 30 years: +40 %: 120 mins: Summer	40.200	37.999	39.164	1.165	118.1	1.667	0.000	117.9	358.308	Surcharged
SW1006	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.480	43.130	43.232	0.102	15.5	0.029	0.000	14.8	10.276	OK
SW1007	FEH 2022: 30 years: +40 %: 15 mins: Summer	44.470	42.764	42.886	0.122	25.2	0.035	0.000	24.9	14.415	OK
SW1008	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.380	42.658	42.771	0.113	24.9	0.032	0.000	23.6	14.933	OK
SW2405	FEH 2022: 30 years: +40 %: 15 mins: Winter	41.620	40.790	41.269	0.479	11.1	0.076	0.000	6.4	5.168	Surcharged
SW2406	FEH 2022: 30 years: +40 %: 15 mins: Winter	41.640	40.680	41.258	0.578	9.2	0.092	0.000	8.5	6.390	Surcharged
SW1906	FEH 2022: 30 years: +40 %: 15 mins: Summer	42.050	40.718	40.799	0.081	9.6	0.013	0.000	9.4	4.141	OK
SW2102	FEH 2022: 30 years: +40 %: 15 mins: Summer	42.270	40.776	40.886	0.110	14.6	0.017	0.000	14.0	8.448	OK
SW2104	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.250	40.482	40.665	0.183	28.4	0.052	0.000	26.2	17.963	OK
SW2106	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.280	40.355	40.634	0.279	27.9	0.079	0.000	25.0	22.737	Surcharged
SW2107	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.270	40.249	40.590	0.340	28.7	0.096	0.000	28.5	24.704	Surcharged
SW2105	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.250	40.422	40.655	0.233	30.6	0.264	0.000	25.2	21.723	Surcharged
SW2108	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.180	40.181	40.551	0.370	31.3	0.105	0.000	30.1	26.031	Surcharged
SW2109	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.280	40.500	40.551	0.051	0.0	0.008	0.000	1.0	0.129	OK
SW2400	FEH 2022: 30 years: +40 %: 15 mins: Winter	41.690	40.340	40.377	0.037	2.7	0.006	0.000	2.6	1.247	OK
SW2403	FEH 2022: 30 years: +40 %: 60 mins: Winter	41.570	39.360	39.675	0.316	96.5	0.089	0.000	96.7	208.284	Surcharged
SW2401	FEH 2022: 30 years: +40 %: 15 mins: Winter	41.650	40.066	40.115	0.049	4.7	0.008	0.000	4.4	2.188	OK
SW2500	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.570	40.620	40.652	0.032	2.0	0.005	0.000	2.0	3.582	OK
SW2501	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.570	40.462	40.510	0.048	3.9	0.008	0.000	3.8	6.925	OK
SW2502	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.620	40.388	40.434	0.046	3.8	0.007	0.000	3.8	6.900	OK
SW2503	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.640	40.196	40.248	0.052	6.4	0.008	0.000	6.3	11.209	OK
SW2504	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.150	40.019	40.072	0.053	6.3	0.008	0.000	6.3	11.179	OK
SW2505	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.110	39.926	39.972	0.046	8.3	0.007	0.000	8.2	14.727	OK
SW2506	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.550	40.150	40.180	0.030	2.0	0.005	0.000	2.0	3.583	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations		Date: 29/04/2026			
Report Details: Type: Junctions Summary Storm Phase: Full Site		Designed by: Nour Rashdan	Checked by: Johnny Hunt		Approved By: Pedro Vicente
		Company Address: 20 Market Street Altrincham WA14 1PF			

SW2706	FEH 2022: 30 years: +40 %: 15 mins: Winter	40.780	39.730	39.781	0.051	6.6	0.008	0.000	6.4	4.131	OK
SW2900	FEH 2022: 30 years: +40 %: 15 mins: Winter	40.530	39.480	39.530	0.050	4.6	0.008	0.000	4.5	3.220	OK
SW2901	FEH 2022: 30 years: +40 %: 15 mins: Winter	40.380	39.336	39.400	0.063	7.4	0.010	0.000	7.1	6.495	OK
SW2902	FEH 2022: 30 years: +40 %: 120 mins: Summer	40.500	39.119	39.226	0.107	8.0	0.017	0.000	8.0	25.029	OK
SW2904	FEH 2022: 30 years: +40 %: 120 mins: Summer	40.230	38.949	39.199	0.250	10.7	0.040	0.000	9.6	30.925	Surcharged
SW196	FEH 2022: 30 years: +40 %: 120 mins: Summer	40.290	38.940	39.171	0.231	5.6	0.037	0.000	5.3	14.110	Surcharged
SW2800	FEH 2022: 30 years: +40 %: 15 mins: Winter	40.300	39.250	39.263	0.013	0.4	0.002	0.000	0.3	0.182	OK
SW2801	FEH 2022: 30 years: +40 %: 120 mins: Winter	40.320	39.101	39.156	0.055	1.7	0.009	0.000	1.7	6.882	OK
SW2803	FEH 2022: 30 years: +40 %: 120 mins: Winter	40.280	39.020	39.153	0.133	1.9	0.021	0.000	1.8	7.611	OK
SW2802	FEH 2022: 30 years: +40 %: 120 mins: Winter	40.300	39.065	39.153	0.088	1.9	0.014	0.000	1.9	7.618	OK
SW2804	FEH 2022: 30 years: +40 %: 120 mins: Winter	40.280	38.649	39.148	0.500	1.8	0.079	0.000	2.0	7.687	Surcharged
SW2805	FEH 2022: 30 years: +40 %: 120 mins: Winter	40.360	38.570	39.148	0.578	3.0	0.092	0.000	2.2	8.921	Surcharged
SW2806	FEH 2022: 30 years: +40 %: 120 mins: Winter	40.250	38.324	39.145	0.821	4.5	0.131	0.000	3.7	14.977	Surcharged
SW2807	FEH 2022: 30 years: +40 %: 120 mins: Winter	40.150	38.240	39.142	0.902	4.4	0.143	0.000	3.9	15.706	Surcharged
SW309	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.650	42.502	42.898	0.396	4.6	0.112	0.000	4.6	54.871	Surcharged
SW306	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.650	42.849	42.931	0.082	10.5	0.013	0.000	10.1	8.212	OK
SW310	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.650	42.477	42.898	0.421	5.4	0.119	0.000	5.4	64.505	Surcharged
SW502	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.650	43.157	43.279	0.122	15.5	0.019	0.000	15.1	9.119	OK
SW009a	FEH 2022: 30 years: +40 %: 1440 mins: Winter	44.460	41.631	42.426	0.795	7.0	0.126	0.000	7.0	706.285	Surcharged
SW009b	FEH 2022: 30 years: +40 %: 1440 mins: Winter	44.350	41.535	42.421	0.886	7.3	0.251	0.000	7.2	714.584	Surcharged
SW011	FEH 2022: 30 years: +40 %: 1440 mins: Winter	43.670	41.246	42.413	1.167	11.2	1.320	0.000	11.2	855.748	Surcharged
SW900	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.350	43.350	43.388	0.038	2.9	0.006	0.000	2.9	5.233	OK
SW901	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.350	43.273	43.363	0.090	11.9	0.014	0.000	11.6	8.560	OK
SW902	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.300	43.084	43.188	0.104	19.3	0.029	0.000	19.1	12.486	OK
SW1102	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.350	42.966	43.025	0.059	5.6	0.009	0.000	5.4	4.355	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations	Date: 29/04/2026			
	Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			

SW600	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.700	43.770	43.840	0.070	8.0	0.011	0.000	7.9	3.694	OK
SW602	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.620	43.640	43.728	0.088	5.9	0.014	0.000	5.6	2.725	OK
SW601	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.610	43.613	43.723	0.110	13.5	0.031	0.000	13.0	6.415	OK
SW607	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.650	43.150	43.272	0.121	22.1	0.034	0.000	21.6	15.651	OK
SW610	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.700	43.190	43.231	0.041	2.8	0.007	0.000	2.7	1.303	OK
SW701	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.350	43.428	43.493	0.064	5.3	0.010	0.000	5.2	9.384	OK
SW2101	FEH 2022: 30 years: +40 %: 15 mins: Summer	42.270	40.828	40.891	0.063	4.8	0.010	0.000	4.5	3.074	OK
SW2100	FEH 2022: 30 years: +40 %: 15 mins: Summer	42.270	40.920	40.965	0.045	3.4	0.007	0.000	3.4	1.467	OK
SW1801	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.900	41.305	41.365	0.061	7.5	0.017	0.000	7.4	5.735	OK
SW2103	FEH 2022: 30 years: +40 %: 15 mins: Summer	42.250	40.550	40.690	0.140	26.4	0.039	0.000	26.1	13.860	OK
SW1905	FEH 2022: 30 years: +40 %: 360 mins: Winter	41.750	38.876	39.347	0.471	2.5	0.532	0.000	2.5	23.601	Surcharged
SW1201	FEH 2022: 30 years: +40 %: 15 mins: Summer	41.600	40.401	40.521	0.120	16.3	0.019	0.000	15.9	8.548	OK
SW1301	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.350	40.235	40.279	0.044	3.1	0.007	0.000	3.1	5.185	OK
SW1307	FEH 2022: 30 years: +40 %: 30 mins: Winter	42.550	40.495	40.595	0.100	28.0	0.028	0.000	27.9	50.934	OK
SW101	FEH 2022: 30 years: +40 %: 30 mins: Winter	44.550	43.361	43.399	0.038	2.7	0.006	0.000	2.7	4.805	OK
SW1603	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	38.899	39.346	0.447	1.8	0.071	0.000	1.8	17.767	Surcharged
SW018a	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.010	38.584	39.347	0.763	38.8	0.863	0.000	16.5	230.993	Surcharged
SW20a	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.000	38.281	39.343	1.062	16.1	1.202	0.000	6.8	159.501	Surcharged
SW60a	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.500	42.373	42.898	0.525	4.5	0.149	0.000	4.4	64.605	Surcharged
SW156a	FEH 2022: 30 years: +40 %: 15 mins: Winter	41.670	40.339	41.000	0.661	67.4	0.187	0.000	69.3	61.263	Surcharged
SW2702	FEH 2022: 30 years: +40 %: 60 mins: Winter	40.550	38.607	39.454	0.847	113.6	0.958	0.000	111.7	253.345	Surcharged
SW2703	FEH 2022: 30 years: +40 %: 60 mins: Winter	40.560	38.526	39.406	0.880	111.7	0.995	0.000	108.2	252.351	Surcharged
SW2903	FEH 2022: 30 years: +40 %: 120 mins: Summer	40.350	39.001	39.210	0.209	8.4	0.033	0.000	8.3	25.861	Surcharged
SW2905	FEH 2022: 30 years: +40 %: 30 mins: Winter	40.380	39.330	39.375	0.045	3.4	0.007	0.000	3.4	6.090	OK
SW510	FEH 2022: 30 years: +40 %: 15 mins: Winter	44.770	43.280	43.347	0.066	7.1	0.011	0.000	7.0	4.891	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations		Date: 29/04/2026			
Report Details: Type: Junctions Summary Storm Phase: Full Site		Designed by: Nour Rashdan	Checked by: Johnny Hunt		Approved By: Pedro Vicente
		Company Address: 20 Market Street Altrincham WA14 1PF			

