



Richard Jackson Plc		Page 1
26 HIGH ST. HADLEIGH IPSWICH SUFFOLK IP7 5AP	Geo-cell Tank Design Charlie Ratchford Camden	
Date 31.10.2018 File CHARLIE RARTCHFORD-47707...	Designed by DRM Checked by DRM	
Micro Drainage	Source Control 2015.1	

Summary of Results for 100 year Return Period (+40%)

<b>Storm Event</b>	<b>Max Level (m)</b>	<b>Max Depth (m)</b>	<b>Max Control (l/s)</b>	<b>Max Volume (m<sup>3</sup>)</b>	<b>Status</b>
15 min Summer	9.264	1.264	3.0	63.2	O K
30 min Summer	9.425	1.425	3.0	71.3	O K
60 min Summer	9.566	1.566	3.0	78.3	O K
120 min Summer	9.641	1.641	3.0	82.0	O K
180 min Summer	9.619	1.619	3.0	81.0	O K
240 min Summer	9.555	1.555	3.0	77.8	O K
360 min Summer	9.461	1.461	3.0	73.1	O K
480 min Summer	9.386	1.386	3.0	69.3	O K
600 min Summer	9.319	1.319	3.0	65.9	O K
720 min Summer	9.251	1.251	3.0	62.6	O K
960 min Summer	9.106	1.106	3.0	55.3	O K
1440 min Summer	8.839	0.839	3.0	42.0	O K
2160 min Summer	8.510	0.510	3.0	25.5	O K
2880 min Summer	8.269	0.269	3.0	13.5	O K
4320 min Summer	8.015	0.015	3.0	0.7	O K
5760 min Summer	8.003	0.003	3.0	0.2	O K
7200 min Summer	8.001	0.001	2.3	0.2	O K
8640 min Summer	8.001	0.001	2.3	0.2	O K
10080 min Summer	8.001	0.001	2.3	0.2	O K


<b>Storm Event</b>	<b>Rain (mm/hr)</b>	<b>Flooded Volume (m<sup>3</sup>)</b>	<b>Discharge Volume (m<sup>3</sup>)</b>	<b>Time-Peak (mins)</b>
15 min Summer	230.350	0.0	66.6	19
30 min Summer	133.628	0.0	77.2	33
60 min Summer	77.519	0.0	89.6	62
120 min Summer	44.969	0.0	104.0	122
180 min Summer	32.702	0.0	113.4	180
240 min Summer	26.087	0.0	120.5	224
360 min Summer	18.971	0.0	131.6	280
480 min Summer	15.133	0.0	139.7	344
600 min Summer	12.700	0.0	146.6	410
720 min Summer	11.005	0.0	152.4	480
960 min Summer	8.709	0.0	160.2	616
1440 min Summer	6.262	0.0	172.6	878
2160 min Summer	4.502	0.0	186.1	1252
2880 min Summer	3.563	0.0	195.6	1584
4320 min Summer	2.496	0.0	203.5	2204
5760 min Summer	1.939	0.0	212.3	2912
7200 min Summer	1.594	0.0	217.6	3384
8640 min Summer	1.358	0.0	219.2	4472
10080 min Summer	1.187	0.0	220.0	4320

Richard Jackson Plc		Page 2
26 HIGH ST. HADLEIGH IPSWICH SUFFOLK IP7 5AP	Geo-cell Tank Design Charlie Ratchford Camden	
Date 31.10.2018 File CHARLIE RARTCHFORD-47707...	Designed by DRM Checked by DRM	
Micro Drainage	Source Control 2015.1	

