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Cedar Barn White Lodge Walgrave Northampton NN6 9PY	Highover Farm, Walsworth Surface Water 1 in 30 Year FSR	
Date 31/07/2026 13:53 File Drainage Network1.MDX	Designed by SWF Checked by	
XP Solutions Network 2020.1.3		

Simulation Criteria for Storm

Volumetric Runoff Coeff	0.750	Additional Flow - % of Total Flow	0.000
Areal Reduction Factor	1.000	MADD Factor * 10m ³ /ha Storage	0.000
Hot Start (mins)	0	Inlet Coefficient	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)	60
Foul Sewage per hectare (l/s)	0.000	Output Interval (mins)	1

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

Synthetic Rainfall Details

Rainfall Model	FSR	Profile Type	Summer
Return Period (years)	2	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.000	Storm Duration (mins)	30
Ratio R	0.450		

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Cedar Barn White Lodge
Walgrave
Northampton NN6 9PY

Highover Farm, Walsworth
Surface Water
1 in 30 Year FSR

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Network 2020.1.3

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

Simulation Criteria

Areal Reduction Factor 1.000

Additional Flow - % of Total Flow 0.000

Hot Start (mins) 0

MADD Factor * 10m³/ha Storage 0.000

Hot Start Level (mm) 0

Inlet Coefficient 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 0

Number of Online Controls 0

Number of Time/Area Diagrams 0

Number of Offline Controls 0

Number of Real Time Controls 0

Synthetic Rainfall Details

Rainfall Model FSR

Ratio R 0.450

Region England and Wales Cv (Summer) 0.750

M5-60 (mm) 20.000 Cv (Winter) 0.840

Margin for Flood Risk Warning (mm) 300.0

Analysis Timestep 2.5 Second Increment (Extended)

DTS Status OFF

DVD Status ON

Inertia Status ON

Profile(s) Summer and Winter

Duration(s) (mins) 15, 30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440

Return Period(s) (years) 30

Climate Change (%) 0

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S1.000	SA1	15 Winter	30	+0%					71.036
S1.001	SA2	15 Winter	30	+0%					70.535
S1.002	SA3	15 Winter	30	+0%					70.239
S1.003	SA4	15 Winter	30	+0%					69.467
S1.004	SA5	15 Winter	30	+0%					68.607
S2.000	SA6	15 Winter	30	+0%					68.914
S2.001	SA7	15 Winter	30	+0%					68.665
S3.000	SA8	15 Winter	30	+0%					69.417
S2.002	SA9	15 Winter	30	+0%	30/15 Summer				68.547
S2.003	SA10	15 Winter	30	+0%					68.050
S4.000	SA11	15 Winter	30	+0%	30/15 Summer				67.757
S1.005	SA12	15 Winter	30	+0%	30/15 Summer				67.667
S1.006	SA13	15 Winter	30	+0%					67.246
S5.000	SA14	15 Winter	30	+0%					70.591
S6.000	SA15	15 Winter	30	+0%	30/15 Summer				69.773
S5.001	SA16	15 Winter	30	+0%					69.450
S7.000	SA17	15 Winter	30	+0%					70.192
S7.001	SA18	15 Winter	30	+0%					68.571
S7.002	SA19	15 Winter	30	+0%					68.316

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

PN	US/MH Name	Surcharged Flooded		Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m³)						
S1.000	SA1	-0.114	0.000	0.47			25.7	OK	
S1.001	SA2	-0.165	0.000	0.41			53.5	OK	
S1.002	SA3	-0.151	0.000	0.49			81.2	OK	
S1.003	SA4	-0.133	0.000	0.58			108.9	OK	
S1.004	SA5	-0.118	0.000	0.67			136.4	OK	
S2.000	SA6	-0.111	0.000	0.50			26.3	OK	
S2.001	SA7	-0.135	0.000	0.57			53.5	OK	
S3.000	SA8	-0.133	0.000	0.34			25.8	OK	
S2.002	SA9	0.047	0.000	1.14			104.0	SURCHARGED	
S2.003	SA10	-0.275	0.000	0.32			127.4	OK	
S4.000	SA11	0.057	0.000	0.63			25.5	SURCHARGED	
S1.005	SA12	0.137	0.000	1.43			311.6	SURCHARGED	
S1.006	SA13	-0.134	0.000	0.84			311.0	OK	
S5.000	SA14	-0.109	0.000	0.51			34.8	OK	
S6.000	SA15	0.073	0.000	1.22			18.1	SURCHARGED	
S5.001	SA16	-0.100	0.000	0.77			53.1	OK	
S7.000	SA17	-0.133	0.000	0.34			28.5	OK	
S7.001	SA18	-0.104	0.000	0.72			57.6	OK	
S7.002	SA19	-0.139	0.000	0.54			92.6	OK	

