

Sketch/Calc ☒
 Phone Call ☐

 Site Visit ☐
 Meeting ☐

 Memo ☐
 File Note ☐
Archibald Shaw

 Consulting Civil and Structural Engineers
www.archibaldshaw.co.uk

Project No./Ref: 28661

Project: FREEZING COUNTRY CENTRE

Section: BURNS - SW DRAINAGE

Prepared: ML

Checked:

©Date: 20.04.13

Time:

1. There follows a proposed surface water drainage system which retains all local surface waters on site to a storm return frequency in excess of $M100 + 30\%$.
2. Detailed design in respect of surface levels, distribution and carrier pipe invert levels will be resolved on site.
3. Overleaf is the proposed general arrangement, followed by summary output data which supports this outline design.
4. The catchment is divided into 2 sub catchments in order to separate muddy operations on the hardstanding from clean rainfall which will be discharge to a plate soakaway beneath the hardstanding.

Sketch/Calc ☐ Site Visit ☐ Memo ☐
 Phone Call ☐ Meeting ☐ File Note ☐

Project No./Ref: 28661

Project: FERRIS COUNTRY CENTRE

Section: BARN - SW DRAINAGE

Prepared: MC

Checked:

©Date: 20.04.17

Time:

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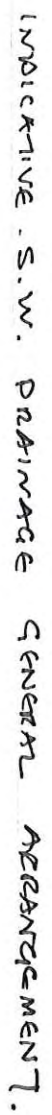
Ground
Management
Report.

5. Design factors.

(i) local infiltration coefficient
[average] = 1×10^{-6} m/s

(ii) Roof area = 452 m^2

(iii) Hardstanding area = 895 m^2 .



PROPOSED BLOCK/SITE PLAN - 1:250@A4

Sketch/Calc ☒Site Visit ☐Memo ☐Phone Call ☐Meeting ☐File Note ☐

Project No./Ref: 28661

Project: FERRIER COUNTRY CENTRE

Section: BARN - S.W. DRAINAGE

Prepared: me

Checked:

©Date: 21.04.17

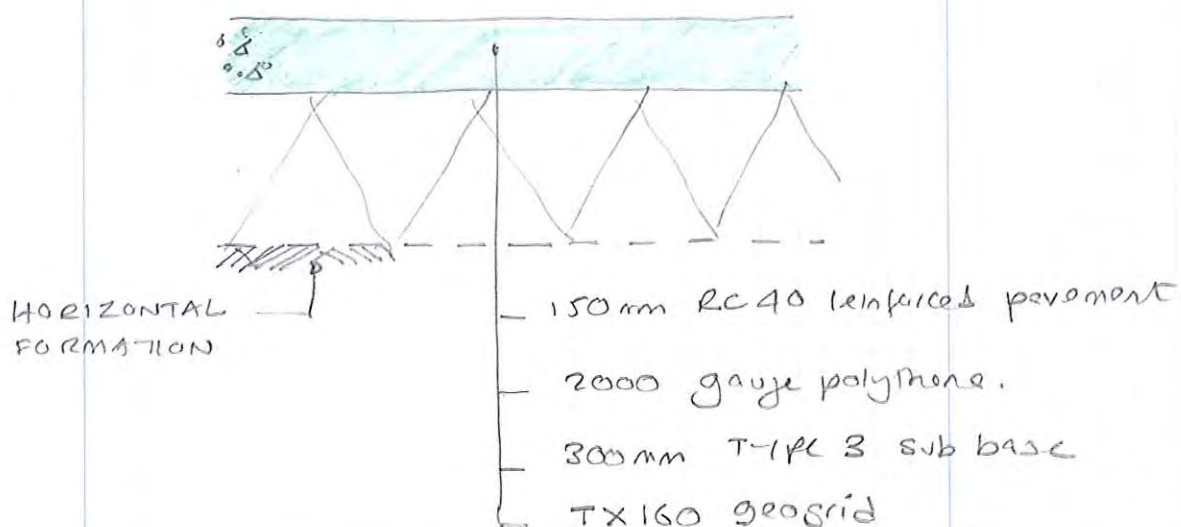
Time:

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CATCHMENT D - Barn 100ft.

These waters will be discharged to a plate soakaway which forms the base to the concrete hardstanding

Further to analysis the estimated peak rise in water elevation within the plate soakaway is 190mm during a 1100+30% storm event. The following pavement details is proposed to accommodate these roof water flows.



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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M1	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage		Source Control W.11.2

Summary of Results for 1 year Return Period

Half Drain Time : 336 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.1	0.1	99.4158	0.0158	2.5	O K
30 Summer	0.1	0.1	99.4203	0.0202	3.2	O K
60 Summer	0.1	0.1	99.4258	0.0257	4.1	O K
120 Summer	0.2	0.2	99.4308	0.0307	4.9	O K
180 Summer	0.2	0.2	99.4333	0.0332	5.3	O K
240 Summer	0.2	0.2	99.4348	0.0347	5.5	O K
360 Summer	0.2	0.2	99.4368	0.0367	5.8	O K
480 Summer	0.2	0.2	99.4378	0.0377	6.0	O K
600 Summer	0.2	0.2	99.4383	0.0382	6.1	O K
720 Summer	0.2	0.2	99.4388	0.0387	6.1	O K
960 Summer	0.2	0.2	99.4393	0.0392	6.2	O K
1440 Summer	0.2	0.2	99.4383	0.0382	6.1	O K
2160 Summer	0.2	0.2	99.4363	0.0362	5.7	O K
2880 Summer	0.2	0.2	99.4343	0.0342	5.4	O K
4320 Summer	0.2	0.2	99.4308	0.0307	4.8	O K
5760 Summer	0.1	0.1	99.4278	0.0277	4.4	O K
7200 Summer	0.1	0.1	99.4258	0.0257	4.0	O K
8640 Summer	0.1	0.1	99.4238	0.0237	3.7	O K
10080 Summer	0.1	0.1	99.4218	0.0217	3.5	O K
15 Winter	0.1	0.1	99.4173	0.0173	2.7	O K
30 Winter	0.1	0.1	99.4228	0.0227	3.6	O K
60 Winter	0.2	0.2	99.4288	0.0287	4.6	O K
120 Winter	0.2	0.2	99.4348	0.0347	5.5	O K
180 Winter	0.2	0.2	99.4378	0.0377	6.0	O K
240 Winter	0.2	0.2	99.4393	0.0392	6.2	O K
360 Winter	0.2	0.2	99.4413	0.0412	6.5	O K
480 Winter	0.2	0.2	99.4423	0.0422	6.6	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	29.65	23
30 Summer	19.73	37
60 Summer	12.80	66
120 Summer	8.16	126
180 Summer	6.24	184
240 Summer	5.15	218
360 Summer	3.90	276
480 Summer	3.20	342
600 Summer	2.74	410
720 Summer	2.42	480
960 Summer	1.98	614
1440 Summer	1.50	884
2160 Summer	1.13	1280
2880 Summer	0.93	1672
4320 Summer	0.70	2424
5760 Summer	0.58	3168
7200 Summer	0.50	3888
8640 Summer	0.44	4584
10080 Summer	0.39	5344
15 Winter	29.65	23
30 Winter	19.73	37
60 Winter	12.80	66
120 Winter	8.16	122
180 Winter	6.24	178
240 Winter	5.15	232
360 Winter	3.90	286
480 Winter	3.20	362

