

ECMWF: Proposed SW Drainage Network Car Park + Eastern Road Catchment			Date: 07/08/2025					
			Designed by:	Checked by:	Approved By:			
Report Details: Type: Inflow Summary Storm Phase: Catchment 4 (Car Park and Easten			COB	LJ	CHF			
			Company: BDP					

SA.02 - DA	SW.34		Time of Concentration	0.019	95	0	95	0.018
SA.03 - DA	SW.34		Time of Concentration	0.013	95	0	95	0.012
SA.04 - DA	SW.35		Time of Concentration	0.030	95	0	95	0.028
SA.05 - DA	SW.36		Time of Concentration	0.012	95	0	95	0.011
SA.06 - DA	SW.37		Time of Concentration	0.043	95	0	95	0.041
SA.07 - DA	SW.38		Time of Concentration	0.014	95	0	95	0.014
SA.08 - DA	SW.39		Time of Concentration	0.016	95	0	95	0.016
SA.09 - DA	SW.40		Time of Concentration	0.016	95	0	95	0.015
SA.09 - DA (2)	SW.41 (1)		Time of Concentration	0.015	95	0	95	0.014
SA.10 - DA	SW.41 (1)		Time of Concentration	0.007	95	0	95	0.007
SL 1.0	SW.01		Time of Concentration	0.043	30	0	30	0.013
TOTAL		1.0		0.991				0.895

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Report Title: Rainfall Analysis Criteria	Company: BDP			

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)	150
Perform No Discharge Analysis	☐

Rainfall

Design Criteria FSR Type: FSR

Region	England And Wales
M5-60 (mm)	18.8
Ratio R	0.400
Summer	☒
Winter	☒

Return Period

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

Storm Durations

Duration (mins)	Run Time (mins)
15	30
30	60
60	120
120	240
180	360
240	480
360	720
480	960
600	1200
720	1440
960	1920
1440	2880
2160	4320
2880	5760
4320	8640
5760	11520
7200	14400
8640	17280
10080	20160

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

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWMH25	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.96 3	65.83 8	65.982	0.144	0.9	0.162	0.000	0.9	4.042	OK
SWMH26	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.91 7	65.63 8	65.981	0.344	1.3	0.389	0.000	1.1	5.262	Surcharged
SWMH27	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.79 9	65.45 2	65.982	0.530	2.6	0.150	0.000	2.6	12.087	Surcharged
SWMH28	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.64 1	65.51 6	65.982	0.466	1.5	0.132	0.000	1.5	6.411	Surcharged
SW.03	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.82 7	65.32 5	65.982	0.657	6.7	0.743	0.000	6.7	29.391	Surcharged
SW.26	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.70 5	65.58 5	65.981	0.396	3.5	0.448	0.000	3.5	15.505	Surcharged
SW.01	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.70 4	65.57 9	65.982	0.403	2.1	0.114	0.000	2.1	8.982	Surcharged
SW.02	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.58 8	65.47 2	65.982	0.510	2.6	0.144	0.000	2.5	11.067	Surcharged
SW.31	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.86 4	64.89 1	65.980	1.089	6.9	1.925	0.000	6.1	99.319	Surcharged
SW.24	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.94 3	65.17 3	65.981	0.808	11.2	0.914	0.000	9.2	50.290	Surcharged
SW.27	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.62 9	65.49 2	65.982	0.490	0.7	0.139	0.000	0.7	3.517	Surcharged
SW.28	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.67 4	65.33 1	65.982	0.651	2.7	0.184	0.000	2.7	14.714	Surcharged
SW.29	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.93 1	65.09 0	65.981	0.891	13.6	1.008	0.000	11.9	89.390	Surcharged
SW.30	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter	66.93 1	65.04 7	65.981	0.934	14.1	1.056	0.000	13.3	108.081	Surcharged
SWMH33	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.47 9	65.981	0.502	0.7			0.7	5.046	Surcharged
SWMH34	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.41 3	65.981	0.568	6.4			2.3	26.886	Surcharged
SWMH35	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.38 4	65.981	0.597	6.4			2.6	28.824	Surcharged
SWMH12	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.57 5	65.982	0.407	0.7			0.7	3.165	Surcharged
SWMH14	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.45 5	65.982	0.527	1.6			1.5	8.099	Surcharged
SWMH15	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.39 0	65.981	0.592	2.1			1.9	10.584	Surcharged

