Quotation for the supply of Rainwater Harvesting Equipment

Client :

Paul Meredith

Site Reference :

Soakaway Report for 69 Highdown, Southwick BN42 4QT

Prepared by:

Ian Woodcock

ianw@rainwaterharvesting.co.uk

01733 405104 / 07736 45 46 45

Our reference : IMW231646

Date of proposal : 15/10/2021

Your Proposal

Thank you for your enquiry and as requested please find the following information regarding our proposed attenuation system.

Drainage anti-flooding blocks (Graf Bloc) with 300-litre capacity for rapid drainage of land. Surface water is diverted or soaks down into weight resistant crates and from there dissipate into the lower ground clearing water quickly from the surface.

The rigid crates are made in black polypropylene (PP) and measure 1200mm (l) x 600mm (w) x 420mm(h) and will hold a maximum capacity of 300 litres gross or a working volume of 285 litres.

The size of soakaway required per property is

L 1.8 x W 1.2 x D 0.42m (0.91 m3)

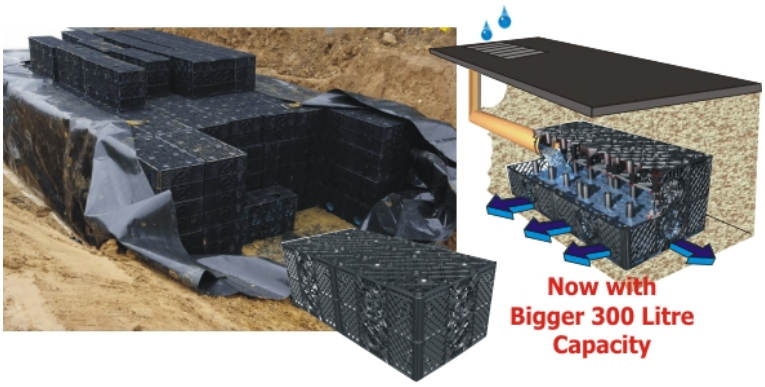
Please see calculations on page 4

The crates can be connected together into larger grids or bocks and wrapped in a geo-textile to slow the drainage of the water forming the equivalent of an underground pond. Easy to install The Graf Rain Bloc can be installed in rows or block form, with 1 to a maximum of 10 layers, depending on the local conditions and the desired storage capacity. installing the module is easy, fast and variable. it can be installed without heavy equipment - a Rain Bloc weighs just 15 kg. The individual modules are connected using practical fast connectors

We would welcome the opportunity of supplying your soakaway system and I can easily be contacted either by phone or email as shown on the previous page

Components and Prices – Supply Only

Product Code **: RainBloc**



Components

Product Code	Description	Qty
360014	GRAF RAIN BLOC 300	3
318500	NW8 NON WOVEN GEOTEXTILE	11 m2

Price : £200.00 (£240.00 Inc. VAT) Per Property

UK delivery is included in the price (Highlands and islands extra)

69 Highdown, Southwick, West Sussex. BN42 4QT

TEST PIT 1					
Lengh	Width	Height			
1.2	0.3	1.5		Volume=	0.27
				Surface Area=	2.61
Time/mins					
1.5				Infiltration rate=	3.8793103
1.6					
0					
Longest Time/hours	0.02666667				

TEST PIT 2					
Lengh	Width	Height			
1.2	0.3	1.5		Volume=	0.27
				Surface Area=	2.61
Time/mins					
1.6				Infiltration rate=	3.1034483
2					
1.7					
Longest Time/hours	0.03333333			SITE INFILTRATION RATE	3.1034483

Rainwater Harvesting Limited, Unit A Harrier Park, Southgate way, Orton Southgate, Peterborough, PE2 6YQ
Tel : 01733 405104 Email : ianw@rainwaterharvesting.co.uk
www.rainwaterharvesting.co.uk

Summary of Results for 100 year Return Period (+40%)

Half Drain Time : 2 minutes.