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M1	
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Micro Drainage		Source Control W.11.2

Summary of Results for 1 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
600 Winter	0.2	0.2	99.4423	0.0422	6.7	O K
720 Winter	0.2	0.2	99.4423	0.0422	6.7	O K
960 Winter	0.2	0.2	99.4418	0.0417	6.6	O K
1440 Winter	0.2	0.2	99.4403	0.0402	6.3	O K
2160 Winter	0.2	0.2	99.4368	0.0367	5.8	O K
2880 Winter	0.2	0.2	99.4333	0.0332	5.3	O K
4320 Winter	0.2	0.2	99.4288	0.0287	4.5	O K
5760 Winter	0.1	0.1	99.4253	0.0252	4.0	O K
7200 Winter	0.1	0.1	99.4223	0.0222	3.5	O K
8640 Winter	0.1	0.1	99.4203	0.0202	3.2	O K
10080 Winter	0.1	0.1	99.4183	0.0183	2.9	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	2.74	438
720 Winter	2.42	514
960 Winter	1.98	660
1440 Winter	1.50	942
2160 Winter	1.13	1344
2880 Winter	0.93	1736
4320 Winter	0.70	2508
5760 Winter	0.58	3232
7200 Winter	0.50	3968
8640 Winter	0.44	4672
10080 Winter	0.39	5448

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M1	
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Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	1	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+0
Ratio-R	0.350	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.045

Time (mins)	Area (ha)	Time (mins)	Area (ha)
from: to:		from: to:	
0 4	0.000	4 8	0.045

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M1	
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Micro Drainage	Source Control W.11.2	

Infiltration Blanket Details

Infil Coef - Base (m/hr)	0.003600	Length (m)	39.5
Safety Factor	1.5	Invert Level (m)	99.400
Porosity	0.40	Cover Level (m)	100.000
Diameter/Width (m)	10.0	Cap Volume (m)	100.000

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M30	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 30 year Return Period

Half Drain Time : 512 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.2	0.2	99.4383	0.0382	6.0	O K
30 Summer	0.3	0.3	99.4498	0.0498	7.9	O K
60 Summer	0.3	0.3	99.4623	0.0623	9.8	O K
120 Summer	0.3	0.3	99.4738	0.0738	11.7	O K
180 Summer	0.3	0.3	99.4798	0.0798	12.6	O K
240 Summer	0.3	0.3	99.4828	0.0828	13.1	O K
360 Summer	0.3	0.3	99.4858	0.0858	13.6	O K
480 Summer	0.3	0.3	99.4873	0.0873	13.8	O K
600 Summer	0.3	0.3	99.4878	0.0878	13.9	O K
720 Summer	0.3	0.3	99.4883	0.0883	13.9	O K
960 Summer	0.3	0.3	99.4878	0.0878	13.8	O K
1440 Summer	0.3	0.3	99.4843	0.0843	13.3	O K
2160 Summer	0.3	0.3	99.4778	0.0778	12.3	O K
2880 Summer	0.3	0.3	99.4708	0.0708	11.2	O K
4320 Summer	0.3	0.3	99.4588	0.0588	9.3	O K
5760 Summer	0.3	0.3	99.4503	0.0503	7.9	O K
7200 Summer	0.2	0.2	99.4453	0.0452	7.1	O K
8640 Summer	0.2	0.2	99.4413	0.0412	6.5	O K
10080 Summer	0.2	0.2	99.4378	0.0377	6.0	O K
15 Winter	0.2	0.2	99.4428	0.0427	6.7	O K
30 Winter	0.3	0.3	99.4563	0.0563	8.9	O K
60 Winter	0.3	0.3	99.4703	0.0703	11.1	O K
120 Winter	0.3	0.3	99.4838	0.0838	13.2	O K
180 Winter	0.3	0.3	99.4903	0.0903	14.3	O K
240 Winter	0.3	0.3	99.4943	0.0943	14.9	O K
360 Winter	0.3	0.3	99.4988	0.0988	15.6	O K
480 Winter	0.3	0.3	99.5003	0.1003	15.8	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	72.68	23
30 Summer	48.36	37
60 Summer	30.81	66
120 Summer	19.04	126
180 Summer	14.19	186
240 Summer	11.47	244
360 Summer	8.49	358
480 Summer	6.85	412
600 Summer	5.80	474
720 Summer	5.06	538
960 Summer	4.07	670
1440 Summer	3.00	942
2160 Summer	2.20	1348
2880 Summer	1.77	1736
4320 Summer	1.30	2468
5760 Summer	1.04	3168
7200 Summer	0.88	3888
8640 Summer	0.76	4592
10080 Summer	0.68	5344
15 Winter	72.68	23
30 Winter	48.36	37
60 Winter	30.81	66
120 Winter	19.04	124
180 Winter	14.19	182
240 Winter	11.47	240
360 Winter	8.49	352
480 Winter	6.85	460

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Micro Drainage	Source Control W.11.2	

