

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	26/05/2022



Trial Pit Identification:	SA102
Trial Pit Length (m):	2.15
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	1.40
Groundwater Level (m bgl):	N/A

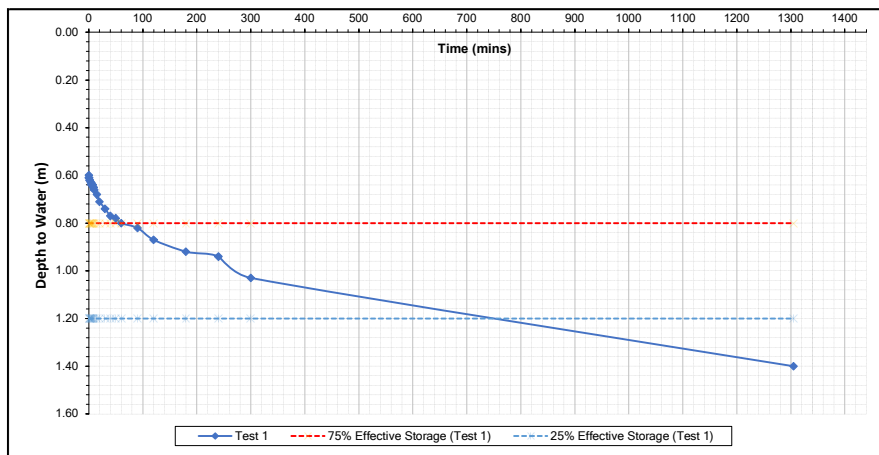
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.0-0.40m bgl Grass over dark brown gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [TOPSOIL]
0.40-1.60m bgl Orange slightly clayey gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
0.80	0.00	0.60
	0.25	0.61
75% Effective Storage Depth (m):	0.50	0.61
0.60	1.50	0.62
	2.00	0.62
(i.e. Depth Below Ground Level) (m):	4.00	0.63
0.80	4.30	0.63
	5.00	0.64
25% Effective Storage Depth (m):	6.00	0.64
0.20	7.00	0.64
	8.00	0.65
(i.e. Depth Below Ground Level) (m):	9.00	0.65
1.20	10.00	0.66
	15.00	0.68
Effective Storage Depth Across 75% - 25% (m):	20.00	0.71
0.40	30.00	0.74
	40.00	0.77
Time to Fall to 75% Effective Depth (min):	50.00	0.78
60	60.00	0.80
	90.00	0.82
Time to Fall to 25% Effective Depth (min):	120.00	0.87
750	180.00	0.92
	240.00	0.94
Vp75%-25% (m3):	300.00	1.03
0.43	1305.00	1.40
As50% (m2):		
3.20		
Tp75%-25% (mins):		
690		

DESIGN SOIL INFILTRATION RATE, f (m/s):	3.25E-06
---	----------

Comments:



Site Engineer:	Date:
HS/TH	26/05/2022

Checked and Approved By:	Date:
LB	20.06.22

Location
SA102

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	26/05/2022



Trial Pit Identification:	SA102
Trial Pit Length (m):	2.15
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	1.40
Groundwater Level (m bgl):	N/A

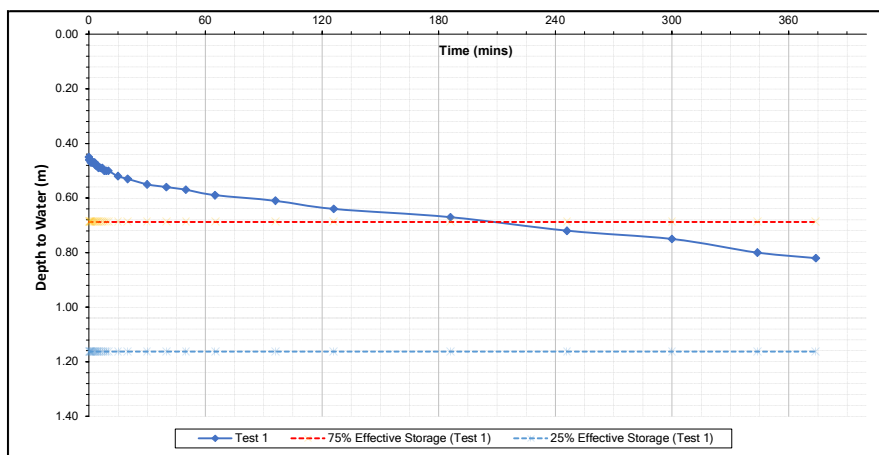
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.0-0.40m bgl Grass over dark brown gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [TOPSOIL]
0.40-1.60m bgl Orange slightly clayey gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]

Test Parameters	TEST 2	
Effective Storage Depth (m):	Time (min)	Depth (m)
0.95	0.00	0.45
	0.25	0.46
75% Effective Storage Depth (m):	0.50	0.46
0.71	0.75	0.46
	1.00	0.47
(i.e. Depth Below Ground Level) (m):	1.50	0.47
0.69	2.00	0.47
	2.50	0.47
25% Effective Storage Depth (m):	3.00	0.47
0.24	3.50	0.48
	4.00	0.48
(i.e. Depth Below Ground Level) (m):	4.50	0.48
	5.00	0.49
1.16	6.00	0.49
Effective Storage Depth Across 75% - 25% (m):	7.00	0.49
	8.00	0.50
0.48	9.00	0.50
Time to Fall to 75% Effective Depth (min):	10.00	0.50
	15.00	0.52
N/A	20.00	0.53
Time to Fall to 25% Effective Depth (min):	30.00	0.55
	40.00	0.56
N/A	50.00	0.57
Vp75%-25% (m3):	65.00	0.59
	96.00	0.61
0.51	126.00	0.64
As50% (m2):	186.00	0.67
	246.00	0.72
3.59	300.00	0.75
Tp75%-25% (mins):	344.00	0.80
N/A	374.00	0.82

DESIGN SOIL INFILTRATION RATE, f (m/s):	N/A
---	-----

Comments:
NOTE: During the duration of the test the required intercept failed to be reached. Therefore the test is considered not to have been successful.



Site Engineer:	Date:
HS/TH	25/02/2022

Checked and Approved By:	Date:
LB	20.06.2022

Location
SA102

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	26/05/2022



Trial Pit Identification:	SA103
Trial Pit Length (m):	2.70
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	2.40
Groundwater Level (m bgl):	N/A

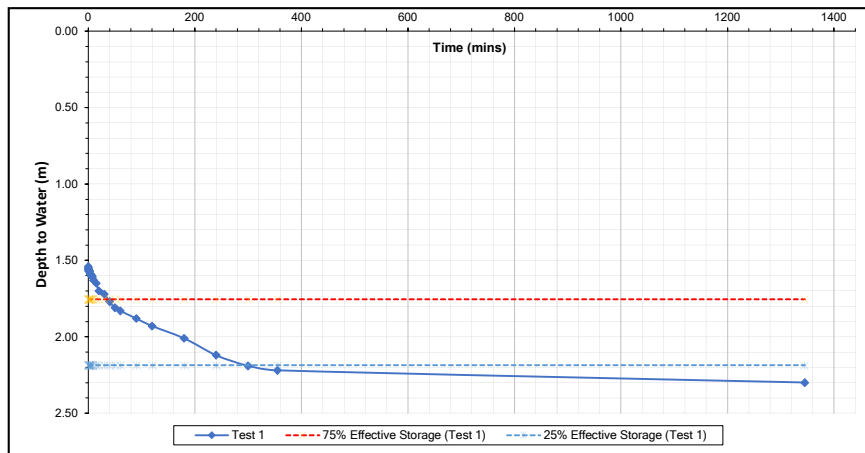
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.60m bgl Dark brown slightly silty gravelly fine to coarse SAND. Gravel is sub-angular to rounded fine to medium flint. [TOPSOIL]
0.60-1.10m bgl Orangish red mottled greenish grey very sandy CLAY. Sand is coarse. [RIVER TERRACE]
1.10-2.60m bgl Orange slightly clayey gravelly coarse SAND. Gravel is sub-angular to rounded fine to medium flint. [RIVER TERRACE]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
0.86	0.00	1.54
	0.25	1.55
75% Effective Storage Depth (m):	0.50	1.56
0.65	0.75	1.56
(i.e. Depth Below Ground Level) (m):	1.00	1.57
	1.50	1.57
1.76	2.00	1.57
	2.50	1.57
25% Effective Storage Depth (m):	3.50	1.59
0.22	4.00	1.59
(i.e. Depth Below Ground Level) (m):	4.50	1.59
	6.00	1.60
2.19	7.00	1.60
	8.00	1.61
Effective Storage Depth Across 75% - 25% (m):	10.00	1.63
0.43	15.00	1.65
	20.00	1.70
Time to Fall to 75% Effective Depth (min):	30.00	1.72
	40.00	1.77
39	50.00	1.81
Time to Fall to 25% Effective Depth (min):	60.00	1.83
	90.00	1.88
300	120.00	1.93
Vp75%-25% (m3):	180.00	2.01
0.58	240.00	2.12
	300.00	2.19
As50% (m2):	355.00	2.22
4.10	1345.00	2.30
Tp75%-25% (mins):		
261		

DESIGN SOIL INFILTRATION RATE, f (m/s):	9.04E-06
---	----------

Comments:



Site Engineer:	Date:
HS/TH	26/05/2022

Checked and Approved By:	Date:
LB	20.06.22

Location
SA103

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	26/05/2022



SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

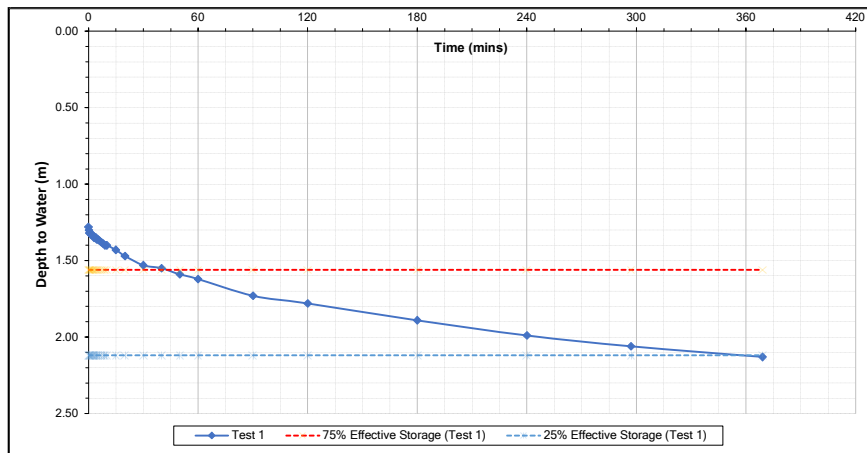
Trial Pit Identification:	SA103
Trial Pit Length (m):	2.70
Trial Pit Width (m):	0.50
Trial Pit Depth (m):	2.40
Groundwater Level (m bgl):	N/A

Geology Description:
0.00-0.60m bgl Dark brown slightly silty gravelly fine to coarse SAND. Gravel is sub-angular to rounded fine to medium flint. [TOPSOIL]
0.60-1.10m bgl Orangish red mottled greenish grey very sandy CLAY. Sand is coarse. [RIVER TERRACE]
1.10-2.60m bgl Orange slightly clayey gravelly coarse SAND. Gravel is sub-angular to rounded fine to medium flint. [RIVER TERRACE]

Test Parameters	TEST 2	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.12	0.00	1.28
	0.25	1.30
75% Effective Storage Depth (m):	0.50	1.32
0.84	0.75	1.32
	1.00	1.32
(i.e. Depth Below Ground Level) (m):	1.50	1.33
	2.00	1.33
1.56	2.50	1.34
25% Effective Storage Depth (m):	3.00	1.35
0.28	3.50	1.35
	4.00	1.35
(i.e. Depth Below Ground Level) (m):	4.50	1.36
	5.00	1.36
2.12	6.00	1.37
Effective Storage Depth Across 75% - 25% (m):	7.00	1.38
	8.00	1.39
0.56	9.00	1.40
Time to Fall to 75% Effective Depth (min):	10.00	1.40
	15.00	1.43
42.00	20.00	1.47
Time to Fall to 25% Effective Depth (min):	30.00	1.53
	40.00	1.55
365.00	50.00	1.59
Vp75%-25% (m3):	60.00	1.62
	90.00	1.73
0.76	120.00	1.78
As50% (m2):	180.00	1.89
	240.00	1.99
4.93	297.00	2.06
Tp75%-25% (mins):	369.00	2.13
323.00		

DESIGN SOIL INFILTRATION RATE, f (m/s):	7.91E-06
---	----------

Comments:



Site Engineer:	Date:
HS/TH	26/05/2022

Checked and Approved By:	Date:
LB	20.06.22

Location
SA103

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022



Trial Pit Identification:	SA201
Trial Pit Length (m):	2.70
Trial Pit Width (m):	0.70
Trial Pit Depth (m):	1.70
Groundwater Level (m bgl):	N/A

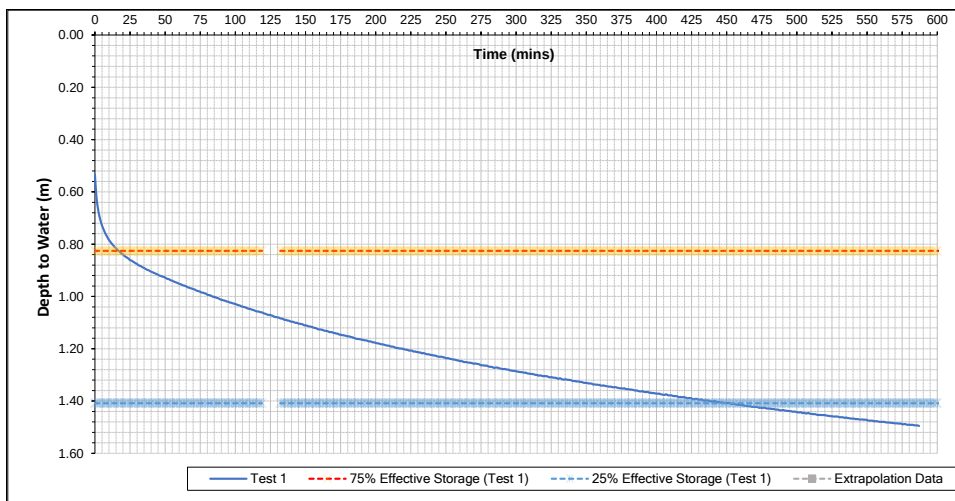
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.50: Dark brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]
0.50-1.10: Orangish brown silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.10-1.20: Orange sandy angular to sub-rounded GRAVEL of flint. Sand is coarse. [RIVER TERRACE]
1.20-1.70: Orange clayey sandy sub-angular to sub-rounded fine to coarse GRAVEL of flint. Sand is coarse. [RIVER TERRACE]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.17	0.00	0.53
	1.00	0.62
75% Effective Storage Depth (m):	2.00	0.66
0.87	3.00	0.69
	902.00	
(i.e. Depth Below Ground Level) (m):	903.00	
0.83	904.00	
	905.00	
25% Effective Storage Depth (m):	906.00	
0.29	907.00	
	908.00	
(i.e. Depth Below Ground Level) (m):	909.00	
1.41	910.00	
	911.00	
Effective Storage Depth Across 75% - 25% (m):	912.00	
0.58	913.00	
	914.00	
Time to Fall to 75% Effective Depth (min):	915.00	
17	916.00	
	917.00	
Time to Fall to 25% Effective Depth (min):	918.00	
450	919.00	
	920.00	
Vp75%-25% (m3):	921.00	
1.10	922.00	
	923.00	
As50% (m2):	924.00	
5.85	925.00	
	926.00	
Tp75%-25% (mins):	927.00	
433	928.00	

