WAVIN Stormwater Management

AquaCell Soakaway designed in accordance with CIRIA 156

Project & Site Details

Project Number	S21013	**Produced by**	Peter Goundry
Client	Claire Cairns	**Checked by**	
Site Name	The Old Piggery,		
Location	Dinder, Wells	**Date**	21/09/2021

Drainage Details

Area	250 m²	**Climate Change**	40 %
Catchment Type	Roof	**Effective Area**	315 m²
Area Reduction Factor	0.9	**Additional Inflow**	0.00 l/s

Discharge Parameters

Infiltration Rate	3.29E-04	**Soil Type**	Gravely Silt
Factor of Safety	2	**Source**	S.I.R
Effective Infiltration Rate	1.64E-04		
Additional Outflow*	0.00 l/s	**Depth to Groundwater (m)**	

*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	-4.35	0.664	0.234	0.16
10min	0.51	10.20	1.91	19.48	0.12	-2.95	0.664	0.309	0.20
15min	0.61	12.20	1.91	23.30	0.09	-2.16	0.664	0.331	0.21
30min	0.78	15.60	1.99	31.04	0.06	-1.13	0.664	0.319	0.20
1hr	1.00	20.00	2.03	40.60	0.04	-0.41	0.664	0.201	0.14
2hr	1.21	24.20	2.03	49.13	0.02	0.12	0.664	-0.088	-0.08
4hr	1.53	30.60	1.97	60.28	0.02	0.44	0.664	-0.405	-0.49
6hr	1.71	34.20	1.97	67.37	0.01	0.56	0.664	-0.553	-0.82
10hr	2.00	40.00	1.89	75.60	0.01	0.69	0.664	-0.685	-1.29
24hr	2.55	51.00	1.81	92.31	0.00	0.81	0.664	-0.810	-2.15
48hr	3.00	60.00	1.81	108.60	0.00	0.86	0.664	-0.862	-2.87

Soakaway Parameters

Length	5.0 m	**Width**	3.0 m
Depth	0.4 m	**Void**	95 %

Results

Critical storm duration (hrs)	15min	
Required Storage Height (m)	0.331	PASS
Half Time Empty (hrs)	0.21	PASS

AquaCell Modular Units

No. Units Long	5	**No. Units Wide**	6
No. Units Deep	1		
Total Number of Units	**30**	**Unit Type**	**AquaCell Eco**

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