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SWMH18	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.29 7	65.982	0.685	3.0			2.9	18.593	Surcharged
SWMH19	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.28 6	65.981	0.696	4.0			3.8	28.015	Surcharged
SWMH20	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.18 4	65.982	0.798	4.0			3.5	30.578	Surcharged
SWMH21	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.19 7	65.982	0.785	5.0			4.6	39.292	Surcharged
SWMH37	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.58 6	65.981	0.394	1.4			1.4	6.541	Surcharged
SWMH16	Design Criteria FSR: 2 years: +0 %: 180 mins: Winter		65.35 8	65.982	0.624	2.7			2.7	14.625	Surcharged
SW.33	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.55 3	65.62 8	65.679	0.051	4.0	0.057	0.000	3.9	3.157	OK
SW.34	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.72 5	65.53 4	65.612	0.078	9.7	0.088	0.000	8.9	5.740	OK
SW.35	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.68 2	65.35 4	65.449	0.095	13.7	0.108	0.000	12.3	7.813	OK
SW.36	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.50 8	65.19 2	65.297	0.105	14.4	0.119	0.000	13.0	8.661	OK
SW.37	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.48 7	65.13 2	65.254	0.122	20.4	0.137	0.000	18.6	12.004	OK
SW.38	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.40 9	64.92 9	65.060	0.132	21.4	0.149	0.000	19.0	13.160	OK
SW.39	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.33 1	64.86 4	64.998	0.134	21.9	0.151	0.000	20.1	14.416	OK
Simple Junction	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter		64.40 0	64.551	0.151	31.6			31.6	23.551	OK
SW.43	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.72 4	64.67 1	64.859	0.189	29.0	0.213	0.000	30.0	23.921	OK
SW.32	Design Criteria FSR: 2 years: +0 %: 120 mins: Summer	66.83 0	64.85 8	64.902	0.044	6.1	0.050	0.000	6.1	64.115	OK
SW.41	Design Criteria FSR: 2 years: +0 %: 30 mins: Winter	66.23 5	64.74 7	64.906	0.159	23.6	0.180	0.000	23.5	23.810	OK
BYPASS S	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.37 3	64.62 0	64.803	0.183	30.0	0.207	0.000	30.4	23.816	OK
SW.40	Design Criteria FSR: 2 years: +0 %: 30 mins: Winter	66.15 3	64.76 9	64.930	0.161	21.3	0.183	0.000	21.2	21.670	OK
SW.41 (1)	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.01 1	65.49 5	65.544	0.049	3.7	0.055	0.000	3.4	1.690	OK
SW.44	Design Criteria FSR: 2 years: +0 %: 15 mins: Winter	66.34 6	64.60 0	64.760	0.161	30.4	0.182	0.000	31.6	23.551	OK

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

Junction	Storm Event	Cover Level (m)	Invert Level (m)	Max. Level (m)	Max. Depth (m)	Max. Inflow (L/s)	Max. Resident Volume (m³)	Max. Flooded Volume (m³)	Max. Outflow (L/s)	Total Discharge Volume (m³)	Status
SWMH25	Design Criteria FSR: 30 years: +0 %: 60 mins: Winter	66.963	65.838	66.146	0.308	3.6	0.348	0.000	3.5	5.264	Surcharged
SWMH26	Design Criteria FSR: 30 years: +0 %: 60 mins: Winter	66.917	65.638	66.145	0.507	4.3	0.574	0.000	4.4	5.972	Surcharged
SWMH27	Design Criteria FSR: 30 years: +0 %: 60 mins: Winter	66.799	65.452	66.144	0.692	10.1	0.196	0.000	7.2	12.895	Surcharged
SWMH28	Design Criteria FSR: 30 years: +0 %: 60 mins: Winter	66.641	65.516	66.145	0.629	5.8	0.178	0.000	5.8	8.252	Surcharged
SW.03	Design Criteria FSR: 30 years: +0 %: 60 mins: Winter	66.827	65.325	66.139	0.814	19.8	0.920	0.000	18.9	32.202	Surcharged
SW.26	Design Criteria FSR: 30 years: +0 %: 60 mins: Winter	66.705	65.585	66.132	0.547	12.2	0.619	0.000	11.8	19.828	Surcharged
SW.01	Design Criteria FSR: 30 years: +0 %: 60 mins: Winter	66.704	65.579	66.146	0.567	8.0	0.160	0.000	8.2	11.731	Surcharged
SW.02	Design Criteria FSR: 30 years: +0 %: 60 mins: Winter	66.588	65.472	66.143	0.671	9.9	0.190	0.000	7.5	13.158	Surcharged
SW.31	Design Criteria FSR: 30 years: +0 %: 240 mins: Winter	66.864	64.891	66.102	1.211	8.5	2.140	0.000	6.0	136.446	Surcharged
SW.24	Design Criteria FSR: 30 years: +0 %: 60 mins: Winter	66.943	65.173	66.114	0.941	32.6	1.065	0.000	32.3	56.258	Surcharged
SW.27	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter	66.629	65.492	66.107	0.615	1.9	0.174	0.000	1.0	6.269	Surcharged
SW.28	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter	66.674	65.331	66.106	0.776	4.7	0.219	0.000	3.8	22.488	Surcharged
SW.29	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter	66.931	65.090	66.103	1.013	25.7	1.146	0.000	21.4	113.810	Surcharged
SW.30	Design Criteria FSR: 30 years: +0 %: 240 mins: Winter	66.931	65.047	66.103	1.056	17.2	1.194	0.000	12.6	188.009	Surcharged
SWMH33	Design Criteria FSR: 30 years: +0 %: 240 mins: Winter		65.479	66.103	0.624	9.1			0.7	43.519	Surcharged
SWMH34	Design Criteria FSR: 30 years: +0 %: 240 mins: Winter		65.413	66.103	0.690	13.9			2.3	68.246	Surcharged
SWMH35	Design Criteria FSR: 30 years: +0 %: 240 mins: Winter		65.384	66.103	0.719	14.0			2.6	75.153	Surcharged
SWMH12	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter		65.575	66.107	0.532	1.2			1.0	6.288	Surcharged
SWMH14	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter		65.455	66.107	0.652	3.4			1.8	13.628	Surcharged
SWMH15	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter		65.390	66.107	0.717	5.0			2.6	17.844	Surcharged

