

WAVIN Stormwater Management

AquaCell Soakaway designed in accordance with CIRIA 156

Project & Site Details

Project Number	S24177-A - 1 in 100 Year	Produced by	Tim Wootton
Client	BWP Architects	Checked by	
Site Name	Gages Close, Itchen Abbas,	Date	12/02/2024
Location	SO21 1AX		

Drainage Details

Area	465 m ²	Climate Change	0 %
Catchment Type	Roof + Hardstanding	Effective Area	419 m ²
Area Reduction Factor	0.9	Additional Inflow	0.00 l/s

Discharge Parameters

Infiltration Rate	4.22E-05	Soil Type	Chalk
Factor of Safety	2	Source	S.I.R
Effective Infiltration Rate	2.11E-05	Depth to Groundwater (m)	Unknown
Additional Outflow*	0.00 l/s		

*flat rate from pump only

Rainfall Data

R value	0.35	Storm Return Period	1 in 100 years						
M5-60	20	Country	England and Wales						
Time	Z1 Value	y mm	Z2 Value	p mm	Value i	a	b	Storage Height	Time To Half -Empty
5min	0.36	7.20	1.84	13.25	0.16	-44.94	0.069	0.258	1.38
10min	0.51	10.20	1.91	19.48	0.12	-32.74	0.069	0.375	1.89
15min	0.61	12.20	1.91	23.30	0.09	-25.87	0.069	0.443	2.16
30min	0.78	15.60	1.99	31.04	0.06	-16.85	0.069	0.572	2.62
1hr	1.00	20.00	2.03	40.60	0.04	-10.61	0.069	0.708	3.05
2hr	1.21	24.20	2.03	49.13	0.02	-5.96	0.069	0.769	3.22
4hr	1.53	30.60	1.97	60.28	0.02	-3.21	0.069	0.775	3.24
6hr	1.71	34.20	1.97	67.37	0.01	-2.10	0.069	0.712	3.06
10hr	2.00	40.00	1.89	75.60	0.01	-1.03	0.069	0.516	2.42
24hr	2.55	51.00	1.81	92.31	0.00	0.04	0.069	-0.034	-0.22
48hr	3.00	60.00	1.81	108.60	0.00	0.50	0.069	-0.484	-4.44

Soakaway Parameters

Length	5.5 m	Width	4.0 m
Depth	0.8 m	Void	95 %

Results

Critical storm duration (hrs)	4hr	
Required Storage Height (m)	0.775	PASS
Half Time Empty (hrs)	3.24	PASS

AquaCell Modular Units

No. Units Long	5.5	No. Units Wide	8
No. Units Deep	2	Unit Type	Unknown
Total Number of Units	88		



CONNECT TO BETTER