SW1009	FEH 2022: 30 years: +40 %: 15 mins: Winter	43.490	41.290	41.597	0.307	14.7	0.049	0.000	10.2	6.701	Surcharged
SW1004	FEH 2022: 30 years: +40 %: 30 mins: Winter	43.530	40.929	41.660	0.731	45.6	0.207	0.000	43.7	64.326	Surcharged
SW2000	FEH 2022: 30 years: +40 %: 60 mins: Winter	42.260	40.770	40.803	0.033	2.0	0.005	0.000	2.0	5.200	OK
SW2001	FEH 2022: 30 years: +40 %: 15 mins: Winter	42.250	40.572	40.656	0.084	1.4	0.013	0.000	1.3	0.445	OK
SW2002	FEH 2022: 30 years: +40 %: 30 mins: Winter	41.640	39.462	39.495	0.033	2.0	0.005	0.000	2.0	3.587	OK
SW012a	FEH 2022: 30 years: +40 %: 1440 mins: Winter	43.540	41.182	42.410	1.228	7.2	0.347	0.000	6.3	506.584	Surcharged

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Calculations	Date: 29/04/2026			
	Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			



FEH 2022: 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
SW603	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.630	43.532	43.681	0.149	18.0	0.024	0.000	17.6	10.742	OK
SW604	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.640	43.389	43.508	0.119	22.5	0.034	0.000	22.4	14.664	OK
SW605	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.620	43.259	43.497	0.238	3.1	0.067	0.000	3.1	71.279	Surcharged
SW606	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.640	43.203	43.497	0.294	3.7	0.083	0.000	3.7	84.653	Surcharged
SW608	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.630	43.079	43.497	0.418	4.4	0.118	0.000	4.4	100.599	Surcharged
SW609	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.780	42.937	43.497	0.560	5.2	0.633	0.000	5.2	130.920	Surcharged
SW006	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.670	42.558	43.497	0.939	7.6	1.062	0.000	7.4	219.159	Surcharged
SW007	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.500	42.008	43.496	1.488	13.7	2.630	0.000	9.6	431.832	Surcharged
SW008	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.400	41.800	43.496	1.696	15.7	2.996	0.000	6.7	765.928	Surcharged
SW009	FEH 2022: 100 years: +45 %: 1440 mins: Winter	44.250	41.433	43.062	1.629	7.3	0.461	0.000	7.2	893.816	Surcharged
SW010	FEH 2022: 100 years: +45 %: 1440 mins: Winter	44.390	41.407	43.061	1.654	7.2	0.468	0.000	7.2	892.934	Surcharged
SW011a	FEH 2022: 100 years: +45 %: 1440 mins: Winter	44.380	41.360	43.060	1.700	10.5	1.923	0.000	10.5	1012.392	Surcharged
SW012	FEH 2022: 100 years: +45 %: 1440 mins: Winter	43.260	41.115	43.053	1.938	15.8	3.424	0.000	7.3	1327.733	Flood Risk
SW013	FEH 2022: 100 years: +45 %: 1440 mins: Winter	43.170	41.011	43.038	2.028	7.3	2.293	0.000	7.3	1069.715	Flood Risk
SW1306	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.620	40.694	40.836	0.142	34.8	0.161	0.000	33.4	30.736	OK
SW1308	FEH 2022: 100 years: +45 %: 15 mins: Winter	41.950	40.266	40.590	0.325	63.1	0.367	0.000	61.8	53.766	Surcharged
SW1405	FEH 2022: 100 years: +45 %: 360 mins: Winter	41.600	38.965	39.741	0.776	32.9	0.878	0.000	32.9	485.632	Surcharged
SW017	FEH 2022: 100 years: +45 %: 360 mins: Winter	41.530	38.747	39.734	0.987	35.2	1.116	0.000	34.4	506.869	Surcharged
SW018	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.980	38.351	39.725	1.374	67.3	2.428	0.000	39.8	903.864	Surcharged
SW019	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.680	38.310	39.723	1.413	61.9	2.497	0.000	42.4	969.054	Surcharged
SW020	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.000	38.241	39.719	1.478	44.5	8.465	0.000	45.5	935.657	Flood Risk

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations	Date: 29/04/2026			
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Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			

SW021	FEH 2022: 100 years: +45 %: 240 mins: Winter	39.900	38.170	39.625	1.455	45.8	2.081	0.000	46.1	702.867	Flood Risk
SW022	FEH 2022: 100 years: +45 %: 240 mins: Winter	40.000	38.141	39.625	1.483	46.1	2.123	0.000	46.3	702.388	Surcharged
SW023	FEH 2022: 100 years: +45 %: 240 mins: Winter	40.000	38.063	39.624	1.561	46.3	2.234	0.000	46.6	692.774	Surcharged
SW024	FEH 2022: 100 years: +45 %: 240 mins: Winter	40.000	38.017	39.624	1.607	46.6	2.300	0.000	46.8	700.187	Surcharged
SW025	FEH 2022: 100 years: +45 %: 240 mins: Winter	39.800	37.956	39.624	1.668	46.9	2.387	0.000	47.2	696.603	Flood Risk
SW026	FEH 2022: 100 years: +45 %: 240 mins: Winter	40.100	37.913	39.623	1.711	97.6	2.448	0.000	83.7	1251.892	Surcharged
SW027	FEH 2022: 100 years: +45 %: 240 mins: Winter	40.130	37.851	39.605	1.754	86.0	3.099	0.000	65.0	1261.863	Surcharged
SW028	FEH 2022: 100 years: +45 %: 240 mins: Winter	39.600	37.824	39.592	1.768	64.5	10.126	0.000	63.0	1252.287	Flood Risk
SW029	FEH 2022: 100 years: +45 %: 15 mins: Summer	39.580	37.640	38.540	0.900	62.5	0.000	0.000	62.5	57.828	OK
SW611	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.780	43.120	43.497	0.377	0.9	0.060	0.000	0.9	30.347	Surcharged
SW031	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.490	43.070	43.498	0.428	1.4	0.484	0.000	1.4	46.784	Surcharged
SW032	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.480	42.813	43.498	0.685	2.5	0.775	0.000	2.4	88.335	Surcharged
SW500	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.770	43.420	43.542	0.122	17.6	0.019	0.000	16.9	8.147	OK
SW501	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.650	43.256	43.497	0.241	1.9	0.038	0.000	1.9	44.659	Surcharged
SW503	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.780	43.109	43.497	0.388	2.3	0.062	0.000	2.3	53.102	Surcharged
SW504	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.790	43.050	43.497	0.447	2.3	0.071	0.000	2.3	53.110	Surcharged
SW505	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.800	42.871	43.496	0.626	3.0	0.099	0.000	3.0	68.896	Surcharged
SW506	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.640	42.755	43.497	0.742	3.0	0.118	0.000	3.0	68.864	Surcharged
SW507	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.550	42.461	43.496	1.035	5.2	0.293	0.000	5.1	120.884	Surcharged
SW509	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.790	43.331	43.496	0.165	1.2	0.026	0.000	1.2	27.760	Surcharged
SW511	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.750	43.182	43.497	0.314	2.2	0.050	0.000	2.3	52.110	Surcharged
SW300	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.380	42.925	43.496	0.571	2.3	0.162	0.000	2.3	53.629	Surcharged
SW301	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.500	42.826	43.496	0.670	3.3	0.190	0.000	3.3	78.088	Surcharged
SW508	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.790	43.440	43.497	0.057	0.3	0.009	0.000	0.3	5.772	OK
SW302	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.740	42.699	43.496	0.797	3.3	0.226	0.000	3.3	78.092	Surcharged

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		Company Address: 20 Market Street Altrincham WA14 1PF			