Summary of Results for 30 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
600 Winter	0.3	0.3	99.4998	0.0998	15.8	O K
720 Winter	0.3	0.3	99.4998	0.0998	15.8	O K
960 Winter	0.3	0.3	99.4983	0.0983	15.6	O K
1440 Winter	0.3	0.3	99.4928	0.0928	14.7	O K
2160 Winter	0.3	0.3	99.4823	0.0823	13.0	O K
2880 Winter	0.3	0.3	99.4713	0.0713	11.2	O K
4320 Winter	0.3	0.3	99.4538	0.0537	8.5	O K
5760 Winter	0.2	0.2	99.4448	0.0447	7.1	O K
7200 Winter	0.2	0.2	99.4393	0.0392	6.2	O K
8640 Winter	0.2	0.2	99.4353	0.0352	5.5	O K
10080 Winter	0.2	0.2	99.4318	0.0317	5.0	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	5.80	552
720 Winter	5.06	576
960 Winter	4.07	728
1440 Winter	3.00	1030
2160 Winter	2.20	1456
2880 Winter	1.77	1852
4320 Winter	1.30	2556
5760 Winter	1.04	3240
7200 Winter	0.88	3968
8640 Winter	0.76	4680
10080 Winter	0.68	5448

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Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	30	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+0
Ratio-R	0.350	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.045

Time (mins)	Area (ha)	Time (mins)	Area (ha)
from:	to:	from:	to:
0	4	0.000	4
			0.045

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M30	
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Micro Drainage	Source Control W.11.2	

Infiltration Blanket Details

Infil Coef - Base (m/hr)	0.003600	Length (m)	39.5
Safety Factor	1.5	Invert Level (m)	99.400
Porosity	0.40	Cover Level (m)	100.000
Diameter/Width (m)	10.0	Cap Volume (m)	100.000

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M100	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage		Source Control W.11.2

Summary of Results for 100 year Return Period

Half Drain Time : 691 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.3	0.3	99.4493	0.0493	7.8	O K
30 Summer	0.3	0.3	99.4658	0.0658	10.4	O K
60 Summer	0.3	0.3	99.4828	0.0828	13.1	O K
120 Summer	0.3	0.3	99.4988	0.0988	15.6	O K
180 Summer	0.3	0.3	99.5068	0.1068	16.9	O K
240 Summer	0.3	0.3	99.5113	0.1113	17.6	O K
360 Summer	0.3	0.3	99.5163	0.1163	18.4	O K
480 Summer	0.3	0.3	99.5183	0.1183	18.7	O K
600 Summer	0.3	0.3	99.5183	0.1183	18.7	O K
720 Summer	0.3	0.3	99.5183	0.1183	18.7	O K
960 Summer	0.3	0.3	99.5173	0.1173	18.5	O K
1440 Summer	0.3	0.3	99.5133	0.1133	17.9	O K
2160 Summer	0.3	0.3	99.5053	0.1053	16.6	O K
2880 Summer	0.3	0.3	99.4963	0.0963	15.2	O K
4320 Summer	0.3	0.3	99.4803	0.0803	12.6	O K
5760 Summer	0.3	0.3	99.4663	0.0663	10.5	O K
7200 Summer	0.3	0.3	99.4563	0.0563	8.9	O K
8640 Summer	0.3	0.3	99.4498	0.0497	7.8	O K
10080 Summer	0.2	0.2	99.4458	0.0457	7.2	O K
15 Winter	0.3	0.3	99.4553	0.0553	8.7	O K
30 Winter	0.3	0.3	99.4738	0.0738	11.6	O K
60 Winter	0.3	0.3	99.4928	0.0928	14.7	O K
120 Winter	0.3	0.3	99.5118	0.1118	17.6	O K
180 Winter	0.3	0.3	99.5208	0.1208	19.1	O K
240 Winter	0.3	0.3	99.5263	0.1263	20.0	O K
360 Winter	0.3	0.3	99.5328	0.1328	21.0	O K
480 Winter	0.3	0.3	99.5353	0.1353	21.4	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	94.18	23
30 Summer	63.26	37
60 Summer	40.51	68
120 Summer	25.00	126
180 Summer	18.55	186
240 Summer	14.91	246
360 Summer	10.98	364
480 Summer	8.82	484
600 Summer	7.43	538
720 Summer	6.46	596
960 Summer	5.17	718
1440 Summer	3.77	986
2160 Summer	2.75	1392
2880 Summer	2.19	1792
4320 Summer	1.59	2556
5760 Summer	1.26	3280
7200 Summer	1.06	3960
8640 Summer	0.92	4592
10080 Summer	0.81	5344
15 Winter	94.18	23
30 Winter	63.26	37
60 Winter	40.51	66
120 Winter	25.00	124
180 Winter	18.55	184
240 Winter	14.91	242
360 Winter	10.98	356
480 Winter	8.82	468

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M100	
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Micro Drainage	Source Control W.11.2	

Summary of Results for 100 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
600 Winter	0.3	0.3	99.5363	0.1363	21.5	O K
720 Winter	0.3	0.3	99.5358	0.1358	21.5	O K
960 Winter	0.3	0.3	99.5333	0.1333	21.1	O K
1440 Winter	0.3	0.3	99.5273	0.1273	20.1	O K
2160 Winter	0.3	0.3	99.5148	0.1148	18.1	O K
2880 Winter	0.3	0.3	99.5013	0.1013	16.0	O K
4320 Winter	0.3	0.3	99.4763	0.0763	12.0	O K
5760 Winter	0.3	0.3	99.4573	0.0573	9.1	O K
7200 Winter	0.3	0.3	99.4478	0.0477	7.5	O K
8640 Winter	0.2	0.2	99.4423	0.0422	6.7	O K
10080 Winter	0.2	0.2	99.4383	0.0382	6.0	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	7.43	576
720 Winter	6.46	680
960 Winter	5.17	772
1440 Winter	3.77	1072
2160 Winter	2.75	1520
2880 Winter	2.19	1936
4320 Winter	1.59	2724
5760 Winter	1.26	3352
7200 Winter	1.06	3968
8640 Winter	0.92	4752
10080 Winter	0.81	5448

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Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	100	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+0
Ratio-R	0.350	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.045

Time (mins)	Area (ha)	Time (mins)	Area (ha)
from: to:		from: to:	
0 4	0.000	4 8	0.045

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M100	
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Micro Drainage	Source Control W.11.2	

Infiltration Blanket Details

Infil Coef - Base (m/hr)	0.003600	Length (m)	39.5
Safety Factor	1.5	Invert Level (m)	99.400
Porosity	0.40	Cover Level (m)	100.000
Diameter/Width (m)	10.0	Cap Volume (m)	100.000

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M100+30%	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 100 year Return Period (+30%)