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	0.100	0.100	1.4	0.2	O K
30 min Summer	0.117	0.117	1.5	0.2	O K
60 min Summer	0.098	0.098	1.4	0.2	O K
120 min Summer	0.052	0.052	1.2	0.1	O K
180 min Summer	0.041	0.041	0.9	0.1	O K
240 min Summer	0.034	0.034	0.8	0.1	O K
360 min Summer	0.026	0.026	0.6	0.1	O K
480 min Summer	0.021	0.021	0.5	0.0	O K
600 min Summer	0.018	0.018	0.4	0.0	O K
720 min Summer	0.016	0.016	0.4	0.0	O K
960 min Summer	0.013	0.013	0.3	0.0	O K
1440 min Summer	0.009	0.009	0.2	0.0	O K
2160 min Summer	0.007	0.007	0.2	0.0	O K
2880 min Summer	0.006	0.006	0.1	0.0	O K
4320 min Summer	0.004	0.004	0.1	0.0	O K
5760 min Summer	0.004	0.004	0.1	0.0	O K
7200 min Summer	0.003	0.003	0.1	0.0	O K
8640 min Summer	0.002	0.002	0.1	0.0	O K
10080 min Summer	0.002	0.002	0.1	0.0	O K
15 min Winter	0.126	0.126	1.5	0.3	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
15 min Summer	131.128	0.0	17
30 min Summer	88.088	0.0	25
60 min Summer	56.422	0.0	40
120 min Summer	34.839	0.0	68
180 min Summer	25.861	0.0	98
240 min Summer	20.787	0.0	128
360 min Summer	15.300	0.0	188
480 min Summer	12.289	0.0	248
600 min Summer	10.359	0.0	306
720 min Summer	9.004	0.0	368
960 min Summer	7.211	0.0	482
1440 min Summer	5.263	0.0	734
2160 min Summer	3.833	0.0	1120
2880 min Summer	3.056	0.0	1452
4320 min Summer	2.218	0.0	2128
5760 min Summer	1.764	0.0	2888
7200 min Summer	1.478	0.0	3672
8640 min Summer	1.279	0.0	4232
10080 min Summer	1.133	0.0	4864
15 min Winter	131.128	0.0	17

©1982-2016 XP Solutions

Summary of Results for 100 year Return Period (+40%)

Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	0.133	0.133	1.6	0.3	O K
60 min Winter	0.089	0.089	1.4	0.2	O K
120 min Winter	0.043	0.043	1.0	0.1	O K
180 min Winter	0.032	0.032	0.7	0.1	O K
240 min Winter	0.026	0.026	0.6	0.1	O K
360 min Winter	0.020	0.020	0.5	0.0	O K
480 min Winter	0.016	0.016	0.4	0.0	O K
600 min Winter	0.013	0.013	0.3	0.0	O K
720 min Winter	0.012	0.012	0.3	0.0	O K
960 min Winter	0.009	0.009	0.2	0.0	O K
1440 min Winter	0.007	0.007	0.2	0.0	O K
2160 min Winter	0.005	0.005	0.1	0.0	O K
2880 min Winter	0.004	0.004	0.1	0.0	O K
4320 min Winter	0.003	0.003	0.1	0.0	O K
5760 min Winter	0.003	0.003	0.1	0.0	O K
7200 min Winter	0.002	0.002	0.1	0.0	O K
8640 min Winter	0.002	0.002	0.1	0.0	O K
10080 min Winter	0.002	0.002	0.0	0.0	O K

Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)
30 min Winter	88.088	0.0	25
60 min Winter	56.422	0.0	40
120 min Winter	34.839	0.0	68
180 min Winter	25.861	0.0	98
240 min Winter	20.787	0.0	130
360 min Winter	15.300	0.0	184
480 min Winter	12.289	0.0	246
600 min Winter	10.359	0.0	308
720 min Winter	9.004	0.0	374
960 min Winter	7.211	0.0	486
1440 min Winter	5.263	0.0	718
2160 min Winter	3.833	0.0	1100
2880 min Winter	3.056	0.0	1440
4320 min Winter	2.218	0.0	2196
5760 min Winter	1.764	0.0	2720
7200 min Winter	1.478	0.0	3584
8640 min Winter	1.279	0.0	4240
10080 min Winter	1.133	0.0	4848

©1982-2016 XP Solutions

Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	100	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.900	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.005

Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)	Time From:	(mins) To:	Area (ha)
0	4	0.002	4	8	0.002	8	12	0.002