SW303	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.650	42.432	43.496	1.064	3.5	0.301	0.000	3.4	87.570	Surcharged
SW304	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.550	42.202	43.496	1.294	7.9	0.366	0.000	7.8	199.161	Surcharged
SW305	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.450	43.100	43.496	0.396	0.6	0.063	0.000	0.6	13.172	Surcharged
SW307	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.650	42.643	43.496	0.853	2.6	0.241	0.000	2.6	61.018	Surcharged
SW308	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.780	42.557	43.496	0.939	2.8	0.266	0.000	2.8	65.941	Surcharged
SW311	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.650	42.385	43.496	1.111	4.7	0.314	0.000	4.5	112.734	Surcharged
SW100	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.680	43.425	43.496	0.071	0.9	0.011	0.000	0.9	20.106	OK
SW102	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.550	43.263	43.497	0.233	1.5	0.037	0.000	1.5	33.848	Surcharged
SW103	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.470	43.116	43.497	0.380	2.0	0.060	0.000	2.0	47.496	Surcharged
SW104	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.490	42.938	43.496	0.558	3.9	0.089	0.000	3.9	107.663	Surcharged
SW059	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.220	42.687	43.496	0.809	3.9	1.430	0.000	3.9	107.626	Surcharged
SW060	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.400	42.237	43.496	1.259	7.4	1.424	0.000	7.3	198.200	Surcharged
SW200	FEH 2022: 100 years: +45 %: 15 mins: Summer	44.700	43.650	43.711	0.061	6.3	0.010	0.000	6.2	2.734	OK
SW201	FEH 2022: 100 years: +45 %: 15 mins: Summer	44.680	43.481	43.537	0.056	6.2	0.009	0.000	6.0	2.731	OK
SW202	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.610	43.273	43.495	0.223	1.0	0.035	0.000	1.1	23.767	Surcharged
SW203	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.600	43.175	43.496	0.321	1.9	0.051	0.000	1.9	43.862	Surcharged
SW700	FEH 2022: 100 years: +45 %: 30 mins: Winter	44.350	43.500	43.534	0.034	2.3	0.005	0.000	2.3	4.178	OK
SW702	FEH 2022: 100 years: +45 %: 30 mins: Winter	44.460	43.399	43.477	0.078	9.1	0.012	0.000	9.0	14.379	OK
SW703	FEH 2022: 100 years: +45 %: 30 mins: Winter	44.480	43.319	43.393	0.075	9.0	0.012	0.000	8.9	14.347	OK
SW704	FEH 2022: 100 years: +45 %: 30 mins: Winter	44.470	43.158	43.227	0.069	11.9	0.011	0.000	11.9	18.575	OK
SW705	FEH 2022: 100 years: +45 %: 1440 mins: Winter	44.000	42.782	43.060	0.278	2.2	0.044	0.000	2.2	76.663	Surcharged
SW706	FEH 2022: 100 years: +45 %: 1440 mins: Winter	43.970	42.586	43.060	0.474	3.5	0.075	0.000	3.5	120.803	Surcharged
SW707	FEH 2022: 100 years: +45 %: 1440 mins: Winter	43.980	42.750	43.057	0.307	0.7	0.049	0.000	0.7	23.340	Surcharged
SW708	FEH 2022: 100 years: +45 %: 1440 mins: Winter	43.960	42.694	43.057	0.363	1.0	0.058	0.000	1.0	35.023	Surcharged
SW709	FEH 2022: 100 years: +45 %: 1440 mins: Winter	43.850	42.512	43.056	0.545	2.7	0.962	0.000	1.6	93.326	Surcharged

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SW1100	FEH 2022: 100 years: +45 %: 15 mins: Summer	44.350	43.300	43.335	0.035	2.4	0.006	0.000	2.4	1.039	OK
SW1101	FEH 2022: 100 years: +45 %: 15 mins: Summer	44.490	43.125	43.171	0.046	4.2	0.007	0.000	4.0	1.821	OK
SW1103	FEH 2022: 100 years: +45 %: 1440 mins: Winter	44.350	42.886	43.053	0.167	1.5	0.027	0.000	1.5	51.988	Surcharged
SW1104	FEH 2022: 100 years: +45 %: 1440 mins: Winter	44.350	42.783	43.053	0.270	2.0	0.043	0.000	2.0	69.499	Surcharged
SW1109	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.470	43.054	43.125	0.071	8.8	0.011	0.000	8.4	6.446	OK
SW1105	FEH 2022: 100 years: +45 %: 1440 mins: Winter	44.350	41.260	43.053	1.793	3.1	2.028	0.000	3.0	105.572	Surcharged
SW1106	FEH 2022: 100 years: +45 %: 30 mins: Winter	44.350	43.300	43.336	0.036	2.3	0.006	0.000	2.3	4.178	OK
SW1107	FEH 2022: 100 years: +45 %: 30 mins: Winter	44.350	43.219	43.268	0.049	4.1	0.008	0.000	4.0	7.299	OK
SW1108	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.460	43.120	43.186	0.067	6.7	0.011	0.000	6.6	5.484	OK
SW1800	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.900	41.386	41.446	0.060	7.6	0.017	0.000	7.5	4.917	OK
SW1802	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.900	41.257	41.325	0.068	9.6	0.019	0.000	9.5	7.476	OK
SW1803	FEH 2022: 100 years: +45 %: 15 mins: Winter	43.000	41.188	41.253	0.065	9.5	0.018	0.000	9.3	7.439	OK
SW1804	FEH 2022: 100 years: +45 %: 15 mins: Winter	43.050	41.070	41.166	0.096	20.0	0.027	0.000	19.5	14.267	OK
SW1805	FEH 2022: 100 years: +45 %: 15 mins: Winter	43.200	40.858	40.964	0.106	22.1	0.030	0.000	21.4	15.373	OK
SW1304	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.550	41.260	41.298	0.038	4.0	0.006	0.000	3.8	1.898	OK
SW1806	FEH 2022: 100 years: +45 %: 15 mins: Summer	43.100	40.985	41.024	0.040	3.1	0.006	0.000	3.0	1.348	OK
SW1807	FEH 2022: 100 years: +45 %: 15 mins: Summer	42.950	40.776	40.842	0.066	6.6	0.010	0.000	6.4	2.873	OK
SW1808	FEH 2022: 100 years: +45 %: 15 mins: Summer	42.950	40.709	40.778	0.070	6.4	0.011	0.000	6.3	2.870	OK
SW1809	FEH 2022: 100 years: +45 %: 15 mins: Summer	42.950	40.678	40.746	0.068	8.1	0.011	0.000	8.2	4.827	OK
SW1810	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.740	40.424	40.620	0.196	22.9	0.222	0.000	18.9	14.493	OK
SW1900	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.150	41.000	41.056	0.056	4.9	0.009	0.000	4.8	3.214	OK
SW1901	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.300	40.937	41.000	0.063	6.8	0.010	0.000	6.6	5.554	OK
SW1902	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.200	40.730	40.772	0.042	6.6	0.007	0.000	6.6	5.524	OK
SW1300	FEH 2022: 100 years: +45 %: 15 mins: Summer	41.500	40.450	40.450	0.000	0.0	0.000	0.000	0.0	0.000	OK
SW1302	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.050	40.186	40.263	0.077	10.0	0.012	0.000	9.7	8.802	OK

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SW1303	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.530	39.947	40.035	0.088	12.0	0.014	0.000	11.4	9.742	OK
SW1305	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.600	40.804	40.846	0.042	6.9	0.012	0.000	6.9	5.412	OK
SW1401	FEH 2022: 100 years: +45 %: 15 mins: Summer	41.500	40.450	40.503	0.053	5.2	0.008	0.000	5.1	2.242	OK
SW1402	FEH 2022: 100 years: +45 %: 15 mins: Summer	41.350	40.211	40.269	0.058	5.1	0.009	0.000	4.9	2.240	OK
SW1403	FEH 2022: 100 years: +45 %: 15 mins: Summer	41.350	40.157	40.233	0.076	10.5	0.012	0.000	10.2	4.679	OK
SW1404	FEH 2022: 100 years: +45 %: 15 mins: Summer	41.480	39.880	40.007	0.127	18.2	0.020	0.000	17.5	8.117	OK
SW1500	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.480	40.430	40.482	0.052	4.6	0.008	0.000	4.6	8.173	OK
SW1501	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.480	40.326	40.384	0.058	6.0	0.009	0.000	5.9	9.435	OK
SW1200	FEH 2022: 100 years: +45 %: 15 mins: Summer	42.100	40.870	40.942	0.072	18.7	0.011	0.000	18.6	8.116	OK
SW1202	FEH 2022: 100 years: +45 %: 15 mins: Summer	41.400	40.311	40.481	0.170	20.2	0.027	0.000	18.7	11.470	Surcharged
SW1203	FEH 2022: 100 years: +45 %: 15 mins: Summer	41.270	40.063	40.177	0.114	20.6	0.032	0.000	20.5	13.543	OK
SW1206	FEH 2022: 100 years: +45 %: 15 mins: Winter	41.000	39.776	39.901	0.125	25.8	0.035	0.000	25.4	20.733	OK
SW1204	FEH 2022: 100 years: +45 %: 15 mins: Summer	41.250	39.997	40.108	0.111	21.0	0.031	0.000	20.5	13.717	OK
SW1205	FEH 2022: 100 years: +45 %: 15 mins: Winter	41.150	39.896	40.013	0.117	23.0	0.033	0.000	22.7	17.279	OK
SW1207	FEH 2022: 100 years: +45 %: 15 mins: Winter	41.040	39.700	39.812	0.112	25.9	0.032	0.000	25.4	20.881	OK
SW1208	FEH 2022: 100 years: +45 %: 360 mins: Winter	41.200	39.446	39.737	0.292	10.2	0.083	0.000	10.2	96.124	Surcharged
SW1209	FEH 2022: 100 years: +45 %: 360 mins: Winter	39.950	39.041	39.736	0.695	15.7	0.786	0.000	15.7	146.768	Flood Risk
SW1704	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.020	38.675	39.728	1.053	20.1	1.191	0.000	19.8	191.795	Flood Risk
SW1400	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.300	39.840	39.877	0.037	3.6	0.006	0.000	3.6	6.402	OK
SW1606	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.000	39.169	39.736	0.567	2.0	0.160	0.000	2.0	18.734	Flood Risk
SW1700	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.100	39.200	39.732	0.532	0.6	0.085	0.000	0.5	4.444	Surcharged
SW1701	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.150	39.149	39.732	0.583	2.9	0.093	0.000	2.9	26.251	Surcharged
SW1702	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.150	38.973	39.731	0.758	4.0	0.120	0.000	3.8	36.578	Surcharged
SW1703	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.100	38.885	39.729	0.844	4.8	0.134	0.000	4.6	45.117	Surcharged
SW2200	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.460	39.167	39.729	0.562	0.5	0.089	0.000	0.5	4.285	Surcharged