DESIGN SOIL INFILTRATION RATE, f (m/s):	7.24E-06
---	----------

Comments:



Site Engineer:	Date:
TH	27/07/2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA201

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022

Trial Pit Identification:	SA201
Trial Pit Length (m):	2.70
Trial Pit Width (m):	0.70
Trial Pit Depth (m):	1.70
Groundwater Level (m bgl):	N/A



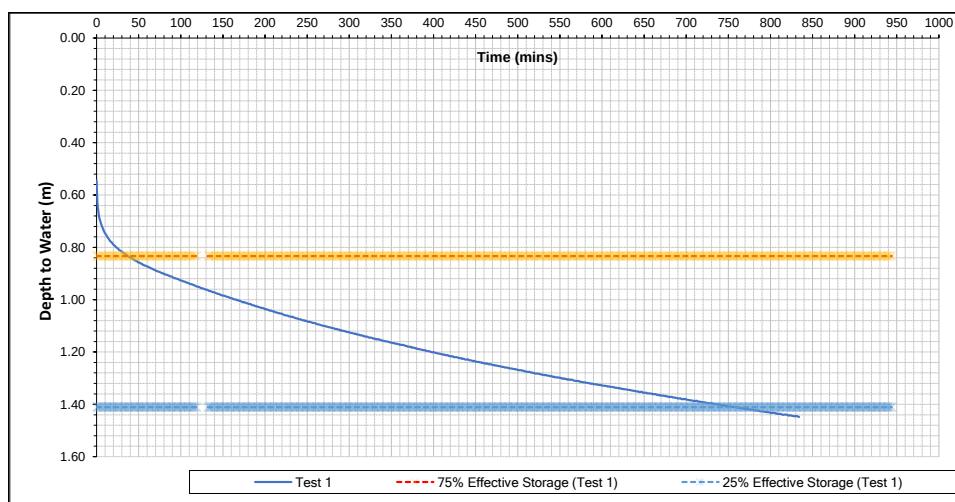
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.50: Dark brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]
0.50-1.10: Orangish brown silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.10-1.20: Orange sandy angular to sub-rounded GRAVEL of flint. Sand is coarse. [RIVER TERRACE]
1.20-1.70: Orange clayey sandy sub-angular to sub-rounded fine to coarse GRAVEL of flint. Sand is coarse. [RIVER TERRACE]

Test Parameters	TEST 2	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.16	0.00	0.54
	1.00	0.63
75% Effective Storage Depth (m):	807.00	1.44
0.87	808.00	1.44
	809.00	1.44
(i.e. Depth Below Ground Level) (m):	810.00	1.44
0.83	811.00	1.44
	812.00	1.44
25% Effective Storage Depth (m):	813.00	1.44
0.29	814.00	1.44
	815.00	1.44
(i.e. Depth Below Ground Level) (m):	816.00	1.44
1.41	817.00	1.44
	818.00	1.44
Effective Storage Depth Across 75% - 25% (m):	819.00	1.44
0.58	820.00	1.44
	821.00	1.44
Time to Fall to 75% Effective Depth (min):	822.00	1.44
40.00	823.00	1.44
	824.00	1.44
Time to Fall to 25% Effective Depth (min):	825.00	1.44
760.00	826.00	1.44
	827.00	1.44
Vp75%-25% (m3):	828.00	1.45
1.09	829.00	1.45
	830.00	1.45
As50% (m2):	831.00	1.45
5.82	832.00	1.45
	833.00	1.45
Tp75%-25% (mins):	834.00	1.45
720.00	835.00	1.45
	836.00	1.45

DESIGN SOIL INFILTRATION RATE, f (m/s):	4.34E-06
---	----------

Comments:



Site Engineer:	Date:
TH	26.05.2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA201

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022

Trial Pit Identification:	SA201
Trial Pit Length (m):	2.70
Trial Pit Width (m):	0.70
Trial Pit Depth (m):	1.70
Groundwater Level (m bgl):	N/A



SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.50: Dark brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [TOPSOIL]
0.50-1.10: Orangish brown silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.10-1.20: Orange sandy angular to sub-rounded GRAVEL of flint. Sand is coarse. [RIVER TERRACE]
1.20-1.70: Orange clayey sandy sub-angular to sub-rounded fine to coarse GRAVEL of flint. Sand is coarse. [RIVER TERRACE]

Test Parameters	TEST 3	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.00	0.00	0.70
	1.00	0.73
75% Effective Storage Depth (m):	2.00	0.75
0.75		
(i.e. Depth Below Ground Level) (m):		
0.95		
25% Effective Storage Depth (m):		
0.25		
(i.e. Depth Below Ground Level) (m):		
1.45		
Effective Storage Depth Across 75% - 25% (m):		
0.49975		
Time to Fall to 75% Effective Depth (min):		
120		
Time to Fall to 25% Effective Depth (min):		
900		
Vp75%-25% (m3):		
0.94		
As50% (m2):		
5.2883		
Tp75%-25% (mins):		
780		

DESIGN SOIL INFILTRATION RATE, f (m/s):	3.82E-06
---	----------

Comments:



Site Engineer:	Date:
TH	27/07/2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA201

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022



Trial Pit Identification:	SA202
Trial Pit Length (m):	2.30
Trial Pit Width (m):	0.60
Trial Pit Depth (m):	1.52
Groundwater Level (m bgl):	N/A

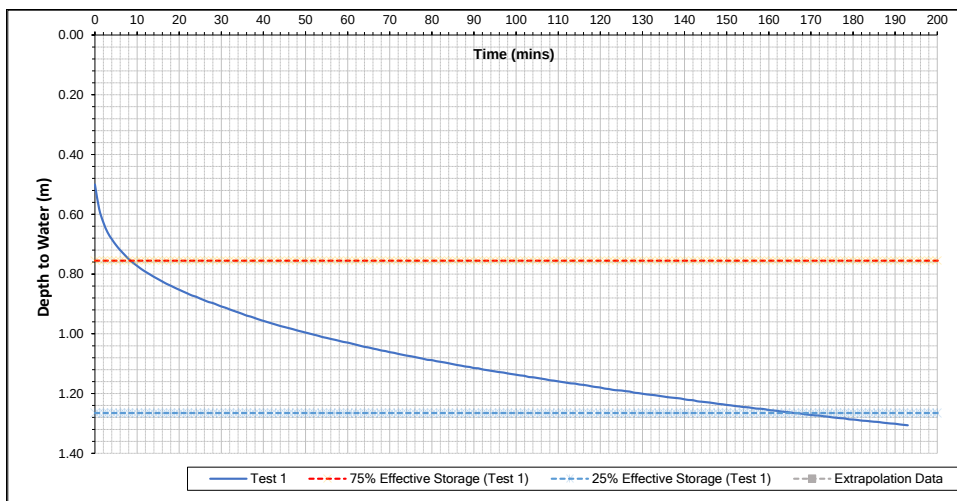
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.50: Dark brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint with rare angular coarse brick. [MADE GROUND]
0.50-1.30: Orangish brown and reddish brown silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.30-1.60: Mottled red blueish grey and orange sandy SILT. Sand is fine to coarse. [RIVER TERRACE]
1.60-1.70: Orange slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [RIVER TERRACE]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.02	0.00	0.50
	1.00	0.58
75% Effective Storage Depth (m):	2.00	0.63
0.76	3.00	0.66
	4.00	0.68
(i.e. Depth Below Ground Level) (m):	5.00	0.70
0.76	6.00	0.72
	7.00	0.73
25% Effective Storage Depth (m):	8.00	0.75
0.25	9.00	0.76
	10.00	0.77
(i.e. Depth Below Ground Level) (m):	11.00	0.78
1.27	12.00	0.79
	13.00	0.80
Effective Storage Depth Across 75% - 25% (m):	14.00	0.81
0.51	15.00	0.82
	16.00	0.82
Time to Fall to 75% Effective Depth (min):	17.00	0.83
8	18.00	0.84
	19.00	0.85
Time to Fall to 25% Effective Depth (min):	20.00	0.85
166	21.00	0.86
	22.00	0.87
Vp75%-25% (m3):	23.00	0.87
0.70	24.00	0.88
	25.00	0.88
As50% (m2):	26.00	0.89
4.34	27.00	0.89
	28.00	0.90
Tp75%-25% (mins):	29.00	0.90
158	30.00	0.91
	31.00	0.91

DESIGN SOIL INFILTRATION RATE, f (m/s):	1.71E-05
---	----------

Comments:



Site Engineer:	Date:
TH	27/07/2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA202

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022

Trial Pit Identification:	SA202
Trial Pit Length (m):	2.30
Trial Pit Width (m):	0.60
Trial Pit Depth (m):	1.52
Groundwater Level (m bgl):	N/A



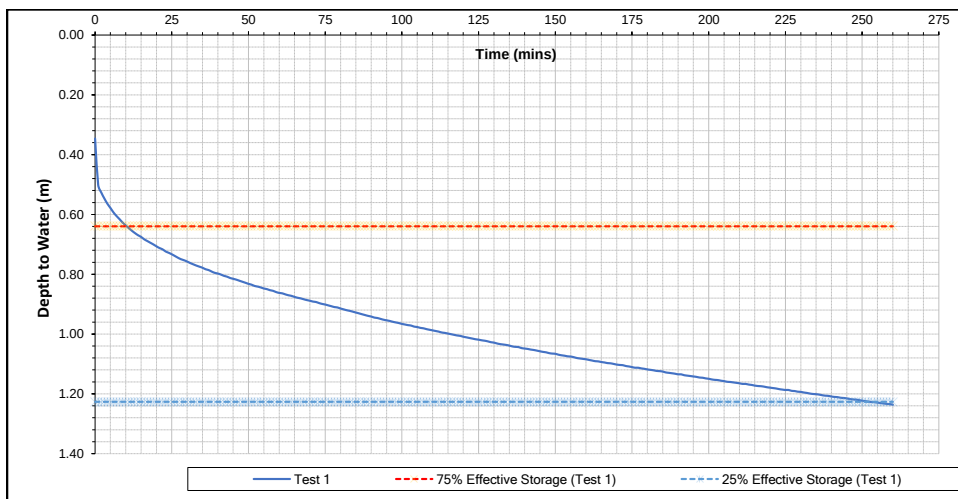
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.50: Dark brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint with rare angular coarse brick. [MADE GROUND]
0.50-1.30: Orangish brown and reddish brown silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.30-1.60: Mottled red blueish grey and orange sandy SILT. Sand is fine to coarse. [RIVER TERRACE]
1.60-1.70: Orange slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [RIVER TERRACE]

Test Parameters	TEST 2	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.17	0.00	0.35
	1.00	0.50
75% Effective Storage Depth (m):	2.00	0.53
0.88	3.00	0.55
	4.00	0.56
(i.e. Depth Below Ground Level) (m):	5.00	0.58
0.64	6.00	0.59
	7.00	0.61
25% Effective Storage Depth (m):	8.00	0.62
0.29	9.00	0.63
	10.00	0.64
(i.e. Depth Below Ground Level) (m):	11.00	0.65
1.23	12.00	0.65
	13.00	0.66
Effective Storage Depth Across 75% - 25% (m):	14.00	0.67
0.59	15.00	0.68
	16.00	0.68
Time to Fall to 75% Effective Depth (min):	17.00	0.69
10.00	18.00	0.69
	19.00	0.70
Time to Fall to 25% Effective Depth (min):	20.00	0.71
252.00	21.00	0.71
	22.00	0.72
Vp75%-25% (m3):	23.00	0.72
0.81	24.00	0.73
	25.00	0.73
As50% (m2):	26.00	0.74
4.78	27.00	0.74
	28.00	0.75
Tp75%-25% (mins):	29.00	0.75
242.00	30.00	0.76
	31.00	0.76

DESIGN SOIL INFILTRATION RATE, f (m/s):	1.17E-05
---	----------

Comments:



Site Engineer:	Date:
TH	26.05.2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA202

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022

Trial Pit Identification:	SA202
Trial Pit Length (m):	2.30
Trial Pit Width (m):	0.60
Trial Pit Depth (m):	1.52
Groundwater Level (m bgl):	N/A



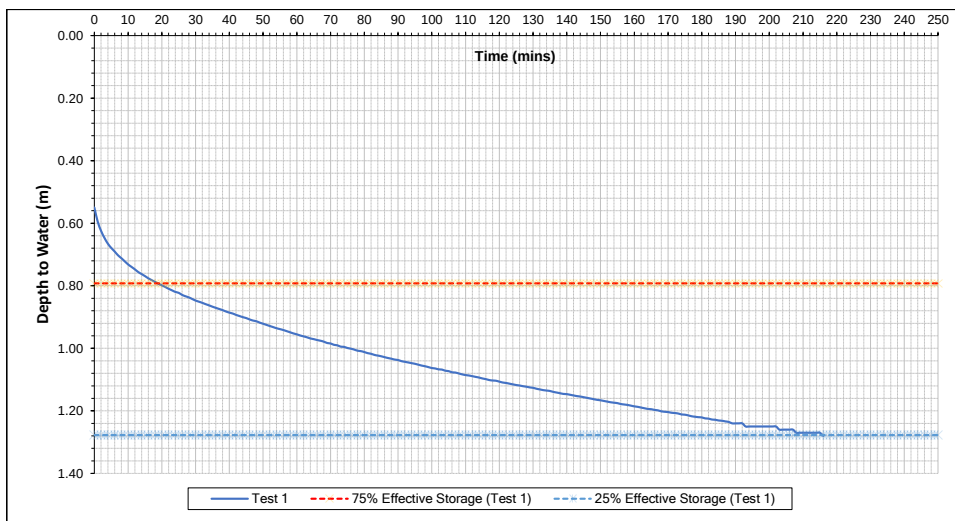
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.50: Dark brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint with rare angular coarse brick. [MADE GROUND]
0.50-1.30: Orangish brown and reddish brown silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.30-1.60: Mottled red blueish grey and orange sandy SILT. Sand is fine to coarse. [RIVER TERRACE]
1.60-1.70: Orange slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to medium flint. [RIVER TERRACE]