Half Drain Time : 947 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.3	0.3	99.4643	0.0643	10.2	O K
30 Summer	0.3	0.3	99.4858	0.0858	13.6	O K
60 Summer	0.3	0.3	99.5083	0.1083	17.1	O K
120 Summer	0.3	0.3	99.5308	0.1308	20.6	O K
180 Summer	0.3	0.3	99.5418	0.1418	22.4	O K
240 Summer	0.3	0.3	99.5488	0.1488	23.5	O K
360 Summer	0.3	0.3	99.5573	0.1572	24.8	O K
480 Summer	0.3	0.3	99.5613	0.1612	25.5	O K
600 Summer	0.3	0.3	99.5633	0.1632	25.8	O K
720 Summer	0.3	0.3	99.5633	0.1632	25.8	O K
960 Summer	0.3	0.3	99.5623	0.1622	25.6	O K
1440 Summer	0.3	0.3	99.5583	0.1583	25.0	O K
2160 Summer	0.3	0.3	99.5498	0.1498	23.7	O K
2880 Summer	0.3	0.3	99.5403	0.1403	22.2	O K
4320 Summer	0.3	0.3	99.5208	0.1208	19.1	O K
5760 Summer	0.3	0.3	99.5033	0.1033	16.3	O K
7200 Summer	0.3	0.3	99.4883	0.0883	13.9	O K
8640 Summer	0.3	0.3	99.4758	0.0758	12.0	O K
10080 Summer	0.3	0.3	99.4653	0.0653	10.3	O K
15 Winter	0.3	0.3	99.4723	0.0723	11.4	O K
30 Winter	0.3	0.3	99.4963	0.0963	15.2	O K
60 Winter	0.3	0.3	99.5218	0.1218	19.2	O K
120 Winter	0.3	0.3	99.5468	0.1468	23.2	O K
180 Winter	0.3	0.3	99.5603	0.1602	25.3	O K
240 Winter	0.3	0.3	99.5683	0.1682	26.6	O K
360 Winter	0.3	0.3	99.5788	0.1787	28.2	O K
480 Winter	0.3	0.3	99.5843	0.1842	29.1	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	122.43	23
30 Summer	82.24	38
60 Summer	52.66	68
120 Summer	32.50	126
180 Summer	24.12	186
240 Summer	19.39	246
360 Summer	14.27	366
480 Summer	11.46	484
600 Summer	9.66	604
720 Summer	8.40	704
960 Summer	6.72	812
1440 Summer	4.91	1056
2160 Summer	3.57	1456
2880 Summer	2.85	1876
4320 Summer	2.07	2680
5760 Summer	1.64	3408
7200 Summer	1.38	4176
8640 Summer	1.19	4848
10080 Summer	1.06	5544
15 Winter	122.43	23
30 Winter	82.24	37
60 Winter	52.66	66
120 Winter	32.50	126
180 Winter	24.12	184
240 Winter	19.39	242
360 Winter	14.27	358
480 Winter	11.46	474

Archibald Shaw Limited		Page 2
One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M100+30%	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 100 year Return Period (+30%)

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
600 Winter	0.3	0.3	99.5873	0.1872	29.6	O K
720 Winter	0.3	0.3	99.5883	0.1882	29.7	O K
960 Winter	0.3	0.3	99.5873	0.1872	29.6	O K
1440 Winter	0.3	0.3	99.5808	0.1808	28.6	O K
2160 Winter	0.3	0.3	99.5688	0.1688	26.6	O K
2880 Winter	0.3	0.3	99.5543	0.1543	24.3	O K
4320 Winter	0.3	0.3	99.5243	0.1243	19.7	O K
5760 Winter	0.3	0.3	99.4978	0.0978	15.5	O K
7200 Winter	0.3	0.3	99.4758	0.0758	12.0	O K
8640 Winter	0.3	0.3	99.4593	0.0593	9.4	O K
10080 Winter	0.3	0.3	99.4498	0.0498	7.8	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	9.66	586
720 Winter	8.40	698
960 Winter	6.72	910
1440 Winter	4.91	1132
2160 Winter	3.57	1588
2880 Winter	2.85	2048
4320 Winter	2.07	2860
5760 Winter	1.64	3632
7200 Winter	1.38	4328
8640 Winter	1.19	4928
10080 Winter	1.06	5448

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M100+30%	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	100	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+30
Ratio-R	0.350	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.045

Time (mins)	Area (ha)	Time (mins)	Area (ha)
from:	to:	from:	to:
0	4	0.000	
		4	8
		0.045	

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Infiltration Blanket M100+30%	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage	Source Control W.11.2	

Infiltration Blanket Details

Infil Coef - Base (m/hr)	0.003600	Length (m)	39.5
Safety Factor	1.5	Invert Level (m)	99.400
Porosity	0.40	Cover Level (m)	100.000
Diameter/Width (m)	10.0	Cap Volume (m)	100.000

Sketch/Calc ☒ Site Visit ☐ Memo ☐
 Phone Call ☐ Meeting ☐ File Note ☐

Project No./Ref: 28661

Project: FERRING COUNTRY CENTRE

Section: BARNES - S.W. DRAINAGE

Prepared: VC

Checked:

©Date: 21.04.17.

Time:

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CATCHMENT B - ROAD standing to pond.

These 'muddy' waters will be discharged to a 'dry' basin. The basin can be easily maintained to remove detritus in order to ensure the basin's effectiveness.

Flow routes to the basin will be via:

- (i) Direct hardstanding run-off
- (ii) via carrier drains to the basin.

Note: The absence of a topographic survey prevents the detailed design of a carrier drainage system at this stage.

Further to analysis the 'dry' basin is proposed to have a basal area of no less than 115m^2 , an effective depth of no less than 700mm, with cut banks no steeper than 1:3.

Sketch/Calc ☒	Site Visit ☐	Memo ☐
Phone Call ☐	Meeting ☐	File Note ☐

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Project No./Ref: 28661

Project: PERRING COUNTRY CENTRE

Section: BARN - S.W. DRAINAGE

Prepared: VIC

Checked:

©Date: 21.09.17

Time:

The estimated rise in water elevation is 400mm during a 1:100 + 30% storm event. It will be noted that the drain down time is greater than 24 hours. In mitigation the basin has a design freeboard of 300mm under the worst case design event, the catchment is small, majority of flood waters will be retained on site, those which leave will flow to the east towards the local pipe.

A sectional detail of the 'dry' basin local to the headstanding is shown over.