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SW2300	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.350	39.300	39.730	0.430	2.0	0.068	0.000	2.0	18.723	Surcharged
SW2201	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.460	39.104	39.730	0.625	7.0	0.707	0.000	5.5	68.468	Surcharged
SW2202	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.470	38.868	39.726	0.858	7.2	0.243	0.000	6.9	72.999	Surcharged
SW2203	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.400	38.781	39.725	0.945	10.3	0.267	0.000	10.1	97.176	Surcharged
SW2204	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.700	38.586	39.724	1.138	14.7	1.287	0.000	14.4	139.637	Surcharged
SW1903	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.150	41.000	41.061	0.061	6.0	0.010	0.000	5.9	4.954	OK
SW1904	FEH 2022: 100 years: +45 %: 30 mins: Winter	42.150	40.846	40.907	0.061	8.5	0.010	0.000	8.4	13.454	OK
SW1600	FEH 2022: 100 years: +45 %: 360 mins: Winter	39.850	39.100	39.724	0.624	1.3	0.099	0.000	1.3	12.600	Flood Risk
SW1601	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.000	38.995	39.724	0.729	2.4	0.116	0.000	2.3	19.558	Flood Risk
SW1602	FEH 2022: 100 years: +45 %: 360 mins: Winter	39.850	38.940	39.724	0.784	2.3	0.125	0.000	2.3	19.603	Flood Risk
SW1604	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.000	38.811	39.723	0.912	2.4	0.145	0.000	2.1	27.160	Flood Risk
SW1605	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.000	38.683	39.722	1.039	3.4	0.165	0.000	3.2	40.155	Flood Risk
SW2301	FEH 2022: 100 years: +45 %: 240 mins: Winter	40.000	38.950	39.624	0.674	1.5	0.107	0.000	1.3	9.814	Surcharged
SW1000	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.470	43.120	43.201	0.081	10.0	0.013	0.000	9.8	8.623	OK
SW1001	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.470	43.009	43.090	0.080	10.8	0.091	0.000	10.3	9.088	OK
SW1002	FEH 2022: 100 years: +45 %: 30 mins: Winter	44.460	42.780	42.910	0.130	19.1	0.021	0.000	18.0	30.896	OK
SW1003	FEH 2022: 100 years: +45 %: 30 mins: Winter	44.080	41.025	42.504	1.479	52.0	1.672	0.000	49.4	76.593	Surcharged
SW1005	FEH 2022: 100 years: +45 %: 30 mins: Winter	43.300	40.797	42.210	1.413	71.3	0.400	0.000	69.3	101.182	Surcharged
SW2407	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.700	40.487	41.643	1.156	74.5	0.327	0.000	73.7	117.741	Flood Risk
SW156	FEH 2022: 100 years: +45 %: 60 mins: Winter	41.650	40.046	40.809	0.762	110.6	0.862	0.000	110.0	257.394	Surcharged
SW2402	FEH 2022: 100 years: +45 %: 60 mins: Winter	41.550	39.691	40.426	0.735	116.1	0.831	0.000	120.5	266.855	Surcharged
SW2404	FEH 2022: 100 years: +45 %: 60 mins: Winter	41.210	38.981	40.217	1.236	122.4	1.398	0.000	117.7	282.482	Surcharged
SW2700	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.650	38.881	40.162	1.282	125.1	1.834	0.000	119.8	298.799	Surcharged
SW2701	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.450	38.664	40.057	1.393	135.1	1.576	0.000	132.7	338.775	Surcharged
SW2704	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.250	38.437	39.868	1.431	140.4	2.047	0.000	138.7	359.554	Surcharged

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations				Date: 29/04/2026						
Report Details: Type: Junctions Summary Storm Phase: Full Site				Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente				
				Company Address: 20 Market Street Altrincham WA14 1PF						

SW2705	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.320	38.222	39.736	1.514	147.0	1.713	0.000	145.8	370.534	Surcharged
SW163	FEH 2022: 100 years: +45 %: 240 mins: Winter	40.200	37.999	39.635	1.636	95.9	2.341	0.000	95.7	620.946	Surcharged
SW1006	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.480	43.130	43.260	0.130	20.2	0.037	0.000	19.1	13.461	OK
SW1007	FEH 2022: 100 years: +45 %: 15 mins: Summer	44.470	42.764	42.910	0.146	32.9	0.041	0.000	32.5	18.868	OK
SW1008	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.380	42.658	42.792	0.134	32.4	0.038	0.000	30.8	19.457	OK
SW2405	FEH 2022: 100 years: +45 %: 15 mins: Winter	41.620	40.790	41.622	0.832	14.5	2.336	2.204	11.5	9.167	Flood
SW2406	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.640	40.680	41.632	0.952	10.6	0.151	0.000	12.4	13.122	Flood Risk
SW1906	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.050	40.718	40.963	0.245	11.7	0.039	0.000	8.9	5.419	Surcharged
SW2102	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.270	40.776	41.026	0.250	17.2	0.040	0.000	15.2	11.766	Surcharged
SW2104	FEH 2022: 100 years: +45 %: 60 mins: Winter	42.250	40.482	40.950	0.468	23.7	0.132	0.000	22.9	50.165	Surcharged
SW2106	FEH 2022: 100 years: +45 %: 60 mins: Winter	42.280	40.355	40.922	0.567	28.1	0.160	0.000	27.4	64.511	Surcharged
SW2107	FEH 2022: 100 years: +45 %: 60 mins: Winter	42.270	40.249	40.887	0.638	30.5	0.181	0.000	29.8	69.273	Surcharged
SW2105	FEH 2022: 100 years: +45 %: 60 mins: Winter	42.250	40.422	40.939	0.517	27.4	0.585	0.000	26.2	61.826	Surcharged
SW2108	FEH 2022: 100 years: +45 %: 60 mins: Winter	42.180	40.181	40.860	0.679	31.7	0.192	0.000	30.5	72.717	Surcharged
SW2109	FEH 2022: 100 years: +45 %: 60 mins: Winter	42.280	40.500	40.860	0.360	0.6	0.057	0.000	0.9	0.428	Surcharged
SW2400	FEH 2022: 100 years: +45 %: 60 mins: Winter	41.690	40.340	40.428	0.088	1.9	0.014	0.000	1.9	2.885	OK
SW2403	FEH 2022: 100 years: +45 %: 60 mins: Winter	41.570	39.360	40.325	0.965	124.7	0.273	0.000	119.7	278.283	Surcharged
SW2401	FEH 2022: 100 years: +45 %: 60 mins: Winter	41.650	40.066	40.427	0.361	3.3	0.057	0.000	3.3	5.094	Surcharged
SW2500	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.570	40.620	40.657	0.037	2.7	0.006	0.000	2.6	4.737	OK
SW2501	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.570	40.462	40.518	0.056	5.1	0.009	0.000	5.1	9.153	OK
SW2502	FEH 2022: 100 years: +45 %: 60 mins: Winter	41.620	40.388	40.442	0.054	5.1	0.009	0.000	5.1	13.210	OK
SW2503	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.640	40.196	40.256	0.060	8.5	0.010	0.000	8.4	14.856	OK
SW2504	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.150	40.019	40.081	0.062	8.4	0.010	0.000	8.3	14.820	OK
SW2505	FEH 2022: 100 years: +45 %: 60 mins: Winter	41.110	39.926	40.064	0.138	10.8	0.022	0.000	10.8	28.366	OK
SW2506	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.550	40.150	40.185	0.035	2.7	0.005	0.000	2.6	4.739	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations	Date: 29/04/2026			
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Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			

SW2706	FEH 2022: 100 years: +45 %: 15 mins: Winter	40.780	39.730	39.789	0.059	8.6	0.009	0.000	8.4	5.413	OK
SW2900	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.530	39.480	39.749	0.269	4.4	0.043	0.000	4.4	9.567	Surcharged
SW2901	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.380	39.336	39.746	0.410	8.5	0.065	0.000	8.5	20.911	Surcharged
SW2902	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.500	39.119	39.721	0.603	12.9	0.096	0.000	12.9	30.628	Surcharged
SW2904	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.230	38.949	39.677	0.728	17.5	0.116	0.000	17.5	37.869	Surcharged
SW196	FEH 2022: 100 years: +45 %: 240 mins: Winter	40.290	38.940	39.638	0.698	4.0	0.111	0.000	3.8	24.471	Surcharged
SW2800	FEH 2022: 100 years: +45 %: 120 mins: Winter	40.300	39.250	39.620	0.370	0.4	0.059	0.000	0.3	1.145	Surcharged
SW2801	FEH 2022: 100 years: +45 %: 120 mins: Winter	40.320	39.101	39.620	0.519	2.2	0.083	0.000	2.1	9.333	Surcharged
SW2803	FEH 2022: 100 years: +45 %: 120 mins: Winter	40.280	39.020	39.619	0.599	2.3	0.095	0.000	2.4	10.198	Surcharged
SW2802	FEH 2022: 100 years: +45 %: 120 mins: Winter	40.300	39.065	39.619	0.555	2.3	0.088	0.000	2.3	10.136	Surcharged
SW2804	FEH 2022: 100 years: +45 %: 120 mins: Winter	40.280	38.649	39.615	0.966	2.4	0.154	0.000	2.7	10.481	Surcharged
SW2805	FEH 2022: 100 years: +45 %: 120 mins: Winter	40.360	38.570	39.615	1.044	3.4	0.166	0.000	3.0	12.545	Surcharged
SW2806	FEH 2022: 100 years: +45 %: 120 mins: Winter	40.250	38.324	39.611	1.287	4.9	0.205	0.000	4.5	20.315	Surcharged
SW2807	FEH 2022: 100 years: +45 %: 240 mins: Winter	40.150	38.240	39.608	1.368	3.7	0.217	0.000	3.9	26.892	Surcharged
SW309	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.650	42.502	43.496	0.994	3.8	0.281	0.000	3.7	89.666	Surcharged
SW306	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.650	42.849	43.496	0.647	2.4	0.103	0.000	2.4	54.991	Surcharged
SW310	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.650	42.477	43.496	1.019	4.4	0.288	0.000	4.3	105.314	Surcharged
SW502	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.650	43.157	43.497	0.340	2.3	0.054	0.000	2.3	53.094	Surcharged
SW009a	FEH 2022: 100 years: +45 %: 1440 mins: Winter	44.460	41.631	43.070	1.439	7.1	0.229	0.000	7.1	884.326	Surcharged
SW009b	FEH 2022: 100 years: +45 %: 1440 mins: Winter	44.350	41.535	43.065	1.530	7.3	0.433	0.000	7.3	894.773	Surcharged
SW011	FEH 2022: 100 years: +45 %: 1440 mins: Winter	43.670	41.246	43.057	1.811	12.5	2.048	0.000	12.5	1098.340	Surcharged
SW900	FEH 2022: 100 years: +45 %: 60 mins: Winter	44.350	43.350	43.394	0.044	3.8	0.007	0.000	3.8	9.976	OK
SW901	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.350	43.273	43.382	0.110	15.6	0.017	0.000	15.2	11.215	OK
SW902	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.300	43.084	43.205	0.121	25.3	0.034	0.000	25.0	16.419	OK
SW1102	FEH 2022: 100 years: +45 %: 1440 mins: Winter	44.350	42.966	43.053	0.087	1.0	0.014	0.000	1.0	32.974	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations	Date: 29/04/2026			
	Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
Report Details: Type: Junctions Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			

