

Link Engineering		Page 1
Lombard House 145 Great Charles Street Birmingham, B3 3LP	Knowsley Hub 50 Proposed Storm Drainage	
Date 15/08/2023 File Proposed Storm Drains.MDX	Designed by CH Checked by	
Innovyze	Network 2020.1.3	

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.840	Additional Flow - % of Total Flow	30.000
Areal Reduction Factor	1.000	MADD Factor * 10m³/ha Storage	2.000
Hot Start (mins)	0	Inlet Coeffiecient	0.800
Hot Start Level (mm)	0	Flow per Person per Day (l/per/day)	0.000
Manhole Headloss Coeff (Global)	0.500	Run Time (mins)	480
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	4

Number of Input Hydrographs 0 Number of Offline Controls 0 Number of Time/Area Diagrams 0
 Number of Online Controls 1 Number of Storage Structures 1 Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Winter
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.700	Storm Duration (mins)	240
Ratio R	0.389		

Summary of Results for 240 minute 100 year Winter (Storm)

Margin for Flood Risk Warning (mm)	300.0
Analysis Timestep 2.5 Second Increment (Extended)	
DTS Status	ON
DVD Status	OFF
Inertia Status	OFF

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

PN	US/MH Name	Water			Surcharged		Flooded		Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status
		Level (m)	Depth (m)	Volume (m³)	Flow	Volume	Flow	Volume					
S1.000	SMH1	44.444	1.030	749.661	0.44							6.3	FLOOD
S1.001	SMH2	44.573	1.351	0.000	0.49							28.8	FLOOD RISK
S2.000	SMH3	44.581	1.250	14.543	0.10							5.0	FLOOD
S1.002	SMH4	44.611	1.501	9.776	0.03							5.1	FLOOD
S1.003	SMH5	44.628	1.619	0.000	0.03							4.9	SURCHARGED
S3.000	SMH6	44.645	0.825	0.000	0.07							15.2	FLOOD RISK
S1.004	SMH7	44.639	2.008	0.000	0.31							4.8	FLOOD RISK
S1.005	SMH8	41.890	-0.094	0.000	0.30							4.8	OK