

WAVIN Stormwater Management

AquaCell Soakaway designed in accordance with CIRIA 156

Project & Site Details

Project Number	S21222 - Front Soakaway	Produced by	Mark Henly
Client	Morton & Hall Consulting Ltd	Checked by	
Site Name	Plot 8 Off West Drove South, Gedney Hill, Spalding,		
Location	Lincs	Date	17/11/2021

Drainage Details

Area	90 m ²	Climate Change	0 %
Catchment Type	Roof	Effective Area	81 m ²
Area Reduction Factor	0.9	Additional Inflow	0.00 l/s

Discharge Parameters

Infiltration Rate	1.11E-04	Soil Type	Unknown
Factor of Safety	2	Source	S.I.R
Effective Infiltration Rate	5.56E-05		
Additional Outflow*	0.00 l/s	Depth to Groundwater (m)	Unknown

*flat rate from pump only

Rainfall Data

R value		0.4		Storm Return Period				1 in 30 years	
M5-60		19		Country				England and Wales	
Time	Z1 Value	y mm	Z2 Value	p mm	Value i	a	b	Storage Height	Time To Half -Empty
5min	0.38	7.22	1.44	10.40	0.12	-5.82	0.421	0.201	0.37
10min	0.52	9.88	1.46	14.42	0.09	-3.88	0.421	0.263	0.45
15min	0.63	11.97	1.47	17.60	0.07	-3.06	0.421	0.306	0.50
30min	0.80	15.20	1.51	22.95	0.05	-1.82	0.421	0.346	0.54
1hr	1.00	19.00	1.51	28.69	0.03	-0.95	0.421	0.327	0.52
2hr	1.19	22.61	1.52	34.37	0.02	-0.37	0.421	0.211	0.38
4hr	1.44	27.36	1.51	41.31	0.01	-0.02	0.421	0.019	0.04
6hr	1.59	30.21	1.49	45.01	0.01	0.12	0.421	-0.111	-0.32
10hr	1.81	34.39	1.49	51.24	0.01	0.24	0.421	-0.237	-0.88
24hr	2.35	44.65	1.45	64.74	0.00	0.36	0.421	-0.363	-2.01
48hr	2.69	51.11	1.41	72.07	0.00	0.42	0.421	-0.424	-3.16

Soakaway Parameters

Length	2.0 m	Width	2.0 m
Depth	0.4 m	Void	95 %

Results

Critical storm duration (hrs)	30min	
Required Storage Height (m)	0.346	PASS
Half Time Empty (hrs)	0.54	PASS

AquaCell Modular Units

No. Units Long	2	No. Units Wide	4
No. Units Deep	1		
Total Number of Units	8	Unit Type	Unknown



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WAVIN Stormwater Management

AquaCell Soakaway designed in accordance with CIRIA 156

Project & Site Details

Project Number	S21222 - Rear Soakaway	Produced by	Mark Henly
Client	Morton & Hall Consulting Ltd	Checked by	
Site Name	Plot 8 Off West Drove South, Gedney Hill, Spalding,		
Location	Lincs	Date	17/11/2021

Drainage Details

Area	115 m ²	Climate Change	0 %
Catchment Type	Roof	Effective Area	104 m ²
Area Reduction Factor	0.9	Additional Inflow	0.00 l/s

Discharge Parameters

Infiltration Rate	1.11E-04	Soil Type	Unknown
Factor of Safety	2	Source	S.I.R
Effective Infiltration Rate	5.56E-05		
Additional Outflow*	0.00 l/s	Depth to Groundwater (m)	Unknown

*flat rate from pump only

Rainfall Data

R value					0.4	Storm Return Period			1 in 30 years	
M5-60					19	Country			England and Wales	
Time	Z1 Value	y mm	Z2 Value	p mm	Value i	a	b	Storage Height	Time To Half -Empty	
5min	0.38	7.22	1.44	10.40	0.12	-6.62	0.379	0.206	0.38	
10min	0.52	9.88	1.46	14.42	0.09	-4.42	0.379	0.271	0.47	
15min	0.63	11.97	1.47	17.60	0.07	-3.49	0.379	0.316	0.53	
30min	0.80	15.20	1.51	22.95	0.05	-2.08	0.379	0.360	0.58	
1hr	1.00	19.00	1.51	28.69	0.03	-1.09	0.379	0.345	0.56	
2hr	1.19	22.61	1.52	34.37	0.02	-0.43	0.379	0.230	0.42	
4hr	1.44	27.36	1.51	41.31	0.01	-0.04	0.379	0.030	0.07	
6hr	1.59	30.21	1.49	45.01	0.01	0.12	0.379	-0.111	-0.31	
10hr	1.81	34.39	1.49	51.24	0.01	0.26	0.379	-0.255	-0.93	
24hr	2.35	44.65	1.45	64.74	0.00	0.40	0.379	-0.400	-2.19	
48hr	2.69	51.11	1.41	72.07	0.00	0.47	0.379	-0.469	-3.47	

Soakaway Parameters

Length	2.5 m	Width	2.0 m
Depth	0.4 m	Void	95 %

Results

Critical storm duration (hrs)	30min	
Required Storage Height (m)	0.360	PASS
Half Time Empty (hrs)	0.58	PASS

AquaCell Modular Units

No. Units Long	2.5	No. Units Wide	4
No. Units Deep	1		
Total Number of Units	10	Unit Type	Unknown



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