©1982-2016 XP Solutions

Model Details

Storage is Online Cover Level (m) 1.000

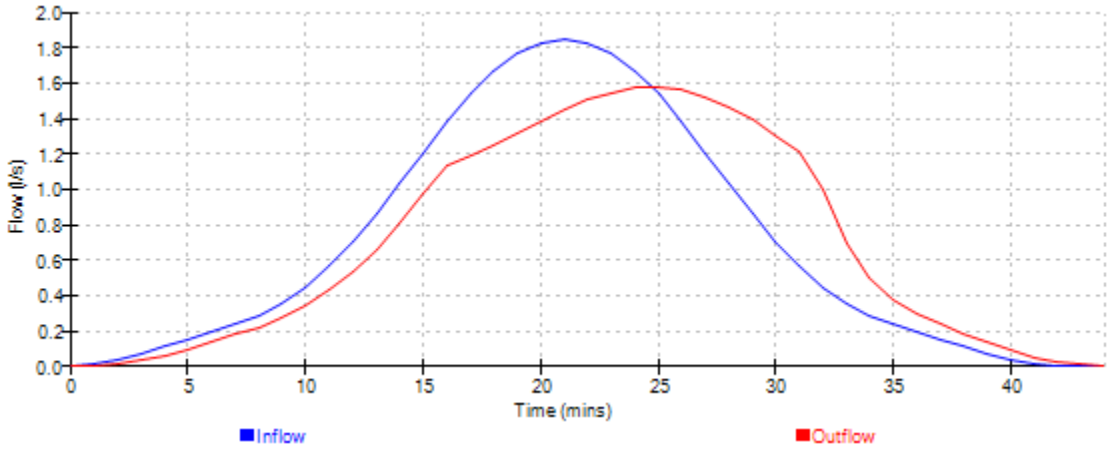
Cellular Storage Structure

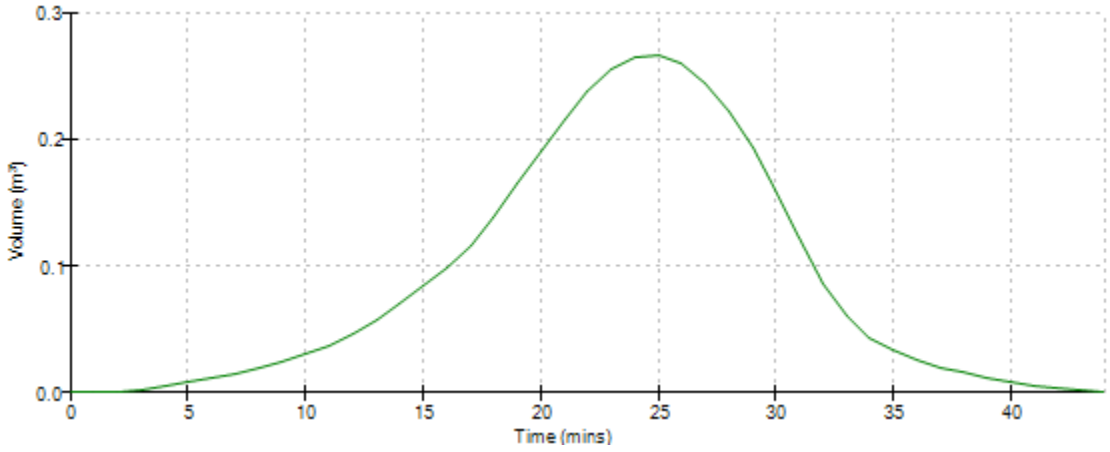
Invert Level (m) 0.000 Safety Factor 2.0
Infiltration Coefficient Base (m/hr) 3.10345 Porosity 0.95
Infiltration Coefficient Side (m/hr) 3.10345

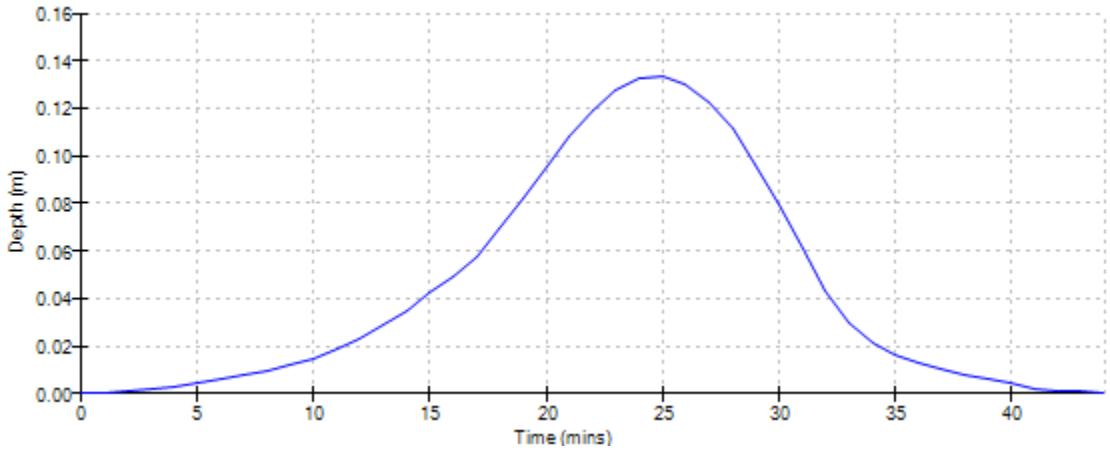
Depth (m)	Area (m²)	Inf. Area (m²)	Depth (m)	Area (m²)	Inf. Area (m²)
0.000	2.1	2.1	0.421	0.0	7.0
0.420	2.1	7.0			

©1982-2016 XP Solutions

Event: 30 min Winter







©1982-2016 XP Solutions