Sketch/Calc ☒ Site Visit ☐ Memo ☐
 Phone Call ☐ Meeting ☐ File Note ☐

Project No./Ref: 28661

Project: FERRING COUNTRY CENTRE

Section: BAYS - SW DRAINAGE

Prepared: ne

Checked:

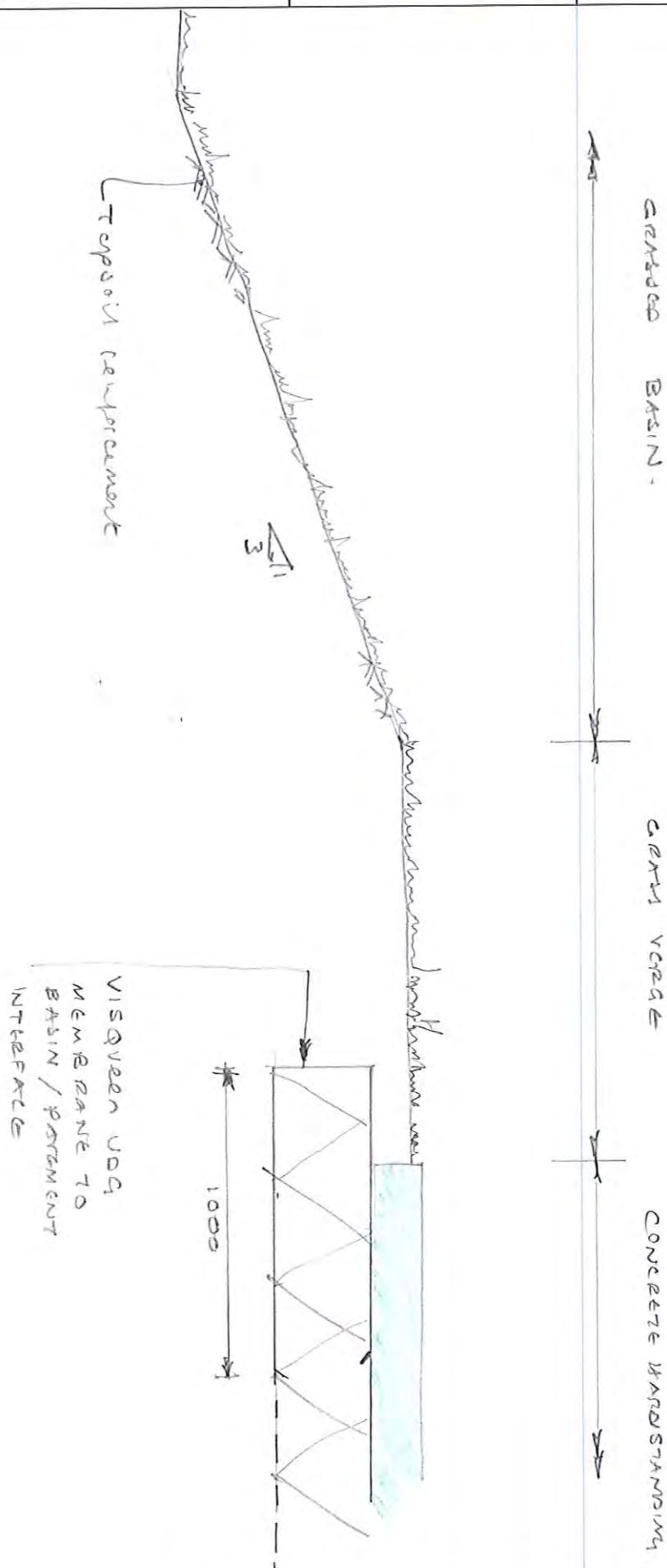
©Date: 21.04.17

Time:

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M1	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage		Source Control W.11.2

Summary of Results for 1 year Return Period

Half Drain Time : 1320 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.0	0.0	99.3278	0.0278	3.3	O K
30 Summer	0.1	0.1	99.3368	0.0367	4.3	O K
60 Summer	0.1	0.1	99.3468	0.0468	5.5	O K
120 Summer	0.1	0.1	99.3583	0.0583	6.9	O K
180 Summer	0.1	0.1	99.3658	0.0658	7.8	O K
240 Summer	0.1	0.1	99.3708	0.0708	8.4	O K
360 Summer	0.1	0.1	99.3778	0.0778	9.2	O K
480 Summer	0.1	0.1	99.3823	0.0823	9.8	O K
600 Summer	0.1	0.1	99.3858	0.0858	10.2	O K
720 Summer	0.1	0.1	99.3883	0.0883	10.5	O K
960 Summer	0.1	0.1	99.3913	0.0913	10.9	O K
1440 Summer	0.1	0.1	99.3953	0.0953	11.4	O K
2160 Summer	0.1	0.1	99.3983	0.0983	11.8	O K
2880 Summer	0.1	0.1	99.3993	0.0993	11.9	O K
4320 Summer	0.1	0.1	99.3978	0.0978	11.7	O K
5760 Summer	0.1	0.1	99.3948	0.0948	11.4	O K
7200 Summer	0.1	0.1	99.3908	0.0908	10.8	O K
8640 Summer	0.1	0.1	99.3863	0.0863	10.3	O K
10080 Summer	0.1	0.1	99.3818	0.0818	9.7	O K
15 Winter	0.1	0.1	99.3313	0.0312	3.6	O K
30 Winter	0.1	0.1	99.3413	0.0412	4.8	O K
60 Winter	0.1	0.1	99.3528	0.0528	6.2	O K
120 Winter	0.1	0.1	99.3653	0.0653	7.7	O K
180 Winter	0.1	0.1	99.3738	0.0738	8.7	O K
240 Winter	0.1	0.1	99.3798	0.0798	9.5	O K
360 Winter	0.1	0.1	99.3878	0.0878	10.5	O K
480 Winter	0.1	0.1	99.3933	0.0933	11.1	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	29.65	23
30 Summer	19.73	38
60 Summer	12.80	68
120 Summer	8.16	126
180 Summer	6.24	186
240 Summer	5.15	246
360 Summer	3.90	364
480 Summer	3.20	484
600 Summer	2.74	602
720 Summer	2.42	722
960 Summer	1.98	912
1440 Summer	1.50	1144
2160 Summer	1.13	1540
2880 Summer	0.93	1964
4320 Summer	0.70	2776
5760 Summer	0.58	3632
7200 Summer	0.50	4400
8640 Summer	0.44	5192
10080 Summer	0.39	5952
15 Winter	29.65	23
30 Winter	19.73	37
60 Winter	12.80	66
120 Winter	8.16	124
180 Winter	6.24	184
240 Winter	5.15	242
360 Winter	3.90	358
480 Winter	3.20	474