Test Parameters	TEST 3	
Effective Storage Depth (m):	Time (min)	Depth (m)
0.97	0.00	0.55
	1.00	0.60
75% Effective Storage Depth (m):	2.00	0.62
0.73	3.00	0.65
	4.00	0.67
(i.e. Depth Below Ground Level) (m):	5.00	0.68
0.79	6.00	0.69
	7.00	0.70
25% Effective Storage Depth (m):	8.00	0.71
0.24	9.00	0.72
	10.00	0.73
(i.e. Depth Below Ground Level) (m):	11.00	0.74
1.28	12.00	0.75
	13.00	0.76
Effective Storage Depth Across 75% - 25% (m):	14.00	0.76
0.48515	15.00	0.77
	16.00	0.78
Time to Fall to 75% Effective Depth (min):	17.00	0.78
18	18.00	0.79
	19.00	0.79
Time to Fall to 25% Effective Depth (min):	20.00	0.80
216	21.00	0.80
	22.00	0.81
Vp75%-25% (m3):	23.00	0.81
0.67	24.00	0.82
	25.00	0.82
As50% (m2):	26.00	0.83
4.19387	27.00	0.83
	28.00	0.84
Tp75%-25% (mins):	29.00	0.84
198	30.00	0.85
	31.00	0.85

DESIGN SOIL INFILTRATION RATE, f (m/s):	1.34E-05
---	----------

Comments:



Site Engineer:	Date:
TH	27/07/2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA202

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022



Trial Pit Identification:	SA203
Trial Pit Length (m):	2.30
Trial Pit Width (m):	0.70
Trial Pit Depth (m):	1.83
Groundwater Level (m bgl):	N/A

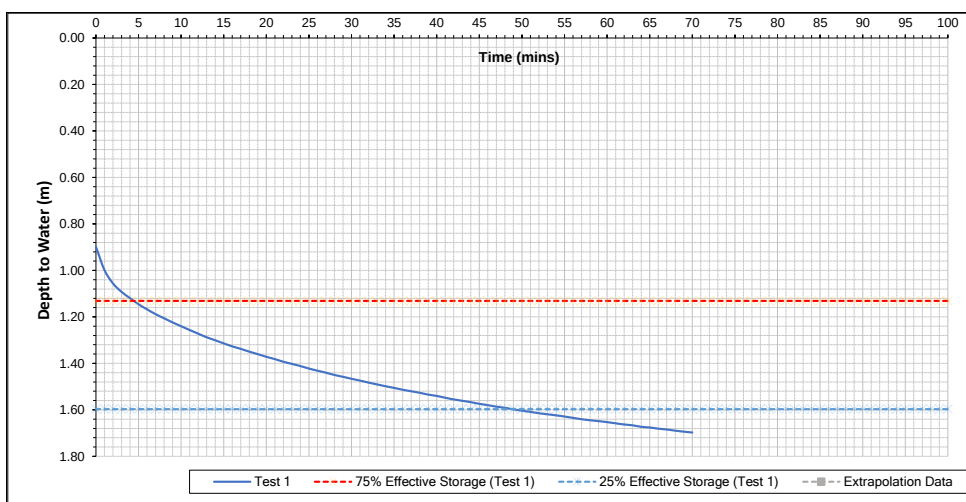
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.20: Light reddish brown grey type 1 concrete crush. [MADE GROUND]
0.20-0.40: Light reddish brown sandy angular to sub-angular fine to coarse GRAVEL of concrete. Sand is fine to coarse. [MADE GROUND]
0.40-1.80: Orange and dark brown slightly gravelly slightly silty coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
0.93	0.00	0.90
	1.00	1.00
75% Effective Storage Depth (m):	2.00	1.06
0.70	3.00	1.09
	4.00	1.12
(i.e. Depth Below Ground Level) (m):	5.00	1.15
	6.00	1.17
1.13	7.00	1.19
25% Effective Storage Depth (m):	8.00	1.21
0.23	9.00	1.22
	10.00	1.24
(i.e. Depth Below Ground Level) (m):	11.00	1.26
1.60	12.00	1.27
	13.00	1.29
Effective Storage Depth Across 75% - 25% (m):	14.00	1.30
0.47	15.00	1.31
	16.00	1.33
Time to Fall to 75% Effective Depth (min):	17.00	1.34
	18.00	1.35
4	19.00	1.36
Time to Fall to 25% Effective Depth (min):	20.00	1.37
	21.00	1.38
49	22.00	1.39
Vp75%-25% (m3):	23.00	1.40
0.75	24.00	1.41
	25.00	1.42
As50% (m2):	26.00	1.43
4.41	27.00	1.44
	28.00	1.45
Tp75%-25% (mins):	29.00	1.46
	30.00	1.47
45	31.00	1.47

DESIGN SOIL INFILTRATION RATE, f (m/s):	6.31E-05
---	----------

Comments:



Site Engineer:	Date:
TH	27/07/2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA203

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022

Trial Pit Identification:	SA203
Trial Pit Length (m):	2.30
Trial Pit Width (m):	0.70
Trial Pit Depth (m):	1.83
Groundwater Level (m bgl):	N/A



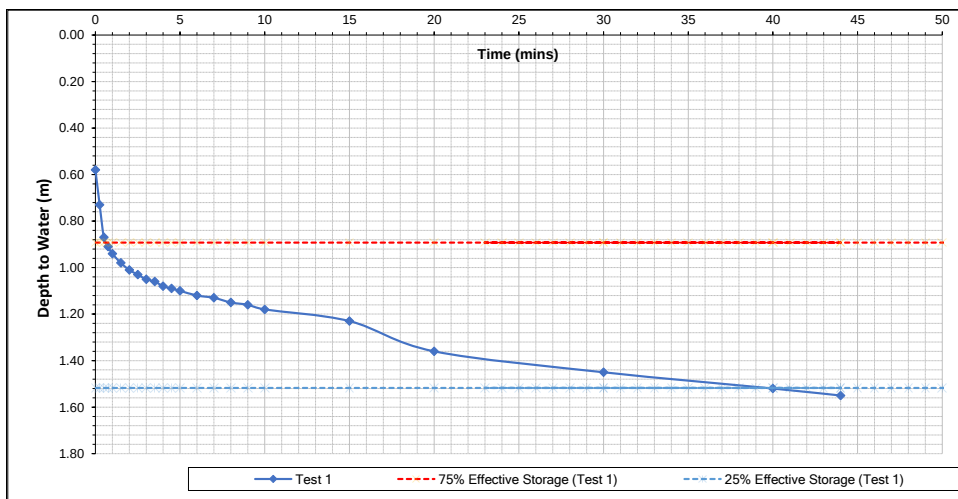
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.20: Light reddish brown grey type 1 concrete crush. [MADE GROUND]
0.20-0.40: Light reddish brown sandy angular to sub-angular fine to coarse GRAVEL of concrete. Sand is fine to coarse. [MADE GROUND]
0.40-1.80: Orange and dark brown slightly gravelly slightly silty coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]

Test Parameters	TEST 2	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.25	0.00	0.58
	0.25	0.73
75% Effective Storage Depth (m):	0.50	0.87
0.94	0.75	0.91
	1.00	0.94
(i.e. Depth Below Ground Level) (m):	1.50	0.98
0.89	2.00	1.01
	2.50	1.03
25% Effective Storage Depth (m):	3.00	1.05
0.31	3.50	1.06
	4.00	1.08
(i.e. Depth Below Ground Level) (m):	4.50	1.09
1.52	5.00	1.10
	6.00	1.12
Effective Storage Depth Across 75% - 25% (m):	7.00	1.13
0.63	8.00	1.15
	9.00	1.16
Time to Fall to 75% Effective Depth (min):	10.00	1.18
0.60	15.00	1.23
	20.00	1.36
Time to Fall to 25% Effective Depth (min):	30.00	1.45
40.00	40.00	1.52
	44.00	1.55
Vp75%-25% (m3):	23.00	
1.01	24.00	
	25.00	
As50% (m2):	26.00	
5.36	27.00	
	28.00	
Tp75%-25% (mins):	29.00	
39.40	30.00	
	31.00	

DESIGN SOIL INFILTRATION RATE, f (m/s):	7.94E-05
---	----------

Comments:



Site Engineer:	Date:
TH	26.05.2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA203

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022



Trial Pit Identification:	SA203
Trial Pit Length (m):	2.30
Trial Pit Width (m):	0.70
Trial Pit Depth (m):	1.83
Groundwater Level (m bgl):	N/A

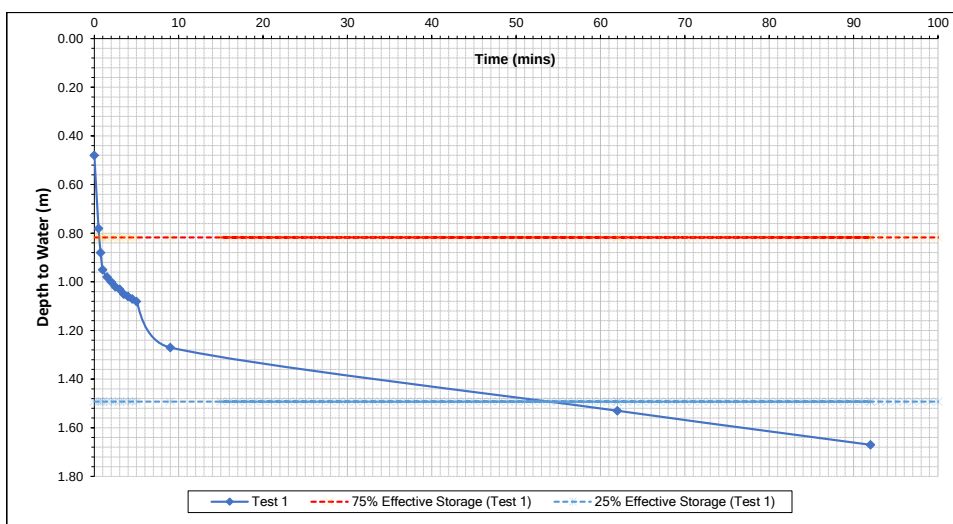
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.20: Light reddish brown grey type 1 concrete crush. [MADE GROUND]
0.20-0.40: Light reddish brown sandy angular to sub-angular fine to coarse GRAVEL of concrete. Sand is fine to coarse. [MADE GROUND]
0.40-1.80: Orange and dark brown slightly gravelly slightly silty coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]

Test Parameters	TEST 3	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.35	0.00	0.48
	0.50	0.78
75% Effective Storage Depth (m):	0.75	0.88
1.01	1.00	0.95
	1.50	0.98
(i.e. Depth Below Ground Level) (m):	2.00	1.00
0.82	2.50	1.02
	3.00	1.03
25% Effective Storage Depth (m):	3.50	1.05
0.34	4.00	1.06
	4.50	1.07
(i.e. Depth Below Ground Level) (m):	5.00	1.08
1.49	9.00	1.27
	62.00	1.53
Effective Storage Depth Across 75% - 25% (m):	92.00	1.67
0.675	15.00	
	16.00	
Time to Fall to 75% Effective Depth (min):	17.00	
0.55	18.00	
	19.00	
Time to Fall to 25% Effective Depth (min):	20.00	
54	21.00	
	22.00	
Vp75%-25% (m3):	23.00	
1.09	24.00	
	25.00	
As50% (m2):	26.00	
5.66	27.00	
	28.00	
Tp75%-25% (mins):	29.00	
53.45	30.00	
	31.00	

DESIGN SOIL INFILTRATION RATE, f (m/s):	5.99E-05
---	----------

Comments:



Site Engineer:	Date:
TH	27/07/2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA203

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022



Trial Pit Identification:	SA204
Trial Pit Length (m):	2.60
Trial Pit Width (m):	0.80
Trial Pit Depth (m):	1.94
Groundwater Level (m bgl):	N/A

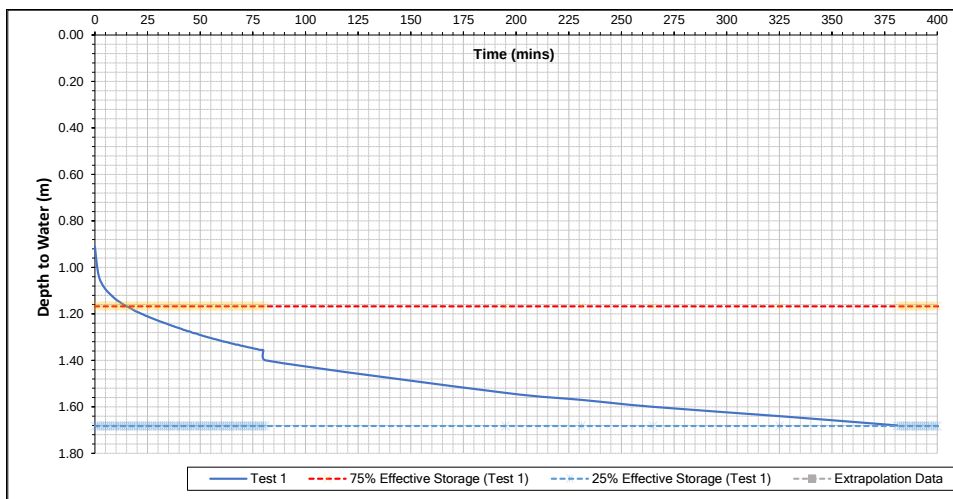
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.15: Light reddish brown sandy angular to sub-angular fine to coarse GRAVEL of concrete. Sand is fine to coarse. [MADE GROUND]
0.15-0.60: Dark brown sandy angular to sub-angular fine to coarse GRAVEL of flint, slate and rare brick. [MADE GROUND]
0.60-1.30: Orangish brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.20-1.70: Orangish brown clayey sandy sub-angular to sub-rounded fine to coarse GRAVEL of flint. Sand is coarse. [RIVER TERRACE]

Test Parameters	TEST 1	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.03	0.00	0.91
	1.00	0.99
75% Effective Storage Depth (m):	2.00	1.04
0.77	3.00	1.06
	4.00	1.08
(i.e. Depth Below Ground Level) (m):	5.00	1.09
1.17	6.00	1.10
	7.00	1.11
25% Effective Storage Depth (m):	8.00	1.12
0.26	9.00	1.13
	10.00	1.14
(i.e. Depth Below Ground Level) (m):	11.00	1.14
1.68	12.00	1.15
	13.00	1.16
Effective Storage Depth Across 75% - 25% (m):	14.00	1.16
0.52	15.00	1.17
	16.00	1.17
Time to Fall to 75% Effective Depth (min):	17.00	1.18
15	18.00	1.18
	19.00	1.19
Time to Fall to 25% Effective Depth (min):	20.00	1.19
381	21.00	1.19
	22.00	1.20
Vp75%-25% (m3):	23.00	1.20
1.07	24.00	1.21
	25.00	1.21
As50% (m2):	26.00	1.21
5.58	27.00	1.22
	28.00	1.22
Tp75%-25% (mins):	29.00	1.23
366	30.00	1.23
	31.00	1.23

DESIGN SOIL INFILTRATION RATE, f (m/s):	8.74E-06
---	----------

Comments:



Site Engineer:	Date:
TH	27/07/2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA204