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Summary of Critical Results by Maximum Level (Rank 1) for Storm									
PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
S7.003	SA20	15 Winter	30	+0%	30/15 Summer				67.403
S7.004	SA21	15 Winter	30	+0%					66.887
S8.000	SA22	15 Winter	30	+0%	30/15 Summer				66.767
S7.005	SA23	15 Winter	30	+0%	30/15 Summer				66.647
S9.000	SA25	15 Winter	30	+0%					69.761
S9.001	SA26	15 Winter	30	+0%					69.507
S10.000	SA27	15 Winter	30	+0%	30/15 Summer				72.570
S10.001	SA28	15 Winter	30	+0%					72.023
S10.002	SA29	15 Winter	30	+0%					70.198
S10.003	SA30	15 Winter	30	+0%					69.263
S10.004	SA31	15 Winter	30	+0%	30/15 Summer				67.940
S11.000	SA32	15 Winter	30	+0%					72.243
S11.001	SA33	15 Winter	30	+0%					69.739
S12.000	SA34	15 Winter	30	+0%					68.036
S12.001	SA35	15 Winter	30	+0%					67.185
S12.002	SA36	15 Winter	30	+0%	30/15 Summer				64.467
S13.000	SA37	15 Winter	30	+0%					65.376
S13.001	SA38	15 Winter	30	+0%	30/15 Summer				64.369
S14.000	SA39	15 Winter	30	+0%					66.073
S14.001	SA40	15 Winter	30	+0%	30/15 Winter				64.509
S12.003	SA41	15 Winter	30	+0%					64.195
PN	US/MH Name	Depth (m)	Volume (m³)	Flow / Cap.	Overflow (l/s)	Half Drain Time (mins)	Pipe Flow (l/s)	Status	Level Exceeded
S7.003	SA20	0.128	0.000	1.25			129.5	SURCHARGED	
S7.004	SA21	-0.163	0.000	0.59			162.8	OK	
S8.000	SA22	0.192	0.000	0.87			32.6	SURCHARGED	
S7.005	SA23	0.232	0.000	1.78			229.3	SURCHARGED	
S9.000	SA25	-0.114	0.000	0.48			27.7	OK	
S9.001	SA26	-0.093	0.000	0.64			57.5	OK	
S10.000	SA27	0.195	0.000	1.36			19.1	SURCHARGED	
S10.001	SA28	-0.127	0.000	0.38			38.3	OK	
S10.002	SA29	-0.102	0.000	0.56			59.6	OK	
S10.003	SA30	-0.087	0.000	0.68			80.9	OK	
S10.004	SA31	0.342	0.000	1.65			100.9	SURCHARGED	
S11.000	SA32	-0.057	0.000	0.67			24.7	OK	
S11.001	SA33	-0.111	0.000	0.50			51.4	OK	
S12.000	SA34	-0.064	0.000	0.62			18.8	OK	
S12.001	SA35	-0.140	0.000	0.30			38.8	OK	
S12.002	SA36	0.074	0.000	1.37			58.8	SURCHARGED	
S13.000	SA37	-0.074	0.000	0.50			18.8	OK	
S13.001	SA38	0.044	0.000	1.51			39.2	SURCHARGED	
S14.000	SA39	-0.077	0.000	0.47			19.2	OK	
S14.001	SA40	0.009	0.000	1.01			38.4	SURCHARGED	
S12.003	SA41	-0.105	0.000	0.74			134.4	OK	
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