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M1	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage		Source Control W.11.2

Summary of Results for 1 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
600 Winter	0.1	0.1	99.3973	0.0973	11.6	O K
720 Winter	0.1	0.1	99.4003	0.1003	12.0	O K
960 Winter	0.1	0.1	99.4043	0.1043	12.5	O K
1440 Winter	0.1	0.1	99.4083	0.1083	13.0	O K
2160 Winter	0.1	0.1	99.4103	0.1103	13.3	O K
2880 Winter	0.1	0.1	99.4103	0.1103	13.3	O K
4320 Winter	0.1	0.1	99.4068	0.1068	12.8	O K
5760 Winter	0.1	0.1	99.4008	0.1008	12.1	O K
7200 Winter	0.1	0.1	99.3933	0.0933	11.2	O K
8640 Winter	0.1	0.1	99.3858	0.0858	10.3	O K
10080 Winter	0.1	0.1	99.3788	0.0788	9.4	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	2.74	588
720 Winter	2.42	700
960 Winter	1.98	924
1440 Winter	1.50	1330
2160 Winter	1.13	1668
2880 Winter	0.93	2136
4320 Winter	0.70	3032
5760 Winter	0.58	3920
7200 Winter	0.50	4752
8640 Winter	0.44	5536
10080 Winter	0.39	6352

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M1	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage		Source Control W.11.2

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	1	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+0
Ratio-R	0.350	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.059

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.019	4	8	0.040

One Little London
Chichester
Sussex PO19 1PP

Ferring Country Centre
Dry Basin
M1

Date 21.04.2017
File

Designed By vlc
Checked By



Micro Drainage

Source Control W.11.2

Infiltration Basin Details

Infil Coef - Base (m/hr)	0.003600	Porosity	1.00
Infil Coef - Sides (m/hr)	0.003600	Invert Level (m)	99.300
Safety Factor	1.5	Ground Level (m)	100.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.00	115.0	0.60	175.0	1.20	185.0	1.80	185.0	2.40	185.0
0.10	125.0	0.70	185.0	1.30	185.0	1.90	185.0	2.50	185.0
0.20	135.0	0.80	185.0	1.40	185.0	2.00	185.0		
0.30	145.0	0.90	185.0	1.50	185.0	2.10	185.0		
0.40	155.0	1.00	185.0	1.60	185.0	2.20	185.0		
0.50	165.0	1.10	185.0	1.70	185.0	2.30	185.0		

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One Little London Chichester Sussex PO19 1PP		Ferring Country Centre Dry Basin M30				
Date 21.04.2017 File		Designed By vlc Checked By				
Micro Drainage		Source Control W.11.2				
Summary of Results for 30 year Return Period						
Half Drain Time : 2697 minutes						
Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.1	0.1	99.3673	0.0673	8.0	O K
30 Summer	0.1	0.1	99.3888	0.0888	10.6	O K
60 Summer	0.1	0.1	99.4113	0.1113	13.4	O K
120 Summer	0.1	0.1	99.4348	0.1348	16.4	O K
180 Summer	0.1	0.1	99.4483	0.1483	18.2	O K
240 Summer	0.1	0.1	99.4578	0.1577	19.4	O K
360 Summer	0.1	0.1	99.4713	0.1712	21.2	O K
480 Summer	0.1	0.1	99.4803	0.1802	22.4	O K
600 Summer	0.1	0.1	99.4873	0.1872	23.3	O K
720 Summer	0.1	0.1	99.4923	0.1922	24.0	O K
960 Summer	0.1	0.1	99.4998	0.1997	24.9	O K
1440 Summer	0.1	0.1	99.5068	0.2067	25.9	O K
2160 Summer	0.1	0.1	99.5088	0.2087	26.2	O K
2880 Summer	0.1	0.1	99.5078	0.2077	26.1	O K
4320 Summer	0.1	0.1	99.5038	0.2037	25.5	O K
5760 Summer	0.1	0.1	99.4978	0.1977	24.7	O K
7200 Summer	0.1	0.1	99.4913	0.1912	23.8	O K
8640 Summer	0.1	0.1	99.4843	0.1842	22.9	O K
10080 Summer	0.1	0.1	99.4773	0.1772	22.0	O K
15 Winter	0.1	0.1	99.3753	0.0753	8.9	O K
30 Winter	0.1	0.1	99.3988	0.0988	11.9	O K
60 Winter	0.1	0.1	99.4243	0.1243	15.0	O K
120 Winter	0.1	0.1	99.4503	0.1502	18.4	O K
180 Winter	0.1	0.1	99.4658	0.1657	20.4	O K
240 Winter	0.1	0.1	99.4763	0.1762	21.8	O K
360 Winter	0.1	0.1	99.4913	0.1912	23.8	O K
480 Winter	0.1	0.1	99.5018	0.2017	25.2	O K
Storm Duration (mins)	Rain (mm/hr)		Time-Peak (mins)			
15 Summer	72.68		23			
30 Summer	48.36		38			
60 Summer	30.81		68			
120 Summer	19.04		128			
180 Summer	14.19		188			
240 Summer	11.47		246			
360 Summer	8.49		366			
480 Summer	6.85		486			
600 Summer	5.80		606			
720 Summer	5.06		726			
960 Summer	4.07		964			
1440 Summer	3.00		1442			
2160 Summer	2.20		2012			
2880 Summer	1.77		2340			
4320 Summer	1.30		3112			
5760 Summer	1.04		3920			
7200 Summer	0.88		4752			
8640 Summer	0.76		5536			
10080 Summer	0.68		6360			
15 Winter	72.68		23			
30 Winter	48.36		37			
60 Winter	30.81		68			
120 Winter	19.04		126			
180 Winter	14.19		184			
240 Winter	11.47		244			
360 Winter	8.49		362			
480 Winter	6.85		478			
©1982-2008 Micro Drainage						

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M30	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage		Source Control W.11.2