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022

Trial Pit Identification:	SA204
Trial Pit Length (m):	2.60
Trial Pit Width (m):	0.80
Trial Pit Depth (m):	1.94
Groundwater Level (m bgl):	N/A



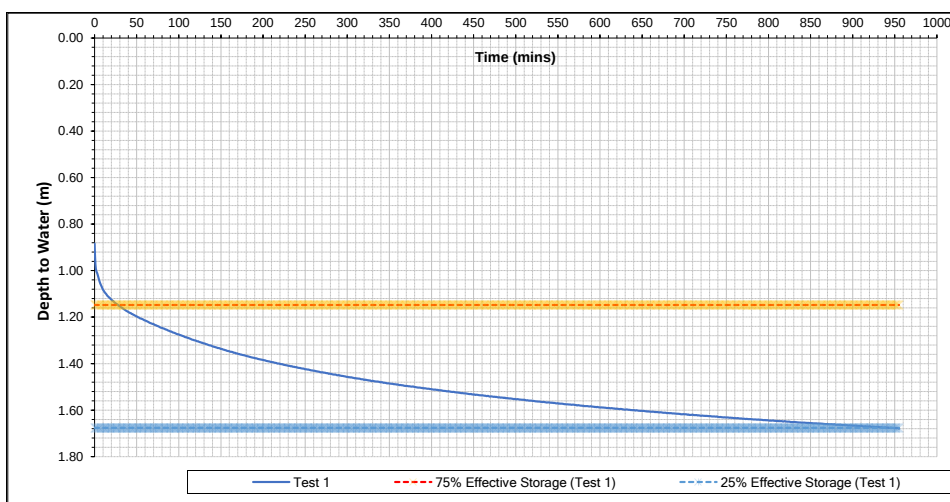
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.15: Light reddish brown sandy angular to sub-angular fine to coarse GRAVEL of concrete. Sand is fine to coarse. [MADE GROUND]
0.15-0.60: Dark brown sandy angular to sub-angular fine to coarse GRAVEL of flint, slate and rare brick. [MADE GROUND]
0.60-1.30: Orangish brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.20-1.70: Orangish brown clayey sandy sub-angular to sub-rounded fine to coarse GRAVEL of flint. Sand is coarse. [RIVER TERRACE]

Test Parameters	TEST 2	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.06	0.00	0.88
	1.00	0.97
75% Effective Storage Depth (m):	2.00	1.00
0.79	3.00	1.01
	4.00	1.02
(i.e. Depth Below Ground Level) (m):	5.00	1.04
1.15	6.00	1.05
	7.00	1.06
25% Effective Storage Depth (m):	8.00	1.07
0.26	9.00	1.07
	10.00	1.08
(i.e. Depth Below Ground Level) (m):	11.00	1.09
1.68	12.00	1.09
	13.00	1.10
Effective Storage Depth Across 75% - 25% (m):	14.00	1.10
0.53	15.00	1.11
	16.00	1.11
Time to Fall to 75% Effective Depth (min):	17.00	1.11
30.00	18.00	1.12
	19.00	1.12
Time to Fall to 25% Effective Depth (min):	20.00	1.13
930.00	21.00	1.13
	22.00	1.13
Vp75%-25% (m3):	23.00	1.13
1.10	24.00	1.14
	25.00	1.14
As50% (m2):	26.00	1.14
5.67	27.00	1.15
	28.00	1.15
Tp75%-25% (mins):	29.00	1.15
900.00	30.00	1.15
	31.00	1.16

DESIGN SOIL INFILTRATION RATE, f (m/s):	3.59E-06
---	----------

Comments:



Site Engineer:	Date:
TH	26.05.2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA204

Site Name:	Moorhill, Southampton
Site Reference:	A11641
Test Date:	27/07/2022



Trial Pit Identification:	SA204
Trial Pit Length (m):	2.60
Trial Pit Width (m):	0.80
Trial Pit Depth (m):	1.94
Groundwater Level (m bgl):	N/A

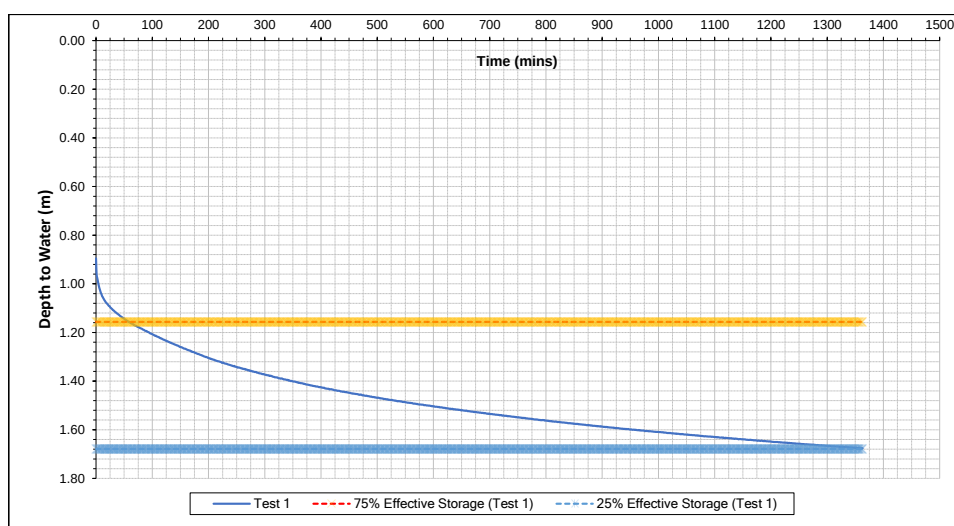
SOIL INFILTRATION RATE TEST
See BRE DG365, Soakaway Design (2016).

Geology Description:
0.00-0.15: Light reddish brown sandy angular to sub-angular fine to coarse GRAVEL of concrete. Sand is fine to coarse. [MADE GROUND]
0.15-0.60: Dark brown sandy angular to sub-angular fine to coarse GRAVEL of flint, slate and rare brick. [MADE GROUND]
0.60-1.30: Orangish brown slightly silty slightly gravelly fine to coarse SAND. Gravel is sub-angular to sub-rounded fine to coarse flint. [RIVER TERRACE]
1.20-1.70: Orangish brown clayey sandy sub-angular to sub-rounded fine to coarse GRAVEL of flint. Sand is coarse. [RIVER TERRACE]

Test Parameters	TEST 3	
Effective Storage Depth (m):	Time (min)	Depth (m)
1.04	0.00	0.90
	1.00	0.96
75% Effective Storage Depth (m):	2.00	0.97
0.78	3.00	0.99
	4.00	1.00
(i.e. Depth Below Ground Level) (m):	5.00	1.01
1.16	6.00	1.02
	7.00	1.02
25% Effective Storage Depth (m):	8.00	1.03
0.26	9.00	1.04
	10.00	1.04
(i.e. Depth Below Ground Level) (m):	11.00	1.05
1.68	12.00	1.05
	13.00	1.06
Effective Storage Depth Across 75% - 25% (m):	14.00	1.06
0.52235	15.00	1.07
	16.00	1.07
Time to Fall to 75% Effective Depth (min):	17.00	1.07
50	18.00	1.08
	19.00	1.08
Time to Fall to 25% Effective Depth (min):	20.00	1.08
1325	21.00	1.09
	22.00	1.09
Vp75%-25% (m3):	23.00	1.09
1.09	24.00	1.09
	25.00	1.10
As50% (m2):	26.00	1.10
5.63198	27.00	1.10
	28.00	1.10
Tp75%-25% (mins):	29.00	1.10
1275	30.00	1.11
	31.00	1.11

DESIGN SOIL INFILTRATION RATE, f (m/s):	2.52E-06
---	----------

Comments:

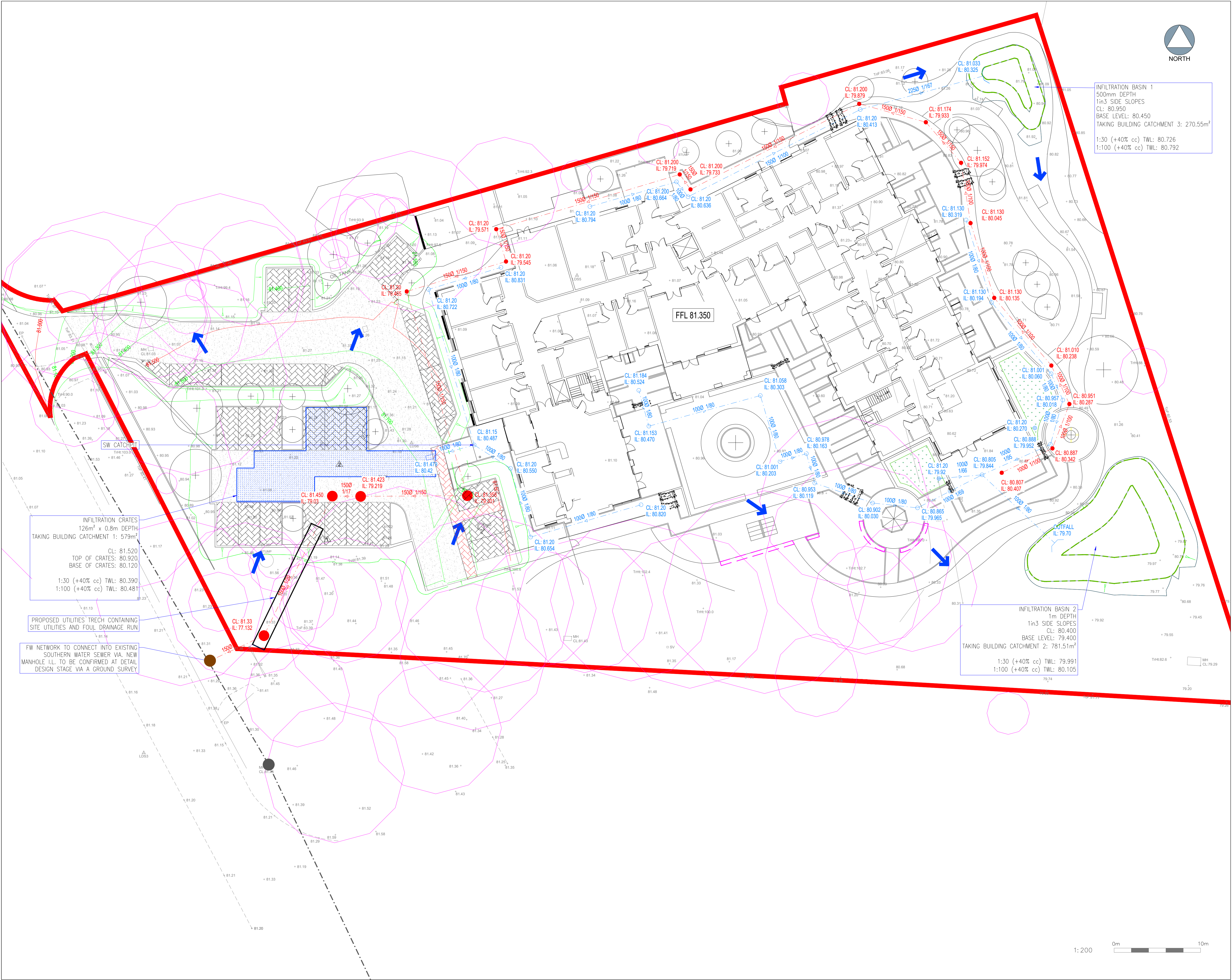


Site Engineer:	Date:
TH	27/07/2022

Checked and Approved By:	Date:
OM	03/08/2022

Location
SA204

Appendix F



The drawings, information and data recorded in this document ("the information") is the property of Paul Basham Associates. This document and the information are solely for the use of the authorized recipient and this document may not be used, copied or reproduced in whole or part for any purposes other than which it was supplied by Paul Basham Associates. Paul Basham Associates makes no representation, undertakes no duty and accepts no responsibilities to any third party who may use or rely upon this document or the information.

GENERAL NOTES

1. THIS DRAWING IS INTENDED TO BE VIEWED IN COMBINATION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS AND SPECIFICATION.
2. ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
3. PAUL BASHAM ASSOCIATES ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF BACKGROUND INFORMATION PROVIDED BY THIRD PARTIES - THIS MUST BE TREATED AS INDICATIVE ONLY.
4. ALL DIMENSIONS AND LEVELS ARE IN METRES. DO NOT SCALE THIS DRAWING, PRINT, PLOT OR DISK.
5. THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION IF THE PROJECT PHASE IN THE TITLE FRAME BELOW IS SHOWN AS "CONSTRUCTION". PAUL BASHAM ASSOCIATES TAKE NO RESPONSIBILITY FOR CONSTRUCTION WORKS UNDERTAKEN TO DRAWINGS WHICH ARE NOT MARKED UNDER THIS PHASE.

CDM Regulations 2015 : Reg. 9

None of the below is deemed to relieve any contractor of his obligations under all applicable health and safety legislation.

In preparing the design shown on this and related drawings Paul Basham Associates has considered and, where reasonably practicable, eliminated foreseeable risks. Any further abnormal or unusual risks, which remain, are numbered below and identified thus (1) and should be given particular attention by all those carrying out construction or of future maintenance works.

1. Operating of machinery whilst digging trust bore trench.
2. Deep excavation for installation of crates.
3. Construction in Root Protection Areas (Site-wide).

