

Bellamy Wallace Partnership LLP		Page 5
Grange House Bearsted Green Business Centre Bearsted, Kent, ME14 4DZ	East Hill, Chatham kent	
Date 13/01/2023 14:10 File SA3 Soakaway.MDX	Designed by C Hoskins Checked by S Wright	
Innovyze Network 2017.1.2		

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	2.000
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 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	FEH
Return Period (years)	2
FEH Rainfall Version	2013
Site Location	GB 577291 164528 TQ 77291 64528
Data Type	Point
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Storm Duration (mins)	30

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Bellamy Wallace Partnership LLP		Page 6
Grange House Bearsted Green Business Centre Bearsted, Kent, ME14 4DZ	East Hill, Chatham kent	
Date 13/01/2023 14:10 File SA3 Soakaway.MDX	Designed by C Hoskins Checked by S Wright	
Innovyze	Network 2017.1.2	
Online Controls for Storm Weir Manhole: 7, DS/PN: 1.003, Volume (m³): 5.3 Discharge Coef 0.544 Width (m) 0.300 Invert Level (m) 97.400		
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Bellamy Wallace Partnership LLP		Page 7																		
Grange House Bearsted Green Business Centre Bearsted, Kent, ME14 4DZ	East Hill, Chatham kent																			
Date 13/01/2023 14:10 File SA3 Soakaway.MDX	Designed by C Hoskins Checked by S Wright																			
Innovyze Network 2017.1.2																				
Storage Structures for Storm Cellular Storage Manhole: 7, DS/PN: 1.003 Invert Level (m) 93.710 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.17000 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.17000 <table><thead><tr><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th><th>Depth (m)</th><th>Area (m²)</th><th>Inf. Area (m²)</th></tr></thead><tbody><tr><td>0.000</td><td>22.5</td><td>22.5</td><td>1.201</td><td>0.0</td><td>45.3</td></tr><tr><td>1.200</td><td>22.5</td><td>45.3</td><td></td><td></td><td></td></tr></tbody></table>			Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)	0.000	22.5	22.5	1.201	0.0	45.3	1.200	22.5	45.3			
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)															
0.000	22.5	22.5	1.201	0.0	45.3															
1.200	22.5	45.3																		
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Bellamy Wallace Partnership LLP		Page 8
Grange House Bearsted Green Business Centre Bearsted, Kent, ME14 4DZ	East Hill, Chatham kent	
Date 13/01/2023 14:10 File SA3 Soakaway.MDX	Designed by C Hoskins Checked by S Wright	
Innovyze Network 2017.1.2		

2 year Return Period 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	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	1	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	2013
Site Location	GB 577291 164528 TQ 77291 64528
Data Type	Point
Cv (Summer)	0.750
Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	2, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surchage	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
1.000	1	15 Winter	2	+0%					98.937
1.001	2	15 Winter	2	+0%					97.108
1.002	3	15 Winter	2	+0%	100/240 Winter				96.742
2.000	3	15 Winter	2	+0%	100/30 Summer				94.383
2.001	5	15 Winter	2	+0%	30/60 Summer				94.141
2.002	6	240 Winter	2	+0%	30/15 Summer				94.088
1.003	7	240 Winter	2	+0%	2/120 Winter				94.088

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Bellamy Wallace Partnership LLP		Page 9
Grange House Bearsted Green Business Centre Bearsted, Kent, ME14 4DZ	East Hill, Chatham kent	
Date 13/01/2023 14:10 File SA3 Soakaway.MDX	Designed by C Hoskins Checked by S Wright	
Innovyze	Network 2017.1.2	

2 year Return Period Summary of Critical Results by Maximum Level (Rank 1) for
Storm

PN	US/MH Name	Surcharged	Flooded	Flow / Cap.	Overflow (l/s)	Pipe	Status	Level
		Depth (m)	Volume (m³)			Flow (l/s)		Exceeded
1.000	1	-0.113	0.000	0.14		5.4	OK	
1.001	2	-0.242	0.000	0.08		8.5	OK	
1.002	3	-0.238	0.000	0.10		8.5	OK	
2.000	3	-0.189	0.000	0.06		2.3	OK	
2.001	5	-0.184	0.000	0.08		3.4	OK	14
2.002	6	-0.044	0.000	0.02		0.8	OK	15
1.003	7	0.031	0.000	0.00		0.0	SURCHARGED	

Bellamy Wallace Partnership LLP		Page 10
Grange House Bearsted Green Business Centre Bearsted, Kent, ME14 4DZ	East Hill, Chatham kent	
Date 13/01/2023 14:10 File SA3 Soakaway.MDX	Designed by C Hoskins Checked by S Wright	
Innovyze Network 2017.1.2		