Summary of Results for 30 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
600 Winter	0.1	0.1	99.5098	0.2097	26.3	O K
720 Winter	0.1	0.1	99.5158	0.2157	27.1	O K
960 Winter	0.1	0.1	99.5243	0.2242	28.3	O K
1440 Winter	0.1	0.1	99.5338	0.2337	29.6	O K
2160 Winter	0.1	0.1	99.5378	0.2377	30.2	O K
2880 Winter	0.1	0.1	99.5363	0.2362	30.0	O K
4320 Winter	0.1	0.1	99.5303	0.2302	29.1	O K
5760 Winter	0.1	0.1	99.5218	0.2217	28.0	O K
7200 Winter	0.1	0.1	99.5118	0.2117	26.6	O K
8640 Winter	0.1	0.1	99.5018	0.2017	25.2	O K
10080 Winter	0.1	0.1	99.4913	0.1913	23.8	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	5.80	596
720 Winter	5.06	712
960 Winter	4.07	946
1440 Winter	3.00	1402
2160 Winter	2.20	2060
2880 Winter	1.77	2684
4320 Winter	1.30	3332
5760 Winter	1.04	4264
7200 Winter	0.88	5184
8640 Winter	0.76	6056
10080 Winter	0.68	6952

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M30	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage		Source Control W.11.2

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	30	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+0
Ratio-R	0.350	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.059

Time (mins)	Area (ha)	Time (mins)	Area (ha)
from:	to:	from:	to:
0	4	0.019	
		4	8
		0.040	

One Little London
Chichester
Sussex PO19 1PP

Ferring Country Centre
Dry Basin
M30

Date 21.04.2017
File

Designed By vlc
Checked By



Micro Drainage

Source Control W.11.2

Infiltration Basin Details

Infil Coef - Base (m/hr) 0.003600 Porosity 1.00
Infil Coef - Sides (m/hr) 0.003600 Invert Level (m) 99.300
Safety Factor 1.5 Ground Level (m) 100.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.00	115.0	0.60	175.0	1.20	185.0	1.80	185.0	2.40	185.0
0.10	125.0	0.70	185.0	1.30	185.0	1.90	185.0	2.50	185.0
0.20	135.0	0.80	185.0	1.40	185.0	2.00	185.0		
0.30	145.0	0.90	185.0	1.50	185.0	2.10	185.0		
0.40	155.0	1.00	185.0	1.60	185.0	2.20	185.0		
0.50	165.0	1.10	185.0	1.70	185.0	2.30	185.0		

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M100	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage		Source Control W.11.2

Summary of Results for 100 year Return Period

Half Drain Time : 3331 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.1	0.1	99.3868	0.0868	10.4	O K
30 Summer	0.1	0.1	99.4148	0.1148	13.9	O K
60 Summer	0.1	0.1	99.4448	0.1447	17.7	O K
120 Summer	0.1	0.1	99.4748	0.1747	21.6	O K
180 Summer	0.1	0.1	99.4918	0.1917	23.9	O K
240 Summer	0.1	0.1	99.5033	0.2032	25.4	O K
360 Summer	0.1	0.1	99.5193	0.2192	27.6	O K
480 Summer	0.1	0.1	99.5308	0.2307	29.2	O K
600 Summer	0.1	0.1	99.5388	0.2387	30.3	O K
720 Summer	0.1	0.1	99.5453	0.2452	31.2	O K
960 Summer	0.1	0.1	99.5538	0.2537	32.4	O K
1440 Summer	0.1	0.1	99.5627	0.2627	33.7	O K
2160 Summer	0.1	0.1	99.5658	0.2657	34.1	O K
2880 Summer	0.1	0.1	99.5633	0.2632	33.7	O K
4320 Summer	0.1	0.1	99.5568	0.2567	32.8	O K
5760 Summer	0.1	0.1	99.5493	0.2492	31.7	O K
7200 Summer	0.1	0.1	99.5408	0.2407	30.6	O K
8640 Summer	0.1	0.1	99.5328	0.2327	29.5	O K
10080 Summer	0.1	0.1	99.5248	0.2247	28.4	O K
15 Winter	0.1	0.1	99.3968	0.0968	11.6	O K
30 Winter	0.1	0.1	99.4283	0.1283	15.6	O K
60 Winter	0.1	0.1	99.4613	0.1612	19.8	O K
120 Winter	0.1	0.1	99.4948	0.1947	24.3	O K
180 Winter	0.1	0.1	99.5133	0.2132	26.8	O K
240 Winter	0.1	0.1	99.5263	0.2262	28.5	O K
360 Winter	0.1	0.1	99.5443	0.2442	31.1	O K
480 Winter	0.1	0.1	99.5568	0.2567	32.9	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	94.18	23
30 Summer	63.26	38
60 Summer	40.51	68
120 Summer	25.00	128
180 Summer	18.55	188
240 Summer	14.91	248
360 Summer	10.98	366
480 Summer	8.82	486
600 Summer	7.43	606
720 Summer	6.46	726
960 Summer	5.17	966
1440 Summer	3.77	1444
2160 Summer	2.75	2160
2880 Summer	2.19	2568
4320 Summer	1.59	3288
5760 Summer	1.26	4040
7200 Summer	1.06	4896
8640 Summer	0.92	5704
10080 Summer	0.81	6552
15 Winter	94.18	23
30 Winter	63.26	38
60 Winter	40.51	68
120 Winter	25.00	126
180 Winter	18.55	186
240 Winter	14.91	244
360 Winter	10.98	362
480 Winter	8.82	480

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M100	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 100 year Return Period

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
600 Winter	0.1	0.1	99.5663	0.2662	34.2	O K
720 Winter	0.1	0.1	99.5738	0.2737	35.2	O K
960 Winter	0.1	0.1	99.5842	0.2842	36.7	O K
1440 Winter	0.1	0.1	99.5953	0.2952	38.3	O K
2160 Winter	0.1	0.1	99.6013	0.3012	39.2	O K
2880 Winter	0.1	0.1	99.6002	0.3002	39.0	O K
4320 Winter	0.1	0.1	99.5907	0.2907	37.7	O K
5760 Winter	0.1	0.1	99.5813	0.2812	36.3	O K
7200 Winter	0.1	0.1	99.5703	0.2702	34.7	O K
8640 Winter	0.1	0.1	99.5588	0.2587	33.1	O K
10080 Winter	0.1	0.1	99.5468	0.2467	31.4	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	7.43	598
720 Winter	6.46	714
960 Winter	5.17	948
1440 Winter	3.77	1412
2160 Winter	2.75	2084
2880 Winter	2.19	2740
4320 Winter	1.59	3464
5760 Winter	1.26	4376
7200 Winter	1.06	5264
8640 Winter	0.92	6224
10080 Winter	0.81	7064