LEGEND

- FOUL SEWER (ø & GRADIENT AS NOTED)
- SURFACE SEWER (ø & GRADIENT AS NOTED)
- EXISTING FOUL SEWER
- FOUL MANHOLE (CL & IL AS NOTED)
- SURFACE MANHOLE (CL & IL AS NOTED)
- EXISTING FOUL MANHOLE
- PROPOSED PUBLIC FOUL MANHOLE
- INFILTRATION CRATE
- NO-DIG PERMEABLE BLOCK PAVING
- NO-DIG PERMEABLE BLOCK PAVING DELINEATING DISABLED PARKING
- NO-DIG PERMEABLE ASPHALT
- ROOT PROTECTION AREA
- INFILTRATION BASIN
- RAIN GARDEN WITH OVERFLOW PIPE
- EXCEEDANCE FLOW PATHS
- FILTER DRAIN
- THRUST BORED PIPEWORK

PRELIMINARY
DRAWING/DESIGN IS STILL 'IN DEVELOPMENT'
YOU ARE ADVISED TO MAKE DUE ALLOWANCE

A	SURFACE FINISHES AND FOUL RUN UPDATED AS PER CLIENT COMMENTS	13.10.22	EA	--
Rev	Description	Date	By	Chkd

paulbasham associates
Paul Basham Associates Ltd
The Botley, Camas Hall Estate, Fareham, PO16 8UT
01329 711 000
info@paulbashamassociates.com www.paulbashamassociates.com

HIGHWOOD

Project Name
MOORHILL, MOORHILL ROAD
WEST END

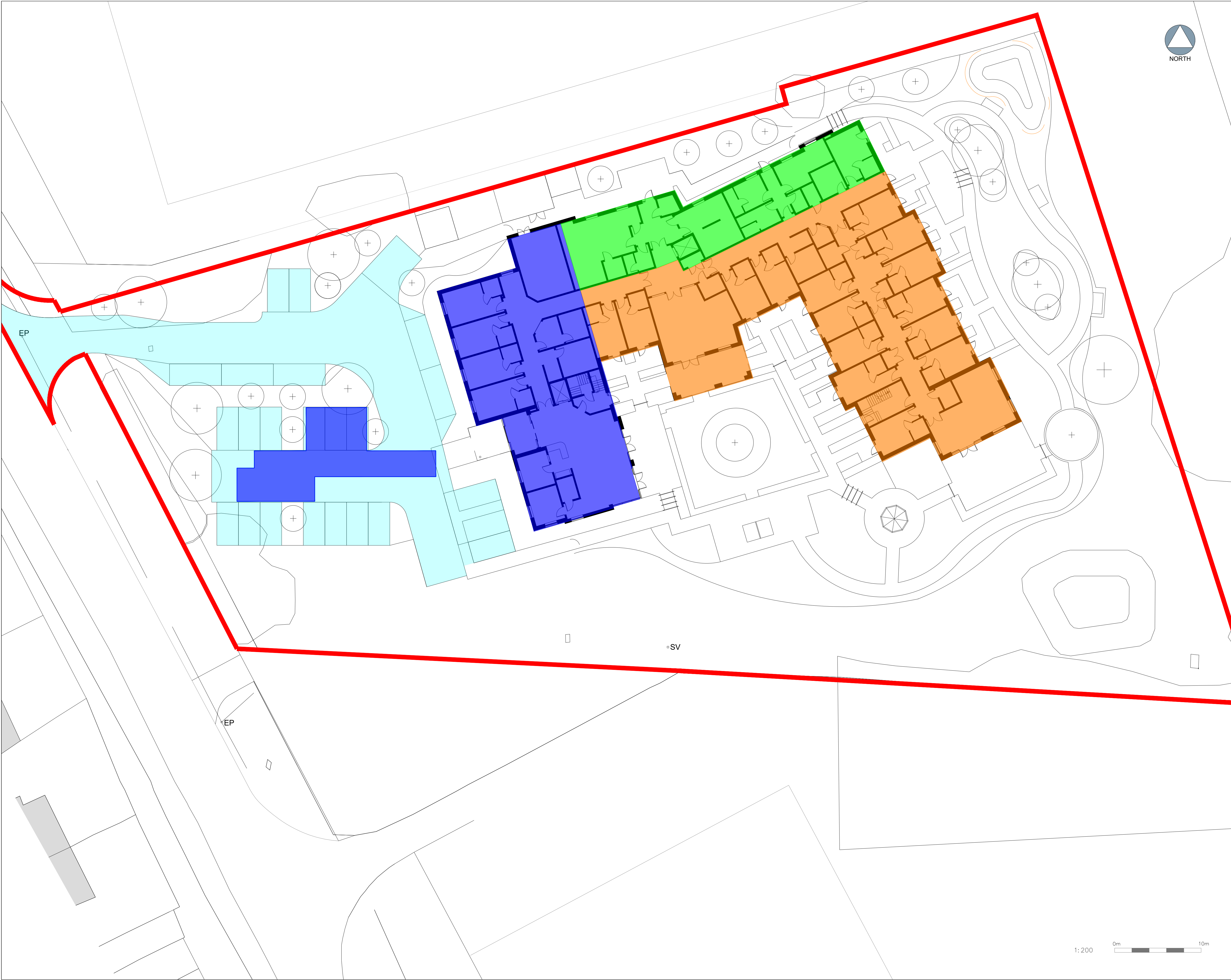
Title
DRAINAGE STRATEGY

Project Phase
PRELIMINARY

Checked By	Checked Date	Drawn By	Drawn Date
NH	12.10.22	EA	26.09.22

Client Drawing No.	Scale	(AT A1 SIZE)
-	1:200	

PBA Drawing No.	Revision
024.0050.502	A



The drawings, information and data recorded in this document ("the information") is the property of Paul Basham Associates. This document and the information are solely for the use of the authorized recipient and this document may not be used, copied or reproduced in whole or part for any purposes other than which it was supplied by Paul Basham Associates. Paul Basham Associates makes no representation, undertakes no duty and accepts no responsibilities to any third party who may use or rely upon this document or the information.

GENERAL NOTES

1. THIS DRAWING IS INTENDED TO BE VIEWED IN COMBINATION WITH ALL RELEVANT ARCHITECTS, ENGINEERS, SERVICES AND SPECIALIST DRAWINGS AND SPECIFICATION.
2. ANY VARIATIONS OR DISCREPANCIES BETWEEN THESE DRAWINGS IN TERMS OF DIMENSIONS OR DETAILS SHOULD BE DRAWN TO THE ATTENTION OF THE ARCHITECT AND/OR THE ENGINEER FOR CLARIFICATION.
3. PAUL BASHAM ASSOCIATES ACCEPTS NO RESPONSIBILITY FOR THE ACCURACY OF BACKGROUND INFORMATION PRODUCED BY THIRD PARTIES – THIS MUST BE TREATED AS INDICATIVE ONLY.
4. ALL DIMENSIONS AND LEVELS ARE IN METRES. DO NOT SCALE THIS DRAWING, PRINT, PLOT OR DISK.
5. THIS DRAWING SHOULD ONLY BE USED FOR CONSTRUCTION IF THE PROJECT PHASE IN THE TITLE FRAME BELOW IS SHOWN AS "CONSTRUCTION". PAUL BASHAM ASSOCIATES TAKE NO RESPONSIBILITY FOR CONSTRUCTION WORKS UNDERTAKEN TO DRAWINGS WHICH ARE NOT MARKED UNDER THIS PHASE.

LEGEND

- INFILTRATION CRATES CATCHMENT – 579m²
- SOUTHEASTERN BASIN CATCHMENT – 781.51m²
- NORTHEASTERN BASIN CATCHMENT – 270.55m²
- PERMEABLE PAVEMENT CATCHMENT – 756m²
- SITE RED LINE BOUNDARY

PRELIMINARY

DRAWING/DESIGN IS STILL 'IN DEVELOPMENT'
YOU ARE ADVISED TO MAKE DUE ALLOWANCE

Rev	Description	Date	By	Chkd
-----	-------------	------	----	------

paulbasham
associates
Paul Basham Associates Ltd
The Botly, Cama Hall Estate, Fareham, PO16 8UT
01329 711 000
info@paulbashamassociates.com www.paulbashamassociates.com

Client



Project Name
MOORHILL, MOORHILL ROAD
WEST END

Title
CATCHMENT PLAN

Project Phase
PRELIMINARY

Checked By NH	Checked Date 12.10.22	Drawn By EA	Drawn Date 12.10.22
Client Drawing No.		Scale 1:200	(AT A1 SIZE)

PBA Drawing No. 024.5050.503	Revision -
---------------------------------	---------------

Appendix G

Paul Basham Associates				Page 1																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END																																																																																																																																																																																																																					
Date 10/08/2022 File PERMEABLE PAVING SIZING...		Designed by OT Checked by																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
<u>Summary of Results for 1 year Return Period</u> Half Drain Time : 29 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>80.874</td><td>0.004</td><td>0.5</td><td>1.1</td><td>O K</td></tr><tr><td>30 min Summer</td><td>80.879</td><td>0.009</td><td>1.0</td><td>2.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>80.883</td><td>0.013</td><td>1.5</td><td>3.5</td><td>O K</td></tr><tr><td>120 min Summer</td><td>80.886</td><td>0.016</td><td>1.8</td><td>4.3</td><td>O K</td></tr><tr><td>180 min Summer</td><td>80.887</td><td>0.017</td><td>2.0</td><td>4.6</td><td>O K</td></tr><tr><td>240 min Summer</td><td>80.887</td><td>0.017</td><td>2.0</td><td>4.7</td><td>O K</td></tr><tr><td>360 min Summer</td><td>80.886</td><td>0.016</td><td>1.9</td><td>4.5</td><td>O K</td></tr><tr><td>480 min Summer</td><td>80.885</td><td>0.015</td><td>1.8</td><td>4.2</td><td>O K</td></tr><tr><td>600 min Summer</td><td>80.884</td><td>0.014</td><td>1.7</td><td>4.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>80.884</td><td>0.014</td><td>1.6</td><td>3.7</td><td>O K</td></tr><tr><td>960 min Summer</td><td>80.882</td><td>0.012</td><td>1.4</td><td>3.3</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>80.880</td><td>0.010</td><td>1.1</td><td>2.6</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>80.878</td><td>0.008</td><td>0.9</td><td>2.1</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>80.876</td><td>0.006</td><td>0.7</td><td>1.7</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>80.875</td><td>0.005</td><td>0.6</td><td>1.3</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>80.874</td><td>0.004</td><td>0.5</td><td>1.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>80.874</td><td>0.004</td><td>0.4</td><td>0.9</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>80.873</td><td>0.003</td><td>0.4</td><td>0.8</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>80.873</td><td>0.003</td><td>0.3</td><td>0.6</td><td>O K</td></tr><tr><td>15 min Winter</td><td>80.876</td><td>0.006</td><td>0.7</td><td>1.7</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>29.340</td><td>0.0</td><td>24</td></tr><tr><td>30 min Summer</td><td>19.509</td><td>0.0</td><td>35</td></tr><tr><td>60 min Summer</td><td>12.656</td><td>0.0</td><td>52</td></tr><tr><td>120 min Summer</td><td>8.063</td><td>0.0</td><td>84</td></tr><tr><td>180 min Summer</td><td>6.169</td><td>0.0</td><td>116</td></tr><tr><td>240 min Summer</td><td>5.098</td><td>0.0</td><td>148</td></tr><tr><td>360 min Summer</td><td>3.855</td><td>0.0</td><td>210</td></tr><tr><td>480 min Summer</td><td>3.161</td><td>0.0</td><td>272</td></tr><tr><td>600 min Summer</td><td>2.710</td><td>0.0</td><td>332</td></tr><tr><td>720 min Summer</td><td>2.390</td><td>0.0</td><td>390</td></tr><tr><td>960 min Summer</td><td>1.960</td><td>0.0</td><td>514</td></tr><tr><td>1440 min Summer</td><td>1.484</td><td>0.0</td><td>752</td></tr><tr><td>2160 min Summer</td><td>1.121</td><td>0.0</td><td>1108</td></tr><tr><td>2880 min Summer</td><td>0.919</td><td>0.0</td><td>1476</td></tr><tr><td>4320 min Summer</td><td>0.696</td><td>0.0</td><td>2208</td></tr><tr><td>5760 min Summer</td><td>0.572</td><td>0.0</td><td>2920</td></tr><tr><td>7200 min Summer</td><td>0.490</td><td>0.0</td><td>3680</td></tr><tr><td>8640 min Summer</td><td>0.431</td><td>0.0</td><td>4416</td></tr><tr><td>10080 min Summer</td><td>0.387</td><td>0.0</td><td>5112</td></tr><tr><td>15 min Winter</td><td>29.340</td><td>0.0</td><td>24</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	80.874	0.004	0.5	1.1	O K	30 min Summer	80.879	0.009	1.0	2.4	O K	60 min Summer	80.883	0.013	1.5	3.5	O K	120 min Summer	80.886	0.016	1.8	4.3	O K	180 min Summer	80.887	0.017	2.0	4.6	O K	240 min Summer	80.887	0.017	2.0	4.7	O K	360 min Summer	80.886	0.016	1.9	4.5	O K	480 min Summer	80.885	0.015	1.8	4.2	O K	600 min Summer	80.884	0.014	1.7	4.0	O K	720 min Summer	80.884	0.014	1.6	3.7	O K	960 min Summer	80.882	0.012	1.4	3.3	O K	1440 min Summer	80.880	0.010	1.1	2.6	O K	2160 min Summer	80.878	0.008	0.9	2.1	O K	2880 min Summer	80.876	0.006	0.7	1.7	O K	4320 min Summer	80.875	0.005	0.6	1.3	O K	5760 min Summer	80.874	0.004	0.5	1.0	O K	7200 min Summer	80.874	0.004	0.4	0.9	O K	8640 min Summer	80.873	0.003	0.4	0.8	O K	10080 min Summer	80.873	0.003	0.3	0.6	O K	15 min Winter	80.876	0.006	0.7	1.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	29.340	0.0	24	30 min Summer	19.509	0.0	35	60 min Summer	12.656	0.0	52	120 min Summer	8.063	0.0	84	180 min Summer	6.169	0.0	116	240 min Summer	5.098	0.0	148	360 min Summer	3.855	0.0	210	480 min Summer	3.161	0.0	272	600 min Summer	2.710	0.0	332	720 min Summer	2.390	0.0	390	960 min Summer	1.960	0.0	514	1440 min Summer	1.484	0.0	752	2160 min Summer	1.121	0.0	1108	2880 min Summer	0.919	0.0	1476	4320 min Summer	0.696	0.0	2208	5760 min Summer	0.572	0.0	2920	7200 min Summer	0.490	0.0	3680	8640 min Summer	0.431	0.0	4416	10080 min Summer	0.387	0.0	5112	15 min Winter	29.340	0.0	24
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	80.874	0.004	0.5	1.1	O K																																																																																																																																																																																																																		
30 min Summer	80.879	0.009	1.0	2.4	O K																																																																																																																																																																																																																		
60 min Summer	80.883	0.013	1.5	3.5	O K																																																																																																																																																																																																																		
120 min Summer	80.886	0.016	1.8	4.3	O K																																																																																																																																																																																																																		
180 min Summer	80.887	0.017	2.0	4.6	O K																																																																																																																																																																																																																		
240 min Summer	80.887	0.017	2.0	4.7	O K																																																																																																																																																																																																																		
360 min Summer	80.886	0.016	1.9	4.5	O K																																																																																																																																																																																																																		
480 min Summer	80.885	0.015	1.8	4.2	O K																																																																																																																																																																																																																		
600 min Summer	80.884	0.014	1.7	4.0	O K																																																																																																																																																																																																																		
720 min Summer	80.884	0.014	1.6	3.7	O K																																																																																																																																																																																																																		
960 min Summer	80.882	0.012	1.4	3.3	O K																																																																																																																																																																																																																		
1440 min Summer	80.880	0.010	1.1	2.6	O K																																																																																																																																																																																																																		
2160 min Summer	80.878	0.008	0.9	2.1	O K																																																																																																																																																																																																																		
2880 min Summer	80.876	0.006	0.7	1.7	O K																																																																																																																																																																																																																		
4320 min Summer	80.875	0.005	0.6	1.3	O K																																																																																																																																																																																																																		
5760 min Summer	80.874	0.004	0.5	1.0	O K																																																																																																																																																																																																																		
7200 min Summer	80.874	0.004	0.4	0.9	O K																																																																																																																																																																																																																		
8640 min Summer	80.873	0.003	0.4	0.8	O K																																																																																																																																																																																																																		
10080 min Summer	80.873	0.003	0.3	0.6	O K																																																																																																																																																																																																																		
15 min Winter	80.876	0.006	0.7	1.7	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	29.340	0.0	24																																																																																																																																																																																																																				
30 min Summer	19.509	0.0	35																																																																																																																																																																																																																				
60 min Summer	12.656	0.0	52																																																																																																																																																																																																																				
120 min Summer	8.063	0.0	84																																																																																																																																																																																																																				
180 min Summer	6.169	0.0	116																																																																																																																																																																																																																				
240 min Summer	5.098	0.0	148																																																																																																																																																																																																																				
360 min Summer	3.855	0.0	210																																																																																																																																																																																																																				
480 min Summer	3.161	0.0	272																																																																																																																																																																																																																				
600 min Summer	2.710	0.0	332																																																																																																																																																																																																																				
720 min Summer	2.390	0.0	390																																																																																																																																																																																																																				
960 min Summer	1.960	0.0	514																																																																																																																																																																																																																				
1440 min Summer	1.484	0.0	752																																																																																																																																																																																																																				
2160 min Summer	1.121	0.0	1108																																																																																																																																																																																																																				
2880 min Summer	0.919	0.0	1476																																																																																																																																																																																																																				
4320 min Summer	0.696	0.0	2208																																																																																																																																																																																																																				
5760 min Summer	0.572	0.0	2920																																																																																																																																																																																																																				
7200 min Summer	0.490	0.0	3680																																																																																																																																																																																																																				
8640 min Summer	0.431	0.0	4416																																																																																																																																																																																																																				
10080 min Summer	0.387	0.0	5112																																																																																																																																																																																																																				
15 min Winter	29.340	0.0	24																																																																																																																																																																																																																				
©1982-2020 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates				Page 2	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 10/08/2022 File PERMEABLE PAVING SIZING...		Designed by OT Checked by			
Innovyze		Source Control 2020.1.3			
Summary of Results for 1 year Return Period					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	80.882	0.012	1.4	3.2	O K
60 min Winter	80.886	0.016	1.8	4.3	O K
120 min Winter	80.888	0.018	2.1	5.0	O K
180 min Winter	80.888	0.018	2.1	5.0	O K
240 min Winter	80.888	0.018	2.1	4.8	O K
360 min Winter	80.886	0.016	1.8	4.4	O K
480 min Winter	80.884	0.014	1.7	3.9	O K
600 min Winter	80.883	0.013	1.5	3.5	O K
720 min Winter	80.882	0.012	1.4	3.2	O K
960 min Winter	80.880	0.010	1.1	2.7	O K
1440 min Winter	80.878	0.008	0.9	2.0	O K
2160 min Winter	80.876	0.006	0.7	1.5	O K
2880 min Winter	80.875	0.005	0.6	1.2	O K
4320 min Winter	80.874	0.004	0.4	0.9	O K
5760 min Winter	80.873	0.003	0.3	0.8	O K
7200 min Winter	80.873	0.003	0.3	0.6	O K
8640 min Winter	80.872	0.002	0.3	0.5	O K
10080 min Winter	80.872	0.002	0.3	0.5	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	19.509	0.0	34		
60 min Winter	12.656	0.0	54		
120 min Winter	8.063	0.0	88		
180 min Winter	6.169	0.0	122		
240 min Winter	5.098	0.0	154		
360 min Winter	3.855	0.0	218		
480 min Winter	3.161	0.0	280		
600 min Winter	2.710	0.0	340		
720 min Winter	2.390	0.0	398		
960 min Winter	1.960	0.0	524		
1440 min Winter	1.484	0.0	748		
2160 min Winter	1.121	0.0	1128		
2880 min Winter	0.919	0.0	1396		
4320 min Winter	0.696	0.0	2156		
5760 min Winter	0.572	0.0	3048		
7200 min Winter	0.490	0.0	3872		
8640 min Winter	0.431	0.0	4440		
10080 min Winter	0.387	0.0	5264		
©1982-2020 Innovyze					

