

Job Name:	Elm Grove		Job No.	9704	By:	CJB
Element:	Soakaway		Date:	27/03/2019		
Location	Bournemouth					
Drained area:	116 m ²	M5 60min	20mm	Ratio	0.35	
Return Period:	100 year rainfall	Increase % Climate Change		40		
Width	1 m		Base	12 m ²		
Length	12 m		Sides	26 m		
Depth	0.8 m		Eff Depth	0.7 m		
Internal surface area	9.1 m ²		Void ratio	0.95		
Total Draining (As50)	21.1 m ²		Site Geology	River Terrace Deposits: Sand, Silt and Clay. <i>As determined by soakage tests</i>		
Infiltration rate f	0.000009 m/s		clk for description			
Outflow factor	0.0001899 m ³ /s		0.011394 m ³ /min	0.68364 m ³ /hr		
Duration	M5 rainfall (mm)	Growth Z2	100 year rainfall	Inflow m ³	Outflow m ³	Storage m ³
5 mins;	7.1	1.84	18.3	2.12	0.06	2.06
10 mins;	10.1	1.91	27.0	3.13	0.11	3.02
15 mins;	12.3	1.95	33.6	3.90	0.17	3.72
30 mins;	15.7	2.00	44.0	5.10	0.34	4.76
1 hour;	20.0	2.03	56.8	6.59	0.68	5.91
2 hours;	24.5	2.01	68.9	8.00	1.37	6.63
4 hours;	29.9	1.97	82.5	9.57	2.73	6.83
6 hours;	33.8	1.94	91.8	10.65	4.10	6.55
10 hours;	38.9	1.90	103.5	12.00	6.84	5.17
24 hours;	49.6	1.81	125.7	14.58	16.41	-1.83
Storage Required	6.83 m ³					
Actual storage	7.98 m ³		OK - Storage is greater than required			
Time to Empty half	299.78 mins		OK - Less than 24hrs			
				Remarks: Soakaway must be sited a minimum of 5m from any buildings. Note: Bournemouth Data matches Brighton data for rainfall.		
Note: The construction of the aquacell system by wrapping in terram allows for full contact with the soil, as such the base is considered to be free draining and is included in the permeable area calculation. This is in accordance with the Wavin Aquacell design guide.						