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26 HIGH ST. HADLEIGH IPSWICH SUFFOLK IP7 5AP	Queenswood Sch 47175 Existing 1 in 1 year	
Date 04/07/2017 10:18 File existing 1 in 1 inc Gre...	Designed by MJG Checked by	
Micro Drainage	Source Control 2015.1	

Summary of Results for 30 year Return Period

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m ³)	Status
15 min Summer	50.305	1.095	28.4	7.6	FLOOD
30 min Summer	50.305	1.095	28.4	7.1	FLOOD
60 min Summer	50.302	1.092	28.4	4.1	FLOOD
120 min Summer	49.957	0.747	23.9	1.8	O K
180 min Summer	49.560	0.350	17.6	1.1	O K
240 min Summer	49.419	0.209	14.6	0.6	O K
360 min Summer	49.365	0.155	10.9	0.4	O K
480 min Summer	49.346	0.136	8.8	0.3	O K
600 min Summer	49.333	0.123	7.4	0.3	O K
720 min Summer	49.321	0.111	6.4	0.2	O K
960 min Summer	49.305	0.095	5.1	0.2	O K
1440 min Summer	49.290	0.080	3.7	0.1	O K
2160 min Summer	49.280	0.070	2.7	0.1	O K
2880 min Summer	49.272	0.062	2.2	0.1	O K
4320 min Summer	49.262	0.052	1.6	0.1	O K
5760 min Summer	49.257	0.047	1.3	0.1	O K
7200 min Summer	49.253	0.043	1.1	0.1	O K
8640 min Summer	49.249	0.039	0.9	0.0	O K
10080 min Summer	49.247	0.037	0.8	0.0	O K
15 min Winter	50.308	1.098	28.4	9.7	FLOOD
30 min Winter	50.305	1.095	28.4	7.5	FLOOD


Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Discharge Volume (m ³)	Time-Peak (mins)
15 min Summer	77.421	5.5	23.8	13
30 min Summer	49.961	5.0	30.7	20
60 min Summer	30.811	1.9	39.5	36
120 min Summer	18.447	0.0	47.3	64
180 min Summer	13.527	0.0	52.0	94
240 min Summer	10.810	0.0	55.5	124
360 min Summer	7.857	0.0	60.5	182
480 min Summer	6.264	0.0	64.3	242
600 min Summer	5.251	0.0	67.3	300
720 min Summer	4.545	0.0	70.0	362
960 min Summer	3.617	0.0	74.2	482
1440 min Summer	2.619	0.0	80.6	712
2160 min Summer	1.894	0.0	87.5	1064
2880 min Summer	1.505	0.0	92.6	1420
4320 min Summer	1.086	0.0	100.3	2168
5760 min Summer	0.862	0.0	106.1	2864
7200 min Summer	0.720	0.0	110.8	3576
8640 min Summer	0.621	0.0	114.8	4408
10080 min Summer	0.549	0.0	118.2	4960
15 min Winter	77.421	7.5	27.7	13
30 min Winter	49.961	5.3	35.9	22

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Summary of Results for 30 year Return Period

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m ³)	Status
60 min Winter	50.300	1.090	28.3	2.4	FLOOD
120 min Winter	49.584	0.374	18.0	1.2	O K
180 min Winter	49.389	0.179	13.6	0.5	O K
240 min Winter	49.365	0.155	10.9	0.4	O K
360 min Winter	49.338	0.128	7.9	0.3	O K
480 min Winter	49.320	0.110	6.3	0.2	O K
600 min Winter	49.308	0.098	5.3	0.2	O K
720 min Winter	49.299	0.089	4.7	0.2	O K
960 min Winter	49.290	0.080	3.7	0.1	O K
1440 min Winter	49.280	0.070	2.7	0.1	O K
2160 min Winter	49.269	0.059	2.0	0.1	O K
2880 min Winter	49.262	0.052	1.6	0.1	O K
4320 min Winter	49.254	0.044	1.1	0.1	O K
5760 min Winter	49.250	0.040	0.9	0.0	O K
7200 min Winter	49.246	0.036	0.8	0.0	O K
8640 min Winter	49.244	0.034	0.7	0.0	O K
10080 min Winter	49.242	0.032	0.6	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Discharge Volume (m ³)	Time-Peak (mins)
60 min Winter	30.811	0.3	44.3	34
120 min Winter	18.447	0.0	53.0	66
180 min Winter	13.527	0.0	58.3	94
240 min Winter	10.810	0.0	62.1	124
360 min Winter	7.857	0.0	67.7	182
480 min Winter	6.264	0.0	72.0	240
600 min Winter	5.251	0.0	75.4	308
720 min Winter	4.545	0.0	78.3	364
960 min Winter	3.617	0.0	83.1	490
1440 min Winter	2.619	0.0	90.3	720
2160 min Winter	1.894	0.0	98.0	1076
2880 min Winter	1.505	0.0	103.7	1492
4320 min Winter	1.086	0.0	112.4	2188
5760 min Winter	0.862	0.0	118.8	2832
7200 min Winter	0.720	0.0	124.1	3816
8640 min Winter	0.621	0.0	128.5	4120
10080 min Winter	0.549	0.0	132.4	5128

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.000	Shortest Storm (mins)	15
Ratio R	0.422	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+0


Pipe Network

Volume in Pipe Network (m³)	1	Dia of Outfall Pipe (m)	0.2
Slope of Outfall Pipe (1:X)	150	Roughness of Outfall Pipe (mm)	0.600

Time Area Diagram

Total Area (ha) 0.171

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From:	To:	From:	To:	From:	To:
0	4 0.168	4	8 0.001	8	12 0.002

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Model Details

Storage is Online Cover Level (m) 50.300

Pipe Structure

Diameter (m) 0.150 Length (m) 60.000
Slope (1:X) 150.000 Invert Level (m) 49.210

Pipe Outflow Control

Diameter (m) 0.150 Entry Loss Coefficient 0.500
Slope (1:X) 150.0 Coefficient of Contraction 0.600
Length (m) 40.000 Upstream Invert Level (m) 49.210
Roughness k (mm) 0.600