Paul Basham Associates		Page 3
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END	
Date 10/08/2022	Designed by OT	
File PERMEABLE PAVING SIZING...	Checked by	
Innovyze		Source Control 2020.1.3

Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	1	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.800	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.109

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.037	4 8	0.036	8 12	0.036

©1982-2020 Innovyze

Paul Basham Associates		Page 4																								
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																									
Date 10/08/2022	Designed by OT																									
File PERMEABLE PAVING SIZING...	Checked by																									
Innovyze		Source Control 2020.1.3																								
<u>Model Details</u> Storage is Online Cover Level (m) 81.200 <u>Porous Car Park Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.04501</td> </tr> <tr> <td>Membrane Percolation (mm/hr)</td> <td>1000</td> </tr> <tr> <td>Max Percolation (l/s)</td> <td>260.6</td> </tr> <tr> <td>Safety Factor</td> <td>2.0</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> </tr> <tr> <td>Invert Level (m)</td> <td>80.870</td> </tr> <tr> <td>Width (m)</td> <td>14.0</td> </tr> <tr> <td>Length (m)</td> <td>67.0</td> </tr> <tr> <td>Slope (1:X)</td> <td>100000.0</td> </tr> <tr> <td>Depression Storage (mm)</td> <td>5</td> </tr> <tr> <td>Evaporation (mm/day)</td> <td>3</td> </tr> <tr> <td>Cap Volume Depth (m)</td> <td>0.220</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.04501	Membrane Percolation (mm/hr)	1000	Max Percolation (l/s)	260.6	Safety Factor	2.0	Porosity	0.30	Invert Level (m)	80.870	Width (m)	14.0	Length (m)	67.0	Slope (1:X)	100000.0	Depression Storage (mm)	5	Evaporation (mm/day)	3	Cap Volume Depth (m)	0.220
Infiltration Coefficient Base (m/hr)	0.04501																									
Membrane Percolation (mm/hr)	1000																									
Max Percolation (l/s)	260.6																									
Safety Factor	2.0																									
Porosity	0.30																									
Invert Level (m)	80.870																									
Width (m)	14.0																									
Length (m)	67.0																									
Slope (1:X)	100000.0																									
Depression Storage (mm)	5																									
Evaporation (mm/day)	3																									
Cap Volume Depth (m)	0.220																									
©1982-2020 Innovyze																										

Paul Basham Associates				Page 1																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END																																																																																																																																																																																																																					
Date 10/08/2022 File PERMEABLE PAVING SIZING...		Designed by OT Checked by																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
Summary of Results for 30 year Return Period (+40%) Half Drain Time : 40 minutes. <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>80.916</td><td>0.046</td><td>5.4</td><td>12.8</td><td>Flood Risk</td></tr><tr><td>30 min Summer</td><td>80.931</td><td>0.061</td><td>5.9</td><td>16.9</td><td>Flood Risk</td></tr><tr><td>60 min Summer</td><td>80.941</td><td>0.071</td><td>5.9</td><td>19.9</td><td>Flood Risk</td></tr><tr><td>120 min Summer</td><td>80.945</td><td>0.075</td><td>5.9</td><td>21.1</td><td>Flood Risk</td></tr><tr><td>180 min Summer</td><td>80.943</td><td>0.073</td><td>5.9</td><td>20.4</td><td>Flood Risk</td></tr><tr><td>240 min Summer</td><td>80.938</td><td>0.068</td><td>5.9</td><td>19.0</td><td>Flood Risk</td></tr><tr><td>360 min Summer</td><td>80.928</td><td>0.058</td><td>5.9</td><td>16.1</td><td>Flood Risk</td></tr><tr><td>480 min Summer</td><td>80.920</td><td>0.050</td><td>5.8</td><td>13.9</td><td>Flood Risk</td></tr><tr><td>600 min Summer</td><td>80.915</td><td>0.045</td><td>5.3</td><td>12.6</td><td>Flood Risk</td></tr><tr><td>720 min Summer</td><td>80.911</td><td>0.041</td><td>4.8</td><td>11.5</td><td>Flood Risk</td></tr><tr><td>960 min Summer</td><td>80.905</td><td>0.035</td><td>4.1</td><td>9.9</td><td>Flood Risk</td></tr><tr><td>1440 min Summer</td><td>80.898</td><td>0.028</td><td>3.3</td><td>7.7</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>80.891</td><td>0.021</td><td>2.5</td><td>5.9</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>80.888</td><td>0.018</td><td>2.1</td><td>4.9</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>80.883</td><td>0.013</td><td>1.6</td><td>3.6</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>80.881</td><td>0.011</td><td>1.3</td><td>2.9</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>80.879</td><td>0.009</td><td>1.1</td><td>2.4</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>80.878</td><td>0.008</td><td>0.9</td><td>2.0</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>80.877</td><td>0.007</td><td>0.8</td><td>1.9</td><td>O K</td></tr><tr><td>15 min Winter</td><td>80.923</td><td>0.053</td><td>5.9</td><td>14.8</td><td>Flood Risk</td></tr></tbody></table> <table><thead><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr></thead><tbody><tr><td>15 min Summer</td><td>100.677</td><td>0.0</td><td>22</td></tr><tr><td>30 min Summer</td><td>66.999</td><td>0.0</td><td>32</td></tr><tr><td>60 min Summer</td><td>42.696</td><td>0.0</td><td>50</td></tr><tr><td>120 min Summer</td><td>26.394</td><td>0.0</td><td>84</td></tr><tr><td>180 min Summer</td><td>19.686</td><td>0.0</td><td>118</td></tr><tr><td>240 min Summer</td><td>15.902</td><td>0.0</td><td>150</td></tr><tr><td>360 min Summer</td><td>11.782</td><td>0.0</td><td>210</td></tr><tr><td>480 min Summer</td><td>9.510</td><td>0.0</td><td>268</td></tr><tr><td>600 min Summer</td><td>8.048</td><td>0.0</td><td>328</td></tr><tr><td>720 min Summer</td><td>7.019</td><td>0.0</td><td>390</td></tr><tr><td>960 min Summer</td><td>5.653</td><td>0.0</td><td>510</td></tr><tr><td>1440 min Summer</td><td>4.161</td><td>0.0</td><td>752</td></tr><tr><td>2160 min Summer</td><td>3.058</td><td>0.0</td><td>1112</td></tr><tr><td>2880 min Summer</td><td>2.456</td><td>0.0</td><td>1472</td></tr><tr><td>4320 min Summer</td><td>1.801</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Summer</td><td>1.444</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Summer</td><td>1.216</td><td>0.0</td><td>3656</td></tr><tr><td>8640 min Summer</td><td>1.058</td><td>0.0</td><td>4400</td></tr><tr><td>10080 min Summer</td><td>0.940</td><td>0.0</td><td>5144</td></tr><tr><td>15 min Winter</td><td>100.677</td><td>0.0</td><td>22</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	80.916	0.046	5.4	12.8	Flood Risk	30 min Summer	80.931	0.061	5.9	16.9	Flood Risk	60 min Summer	80.941	0.071	5.9	19.9	Flood Risk	120 min Summer	80.945	0.075	5.9	21.1	Flood Risk	180 min Summer	80.943	0.073	5.9	20.4	Flood Risk	240 min Summer	80.938	0.068	5.9	19.0	Flood Risk	360 min Summer	80.928	0.058	5.9	16.1	Flood Risk	480 min Summer	80.920	0.050	5.8	13.9	Flood Risk	600 min Summer	80.915	0.045	5.3	12.6	Flood Risk	720 min Summer	80.911	0.041	4.8	11.5	Flood Risk	960 min Summer	80.905	0.035	4.1	9.9	Flood Risk	1440 min Summer	80.898	0.028	3.3	7.7	O K	2160 min Summer	80.891	0.021	2.5	5.9	O K	2880 min Summer	80.888	0.018	2.1	4.9	O K	4320 min Summer	80.883	0.013	1.6	3.6	O K	5760 min Summer	80.881	0.011	1.3	2.9	O K	7200 min Summer	80.879	0.009	1.1	2.4	O K	8640 min Summer	80.878	0.008	0.9	2.0	O K	10080 min Summer	80.877	0.007	0.8	1.9	O K	15 min Winter	80.923	0.053	5.9	14.8	Flood Risk	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	100.677	0.0	22	30 min Summer	66.999	0.0	32	60 min Summer	42.696	0.0	50	120 min Summer	26.394	0.0	84	180 min Summer	19.686	0.0	118	240 min Summer	15.902	0.0	150	360 min Summer	11.782	0.0	210	480 min Summer	9.510	0.0	268	600 min Summer	8.048	0.0	328	720 min Summer	7.019	0.0	390	960 min Summer	5.653	0.0	510	1440 min Summer	4.161	0.0	752	2160 min Summer	3.058	0.0	1112	2880 min Summer	2.456	0.0	1472	4320 min Summer	1.801	0.0	2204	5760 min Summer	1.444	0.0	2936	7200 min Summer	1.216	0.0	3656	8640 min Summer	1.058	0.0	4400	10080 min Summer	0.940	0.0	5144	15 min Winter	100.677	0.0	22
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	80.916	0.046	5.4	12.8	Flood Risk																																																																																																																																																																																																																		
30 min Summer	80.931	0.061	5.9	16.9	Flood Risk																																																																																																																																																																																																																		
60 min Summer	80.941	0.071	5.9	19.9	Flood Risk																																																																																																																																																																																																																		
120 min Summer	80.945	0.075	5.9	21.1	Flood Risk																																																																																																																																																																																																																		
180 min Summer	80.943	0.073	5.9	20.4	Flood Risk																																																																																																																																																																																																																		
240 min Summer	80.938	0.068	5.9	19.0	Flood Risk																																																																																																																																																																																																																		
360 min Summer	80.928	0.058	5.9	16.1	Flood Risk																																																																																																																																																																																																																		
480 min Summer	80.920	0.050	5.8	13.9	Flood Risk																																																																																																																																																																																																																		
600 min Summer	80.915	0.045	5.3	12.6	Flood Risk																																																																																																																																																																																																																		
720 min Summer	80.911	0.041	4.8	11.5	Flood Risk																																																																																																																																																																																																																		
960 min Summer	80.905	0.035	4.1	9.9	Flood Risk																																																																																																																																																																																																																		
1440 min Summer	80.898	0.028	3.3	7.7	O K																																																																																																																																																																																																																		
2160 min Summer	80.891	0.021	2.5	5.9	O K																																																																																																																																																																																																																		
2880 min Summer	80.888	0.018	2.1	4.9	O K																																																																																																																																																																																																																		
4320 min Summer	80.883	0.013	1.6	3.6	O K																																																																																																																																																																																																																		
5760 min Summer	80.881	0.011	1.3	2.9	O K																																																																																																																																																																																																																		
7200 min Summer	80.879	0.009	1.1	2.4	O K																																																																																																																																																																																																																		
8640 min Summer	80.878	0.008	0.9	2.0	O K																																																																																																																																																																																																																		
10080 min Summer	80.877	0.007	0.8	1.9	O K																																																																																																																																																																																																																		
15 min Winter	80.923	0.053	5.9	14.8	Flood Risk																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	100.677	0.0	22																																																																																																																																																																																																																				
30 min Summer	66.999	0.0	32																																																																																																																																																																																																																				
60 min Summer	42.696	0.0	50																																																																																																																																																																																																																				
120 min Summer	26.394	0.0	84																																																																																																																																																																																																																				
180 min Summer	19.686	0.0	118																																																																																																																																																																																																																				
240 min Summer	15.902	0.0	150																																																																																																																																																																																																																				
360 min Summer	11.782	0.0	210																																																																																																																																																																																																																				
480 min Summer	9.510	0.0	268																																																																																																																																																																																																																				
600 min Summer	8.048	0.0	328																																																																																																																																																																																																																				
720 min Summer	7.019	0.0	390																																																																																																																																																																																																																				
960 min Summer	5.653	0.0	510																																																																																																																																																																																																																				
1440 min Summer	4.161	0.0	752																																																																																																																																																																																																																				
2160 min Summer	3.058	0.0	1112																																																																																																																																																																																																																				
2880 min Summer	2.456	0.0	1472																																																																																																																																																																																																																				
4320 min Summer	1.801	0.0	2204																																																																																																																																																																																																																				
5760 min Summer	1.444	0.0	2936																																																																																																																																																																																																																				
7200 min Summer	1.216	0.0	3656																																																																																																																																																																																																																				
8640 min Summer	1.058	0.0	4400																																																																																																																																																																																																																				
10080 min Summer	0.940	0.0	5144																																																																																																																																																																																																																				
15 min Winter	100.677	0.0	22																																																																																																																																																																																																																				
©1982-2020 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates				Page 2	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 10/08/2022 File PERMEABLE PAVING SIZING...		Designed by OT Checked by			
Innovyze		Source Control 2020.1.3			
Summary of Results for 30 year Return Period (+40%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	80.940	0.070	5.9	19.7	Flood Risk
60 min Winter	80.952	0.082	5.9	22.9	Flood Risk
120 min Winter	80.953	0.083	5.9	23.3	Flood Risk
180 min Winter	80.947	0.077	5.9	21.4	Flood Risk
240 min Winter	80.938	0.068	5.9	19.0	Flood Risk
360 min Winter	80.922	0.052	5.9	14.6	Flood Risk
480 min Winter	80.915	0.045	5.2	12.5	Flood Risk
600 min Winter	80.909	0.039	4.6	11.0	Flood Risk
720 min Winter	80.905	0.035	4.1	9.8	Flood Risk
960 min Winter	80.899	0.029	3.4	8.1	O K
1440 min Winter	80.892	0.022	2.6	6.1	O K
2160 min Winter	80.886	0.016	1.9	4.5	O K
2880 min Winter	80.883	0.013	1.6	3.6	O K
4320 min Winter	80.880	0.010	1.1	2.6	O K
5760 min Winter	80.878	0.008	0.9	2.0	O K
7200 min Winter	80.877	0.007	0.8	1.7	O K
8640 min Winter	80.876	0.006	0.7	1.5	O K
10080 min Winter	80.875	0.005	0.6	1.3	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	66.999	0.0	33		
60 min Winter	42.696	0.0	54		
120 min Winter	26.394	0.0	92		
180 min Winter	19.686	0.0	126		
240 min Winter	15.902	0.0	160		
360 min Winter	11.782	0.0	216		
480 min Winter	9.510	0.0	276		
600 min Winter	8.048	0.0	338		
720 min Winter	7.019	0.0	398		
960 min Winter	5.653	0.0	516		
1440 min Winter	4.161	0.0	764		
2160 min Winter	3.058	0.0	1124		
2880 min Winter	2.456	0.0	1472		
4320 min Winter	1.801	0.0	2164		
5760 min Winter	1.444	0.0	2928		
7200 min Winter	1.216	0.0	3640		
8640 min Winter	1.058	0.0	4272		
10080 min Winter	0.940	0.0	5248		
©1982-2020 Innovyze					