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Control (l/s)	Max Volume (m <sup>3</sup> )	Status
15 min Winter	9.424	1.424	3.0	71.2	O K
30 min Winter	9.613	1.613	3.0	80.7	O K
60 min Winter	9.786	1.786	3.0	89.3	Flood Risk
120 min Winter	9.902	1.902	3.0	95.1	Flood Risk
180 min Winter	9.912	1.912	3.0	95.6	Flood Risk
240 min Winter	9.872	1.872	3.0	93.6	Flood Risk
360 min Winter	9.733	1.733	3.0	86.6	Flood Risk
480 min Winter	9.636	1.636	3.0	81.8	O K
600 min Winter	9.537	1.537	3.0	76.9	O K
720 min Winter	9.437	1.437	3.0	71.8	O K
960 min Winter	9.216	1.216	3.0	60.8	O K
1440 min Winter	8.811	0.811	3.0	40.6	O K
2160 min Winter	8.336	0.336	3.0	16.8	O K
2880 min Winter	8.046	0.046	3.0	2.3	O K
4320 min Winter	8.001	0.001	3.0	0.1	O K
5760 min Winter	8.001	0.001	2.3	0.2	O K
7200 min Winter	8.001	0.001	2.3	0.2	O K
8640 min Winter	8.000	0.000	1.2	0.2	O K
10080 min Winter	8.000	0.000	1.1	0.2	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m <sup>3</sup> )	Discharge Volume (m <sup>3</sup> )	Time-Peak (mins)
15 min Winter	230.350	0.0	74.5	18
30 min Winter	133.628	0.0	86.4	33
60 min Winter	77.519	0.0	100.3	62
120 min Winter	44.969	0.0	116.3	120
180 min Winter	32.702	0.0	127.0	176
240 min Winter	26.087	0.0	135.0	232
360 min Winter	18.971	0.0	147.4	326
480 min Winter	15.133	0.0	156.7	372
600 min Winter	12.700	0.0	164.4	448
720 min Winter	11.005	0.0	171.0	522
960 min Winter	8.709	0.0	180.1	666
1440 min Winter	6.262	0.0	192.9	938
2160 min Winter	4.502	0.0	207.3	1296
2880 min Winter	3.563	0.0	218.1	1560
4320 min Winter	2.496	0.0	228.1	1716
5760 min Winter	1.939	0.0	232.9	2568
7200 min Winter	1.594	0.0	237.2	2856
8640 min Winter	1.358	0.0	232.0	5120
10080 min Winter	1.187	0.0	242.2	5672

Richard Jackson Plc		Page 3
26 HIGH ST. HADLEIGH IPSWICH SUFFOLK IP7 5AP	Geo-cell Tank Design Charlie Ratchford Camden	
Date 31.10.2018 File CHARLIE RARTCHFORD-47707...	Designed by DRM Checked by DRM	
Micro Drainage	Source Control 2015.1	


Rainfall Details

Rainfall Model	FEH
Return Period (years)	100
Site Location	GB 528300 184350 TQ 28300 84350
C (1km)	-0.026
D1 (1km)	0.334
D2 (1km)	0.306
D3 (1km)	0.242
E (1km)	0.335
F (1km)	2.473
Summer Storms	Yes
Winter Storms	Yes
Cv (Summer)	0.750
Cv (Winter)	0.840
Shortest Storm (mins)	15
Longest Storm (mins)	10080
Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.154

Time (mins)	Area
From:	To: (ha)
0	4 0.154

Richard Jackson Plc		Page 4
26 HIGH ST. HADLEIGH IPSWICH SUFFOLK IP7 5AP	Geo-cell Tank Design Charlie Ratchford Camden	
Date 31.10.2018 File CHARLIE RARTCHFORD-47707...	Designed by DRM Checked by DRM	
Micro Drainage	Source Control 2015.1	

Model Details

Storage is Online Cover Level (m) 10.000

Tank or Pond Structure

Invert Level (m) 8.000

Depth (m)	Area (m <sup>2</sup> )	Depth (m)	Area (m <sup>2</sup> )
0.000	50.0	2.000	50.0

Depth/Flow Relationship Outflow Control

Invert Level (m) 8.000

Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)	Depth (m)	Flow (l/s)
0.001	3.0000	0.900	3.0000	1.700	3.0000	2.500	3.0000
0.200	3.0000	1.000	3.0000	1.800	3.0000	2.600	3.0000
0.300	3.0000	1.100	3.0000	1.900	3.0000	2.700	3.0000
0.400	3.0000	1.200	3.0000	2.000	3.0000	2.800	3.0000
0.500	3.0000	1.300	3.0000	2.100	3.0000	2.900	3.0000
0.600	3.0000	1.400	3.0000	2.200	3.0000	3.000	3.0000
0.700	3.0000	1.500	3.0000	2.300	3.0000		
0.800	3.0000	1.600	3.0000	2.400	3.0000		