



Stormwater Management - Soakaway Design

Project & Site Details

Project Number	B12420-A	Produced by	Stuart Henly
Client	John Reilly (Civil Engineering) Ltd	Checked by	Stuart Henly
Site Name	Phase 1 Clitheroe Road		
Location	Barrow	Date	13/03/2015

Drainage Details

Area	1058 m ²	Climate Change	30%
Catchment Type	Roof + Drives	Effective Area	1237.86m ²
Area Reduction Factor	0.9	Additional Inflow	3.00 l/s

Discharge Parameters

Discharge Rate	5.00 l/s	Soil Type	
Factor of Safety	1	Source	
Effective Discharge	5.00 l/s		
Additional Outflow*	0.00 l/s	Depth to Groundwater (m)	10.00 m

*flat rate from pump only

Rainfall Data

R value	0.3	Storm Return Period		1 in 100 years			
M5-60	20	Country		England and Wales			
<u>Time</u>	<u>Z1 Value</u>	<u>y mm</u>	<u>Z2 Value</u>	<u>p mm</u>	<u>Inflow</u>	<u>Outflow</u>	<u>Storage</u>
5min	0.34	6.80	1.81	12.31	16.136	1.500	14.636
10min	0.49	9.80	1.89	18.52	24.728	3.000	21.728
15min	0.60	12.00	1.91	22.92	31.072	4.500	26.572
30min	0.77	15.40	1.99	30.65	43.335	9.000	34.335
1hr	1.00	20.00	2.03	40.60	61.057	18.000	43.057
2hr	1.23	24.60	2.03	49.94	83.416	36.000	47.416
4hr	1.60	32.00	1.97	63.04	121.235	72.000	49.235
6hr	1.80	36.00	1.97	70.92	152.589	108.000	44.589
10hr	2.10	42.00	1.89	79.38	206.261	180.000	26.261
24hr	2.80	56.00	1.81	101.36	384.669	432.000	-47.331
48hr	3.50	70.00	1.81	126.70	675.237	864.000	-188.763

Soakaway Parameters

Length	38.0 m	Width	3.5 m
Depth	0.4 m	Void	95 %

Results

Critical storm duration	4hr	
Minimum Required Volume	49.23	
Volume From Dimensions	50.54	PASS

AquaCell Modular Units

Length	38	Width	7
Depth	1	Total	266 AquaCell Prime