SW600	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.700	43.770	43.852	0.082	10.4	0.013	0.000	10.3	4.820	OK
SW602	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.620	43.640	43.767	0.127	7.7	0.020	0.000	6.8	3.574	OK
SW601	FEH 2022: 100 years: +45 %: 15 mins: Winter	44.610	43.613	43.762	0.149	17.1	0.042	0.000	16.0	8.390	OK
SW607	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.650	43.150	43.498	0.347	4.2	0.098	0.000	4.2	97.422	Surcharged
SW610	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.700	43.190	43.497	0.307	0.3	0.049	0.000	0.3	7.009	Surcharged
SW701	FEH 2022: 100 years: +45 %: 30 mins: Winter	44.350	43.428	43.505	0.077	7.0	0.012	0.000	6.9	12.413	OK
SW2101	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.270	40.828	41.034	0.206	6.2	0.033	0.000	5.4	4.273	Surcharged
SW2100	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.270	40.920	41.036	0.116	4.2	0.018	0.000	4.1	1.920	OK
SW1801	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.900	41.305	41.376	0.071	9.8	0.020	0.000	9.6	7.511	OK
SW2103	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.250	40.550	40.959	0.409	27.7	0.116	0.000	25.7	18.892	Surcharged
SW1905	FEH 2022: 100 years: +45 %: 360 mins: Winter	41.750	38.876	39.724	0.848	3.3	0.960	0.000	3.0	30.911	Surcharged
SW1201	FEH 2022: 100 years: +45 %: 15 mins: Summer	41.600	40.401	40.595	0.195	21.4	0.031	0.000	19.7	11.193	Surcharged
SW1301	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.350	40.235	40.288	0.052	4.1	0.008	0.000	4.1	6.851	OK
SW1307	FEH 2022: 100 years: +45 %: 15 mins: Winter	42.550	40.495	40.625	0.130	36.0	0.037	0.000	30.7	33.521	OK
SW101	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.550	43.361	43.496	0.135	0.9	0.022	0.000	0.9	20.107	OK
SW1603	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.000	38.899	39.724	0.825	2.3	0.131	0.000	2.2	19.833	Flood Risk
SW018a	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.010	38.584	39.725	1.141	66.6	1.291	0.000	30.1	354.015	Flood Risk
SW20a	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.000	38.281	39.719	1.438	24.1	1.627	0.000	6.3	157.533	Flood Risk
SW60a	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.500	42.373	43.496	1.123	4.0	0.318	0.000	3.9	112.175	Surcharged
SW156a	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.670	40.339	41.348	1.009	80.1	0.286	0.000	79.7	126.675	Surcharged
SW2702	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.550	38.607	40.003	1.396	132.7	1.578	0.000	130.7	337.893	Surcharged
SW2703	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.560	38.526	39.937	1.411	130.7	1.595	0.000	129.2	336.416	Surcharged
SW2903	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.350	39.001	39.694	0.693	13.5	0.110	0.000	13.5	31.644	Surcharged
SW2905	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.380	39.330	39.871	0.541	4.5	0.086	0.000	4.2	11.613	Surcharged
SW510	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.770	43.280	43.497	0.216	1.3	0.034	0.000	1.3	31.090	Surcharged

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations		Date: 29/04/2026			
Report Details: Type: Junctions Summary Storm Phase: Full Site		Designed by: Nour Rashdan	Checked by: Johnny Hunt		Approved By: Pedro Vicente
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SW1009	FEH 2022: 100 years: +45 %: 30 mins: Winter	43.490	41.290	42.293	1.003	13.2	0.159	0.000	10.8	12.063	Surcharged
SW1004	FEH 2022: 100 years: +45 %: 30 mins: Winter	43.530	40.929	42.393	1.464	58.7	0.414	0.000	56.3	85.107	Surcharged
SW2000	FEH 2022: 100 years: +45 %: 60 mins: Winter	42.260	40.770	40.954	0.184	2.7	0.029	0.000	2.9	6.948	Surcharged
SW2001	FEH 2022: 100 years: +45 %: 60 mins: Winter	42.250	40.572	40.939	0.367	0.8	0.058	0.000	1.2	1.237	Surcharged
SW2002	FEH 2022: 100 years: +45 %: 360 mins: Winter	41.640	39.462	39.724	0.262	1.2	0.042	0.000	1.2	11.003	Surcharged
SW012a	FEH 2022: 100 years: +45 %: 1440 mins: Winter	43.540	41.182	43.053	1.871	10.3	0.529	0.000	2.6	400.042	Surcharged

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Calculations	Date: 29/04/2026			
	Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			



FEH 2022: 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. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Tank 5	FEH 2022: 2 years: +0 %: 960 mins: Winter	38.836	38.836	0.486	0.486	7.7	150.549	0.000	0.000	2.1	76.302	30.849	OK
Swale (3)	FEH 2022: 2 years: +0 %: 60 mins: Summer	39.518	39.512	0.003	0.012	1.2	0.691	0.000	0.000	0.8	1.369	98.928	OK
Swale (4)	FEH 2022: 2 years: +0 %: 1440 mins: Summer	39.429	39.429	0.064	0.089	0.2	3.864	0.000	0.000	0.0	0.000	92.658	OK
Swale (1)	FEH 2022: 2 years: +0 %: 30 mins: Summer	42.677	42.674	0.004	0.014	0.8	0.305	0.000	0.000	0.5	0.607	98.995	OK
Tank 3	FEH 2022: 2 years: +0 %: 480 mins: Winter	41.493	41.493	0.293	0.293	7.4	75.566	0.000	0.000	5.3	73.564	79.135	OK
Swale (2)	FEH 2022: 2 years: +0 %: 60 mins: Winter	43.047	43.047	0.024	0.047	5.3	3.682	0.000	0.000	3.4	9.804	94.961	OK
Tank 1	FEH 2022: 2 years: +0 %: 240 mins: Winter	42.201	42.201	0.234	0.234	12.9	55.581	0.000	0.000	5.6	70.562	83.354	OK
Tank 2	FEH 2022: 2 years: +0 %: 15 mins: Summer	42.280	42.280	0.000	0.000	0.0	0.000	0.000	0.000	0.0	0.000	100.000	OK
Swale (5)	FEH 2022: 2 years: +0 %: 1440 mins: Winter	38.940	38.940	0.039	0.067	0.3	9.870	0.000	0.000	0.0	0.000	94.416	OK
Porous Paving (4)	FEH 2022: 2 years: +0 %: 240 mins: Winter	43.992	43.882	0.062	0.012	1.4	3.907	0.000	0.000	0.7	6.994	87.412	OK
Porous Paving (3)	FEH 2022: 2 years: +0 %: 480 mins: Summer	44.350	44.155	0.034	0.004	0.3	1.253	0.000	0.000	0.1	2.244	76.367	OK
Porous Paving (2)	FEH 2022: 2 years: +0 %: 480 mins: Summer	44.374	44.180	0.026	0.004	0.2	0.629	0.000	0.000	0.1	1.501	83.013	OK
Porous Paving (1)	FEH 2022: 2 years: +0 %: 960 mins: Winter	44.148	43.977	0.044	0.007	0.3	3.274	0.000	0.000	0.1	6.654	88.005	OK
Tank 4	FEH 2022: 2 years: +0 %: 960 mins: Winter	38.837	38.837	0.237	0.237	7.5	39.427	0.000	0.000	1.1	38.804	83.173	OK
Porous Paving (9)	FEH 2022: 2 years: +0 %: 960 mins: Winter	44.130	43.875	0.064	0.005	0.4	5.551	0.000	0.000	0.2	8.772	81.543	OK
Porous Paving (10)	FEH 2022: 2 years: +0 %: 960 mins: Winter	44.141	43.876	0.044	0.006	0.5	6.301	0.000	0.000	0.2	8.644	86.004	OK
Porous Paving (12)	FEH 2022: 2 years: +0 %: 240 mins: Summer	44.333	44.179	0.028	0.003	0.2	0.407	0.000	0.000	0.1	0.827	83.119	OK

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			Company Address: 20 Market Street Altrincham WA14 1PF			