Paul Basham Associates		Page 3																																										
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																																											
Date 10/08/2022	Designed by OT																																											
File PERMEABLE PAVING SIZING...	Checked by																																											
Innovyze		Source Control 2020.1.3																																										
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FSR</td> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Return Period (years)</td> <td>30</td> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Region</td> <td>England and Wales</td> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>M5-60 (mm)</td> <td>19.800</td> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Ratio R</td> <td>0.350</td> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> <td>Climate Change %</td> <td>+40</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.109 <table> <thead> <tr> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From: To:</th> <th>(ha)</th> <th>From: To:</th> <th>(ha)</th> <th>From: To:</th> <th>(ha)</th> </tr> </thead> <tbody> <tr> <td>0 4</td> <td>0.037</td> <td>4 8</td> <td>0.036</td> <td>8 12</td> <td>0.036</td> </tr> </tbody> </table>			Rainfall Model	FSR	Winter Storms	Yes	Return Period (years)	30	Cv (Summer)	0.750	Region	England and Wales	Cv (Winter)	0.840	M5-60 (mm)	19.800	Shortest Storm (mins)	15	Ratio R	0.350	Longest Storm (mins)	10080	Summer Storms	Yes	Climate Change %	+40	Time (mins)	Area	Time (mins)	Area	Time (mins)	Area	From: To:	(ha)	From: To:	(ha)	From: To:	(ha)	0 4	0.037	4 8	0.036	8 12	0.036
Rainfall Model	FSR	Winter Storms	Yes																																									
Return Period (years)	30	Cv (Summer)	0.750																																									
Region	England and Wales	Cv (Winter)	0.840																																									
M5-60 (mm)	19.800	Shortest Storm (mins)	15																																									
Ratio R	0.350	Longest Storm (mins)	10080																																									
Summer Storms	Yes	Climate Change %	+40																																									
Time (mins)	Area	Time (mins)	Area	Time (mins)	Area																																							
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)																																							
0 4	0.037	4 8	0.036	8 12	0.036																																							
©1982-2020 Innovyze																																												

Paul Basham Associates		Page 4																								
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																									
Date 10/08/2022	Designed by OT																									
File PERMEABLE PAVING SIZING...	Checked by																									
Innovyze		Source Control 2020.1.3																								
<u>Model Details</u> Storage is Online Cover Level (m) 81.200 <u>Porous Car Park Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.04501</td> </tr> <tr> <td>Membrane Percolation (mm/hr)</td> <td>1000</td> </tr> <tr> <td>Max Percolation (l/s)</td> <td>260.6</td> </tr> <tr> <td>Safety Factor</td> <td>2.0</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> </tr> <tr> <td>Invert Level (m)</td> <td>80.870</td> </tr> <tr> <td>Width (m)</td> <td>14.0</td> </tr> <tr> <td>Length (m)</td> <td>67.0</td> </tr> <tr> <td>Slope (1:X)</td> <td>100000.0</td> </tr> <tr> <td>Depression Storage (mm)</td> <td>5</td> </tr> <tr> <td>Evaporation (mm/day)</td> <td>3</td> </tr> <tr> <td>Cap Volume Depth (m)</td> <td>0.220</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.04501	Membrane Percolation (mm/hr)	1000	Max Percolation (l/s)	260.6	Safety Factor	2.0	Porosity	0.30	Invert Level (m)	80.870	Width (m)	14.0	Length (m)	67.0	Slope (1:X)	100000.0	Depression Storage (mm)	5	Evaporation (mm/day)	3	Cap Volume Depth (m)	0.220
Infiltration Coefficient Base (m/hr)	0.04501																									
Membrane Percolation (mm/hr)	1000																									
Max Percolation (l/s)	260.6																									
Safety Factor	2.0																									
Porosity	0.30																									
Invert Level (m)	80.870																									
Width (m)	14.0																									
Length (m)	67.0																									
Slope (1:X)	100000.0																									
Depression Storage (mm)	5																									
Evaporation (mm/day)	3																									
Cap Volume Depth (m)	0.220																									
©1982-2020 Innovyze																										

Paul Basham Associates				Page 1																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END																																																																																																																																																																																																																					
Date 10/08/2022 File PERMEABLE PAVING SIZING...		Designed by OT Checked by																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
Summary of Results for 100 year Return Period (+40%) Half Drain Time : 52 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>80.934</td><td>0.064</td><td>5.9</td><td>18.0</td><td>Flood Risk</td></tr><tr><td>30 min Summer</td><td>80.957</td><td>0.087</td><td>5.9</td><td>24.3</td><td>Flood Risk</td></tr><tr><td>60 min Summer</td><td>80.973</td><td>0.103</td><td>5.9</td><td>28.9</td><td>Flood Risk</td></tr><tr><td>120 min Summer</td><td>80.980</td><td>0.110</td><td>5.9</td><td>30.9</td><td>Flood Risk</td></tr><tr><td>180 min Summer</td><td>80.977</td><td>0.107</td><td>5.9</td><td>30.0</td><td>Flood Risk</td></tr><tr><td>240 min Summer</td><td>80.970</td><td>0.100</td><td>5.9</td><td>28.1</td><td>Flood Risk</td></tr><tr><td>360 min Summer</td><td>80.956</td><td>0.086</td><td>5.9</td><td>24.2</td><td>Flood Risk</td></tr><tr><td>480 min Summer</td><td>80.943</td><td>0.073</td><td>5.9</td><td>20.5</td><td>Flood Risk</td></tr><tr><td>600 min Summer</td><td>80.932</td><td>0.062</td><td>5.9</td><td>17.4</td><td>Flood Risk</td></tr><tr><td>720 min Summer</td><td>80.924</td><td>0.054</td><td>5.9</td><td>15.0</td><td>Flood Risk</td></tr><tr><td>960 min Summer</td><td>80.915</td><td>0.045</td><td>5.3</td><td>12.6</td><td>Flood Risk</td></tr><tr><td>1440 min Summer</td><td>80.905</td><td>0.035</td><td>4.1</td><td>9.8</td><td>Flood Risk</td></tr><tr><td>2160 min Summer</td><td>80.897</td><td>0.027</td><td>3.1</td><td>7.4</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>80.892</td><td>0.022</td><td>2.6</td><td>6.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>80.886</td><td>0.016</td><td>1.9</td><td>4.5</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>80.883</td><td>0.013</td><td>1.6</td><td>3.6</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>80.881</td><td>0.011</td><td>1.3</td><td>3.0</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>80.879</td><td>0.009</td><td>1.1</td><td>2.6</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>80.878</td><td>0.008</td><td>1.0</td><td>2.2</td><td>O K</td></tr><tr><td>15 min Winter</td><td>80.944</td><td>0.074</td><td>5.9</td><td>20.8</td><td>Flood Risk</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>130.405</td><td>0.0</td><td>22</td></tr><tr><td>30 min Summer</td><td>87.611</td><td>0.0</td><td>33</td></tr><tr><td>60 min Summer</td><td>56.129</td><td>0.0</td><td>54</td></tr><tr><td>120 min Summer</td><td>34.675</td><td>0.0</td><td>88</td></tr><tr><td>180 min Summer</td><td>25.749</td><td>0.0</td><td>122</td></tr><tr><td>240 min Summer</td><td>20.687</td><td>0.0</td><td>156</td></tr><tr><td>360 min Summer</td><td>15.234</td><td>0.0</td><td>220</td></tr><tr><td>480 min Summer</td><td>12.237</td><td>0.0</td><td>280</td></tr><tr><td>600 min Summer</td><td>10.316</td><td>0.0</td><td>338</td></tr><tr><td>720 min Summer</td><td>8.967</td><td>0.0</td><td>394</td></tr><tr><td>960 min Summer</td><td>7.182</td><td>0.0</td><td>510</td></tr><tr><td>1440 min Summer</td><td>5.242</td><td>0.0</td><td>752</td></tr><tr><td>2160 min Summer</td><td>3.818</td><td>0.0</td><td>1112</td></tr><tr><td>2880 min Summer</td><td>3.045</td><td>0.0</td><td>1476</td></tr><tr><td>4320 min Summer</td><td>2.209</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Summer</td><td>1.757</td><td>0.0</td><td>2936</td></tr><tr><td>7200 min Summer</td><td>1.472</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Summer</td><td>1.274</td><td>0.0</td><td>4408</td></tr><tr><td>10080 min Summer</td><td>1.128</td><td>0.0</td><td>5136</td></tr><tr><td>15 min Winter</td><td>130.405</td><td>0.0</td><td>23</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	80.934	0.064	5.9	18.0	Flood Risk	30 min Summer	80.957	0.087	5.9	24.3	Flood Risk	60 min Summer	80.973	0.103	5.9	28.9	Flood Risk	120 min Summer	80.980	0.110	5.9	30.9	Flood Risk	180 min Summer	80.977	0.107	5.9	30.0	Flood Risk	240 min Summer	80.970	0.100	5.9	28.1	Flood Risk	360 min Summer	80.956	0.086	5.9	24.2	Flood Risk	480 min Summer	80.943	0.073	5.9	20.5	Flood Risk	600 min Summer	80.932	0.062	5.9	17.4	Flood Risk	720 min Summer	80.924	0.054	5.9	15.0	Flood Risk	960 min Summer	80.915	0.045	5.3	12.6	Flood Risk	1440 min Summer	80.905	0.035	4.1	9.8	Flood Risk	2160 min Summer	80.897	0.027	3.1	7.4	O K	2880 min Summer	80.892	0.022	2.6	6.1	O K	4320 min Summer	80.886	0.016	1.9	4.5	O K	5760 min Summer	80.883	0.013	1.6	3.6	O K	7200 min Summer	80.881	0.011	1.3	3.0	O K	8640 min Summer	80.879	0.009	1.1	2.6	O K	10080 min Summer	80.878	0.008	1.0	2.2	O K	15 min Winter	80.944	0.074	5.9	20.8	Flood Risk	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	130.405	0.0	22	30 min Summer	87.611	0.0	33	60 min Summer	56.129	0.0	54	120 min Summer	34.675	0.0	88	180 min Summer	25.749	0.0	122	240 min Summer	20.687	0.0	156	360 min Summer	15.234	0.0	220	480 min Summer	12.237	0.0	280	600 min Summer	10.316	0.0	338	720 min Summer	8.967	0.0	394	960 min Summer	7.182	0.0	510	1440 min Summer	5.242	0.0	752	2160 min Summer	3.818	0.0	1112	2880 min Summer	3.045	0.0	1476	4320 min Summer	2.209	0.0	2204	5760 min Summer	1.757	0.0	2936	7200 min Summer	1.472	0.0	3672	8640 min Summer	1.274	0.0	4408	10080 min Summer	1.128	0.0	5136	15 min Winter	130.405	0.0	23
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	80.934	0.064	5.9	18.0	Flood Risk																																																																																																																																																																																																																		
30 min Summer	80.957	0.087	5.9	24.3	Flood Risk																																																																																																																																																																																																																		
60 min Summer	80.973	0.103	5.9	28.9	Flood Risk																																																																																																																																																																																																																		
120 min Summer	80.980	0.110	5.9	30.9	Flood Risk																																																																																																																																																																																																																		
180 min Summer	80.977	0.107	5.9	30.0	Flood Risk																																																																																																																																																																																																																		
240 min Summer	80.970	0.100	5.9	28.1	Flood Risk																																																																																																																																																																																																																		
360 min Summer	80.956	0.086	5.9	24.2	Flood Risk																																																																																																																																																																																																																		
480 min Summer	80.943	0.073	5.9	20.5	Flood Risk																																																																																																																																																																																																																		
600 min Summer	80.932	0.062	5.9	17.4	Flood Risk																																																																																																																																																																																																																		
720 min Summer	80.924	0.054	5.9	15.0	Flood Risk																																																																																																																																																																																																																		
960 min Summer	80.915	0.045	5.3	12.6	Flood Risk																																																																																																																																																																																																																		
1440 min Summer	80.905	0.035	4.1	9.8	Flood Risk																																																																																																																																																																																																																		
2160 min Summer	80.897	0.027	3.1	7.4	O K																																																																																																																																																																																																																		
2880 min Summer	80.892	0.022	2.6	6.1	O K																																																																																																																																																																																																																		
4320 min Summer	80.886	0.016	1.9	4.5	O K																																																																																																																																																																																																																		
5760 min Summer	80.883	0.013	1.6	3.6	O K																																																																																																																																																																																																																		
7200 min Summer	80.881	0.011	1.3	3.0	O K																																																																																																																																																																																																																		
8640 min Summer	80.879	0.009	1.1	2.6	O K																																																																																																																																																																																																																		
10080 min Summer	80.878	0.008	1.0	2.2	O K																																																																																																																																																																																																																		
15 min Winter	80.944	0.074	5.9	20.8	Flood Risk																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	130.405	0.0	22																																																																																																																																																																																																																				
30 min Summer	87.611	0.0	33																																																																																																																																																																																																																				
60 min Summer	56.129	0.0	54																																																																																																																																																																																																																				
120 min Summer	34.675	0.0	88																																																																																																																																																																																																																				
180 min Summer	25.749	0.0	122																																																																																																																																																																																																																				
240 min Summer	20.687	0.0	156																																																																																																																																																																																																																				
360 min Summer	15.234	0.0	220																																																																																																																																																																																																																				
480 min Summer	12.237	0.0	280																																																																																																																																																																																																																				
600 min Summer	10.316	0.0	338																																																																																																																																																																																																																				
720 min Summer	8.967	0.0	394																																																																																																																																																																																																																				
960 min Summer	7.182	0.0	510																																																																																																																																																																																																																				
1440 min Summer	5.242	0.0	752																																																																																																																																																																																																																				
2160 min Summer	3.818	0.0	1112																																																																																																																																																																																																																				
2880 min Summer	3.045	0.0	1476																																																																																																																																																																																																																				
4320 min Summer	2.209	0.0	2204																																																																																																																																																																																																																				
5760 min Summer	1.757	0.0	2936																																																																																																																																																																																																																				
7200 min Summer	1.472	0.0	3672																																																																																																																																																																																																																				
8640 min Summer	1.274	0.0	4408																																																																																																																																																																																																																				
10080 min Summer	1.128	0.0	5136																																																																																																																																																																																																																				
15 min Winter	130.405	0.0	23																																																																																																																																																																																																																				
©1982-2020 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates				Page 2	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 10/08/2022 File PERMEABLE PAVING SIZING...		Designed by OT Checked by			
Innovyze		Source Control 2020.1.3			
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	80.971	0.101	5.9	28.2	Flood Risk
60 min Winter	80.990	0.120	5.9	33.6	Flood Risk
120 min Winter	80.994	0.124	5.9	34.9	Flood Risk
180 min Winter	80.987	0.117	5.9	32.8	Flood Risk
240 min Winter	80.976	0.106	5.9	29.6	Flood Risk
360 min Winter	80.953	0.083	5.9	23.2	Flood Risk
480 min Winter	80.933	0.063	5.9	17.8	Flood Risk
600 min Winter	80.920	0.050	5.9	14.1	Flood Risk
720 min Winter	80.915	0.045	5.2	12.5	Flood Risk
960 min Winter	80.907	0.037	4.4	10.3	Flood Risk
1440 min Winter	80.898	0.028	3.3	7.7	O K
2160 min Winter	80.890	0.020	2.4	5.6	O K
2880 min Winter	80.886	0.016	1.9	4.5	O K
4320 min Winter	80.882	0.012	1.4	3.2	O K
5760 min Winter	80.879	0.009	1.1	2.5	O K
7200 min Winter	80.878	0.008	0.9	2.1	O K
8640 min Winter	80.877	0.007	0.8	1.8	O K
10080 min Winter	80.876	0.006	0.7	1.6	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	87.611	0.0	34		
60 min Winter	56.129	0.0	58		
120 min Winter	34.675	0.0	96		
180 min Winter	25.749	0.0	132		
240 min Winter	20.687	0.0	168		
360 min Winter	15.234	0.0	234		
480 min Winter	12.237	0.0	290		
600 min Winter	10.316	0.0	338		
720 min Winter	8.967	0.0	398		
960 min Winter	7.182	0.0	518		
1440 min Winter	5.242	0.0	756		
2160 min Winter	3.818	0.0	1128		
2880 min Winter	3.045	0.0	1476		
4320 min Winter	2.209	0.0	2208		
5760 min Winter	1.757	0.0	2952		
7200 min Winter	1.472	0.0	3680		
8640 min Winter	1.274	0.0	4320		
10080 min Winter	1.128	0.0	5048		
©1982-2020 Innovyze					