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SWMH18	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter	65.29 7	66.106	0.809	5.2				3.9	27.100	Surcharged
SWMH19	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter	65.28 6	66.106	0.820	5.8				4.7	37.460	Surcharged
SWMH20	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter	65.18 4	66.105	0.921	8.1				5.5	43.195	Surcharged
SWMH21	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter	65.19 7	66.105	0.908	8.3				6.9	51.848	Surcharged
SWMH37	Design Criteria FSR: 30 years: +0 %: 240 mins: Winter	65.58 6	66.102	0.516	2.0				1.9	13.556	Surcharged
SWMH16	Design Criteria FSR: 30 years: +0 %: 120 mins: Winter	65.35 8	66.107	0.749	5.2				3.8	23.559	Surcharged
SW.33	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.55 3	65.62 8	65.693	0.065	6.8	0.074	0.000	6.5	4.411	OK
SW.34	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.72 5	65.53 4	65.643	0.109	17.6	0.123	0.000	16.3	9.405	OK
SW.35	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.68 2	65.35 4	65.520	0.166	25.4	0.188	0.000	23.1	13.457	OK
SW.36	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.50 8	65.19 2	65.471	0.279	27.0	0.315	0.000	22.9	15.153	Surcharged
SW.37	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.48 7	65.13 2	65.442	0.310	37.0	0.351	0.000	27.0	21.541	Surcharged
SW.38	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.40 9	64.92 9	65.315	0.386	32.3	0.437	0.000	29.8	23.900	Surcharged
SW.39	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.33 1	64.86 4	65.257	0.393	35.3	0.444	0.000	32.5	26.353	Surcharged
Simple Junction	Design Criteria FSR: 30 years: +0 %: 15 mins: Summer		64.40 0	64.625	0.225	43.4			43.4	34.360	OK
SW.43	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.72 4	64.67 1	65.016	0.346	43.7	0.391	0.000	44.2	38.179	Surcharged
SW.32	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.83 0	64.85 8	65.019	0.161	5.3	0.182	0.000	6.3	6.755	OK
SW.41	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.23 5	64.74 7	65.123	0.376	41.2	0.426	0.000	38.7	31.731	Surcharged
BYPASS S	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.37 3	64.62 0	64.963	0.343	44.2	0.388	0.000	44.7	38.086	Surcharged
SW.40	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.15 3	64.76 9	65.162	0.393	37.6	0.444	0.000	34.7	28.599	Surcharged
SW.41 (1)	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.01 1	65.49 5	65.564	0.069	7.0	0.078	0.000	6.4	3.201	OK
SW.44	Design Criteria FSR: 30 years: +0 %: 15 mins: Winter	66.34 6	64.60 0	64.903	0.304	44.7	0.344	0.000	45.1	37.836	Surcharged