30 year Return Period 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	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	1	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	2013
Site Location	GB 577291 164528 TQ 77291 64528
Data Type	Point
Cv (Summer)	0.750
Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	2, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
1.000	1	15 Winter	30	+0%					98.958
1.001	2	15 Winter	30	+0%					97.142
1.002	3	15 Winter	30	+0%	100/240 Winter				96.779
2.000	3	240 Winter	30	+0%	100/30 Summer				94.504
2.001	5	240 Winter	30	+0%	30/60 Summer				94.504
2.002	6	240 Winter	30	+0%	30/15 Summer				94.504
1.003	7	240 Winter	30	+0%	2/120 Winter				94.504

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Bellamy Wallace Partnership LLP		Page 11
Grange House Bearsted Green Business Centre Bearsted, Kent, ME14 4DZ	East Hill, Chatham kent	
Date 13/01/2023 14:10 File SA3 Soakaway.MDX	Designed by C Hoskins Checked by S Wright	
Innovyze	Network 2017.1.2	

30 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

PN	US/MH Name	Surcharged Flooded		Flow / Cap.	Overflow (l/s)	Pipe Flow (l/s)	Status	Level Exceeded
		Depth (m)	Volume (m ³)					
1.000	1	-0.092	0.000	0.32		12.2	OK	
1.001	2	-0.208	0.000	0.20		20.6	OK	
1.002	3	-0.201	0.000	0.23		20.5	OK	
2.000	3	-0.068	0.000	0.03		1.0	OK	
2.001	5	0.179	0.000	0.03		1.4	SURCHARGED*	14
2.002	6	0.372	0.000	0.03		1.0	FLOOD RISK*	15
1.003	7	0.447	0.000	0.00		0.0	SURCHARGED	

Bellamy Wallace Partnership LLP		Page 12
Grange House Bearsted Green Business Centre Bearsted, Kent, ME14 4DZ	East Hill, Chatham kent	
Date 13/01/2023 14:10 File SA3 Soakaway.MDX	Designed by C Hoskins Checked by S Wright	
Innovyze Network 2017.1.2		

100 year Return Period 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	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	1	Number of Real Time Controls	0

Synthetic Rainfall Details

Rainfall Model	FEH
FEH Rainfall Version	2013
Site Location	GB 577291 164528 TQ 77291 64528
Data Type	Point
Cv (Summer)	0.750
Cv (Winter)	0.840

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

Profile(s)	Summer and Winter
Duration(s) (mins)	15, 30, 60, 120, 240, 360, 480, 960, 1440
Return Period(s) (years)	2, 30, 100
Climate Change (%)	0, 0, 40

PN	US/MH Name	Storm	Return Period	Climate Change	First (X) Surcharge	First (Y) Flood	First (Z) Overflow	Overflow Act.	Water Level (m)
1.000	1	15 Winter	100	+40%					98.982
1.001	2	480 Winter	100	+40%					97.213
1.002	3	480 Winter	100	+40%	100/240 Winter				97.212
2.000	3	120 Winter	100	+40%	100/30 Summer				95.525
2.001	5	120 Winter	100	+40%	30/60 Summer				94.850
2.002	6	60 Winter	100	+40%	30/15 Summer				94.700
1.003	7	480 Winter	100	+40%	2/120 Winter				97.213

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Bellamy Wallace Partnership LLP		Page 13
Grange House Bearsted Green Business Centre Bearsted, Kent, ME14 4DZ	East Hill, Chatham kent	
Date 13/01/2023 14:10	Designed by C Hoskins	
File SA3 Soakaway.MDX	Checked by S Wright	
Innovyze	Network 2017.1.2	

100 year Return Period Summary of Critical Results by Maximum Level (Rank 1)
for Storm

PN	US/MH Name	Surcharged		Flooded		Pipe		Status	Level Exceeded
		Depth (m)	Volume (m ³)	Flow / Cap.	Overflow (l/s)	Flow (l/s)			
1.000	1	-0.068	0.000	0.57		22.0		OK	
1.001	2	-0.137	0.000	0.04		4.5		OK	
1.002	3	0.232	0.000	0.05		4.5		SURCHARGED	
2.000	3	0.953	0.000	0.07		2.8		FLOOD RISK*	
2.001	5	0.525	0.000	0.07		2.9		FLOOD RISK*	14
2.002	6	0.568	0.000	0.08		3.1		FLOOD	15
1.003	7	3.156	0.000	0.00		0.0		FLOOD RISK	