

Amey Group Plc		Page 1
South East Hub, Explorer II Fleming Way, Crawley West Sussex, RH10 9GT		
Date 04/08/2022 14:02 File Clayton Bridge 50 year ...	Designed by 139254 Checked by	
Innovyze	Network 2020.1.3	

STORM SEWER DESIGN by the Modified Rational Method

Design Criteria for Storm

Pipe Sizes M8 CJV Manhole Sizes STANDARD

FSR Rainfall Model - England and Wales

Return Period (years)	50	PIMP (%)	50
M5-60 (mm)	18.500	Add Flow / Climate Change (%)	0
Ratio R	0.315	Minimum Backdrop Height (m)	0.200
Maximum Rainfall (mm/hr)	50	Maximum Backdrop Height (m)	1.500
Maximum Time of Concentration (mins)	30	Min Design Depth for Optimisation (m)	0.600
Foul Sewage (l/s/ha)	0.000	Min Vel for Auto Design only (m/s)	0.80
Volumetric Runoff Coeff.	0.750	Min Slope for Optimisation (1:X)	500

Designed with Level Soffits

©1982-2020 Innovyze

Amey Group Plc										Page 2	
South East Hub, Explorer II Fleming Way, Crawley West Sussex, RH10 9GT											
Date 04/08/2022 14:02 File Clayton Bridge 50 year ...					Designed by 139254 Checked by						
Innovyze					Network 2020.1.3						
<u>Summary of Critical Results by Maximum Level (Rank 1) for Storm</u>											
<u>Simulation Criteria</u>											
Areal Reduction Factor 1.000 Additional Flow - % of Total Flow 0.000											
Hot Start (mins) 0 MADD Factor * 10m³/ha Storage 2.000											
Hot Start Level (mm) 0 Inlet Coeffiecient 0.800											
Manhole Headloss Coeff (Global) 0.500 Flow per Person per Day (l/per/day) 0.000											
Foul Sewage per hectare (l/s) 0.000											
Number of Input Hydrographs 0 Number of Storage Structures 1											
Number of Online Controls 1 Number of Time/Area Diagrams 0											
Number of Offline Controls 0 Number of Real Time Controls 0											
<u>Synthetic Rainfall Details</u>											
Rainfall Model FSR Ratio R 0.300											
Region England and Wales Cv (Summer) 0.750											
M5-60 (mm) 18.800 Cv (Winter) 0.840											
Margin for Flood Risk Warning (mm) 300.0 DVD Status OFF											
Analysis Timestep Fine Inertia Status OFF											
DTS Status ON											
Profile(s) Summer and Winter											
Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440, 2160, 2880, 4320, 5760, 7200, 8640, 10080											
Return Period(s) (years) 100											
Climate Change (%) 40											

Amey Group Plc		Page 3
South East Hub, Explorer II Fleming Way, Crawley West Sussex, RH10 9GT		
Date 04/08/2022 14:02	Designed by 139254	
File Clayton Bridge 50 year ...	Checked by	
Innovyze	Network 2020.1.3	

Summary of Critical Results by Maximum Level (Rank 1) for Storm

PN	US/MH Name	Surcharged Flooded		Half Drain		Pipe		Status	Level Exceeded
		Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	Time (mins)	Flow (l/s)		
S1.001	S2	-0.136	0.000	0.33			15.8	OK	
S1.002	S3	-0.113	0.000	0.48			23.3	OK	
S1.003	S4	-0.080	0.000	0.72			31.4	OK	
S1.004	S5	0.065	0.000	0.43			14.9	SURCHARGED	
S1.005	S6	0.207	0.000	0.30			18.3	SURCHARGED	
S1.006	S7	0.315	0.000	0.35			21.1	SURCHARGED	
S2.000	S8	-0.047	0.000	0.80			13.7	OK	
S2.001	S9	-0.030	0.000	0.98			16.3	OK	
S1.007	S10	0.383	0.000	0.11			26.9	SURCHARGED	
S1.008	S11	1.308	0.000	0.54			25.2	SURCHARGED	
S1.009	S12	1.454	0.000	0.02		128	5.8	SURCHARGED	
S1.010	S13	-0.154	0.000	0.22			5.8	OK	