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26 HIGH ST. HADLEIGH IPSWICH SUFFOLK IP7 5AP	Queenswood Sch 47175 Existing 1 in 1 year	
Date 04/07/2017 10:19 File existing 1 in 1 inc Gre...	Designed by MJG Checked by	
Micro Drainage	Source Control 2015.1	

Summary of Results for 100 year Return Period

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m ³)	Status
15 min Summer	50.311	1.101	28.5	13.6	FLOOD
30 min Summer	50.311	1.101	28.5	13.0	FLOOD
60 min Summer	50.306	1.096	28.4	7.8	FLOOD
120 min Summer	50.301	1.091	28.4	2.9	FLOOD
180 min Summer	49.954	0.744	23.9	1.8	O K
240 min Summer	49.620	0.410	18.7	1.3	O K
360 min Summer	49.398	0.188	14.1	0.5	O K
480 min Summer	49.369	0.159	11.4	0.4	O K
600 min Summer	49.353	0.143	9.5	0.3	O K
720 min Summer	49.340	0.130	8.2	0.3	O K
960 min Summer	49.323	0.113	6.5	0.2	O K
1440 min Summer	49.300	0.090	4.7	0.2	O K
2160 min Summer	49.287	0.077	3.4	0.1	O K
2880 min Summer	49.280	0.070	2.7	0.1	O K
4320 min Summer	49.268	0.058	1.9	0.1	O K
5760 min Summer	49.262	0.052	1.6	0.1	O K
7200 min Summer	49.258	0.048	1.3	0.1	O K
8640 min Summer	49.254	0.044	1.1	0.1	O K
10080 min Summer	49.252	0.042	1.0	0.1	O K
15 min Winter	50.313	1.103	28.5	15.2	FLOOD
30 min Winter	50.312	1.102	28.5	14.0	FLOOD


Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Discharge Volume (m ³)	Time-Peak (mins)
15 min Summer	100.544	11.4	32.1	13
30 min Summer	65.411	10.9	41.7	22
60 min Summer	40.510	5.7	50.7	38
120 min Summer	24.246	0.8	62.2	66
180 min Summer	17.728	0.0	68.2	94
240 min Summer	14.118	0.0	72.4	124
360 min Summer	10.201	0.0	78.5	182
480 min Summer	8.103	0.0	83.1	242
600 min Summer	6.773	0.0	86.9	302
720 min Summer	5.848	0.0	90.0	362
960 min Summer	4.634	0.0	95.1	488
1440 min Summer	3.335	0.0	102.6	712
2160 min Summer	2.396	0.0	110.6	1080
2880 min Summer	1.893	0.0	116.6	1464
4320 min Summer	1.357	0.0	125.3	2168
5760 min Summer	1.070	0.0	131.8	2856
7200 min Summer	0.890	0.0	137.0	3640
8640 min Summer	0.765	0.0	141.3	4288
10080 min Summer	0.673	0.0	145.1	5016
15 min Winter	100.544	13.0	35.1	14
30 min Winter	65.411	11.8	45.7	23

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Summary of Results for 100 year Return Period

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m ³)	Status
60 min Winter	50.305	1.095	28.4	7.2	FLOOD
120 min Winter	49.970	0.760	24.1	1.8	O K
180 min Winter	49.561	0.351	17.6	1.1	O K
240 min Winter	49.399	0.189	14.2	0.5	O K
360 min Winter	49.360	0.150	10.3	0.3	O K
480 min Winter	49.341	0.131	8.2	0.3	O K
600 min Winter	49.327	0.117	6.9	0.2	O K
720 min Winter	49.316	0.106	6.0	0.2	O K
960 min Winter	49.300	0.090	4.7	0.2	O K
1440 min Winter	49.287	0.077	3.4	0.1	O K
2160 min Winter	49.277	0.067	2.5	0.1	O K
2880 min Winter	49.269	0.059	2.0	0.1	O K
4320 min Winter	49.259	0.049	1.4	0.1	O K
5760 min Winter	49.255	0.045	1.1	0.1	O K
7200 min Winter	49.250	0.040	0.9	0.1	O K
8640 min Winter	49.247	0.037	0.8	0.0	O K
10080 min Winter	49.245	0.035	0.7	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m ³)	Discharge Volume (m ³)	Time-Peak (mins)
60 min Winter	40.510	5.1	58.2	40
120 min Winter	24.246	0.0	69.7	64
180 min Winter	17.728	0.0	76.4	94
240 min Winter	14.118	0.0	81.1	124
360 min Winter	10.201	0.0	87.9	184
480 min Winter	8.103	0.0	93.1	246
600 min Winter	6.773	0.0	97.3	306
720 min Winter	5.848	0.0	100.8	362
960 min Winter	4.634	0.0	106.5	480
1440 min Winter	3.335	0.0	115.0	734
2160 min Winter	2.396	0.0	123.9	1096
2880 min Winter	1.893	0.0	130.5	1468
4320 min Winter	1.357	0.0	140.3	2188
5760 min Winter	1.070	0.0	147.6	2904
7200 min Winter	0.890	0.0	153.4	3680
8640 min Winter	0.765	0.0	158.3	4432
10080 min Winter	0.673	0.0	162.5	4944

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Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	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:	(ha)	From:	To:	(ha)	From:	To:	(ha)
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