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M100	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage		Source Control W.11.2

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	100	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+0
Ratio-R	0.350	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.059

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.019	4	8	0.040

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M100+30%	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage	Source Control W.11.2	

Summary of Results for 100 year Return Period (+30%)

Half Drain Time : 4262 minutes

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m³)	Status
15 Summer	0.1	0.1	99.4118	0.1118	13.5	O K
30 Summer	0.1	0.1	99.4478	0.1477	18.1	O K
60 Summer	0.1	0.1	99.4853	0.1852	23.0	O K
120 Summer	0.1	0.1	99.5238	0.2237	28.2	O K
180 Summer	0.1	0.1	99.5453	0.2452	31.2	O K
240 Summer	0.1	0.1	99.5598	0.2597	33.2	O K
360 Summer	0.1	0.1	99.5808	0.2807	36.2	O K
480 Summer	0.1	0.1	99.5958	0.2957	38.3	O K
600 Summer	0.1	0.1	99.6063	0.3062	39.9	O K
720 Summer	0.1	0.1	99.6153	0.3152	41.2	O K
960 Summer	0.1	0.1	99.6272	0.3272	43.0	O K
1440 Summer	0.1	0.1	99.6417	0.3417	45.1	O K
2160 Summer	0.1	0.1	99.6493	0.3492	46.3	O K
2880 Summer	0.1	0.1	99.6492	0.3492	46.3	O K
4320 Summer	0.1	0.1	99.6428	0.3427	45.3	O K
5760 Summer	0.1	0.1	99.6348	0.3347	44.1	O K
7200 Summer	0.1	0.1	99.6268	0.3267	42.9	O K
8640 Summer	0.1	0.1	99.6187	0.3187	41.7	O K
10080 Summer	0.1	0.1	99.6102	0.3102	40.5	O K
15 Winter	0.1	0.1	99.4248	0.1248	15.1	O K
30 Winter	0.1	0.1	99.4643	0.1642	20.2	O K
60 Winter	0.1	0.1	99.5063	0.2062	25.8	O K
120 Winter	0.1	0.1	99.5488	0.2487	31.7	O K
180 Winter	0.1	0.1	99.5723	0.2722	35.0	O K
240 Winter	0.1	0.1	99.5883	0.2882	37.3	O K
360 Winter	0.1	0.1	99.6123	0.3122	40.7	O K
480 Winter	0.1	0.1	99.6283	0.3282	43.2	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
15 Summer	122.43	23
30 Summer	82.24	38
60 Summer	52.66	68
120 Summer	32.50	128
180 Summer	24.12	188
240 Summer	19.39	248
360 Summer	14.27	366
480 Summer	11.46	486
600 Summer	9.66	606
720 Summer	8.40	726
960 Summer	6.72	966
1440 Summer	4.91	1444
2160 Summer	3.57	2164
2880 Summer	2.85	2880
4320 Summer	2.07	3588
5760 Summer	1.64	4320
7200 Summer	1.38	5112
8640 Summer	1.19	5888
10080 Summer	1.06	6760
15 Winter	122.43	23
30 Winter	82.24	38
60 Winter	52.66	68
120 Winter	32.50	126
180 Winter	24.12	186
240 Winter	19.39	244
360 Winter	14.27	362
480 Winter	11.46	480

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M100+30%	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage		Source Control W.11.2

Summary of Results for 100 year Return Period (+30%)

Storm Duration (mins)	Maximum Filtration (l/s)	Maximum Outflow (l/s)	Maximum Water Level (m OD)	Maximum Depth (m)	Maximum Volume (m ³)	Status
600 Winter	0.1	0.1	99.6408	0.3407	45.0	O K
720 Winter	0.1	0.1	99.6508	0.3507	46.5	O K
960 Winter	0.1	0.1	99.6647	0.3647	48.6	O K
1440 Winter	0.1	0.1	99.6817	0.3817	51.2	O K
2160 Winter	0.1	0.1	99.6932	0.3932	52.9	O K
2880 Winter	0.1	0.1	99.6957	0.3957	53.4	O K
4320 Winter	0.1	0.1	99.6897	0.3897	52.4	O K
5760 Winter	0.1	0.1	99.6787	0.3787	50.8	O K
7200 Winter	0.1	0.1	99.6692	0.3692	49.2	O K
8640 Winter	0.1	0.1	99.6582	0.3582	47.6	O K
10080 Winter	0.1	0.1	99.6467	0.3467	45.9	O K

Storm Duration (mins)	Rain (mm/hr)	Time-Peak (mins)
600 Winter	9.66	598
720 Winter	8.40	716
960 Winter	6.72	952
1440 Winter	4.91	1416
2160 Winter	3.57	2100
2880 Winter	2.85	2772
4320 Winter	2.07	4024
5760 Winter	1.64	4560
7200 Winter	1.38	5472
8640 Winter	1.19	6400
10080 Winter	1.06	7352

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M100+30%	
Date 21.04.2017 File	Designed By vlc Checked By	
Micro Drainage	Source Control W.11.2	

Rainfall Details

Region	ENG+WAL	Cv (Summer)	0.750	Summer Storms	Yes
Return Period (years)	100	Cv (Winter)	0.840	Winter Storms	Yes
M5-60 (mm)	20.000	Shortest Storm (mins)	15	Climate Change %	+30
Ratio-R	0.350	Longest Storm (mins)	10080		

Time / Area Diagram

Total Area (ha) = 0.059

Time from:	(mins) to:	Area (ha)	Time from:	(mins) to:	Area (ha)
0	4	0.019	4	8	0.040

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One Little London Chichester Sussex PO19 1PP	Ferring Country Centre Dry Basin M100+30%	
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Infiltration Basin Details

Infil Coef - Base (m/hr) 0.003600 Porosity 1.00
 Infil Coef - Sides (m/hr) 0.003600 Invert Level (m) 99.300
 Safety Factor 1.5 Ground Level (m) 100.000

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.00	115.0	0.60	175.0	1.20	185.0	1.80	185.0	2.40	185.0
0.10	125.0	0.70	185.0	1.30	185.0	1.90	185.0	2.50	185.0
0.20	135.0	0.80	185.0	1.40	185.0	2.00	185.0		
0.30	145.0	0.90	185.0	1.50	185.0	2.10	185.0		
0.40	155.0	1.00	185.0	1.60	185.0	2.20	185.0		
0.50	165.0	1.10	185.0	1.70	185.0	2.30	185.0		