Porous Paving (13)	FEH 2022: 2 years: +0 %: 480 mins: Summer	44.318	44.154	0.035	0.003	0.2	0.549	0.000	0.000	0.1	1.204	79.809	OK
Swale 6	FEH 2022: 2 years: +0 %: 120 mins: Summer	39.514	39.513	0.012	0.013	0.7	0.704	0.000	0.000	0.5	1.410	98.351	OK
Porous Paving	FEH 2022: 2 years: +0 %: 480 mins: Winter	44.205	44.024	0.034	0.004	0.2	1.126	0.000	0.000	0.1	2.248	89.985	OK
Porous Paving (5)	FEH 2022: 2 years: +0 %: 960 mins: Winter	44.324	44.224	0.102	0.004	0.1	1.572	0.000	0.000	0.1	2.537	81.416	OK
Porous Paving (7)	FEH 2022: 2 years: +0 %: 360 mins: Winter	44.250	43.918	0.030	0.003	0.3	1.522	0.000	0.000	0.1	2.762	90.144	OK
Porous Paving (8)	FEH 2022: 2 years: +0 %: 1440 mins: Winter	44.377	44.294	0.085	0.004	0.1	2.382	0.000	0.000	0.1	3.321	84.512	OK
Porous Paving (15)	FEH 2022: 2 years: +0 %: 1440 mins: Winter	44.366	44.283	0.084	0.003	0.1	2.447	0.000	0.000	0.1	3.555	84.761	OK
Porous Paving (16)	FEH 2022: 2 years: +0 %: 480 mins: Winter	44.274	44.025	0.035	0.005	0.2	1.344	0.000	0.000	0.1	2.414	89.237	OK
Porous Paving (17)	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.971	40.852	0.057	0.002	0.0	0.495	0.000	0.000	0.0	0.903	69.137	OK
Porous Paving (18)	FEH 2022: 2 years: +0 %: 120 mins: Winter	41.904	41.004	0.015	0.004	0.2	0.268	0.000	0.000	0.1	0.546	84.596	OK
Porous Paving (22)	FEH 2022: 2 years: +0 %: 480 mins: Winter	39.853	39.733	0.049	0.003	0.1	0.468	0.000	0.000	0.0	0.855	75.329	OK
Porous Paving (23)	FEH 2022: 2 years: +0 %: 120 mins: Summer	40.994	39.903	0.015	0.003	0.2	0.194	0.000	0.000	0.1	0.394	86.062	OK
Porous Paving (24)	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.065	40.003	0.064	0.003	0.0	0.394	0.000	0.000	0.0	0.865	73.590	OK
Porous Paving (25)	FEH 2022: 2 years: +0 %: 120 mins: Winter	40.618	40.084	0.011	0.004	0.1	0.098	0.000	0.000	0.1	0.274	88.238	OK
Porous Paving (27)	FEH 2022: 2 years: +0 %: 960 mins: Winter	41.494	41.423	0.060	0.003	0.1	0.468	0.000	0.000	0.0	1.051	74.053	OK
Porous Paving (28)	FEH 2022: 2 years: +0 %: 1440 mins: Summer	41.545	41.453	0.061	0.003	0.1	0.823	0.000	0.000	0.0	1.606	69.722	OK
Porous Paving (31)	FEH 2022: 2 years: +0 %: 240 mins: Winter	41.521	40.116	0.012	0.006	0.3	0.773	0.000	0.000	0.1	1.688	81.126	OK
Porous Paving (32)	FEH 2022: 2 years: +0 %: 1440 mins: Winter	40.147	40.002	0.071	0.002	0.1	1.095	0.000	0.000	0.0	1.495	69.614	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations			Date: 29/04/2026			
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site			Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
			Company Address: 20 Market Street Altrincham WA14 1PF			

Porous Paving (33)	FEH 2022: 2 years: +0 %: 1440 mins: Winter	40.113	40.042	0.071	0.002	0.0	0.434	0.000	0.000	0.0	1.030	70.704	OK
Porous Paving (35)	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.138	39.952	0.049	0.002	0.1	0.881	0.000	0.000	0.0	1.368	65.575	OK
Porous Paving (36)	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.117	39.952	0.044	0.002	0.0	0.530	0.000	0.000	0.0	1.122	71.350	OK
Porous Paving (34)	FEH 2022: 2 years: +0 %: 1440 mins: Winter	40.147	40.012	0.075	0.002	0.1	1.480	0.000	0.000	0.0	1.806	68.924	OK
Porous Paving (19)	FEH 2022: 2 years: +0 %: 960 mins: Winter	44.168	43.994	0.039	0.004	0.1	1.159	0.000	0.000	0.0	2.326	89.039	OK
Porous Paving (20)	FEH 2022: 2 years: +0 %: 1440 mins: Winter	39.723	39.452	0.074	0.002	0.2	3.792	0.000	0.000	0.0	3.214	75.816	OK
Porous Paving (41)	FEH 2022: 2 years: +0 %: 960 mins: Summer	43.720	43.431	0.031	0.011	0.7	5.793	0.000	0.000	0.2	10.378	88.602	OK
Tank 6	FEH 2022: 2 years: +0 %: 480 mins: Summer	38.724	38.724	0.891	0.891	64.1	253.457	0.000	0.000	26.1	503.890	0.196	OK
Tank 7	FEH 2022: 2 years: +0 %: 960 mins: Winter	38.836	38.836	0.536	0.536	5.9	85.744	0.000	0.000	1.1	39.356	24.241	OK
Porous Paving (14)	FEH 2022: 2 years: +0 %: 240 mins: Winter	44.548	44.220	0.028	0.010	0.5	1.145	0.000	0.000	0.3	2.680	78.882	OK
Porous Paving (21)	FEH 2022: 2 years: +0 %: 240 mins: Winter	44.602	44.458	0.028	0.002	0.0	0.067	0.000	0.000	0.0	0.272	89.835	OK
Porous Paving (6)	FEH 2022: 2 years: +0 %: 240 mins: Winter	44.546	44.508	0.040	0.002	0.0	0.076	0.000	0.000	0.0	0.215	86.199	OK
Porous Paving (38)	FEH 2022: 2 years: +0 %: 240 mins: Winter	40.437	39.660	0.021	0.004	0.1	0.369	0.000	0.000	0.1	0.712	79.174	OK
Porous Paving (26)	FEH 2022: 2 years: +0 %: 240 mins: Winter	43.408	42.474	0.017	0.004	0.2	0.486	0.000	0.000	0.1	0.923	69.527	OK
Porous Paving (29)	FEH 2022: 2 years: +0 %: 240 mins: Winter	44.290	44.109	0.077	0.009	0.5	0.840	0.000	0.000	0.4	2.949	78.651	OK
Porous Paving (30)	FEH 2022: 2 years: +0 %: 1440 mins: Winter	39.957	39.872	0.078	0.002	0.0	0.586	0.000	0.000	0.0	1.023	82.216	OK
Porous Paving (37)	FEH 2022: 2 years: +0 %: 480 mins: Winter	44.128	43.995	0.045	0.005	0.2	1.083	0.000	0.000	0.1	2.080	90.342	OK
Porous Paving (11)	FEH 2022: 2 years: +0 %: 960 mins: Winter	40.987	40.852	0.061	0.002	0.1	0.561	0.000	0.000	0.0	0.913	66.443	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Calculations	Date: 29/04/2026			
	Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site	Company Address: 20 Market Street Altrincham WA14 1PF			



FEH 2022: 30 years: Increase Rainfall (%): +40: 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
Tank 5	FEH 2022: 30 years: +40 %: 360 mins: Winter	39.346	39.346	0.996	0.996	46.3	217.141	0.000	0.000	10.6	103.858	0.261	OK
Swale (3)	FEH 2022: 30 years: +40 %: 30 mins: Summer	39.523	39.522	0.008	0.022	4.1	1.602	0.000	0.000	2.8	3.385	97.517	OK
Swale (4)	FEH 2022: 30 years: +40 %: 480 mins: Summer	39.439	39.439	0.074	0.099	0.9	4.442	0.000	0.000	0.6	3.031	91.559	OK
Swale (1)	FEH 2022: 30 years: +40 %: 30 mins: Summer	42.687	42.686	0.014	0.026	2.3	0.723	0.000	0.000	1.9	1.977	97.617	OK
Tank 3	FEH 2022: 30 years: +40 %: 1440 mins: Winter	42.410	42.410	1.210	1.210	9.4	311.756	0.000	0.000	6.2	268.485	13.919	OK
Swale (2)	FEH 2022: 30 years: +40 %: 30 mins: Winter	43.101	43.100	0.078	0.100	20.7	9.626	0.000	0.000	12.2	21.062	86.825	OK
Tank 1	FEH 2022: 30 years: +40 %: 480 mins: Winter	42.899	42.899	0.932	0.932	22.6	221.410	0.000	0.000	5.9	177.838	33.691	OK
Tank 2	FEH 2022: 30 years: +40 %: 480 mins: Winter	42.899	42.899	0.619	0.619	7.0	34.599	0.000	0.000	1.0	25.011	42.108	OK
Swale (5)	FEH 2022: 30 years: +40 %: 1440 mins: Winter	39.017	39.017	0.116	0.144	0.7	25.026	0.000	0.000	0.0	0.000	85.841	OK
Porous Paving (4)	FEH 2022: 30 years: +40 %: 120 mins: Winter	44.084	43.894	0.154	0.024	6.2	8.910	0.000	0.000	2.8	14.238	71.292	OK
Porous Paving (3)	FEH 2022: 30 years: +40 %: 480 mins: Summer	44.411	44.158	0.094	0.007	0.8	2.946	0.000	0.000	0.3	5.687	44.437	OK
Porous Paving (2)	FEH 2022: 30 years: +40 %: 240 mins: Summer	44.426	44.182	0.078	0.006	0.8	1.502	0.000	0.000	0.4	2.833	59.427	OK
Porous Paving (1)	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.229	43.983	0.125	0.013	1.3	7.563	0.000	0.000	0.5	11.912	72.288	OK
Tank 4	FEH 2022: 30 years: +40 %: 360 mins: Winter	39.347	39.347	0.747	0.747	38.6	124.586	0.000	0.000	16.4	105.262	46.829	OK
Porous Paving (9)	FEH 2022: 30 years: +40 %: 960 mins: Winter	44.245	43.879	0.179	0.009	1.1	12.601	0.000	0.000	0.5	22.732	58.104	OK
Porous Paving (10)	FEH 2022: 30 years: +40 %: 960 mins: Winter	44.223	43.879	0.126	0.009	1.2	14.657	0.000	0.000	0.4	22.414	67.444	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations			Date: 29/04/2026			
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site			Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
			Company Address: 20 Market Street Altrincham WA14 1PF			

