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Honeywood House Whitfield Kent CT16 3EH		Broad Oak 100 year + 20%
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XP Solutions		

Existing Network Details for Storm


PN	Length (m)	Fall (m)	Slope (1:X)	I.Area (ha)	T.E. (mins)	Base Flow (l/s)	k (mm)	HYD SECT	DIA (mm)	Section Type
1.000	18.700	0.120	155.8	0.054	2.00	0.0	0.600	o	300	Pipe/Conduit
1.001	22.000	0.140	157.1	0.058	0.00	0.0	0.600	o	300	Pipe/Conduit
1.002	16.200	0.100	162.0	0.047	0.00	0.0	0.600	o	300	Pipe/Conduit
1.003	20.700	0.130	159.2	0.023	0.00	0.0	0.600	o	300	Pipe/Conduit
1.004	6.000	0.035	171.4	0.035	0.00	0.0	0.600	o	300	Pipe/Conduit
1.005	15.900	0.100	159.0	0.025	0.00	0.0	0.600	o	300	Pipe/Conduit
1.006	5.900	0.040	147.5	0.033	0.00	0.0	0.600	o	300	Pipe/Conduit
1.007	12.000	0.075	160.0	0.032	0.00	0.0	0.600	o	300	Pipe/Conduit
1.008	20.650	0.000	0.0	0.017	0.00	0.0	0.600	o	300	Pipe/Conduit
1.009	1.000	0.000	0.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit
1.010	1.000	0.000	0.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit
1.011	1.000	0.000	0.0	0.000	0.00	0.0	0.600	o	300	Pipe/Conduit

Network Results Table

PN	US/IL (m)	E I.Area (ha)	Σ Base Flow (l/s)	Vel (m/s)	Cap (l/s)
1.000	49.675	0.054	0.0	1.26	88.9
1.001	49.555	0.112	0.0	1.25	88.5
1.002	49.415	0.159	0.0	1.23	87.1
1.003	49.315	0.182	0.0	1.24	87.9
1.004	49.185	0.217	0.0	1.20	84.7
1.005	49.150	0.242	0.0	1.24	88.0
1.006	49.050	0.275	0.0	1.29	91.4
1.007	49.010	0.307	0.0	1.24	87.7
1.008	48.935	0.324	0.0	0.00	0.0
1.009	48.935	0.324	0.0	0.00	0.0
1.010	48.935	0.324	0.0	0.00	0.0
1.011	48.935	0.324	0.0	0.00	0.0

Free Flowing Outfall Details for Storm

Outfall Pipe Number	Outfall Name	C. Level (m)	I. Level (m)	Min I. Level (m)	D,L (mm)	W (mm)
1.011	dummy	51.230	48.935	48.935	0	0


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Online Controls for Storm

Pump Manhole: dummy, DS/PN: 1.011, Volume (m<sup>3</sup>): 4.0

Invert Level (m) 48.935

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.200	0.0000	1.400	0.0000	2.600	0.0000	3.800	0.0000	5.000	0.0000
0.400	0.0000	1.600	0.0000	2.800	0.0000	4.000	0.0000	5.200	0.0000
0.600	0.0000	1.800	0.0000	3.000	0.0000	4.200	0.0000	5.400	0.0000
0.800	0.0000	2.000	0.0000	3.200	0.0000	4.400	0.0000	5.600	0.0000
1.000	0.0000	2.200	0.0000	3.400	0.0000	4.600	0.0000	5.800	0.0000
1.200	0.0000	2.400	0.0000	3.600	0.0000	4.800	0.0000	6.000	0.0000

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Storage Structures for Storm


Tank or Pond Manhole: Pond Outlet, DS/PN: 1.009

Invert Level (m) 48.935

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	72.0	0.500	96.0	1.000	121.0	1.500	148.0	2.000	177.0

Lined Soakaway Manhole: Soakaway, DS/PN: 1.010

Infiltration Coefficient Base (m/hr)	0.00000	Ring Diameter (m)	1.50
Infiltration Coefficient Side (m/hr)	0.64000	Pit Multiplier	1.5
Safety Factor	2.0	Number Required	2
Porosity	0.30	Cap Volume Depth (m)	3.500
Invert Level (m)	47.230	Cap Infiltration Depth (m)	1.500

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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 * 10m <sup>3</sup> /ha Storage	2.000
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 Offline Controls	0	Number of Time/Area Diagrams	0
Number of Online Controls	1	Number of Storage Structures	2	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FSR M5-60 (mm)	26.250	Cv (Summer)	0.750	
Region	England and Wales	Ratio R	0.391	Cv (Winter)	0.840

Margin for Flood Risk Warning (mm)	100.0
Analysis Timestep	2.5 Second Increment (Extended)
DTS Status	ON
DVD Status	ON
Inertia Status	ON

Profile(s)	Summer and Winter
Duration(s) (mins)	30, 60, 120, 180, 240, 360, 480, 600, 720, 960, 1440
Return Period(s) (years)	1, 30, 100
Climate Change (%)	0, 0, 20

PN	US/MH Name	Event	US/CL (m)	Water Level (m)	Flooded Volume (m <sup>3</sup> )	Discharge Vol (m <sup>3</sup> )	Pipe Flow (l/s)	Status
1.000	S1.0	30 minute 100 year Summer I+20%	51.175	50.985	0.000	20.522	30.7	SURCHARGED
1.001	S1.1	30 minute 100 year Summer I+20%	51.160	50.967	0.000	41.529	52.2	SURCHARGED
1.002	S1.2	30 minute 100 year Summer I+20%	51.140	50.862	0.000	57.357	70.9	SURCHARGED
1.003	S1.3	30 minute 100 year Summer I+20%	51.310	50.764	0.000	64.203	79.5	SURCHARGED
1.004	S1.4	30 minute 100 year Summer I+20%	51.055	50.632	0.000	74.990	96.0	SURCHARGED
1.005	S1.5	30 minute 100 year Summer I+20%	50.990	50.489	0.000	82.961	107.1	SURCHARGED
1.006	S1.6	480 minute 100 year Winter I+20%	51.110	50.412	0.000	216.499	17.6	SURCHARGED
1.007	S1.7	480 minute 100 year Winter I+20%	51.230	50.411	0.000	241.237	19.7	SURCHARGED
1.008	Pond Inlet	480 minute 100 year Winter I+20%	51.230	50.409	0.000	252.855	20.6	SURCHARGED
1.009	Pond Outlet	480 minute 100 year Winter I+20%	51.230	50.406	0.000	147.900	4.7	SURCHARGED
1.010	Soakaway	480 minute 100 year Winter I+20%	51.230	50.403	0.000	1.803	0.7	SURCHARGED
1.011	dummy	480 minute 100 year Winter I+20%	51.230	50.403	0.000	0.000	0.0	SURCHARGED