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North Kiln Felaw Maltings 46 Felaw Street Ipswich IP2 8PN			Kiln Court Unit 4			
Date November 2017 File 668050-CALC-SBU-C-Unit_...			Designed by D O'Connell Checked by CB/BF			
XP Solutions			Source Control 2016.1			
Summary of Results for 100 year Return Period (+30%)						
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status	
15 min Summer	43.244	1.244	1.4	1.6	O K	
30 min Summer	43.170	1.170	1.4	1.5	O K	
60 min Summer	42.992	0.992	1.3	1.3	O K	
120 min Summer	42.738	0.738	1.1	1.0	O K	
180 min Summer	42.571	0.571	1.0	0.7	O K	
240 min Summer	42.458	0.458	0.9	0.6	O K	
360 min Summer	42.314	0.314	0.7	0.4	O K	
480 min Summer	42.231	0.231	0.6	0.3	O K	
600 min Summer	42.179	0.179	0.5	0.2	O K	
720 min Summer	42.144	0.144	0.5	0.2	O K	
960 min Summer	42.101	0.101	0.4	0.1	O K	
1440 min Summer	42.061	0.061	0.3	0.1	O K	
2160 min Summer	42.038	0.038	0.2	0.0	O K	
2880 min Summer	42.032	0.032	0.2	0.0	O K	
4320 min Summer	42.025	0.025	0.1	0.0	O K	
5760 min Summer	42.022	0.022	0.1	0.0	O K	
7200 min Summer	42.019	0.019	0.1	0.0	O K	
8640 min Summer	42.017	0.017	0.1	0.0	O K	
10080 min Summer	42.016	0.016	0.1	0.0	O K	
15 min Winter	43.411	1.411	1.5	1.8	O K	
30 min Winter	43.301	1.301	1.5	1.7	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)		
15 min Summer	214.874	0.0	2.4	14		
30 min Summer	124.391	0.0	2.8	22		
60 min Summer	72.011	0.0	3.2	38		
120 min Summer	41.687	0.0	3.8	70		
180 min Summer	30.279	0.0	4.1	102		
240 min Summer	24.133	0.0	4.3	132		
360 min Summer	17.528	0.0	4.7	192		
480 min Summer	13.971	0.0	5.0	250		
600 min Summer	11.716	0.0	5.3	310		
720 min Summer	10.147	0.0	5.5	370		
960 min Summer	8.088	0.0	5.8	490		
1440 min Summer	5.874	0.0	6.3	734		
2160 min Summer	4.267	0.0	6.9	1080		
2880 min Summer	3.401	0.0	7.3	1440		
4320 min Summer	2.381	0.0	7.7	2192		
5760 min Summer	1.848	0.0	8.0	2880		
7200 min Summer	1.519	0.0	8.2	3632		
8640 min Summer	1.294	0.0	8.4	4248		
10080 min Summer	1.130	0.0	8.5	4992		
15 min Winter	214.874	0.0	2.7	14		
30 min Winter	124.391	0.0	3.1	24		
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<u>Summary of Results for 100 year Return Period (+30%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m³)	Status
60 min Winter	43.045	1.045	1.3	1.4	O K
120 min Winter	42.691	0.691	1.1	0.9	O K
180 min Winter	42.484	0.484	0.9	0.6	O K
240 min Winter	42.357	0.357	0.8	0.5	O K
360 min Winter	42.218	0.218	0.6	0.3	O K
480 min Winter	42.150	0.150	0.5	0.2	O K
600 min Winter	42.111	0.111	0.4	0.1	O K
720 min Winter	42.087	0.087	0.4	0.1	O K
960 min Winter	42.061	0.061	0.3	0.1	O K
1440 min Winter	42.038	0.038	0.2	0.0	O K
2160 min Winter	42.030	0.030	0.2	0.0	O K
2880 min Winter	42.026	0.026	0.1	0.0	O K
4320 min Winter	42.021	0.021	0.1	0.0	O K
5760 min Winter	42.017	0.017	0.1	0.0	O K
7200 min Winter	42.015	0.015	0.1	0.0	O K
8640 min Winter	42.014	0.014	0.0	0.0	O K
10080 min Winter	42.013	0.013	0.0	0.0	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Discharge Volume (m³)	Time-Peak (mins)	
60 min Winter	72.011	0.0	3.6	42	
120 min Winter	41.687	0.0	4.2	74	
180 min Winter	30.279	0.0	4.6	104	
240 min Winter	24.133	0.0	4.9	134	
360 min Winter	17.528	0.0	5.3	194	
480 min Winter	13.971	0.0	5.6	252	
600 min Winter	11.716	0.0	5.9	310	
720 min Winter	10.147	0.0	6.1	370	
960 min Winter	8.088	0.0	6.5	490	
1440 min Winter	5.874	0.0	7.1	730	
2160 min Winter	4.267	0.0	7.7	1108	
2880 min Winter	3.401	0.0	8.2	1428	
4320 min Winter	2.381	0.0	8.6	2152	
5760 min Winter	1.848	0.0	8.9	2952	
7200 min Winter	1.519	0.0	9.2	3664	
8640 min Winter	1.294	0.0	9.4	4488	
10080 min Winter	1.130	0.0	9.6	5088	
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Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
Site Location GB 528450 185200 TQ 28450 85200	
C (1km)	-0.026
D1 (1km)	0.331
D2 (1km)	0.331
D3 (1km)	0.240
E (1km)	0.334
F (1km)	2.478
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+30

Time Area Diagram

Total Area (ha) 0.006

Time	(mins)	Area
From:	To:	(ha)

0 4 0.006

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Model Details

Storage is Online Cover Level (m) 43.710

Tank or Pond Structure

Invert Level (m) 42.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	1.3	1.710	1.3	1.711	0.0

Orifice Outflow Control

Diameter (m) 0.025 Discharge Coefficient 0.600 Invert Level (m) 42.000

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