Porous Paving (12)	FEH 2022: 30 years: +40 %: 240 mins: Summer	44.385	44.182	0.080	0.006	0.6	0.984	0.000	0.000	0.3	2.191	59.244	OK
Porous Paving (13)	FEH 2022: 30 years: +40 %: 360 mins: Summer	44.378	44.157	0.094	0.006	0.5	1.270	0.000	0.000	0.2	2.679	53.278	OK
Swale 6	FEH 2022: 30 years: +40 %: 60 mins: Summer	39.528	39.525	0.026	0.025	2.8	1.470	0.000	0.000	2.0	3.263	96.555	OK
Porous Paving	FEH 2022: 30 years: +40 %: 240 mins: Winter	44.272	44.027	0.102	0.007	0.9	2.643	0.000	0.000	0.3	3.930	76.499	OK
Porous Paving (5)	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.433	44.228	0.211	0.008	0.6	3.228	0.000	0.000	0.3	5.296	61.836	OK
Porous Paving (7)	FEH 2022: 30 years: +40 %: 240 mins: Winter	44.310	43.921	0.090	0.006	1.2	3.688	0.000	0.000	0.4	5.590	76.123	OK
Porous Paving (8)	FEH 2022: 30 years: +40 %: 960 mins: Winter	44.472	44.297	0.179	0.007	0.4	4.988	0.000	0.000	0.2	8.173	67.563	OK
Porous Paving (15)	FEH 2022: 30 years: +40 %: 960 mins: Winter	44.457	44.286	0.174	0.006	0.5	5.070	0.000	0.000	0.2	8.609	68.433	OK
Porous Paving (16)	FEH 2022: 30 years: +40 %: 360 mins: Winter	44.341	44.029	0.103	0.009	0.7	3.169	0.000	0.000	0.3	5.225	74.629	OK
Porous Paving (17)	FEH 2022: 30 years: +40 %: 480 mins: Winter	41.053	40.853	0.139	0.003	0.2	1.084	0.000	0.000	0.1	1.652	32.405	OK
Porous Paving (18)	FEH 2022: 30 years: +40 %: 60 mins: Winter	41.942	41.007	0.053	0.007	0.8	0.740	0.000	0.000	0.3	1.091	57.406	OK
Porous Paving (22)	FEH 2022: 30 years: +40 %: 360 mins: Winter	39.926	39.734	0.122	0.004	0.3	1.044	0.000	0.000	0.1	1.953	44.987	OK
Porous Paving (23)	FEH 2022: 30 years: +40 %: 120 mins: Summer	41.021	39.906	0.042	0.006	0.5	0.525	0.000	0.000	0.2	1.108	62.259	OK
Porous Paving (24)	FEH 2022: 30 years: +40 %: 360 mins: Winter	40.132	40.006	0.130	0.006	0.2	0.808	0.000	0.000	0.1	1.521	45.813	OK
Porous Paving (25)	FEH 2022: 30 years: +40 %: 60 mins: Winter	40.657	40.088	0.050	0.008	0.4	0.287	0.000	0.000	0.2	0.574	65.713	OK
Porous Paving (27)	FEH 2022: 30 years: +40 %: 360 mins: Winter	41.562	41.428	0.129	0.008	0.3	0.985	0.000	0.000	0.1	1.832	45.367	OK
Porous Paving (28)	FEH 2022: 30 years: +40 %: 1440 mins: Summer	41.623	41.455	0.139	0.005	0.2	1.758	0.000	0.000	0.1	4.201	35.337	OK
Porous Paving (31)	FEH 2022: 30 years: +40 %: 240 mins: Winter	41.543	40.119	0.033	0.009	0.8	1.967	0.025	0.000	0.4	4.492	51.987	OK
Porous Paving (32)	FEH 2022: 30 years: +40 %: 1440 mins: Winter	40.252	40.003	0.176	0.003	0.1	2.419	0.000	0.000	0.1	4.217	32.905	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations		Date: 29/04/2026			
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site		Designed by: Nour Rashdan	Checked by: Johnny Hunt		Approved By: Pedro Vicente
		Company Address: 20 Market Street Altrincham WA14 1PF			

Porous Paving (33)	FEH 2022: 30 years: +40 %: 480 mins: Winter	40.184	40.044	0.142	0.004	0.2	0.867	0.000	0.000	0.1	1.612	41.473	OK
Porous Paving (35)	FEH 2022: 30 years: +40 %: 960 mins: Winter	40.225	39.953	0.136	0.003	0.2	1.992	0.030	0.000	0.1	3.609	22.163	OK
Porous Paving (36)	FEH 2022: 30 years: +40 %: 480 mins: Winter	40.198	39.953	0.125	0.003	0.2	1.227	0.000	0.000	0.1	2.023	33.668	OK
Porous Paving (34)	FEH 2022: 30 years: +40 %: 1440 mins: Winter	40.257	40.014	0.185	0.004	0.2	3.296	0.000	0.000	0.1	5.298	30.801	OK
Porous Paving (19)	FEH 2022: 30 years: +40 %: 480 mins: Winter	44.241	43.997	0.112	0.007	0.4	2.659	0.000	0.000	0.2	4.052	74.845	OK
Porous Paving (20)	FEH 2022: 30 years: +40 %: 1440 mins: Winter	39.846	39.454	0.198	0.004	0.4	8.771	0.000	0.000	0.1	9.166	44.063	OK
Porous Paving (41)	FEH 2022: 30 years: +40 %: 960 mins: Summer	43.779	43.438	0.090	0.018	1.9	13.566	0.000	0.000	0.6	25.770	73.306	OK
Tank 6	FEH 2022: 30 years: +40 %: 120 mins: Winter	39.133	39.133	1.300	1.300	88.3	253.850	0.000	0.000	64.0	476.115	0.041	OK
Tank 7	FEH 2022: 30 years: +40 %: 360 mins: Winter	39.343	39.343	1.043	1.043	16.0	112.444	0.000	0.000	5.7	46.007	0.651	OK
Porous Paving (14)	FEH 2022: 30 years: +40 %: 120 mins: Winter	44.614	44.228	0.094	0.018	2.1	2.931	0.000	0.000	0.9	5.168	45.941	OK
Porous Paving (21)	FEH 2022: 30 years: +40 %: 60 mins: Winter	44.650	44.461	0.077	0.005	0.3	0.178	0.000	0.000	0.2	0.428	72.984	OK
Porous Paving (6)	FEH 2022: 30 years: +40 %: 120 mins: Winter	44.590	44.510	0.083	0.004	0.2	0.159	0.000	0.000	0.1	0.448	71.028	OK
Porous Paving (38)	FEH 2022: 30 years: +40 %: 240 mins: Winter	40.473	39.661	0.058	0.005	0.3	0.909	0.000	0.000	0.1	1.870	48.728	OK
Porous Paving (26)	FEH 2022: 30 years: +40 %: 120 mins: Winter	43.454	42.478	0.063	0.008	0.7	1.203	0.059	0.000	0.2	1.683	24.613	OK
Porous Paving (29)	FEH 2022: 30 years: +40 %: 60 mins: Winter	44.406	44.122	0.193	0.022	3.5	2.067	0.000	0.000	2.1	4.599	47.492	OK
Porous Paving (30)	FEH 2022: 30 years: +40 %: 960 mins: Winter	40.043	39.874	0.163	0.004	0.1	1.205	0.000	0.000	0.1	2.268	63.432	OK
Porous Paving (37)	FEH 2022: 30 years: +40 %: 360 mins: Winter	44.199	43.999	0.116	0.009	0.6	2.475	0.000	0.000	0.3	4.734	77.935	OK
Porous Paving (11)	FEH 2022: 30 years: +40 %: 960 mins: Winter	41.073	40.853	0.147	0.003	0.1	1.206	0.005	0.000	0.1	2.360	27.838	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations				Date: 29/04/2026				
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site				Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente		
				Company Address: 20 Market Street Altrincham WA14 1PF				



FEH 2022: 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. Resident Volume (m³)	Max. Flooded Volume (m³)	Total Lost Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Percentage Available (%)	Status
Tank 5	FEH 2022: 100 years: +45 %: 360 mins: Winter	39.723	39.723	1.373	1.373	61.5	217.504	0.000	0.000	18.2	98.281	0.095	OK
Swale (3)	FEH 2022: 100 years: +45 %: 360 mins: Winter	39.720	39.720	0.205	0.220	11.7	24.655	0.000	0.000	5.7	31.648	61.775	OK
Swale (4)	FEH 2022: 100 years: +45 %: 360 mins: Winter	39.720	39.720	0.355	0.380	12.5	26.615	0.000	0.000	5.9	24.628	49.428	OK
Swale (1)	FEH 2022: 100 years: +45 %: 1440 mins: Winter	43.057	43.057	0.384	0.397	2.7	21.493	0.000	0.000	1.0	29.039	29.195	OK
Tank 3	FEH 2022: 100 years: +45 %: 1440 mins: Winter	43.053	43.053	1.853	1.853	13.2	361.317	0.000	0.000	2.5	131.284	0.235	OK
Swale (2)	FEH 2022: 100 years: +45 %: 60 mins: Winter	43.126	43.126	0.103	0.126	22.5	12.637	0.000	0.000	16.1	43.199	82.705	OK
Tank 1	FEH 2022: 100 years: +45 %: 960 mins: Winter	43.496	43.496	1.529	1.529	18.3	332.955	0.000	0.000	5.8	347.877	0.284	OK
Tank 2	FEH 2022: 100 years: +45 %: 960 mins: Winter	43.496	43.496	1.216	1.216	4.9	58.886	0.000	0.000	0.9	43.593	1.472	OK
Swale (5)	FEH 2022: 100 years: +45 %: 480 mins: Winter	39.425	39.425	0.524	0.552	22.2	122.155	0.000	0.000	13.7	65.178	30.890	OK
Porous Paving (4)	FEH 2022: 100 years: +45 %: 120 mins: Winter	44.127	43.898	0.197	0.028	8.1	11.190	0.000	0.000	3.9	19.357	63.947	OK
Porous Paving (3)	FEH 2022: 100 years: +45 %: 480 mins: Summer	44.443	44.159	0.127	0.008	1.1	3.769	0.000	0.000	0.4	7.540	28.910	OK
Porous Paving (2)	FEH 2022: 100 years: +45 %: 240 mins: Summer	44.451	44.182	0.102	0.006	1.1	1.920	0.000	0.000	0.5	3.728	48.137	OK
Porous Paving (1)	FEH 2022: 100 years: +45 %: 480 mins: Winter	44.270	43.985	0.165	0.015	1.7	9.607	0.000	0.000	0.7	16.023	64.798	OK
Tank 4	FEH 2022: 100 years: +45 %: 360 mins: Winter	39.725	39.725	1.125	1.125	66.1	187.570	0.000	0.000	29.9	164.973	19.948	OK
Porous Paving (9)	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.307	43.880	0.241	0.010	1.5	16.125	0.000	0.000	0.8	30.797	46.389	OK
Porous Paving (10)	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.270	43.881	0.174	0.011	1.6	18.972	0.000	0.000	0.6	30.484	57.859	OK

Project: UoM Residences DBFO Site Wide Proposed Surface Water with Surcharge Caculations			Date: 29/04/2026			
Report Details: Type: Stormwater Controls Summary Storm Phase: Full Site			Designed by: Nour Rashdan	Checked by: Johnny Hunt	Approved By: Pedro Vicente	
			Company Address: 20 Market Street Altrincham WA14 1PF			

Porous Paving (12)	FEH 2022: 100 years: +45 %: 240 mins: Summer	44.410	44.183	0.105	0.007	0.8	1.243	0.000	0.000	0.4	2.863	48.475	OK
Porous Paving (13)	FEH 2022: 100 years: +45 %: 360 mins: Summer	44.408	44.158	0.125	0.007	0.7	1.622	0.000	0.000	0.3	3.550	40.329	OK
Swale 6	FEH 2022: 100 years: +45 %: 360 mins: Winter	39.729	39.730	0.228	0.230	7.4	15.930	0.000	0.000	3.5	20.790	62.671	OK
Porous Paving	FEH 2022: 100 years: +45 %: 240 mins: Winter	44.306	44.028	0.135	0.008	1.1	3.353	0.000	0.000	0.4	5.245	70.183	OK
Porous Paving (5)	FEH 2022: 100 years: +45 %: 480 mins: Winter	44.484	44.229	0.262	0.009	0.8	3.995	0.000	0.000	0.4	7.257	52.759	OK
Porous Paving (7)	FEH 2022: 100 years: +45 %: 240 mins: Winter	44.340	43.922	0.120	0.007	1.5	4.703	0.000	0.000	0.6	7.330	69.549	OK
Porous Paving (8)	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.517	44.298	0.224	0.008	0.6	6.224	0.000	0.000	0.3	11.343	59.525	OK
Porous Paving (15)	FEH 2022: 100 years: +45 %: 960 mins: Winter	44.501	44.287	0.219	0.007	0.6	6.337	0.000	0.000	0.3	12.008	60.539	OK
Porous Paving (16)	FEH 2022: 100 years: +45 %: 360 mins: Winter	44.376	44.031	0.137	0.011	0.9	4.024	0.000	0.000	0.4	6.891	67.782	OK
Porous Paving (17)	FEH 2022: 100 years: +45 %: 480 mins: Winter	41.116	40.854	0.202	0.004	0.2	1.313	0.099	0.000	0.1	2.295	18.057	Flood
Porous Paving (18)	FEH 2022: 100 years: +45 %: 120 mins: Winter	41.946	41.007	0.057	0.007	0.7	0.925	0.020	0.000	0.3	2.020	46.785	OK
Porous Paving (22)	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.005	39.735	0.201	0.005	0.3	1.302	0.019	0.000	0.2	2.583	31.394	Flood
Porous Paving (23)	FEH 2022: 100 years: +45 %: 120 mins: Summer	41.035	39.906	0.055	0.006	0.7	0.684	0.006	0.000	0.3	1.456	50.839	OK
Porous Paving (24)	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.205	40.007	0.204	0.007	0.3	0.994	0.039	0.000	0.1	2.058	33.339	Flood
Porous Paving (25)	FEH 2022: 100 years: +45 %: 60 mins: Winter	40.675	40.089	0.068	0.009	0.5	0.377	0.000	0.000	0.3	0.764	54.943	OK
Porous Paving (27)	FEH 2022: 100 years: +45 %: 30 mins: Winter	41.656	41.661	0.222	0.241	5.1	2.653	1.040	0.000	6.7	2.219	-47.180	Flood
Porous Paving (28)	FEH 2022: 100 years: +45 %: 960 mins: Summer	41.687	41.456	0.202	0.006	0.4	2.189	0.124	0.000	0.2	4.755	19.460	Flood
Porous Paving (31)	FEH 2022: 100 years: +45 %: 120 mins: Winter	41.575	40.121	0.066	0.011	1.7	2.696	0.077	0.000	0.7	4.507	34.203	OK
Porous Paving (32)	FEH 2022: 100 years: +45 %: 960 mins: Winter	40.328	40.004	0.252	0.004	0.3	3.015	0.133	0.000	0.1	4.691	16.363	Flood

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Porous Paving (33)	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.248	40.044	0.206	0.004	0.3	1.067	0.067	0.000	0.1	1.931	27.982	Flood
Porous Paving (35)	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.291	39.954	0.201	0.004	0.5	2.254	0.190	0.000	0.2	2.858	11.933	Flood
Porous Paving (36)	FEH 2022: 100 years: +45 %: 360 mins: Winter	40.274	39.953	0.201	0.003	0.3	1.481	0.083	0.000	0.2	2.331	19.922	Flood
Porous Paving (34)	FEH 2022: 100 years: +45 %: 960 mins: Winter	40.324	40.015	0.252	0.005	0.3	4.065	0.231	0.000	0.2	6.039	14.659	Flood
Porous Paving (19)	FEH 2022: 100 years: +45 %: 480 mins: Winter	44.278	43.998	0.149	0.008	0.6	3.383	0.000	0.000	0.2	5.437	67.997	OK
Porous Paving (20)	FEH 2022: 100 years: +45 %: 480 mins: Winter	39.875	39.709	0.227	0.259	2.3	11.877	0.000	0.000	0.7	9.346	24.255	OK
Porous Paving (41)	FEH 2022: 100 years: +45 %: 960 mins: Summer	43.815	43.441	0.127	0.021	2.5	17.593	0.000	0.000	0.9	34.354	65.381	OK
Tank 6	FEH 2022: 100 years: +45 %: 240 mins: Winter	39.601	39.601	1.768	1.768	78.6	254.362	0.064	0.000	64.5	1081.580	-0.161	Flood
Tank 7	FEH 2022: 100 years: +45 %: 360 mins: Winter	39.719	39.719	1.419	1.419	23.9	112.805	0.000	0.000	6.3	43.270	0.332	OK
Porous Paving (14)	FEH 2022: 100 years: +45 %: 120 mins: Winter	44.644	44.231	0.125	0.021	2.7	3.692	0.143	0.000	1.2	6.846	31.910	OK
Porous Paving (21)	FEH 2022: 100 years: +45 %: 60 mins: Winter	44.673	44.462	0.099	0.006	0.4	0.228	0.000	0.000	0.3	0.570	65.330	OK
Porous Paving (6)	FEH 2022: 100 years: +45 %: 60 mins: Winter	44.610	44.512	0.104	0.006	0.3	0.197	0.000	0.000	0.2	0.458	64.058	OK
Porous Paving (38)	FEH 2022: 100 years: +45 %: 240 mins: Winter	40.492	39.708	0.077	0.052	0.4	1.194	0.039	0.000	0.2	2.441	32.613	OK
Porous Paving (26)	FEH 2022: 100 years: +45 %: 60 mins: Winter	43.483	42.481	0.092	0.011	1.5	1.417	0.148	0.000	0.5	1.409	11.186	OK
Porous Paving (29)	FEH 2022: 100 years: +45 %: 60 mins: Winter	44.471	44.126	0.258	0.026	4.7	2.486	0.261	0.000	3.0	6.368	36.834	Flood
Porous Paving (30)	FEH 2022: 100 years: +45 %: 960 mins: Winter	40.084	39.874	0.204	0.004	0.2	1.501	0.000	0.000	0.1	3.160	54.457	OK
Porous Paving (37)	FEH 2022: 100 years: +45 %: 360 mins: Winter	44.233	44.000	0.150	0.010	0.8	3.120	0.000	0.000	0.4	6.330	72.181	OK
Porous Paving (11)	FEH 2022: 100 years: +45 %: 360 mins: Winter	41.129	40.855	0.202	0.005	0.3	1.394	0.126	0.000	0.2	1.916	16.599	Flood