Paul Basham Associates		Page 3
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END	
Date 10/08/2022	Designed by OT	
File PERMEABLE PAVING SIZING...	Checked by	
Innovyze		Source Control 2020.1.3

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)	19.800	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.109

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.037	4 8	0.036	8 12	0.036

©1982-2020 Innovyze

Paul Basham Associates		Page 4																								
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																									
Date 10/08/2022	Designed by OT																									
File PERMEABLE PAVING SIZING...	Checked by																									
Innovyze		Source Control 2020.1.3																								
<u>Model Details</u> Storage is Online Cover Level (m) 81.200 <u>Porous Car Park Structure</u> <table> <tr> <td>Infiltration Coefficient Base (m/hr)</td> <td>0.04501</td> </tr> <tr> <td>Membrane Percolation (mm/hr)</td> <td>1000</td> </tr> <tr> <td>Max Percolation (l/s)</td> <td>260.6</td> </tr> <tr> <td>Safety Factor</td> <td>2.0</td> </tr> <tr> <td>Porosity</td> <td>0.30</td> </tr> <tr> <td>Invert Level (m)</td> <td>80.870</td> </tr> <tr> <td>Width (m)</td> <td>14.0</td> </tr> <tr> <td>Length (m)</td> <td>67.0</td> </tr> <tr> <td>Slope (1:X)</td> <td>100000.0</td> </tr> <tr> <td>Depression Storage (mm)</td> <td>5</td> </tr> <tr> <td>Evaporation (mm/day)</td> <td>3</td> </tr> <tr> <td>Cap Volume Depth (m)</td> <td>0.220</td> </tr> </table>			Infiltration Coefficient Base (m/hr)	0.04501	Membrane Percolation (mm/hr)	1000	Max Percolation (l/s)	260.6	Safety Factor	2.0	Porosity	0.30	Invert Level (m)	80.870	Width (m)	14.0	Length (m)	67.0	Slope (1:X)	100000.0	Depression Storage (mm)	5	Evaporation (mm/day)	3	Cap Volume Depth (m)	0.220
Infiltration Coefficient Base (m/hr)	0.04501																									
Membrane Percolation (mm/hr)	1000																									
Max Percolation (l/s)	260.6																									
Safety Factor	2.0																									
Porosity	0.30																									
Invert Level (m)	80.870																									
Width (m)	14.0																									
Length (m)	67.0																									
Slope (1:X)	100000.0																									
Depression Storage (mm)	5																									
Evaporation (mm/day)	3																									
Cap Volume Depth (m)	0.220																									
©1982-2020 Innovyze																										

Paul Basham Associates				Page 1																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END																																																																																																																																																																																																																					
Date 12/08/2022 File South Basin Sizing.srcx		Designed by OT Checked by NH																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
<u>Summary of Results for 1 year Return Period</u> Half Drain Time : 581 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>78.787</td><td>0.087</td><td>0.1</td><td>4.2</td><td>O K</td></tr><tr><td>30 min Summer</td><td>78.812</td><td>0.112</td><td>0.2</td><td>5.5</td><td>O K</td></tr><tr><td>60 min Summer</td><td>78.839</td><td>0.139</td><td>0.2</td><td>7.0</td><td>O K</td></tr><tr><td>120 min Summer</td><td>78.867</td><td>0.167</td><td>0.2</td><td>8.6</td><td>O K</td></tr><tr><td>180 min Summer</td><td>78.883</td><td>0.183</td><td>0.2</td><td>9.6</td><td>O K</td></tr><tr><td>240 min Summer</td><td>78.893</td><td>0.193</td><td>0.2</td><td>10.2</td><td>O K</td></tr><tr><td>360 min Summer</td><td>78.903</td><td>0.203</td><td>0.2</td><td>10.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>78.907</td><td>0.207</td><td>0.2</td><td>11.1</td><td>O K</td></tr><tr><td>600 min Summer</td><td>78.911</td><td>0.211</td><td>0.2</td><td>11.3</td><td>O K</td></tr><tr><td>720 min Summer</td><td>78.913</td><td>0.213</td><td>0.2</td><td>11.5</td><td>O K</td></tr><tr><td>960 min Summer</td><td>78.916</td><td>0.216</td><td>0.2</td><td>11.6</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>78.916</td><td>0.216</td><td>0.2</td><td>11.6</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>78.909</td><td>0.209</td><td>0.2</td><td>11.2</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>78.901</td><td>0.201</td><td>0.2</td><td>10.7</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>78.883</td><td>0.183</td><td>0.2</td><td>9.6</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>78.866</td><td>0.166</td><td>0.2</td><td>8.6</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>78.850</td><td>0.150</td><td>0.2</td><td>7.7</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>78.835</td><td>0.135</td><td>0.2</td><td>6.8</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>78.821</td><td>0.121</td><td>0.2</td><td>6.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>78.796</td><td>0.096</td><td>0.2</td><td>4.7</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>29.648</td><td>0.0</td><td>26</td></tr><tr><td>30 min Summer</td><td>19.726</td><td>0.0</td><td>40</td></tr><tr><td>60 min Summer</td><td>12.800</td><td>0.0</td><td>70</td></tr><tr><td>120 min Summer</td><td>8.156</td><td>0.0</td><td>128</td></tr><tr><td>180 min Summer</td><td>6.242</td><td>0.0</td><td>186</td></tr><tr><td>240 min Summer</td><td>5.155</td><td>0.0</td><td>244</td></tr><tr><td>360 min Summer</td><td>3.898</td><td>0.0</td><td>360</td></tr><tr><td>480 min Summer</td><td>3.196</td><td>0.0</td><td>424</td></tr><tr><td>600 min Summer</td><td>2.740</td><td>0.0</td><td>486</td></tr><tr><td>720 min Summer</td><td>2.417</td><td>0.0</td><td>552</td></tr><tr><td>960 min Summer</td><td>1.983</td><td>0.0</td><td>684</td></tr><tr><td>1440 min Summer</td><td>1.501</td><td>0.0</td><td>964</td></tr><tr><td>2160 min Summer</td><td>1.134</td><td>0.0</td><td>1380</td></tr><tr><td>2880 min Summer</td><td>0.930</td><td>0.0</td><td>1792</td></tr><tr><td>4320 min Summer</td><td>0.704</td><td>0.0</td><td>2596</td></tr><tr><td>5760 min Summer</td><td>0.578</td><td>0.0</td><td>3352</td></tr><tr><td>7200 min Summer</td><td>0.495</td><td>0.0</td><td>4112</td></tr><tr><td>8640 min Summer</td><td>0.436</td><td>0.0</td><td>4848</td></tr><tr><td>10080 min Summer</td><td>0.391</td><td>0.0</td><td>5552</td></tr><tr><td>15 min Winter</td><td>29.648</td><td>0.0</td><td>26</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	78.787	0.087	0.1	4.2	O K	30 min Summer	78.812	0.112	0.2	5.5	O K	60 min Summer	78.839	0.139	0.2	7.0	O K	120 min Summer	78.867	0.167	0.2	8.6	O K	180 min Summer	78.883	0.183	0.2	9.6	O K	240 min Summer	78.893	0.193	0.2	10.2	O K	360 min Summer	78.903	0.203	0.2	10.8	O K	480 min Summer	78.907	0.207	0.2	11.1	O K	600 min Summer	78.911	0.211	0.2	11.3	O K	720 min Summer	78.913	0.213	0.2	11.5	O K	960 min Summer	78.916	0.216	0.2	11.6	O K	1440 min Summer	78.916	0.216	0.2	11.6	O K	2160 min Summer	78.909	0.209	0.2	11.2	O K	2880 min Summer	78.901	0.201	0.2	10.7	O K	4320 min Summer	78.883	0.183	0.2	9.6	O K	5760 min Summer	78.866	0.166	0.2	8.6	O K	7200 min Summer	78.850	0.150	0.2	7.7	O K	8640 min Summer	78.835	0.135	0.2	6.8	O K	10080 min Summer	78.821	0.121	0.2	6.1	O K	15 min Winter	78.796	0.096	0.2	4.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	29.648	0.0	26	30 min Summer	19.726	0.0	40	60 min Summer	12.800	0.0	70	120 min Summer	8.156	0.0	128	180 min Summer	6.242	0.0	186	240 min Summer	5.155	0.0	244	360 min Summer	3.898	0.0	360	480 min Summer	3.196	0.0	424	600 min Summer	2.740	0.0	486	720 min Summer	2.417	0.0	552	960 min Summer	1.983	0.0	684	1440 min Summer	1.501	0.0	964	2160 min Summer	1.134	0.0	1380	2880 min Summer	0.930	0.0	1792	4320 min Summer	0.704	0.0	2596	5760 min Summer	0.578	0.0	3352	7200 min Summer	0.495	0.0	4112	8640 min Summer	0.436	0.0	4848	10080 min Summer	0.391	0.0	5552	15 min Winter	29.648	0.0	26
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	78.787	0.087	0.1	4.2	O K																																																																																																																																																																																																																		
30 min Summer	78.812	0.112	0.2	5.5	O K																																																																																																																																																																																																																		
60 min Summer	78.839	0.139	0.2	7.0	O K																																																																																																																																																																																																																		
120 min Summer	78.867	0.167	0.2	8.6	O K																																																																																																																																																																																																																		
180 min Summer	78.883	0.183	0.2	9.6	O K																																																																																																																																																																																																																		
240 min Summer	78.893	0.193	0.2	10.2	O K																																																																																																																																																																																																																		
360 min Summer	78.903	0.203	0.2	10.8	O K																																																																																																																																																																																																																		
480 min Summer	78.907	0.207	0.2	11.1	O K																																																																																																																																																																																																																		
600 min Summer	78.911	0.211	0.2	11.3	O K																																																																																																																																																																																																																		
720 min Summer	78.913	0.213	0.2	11.5	O K																																																																																																																																																																																																																		
960 min Summer	78.916	0.216	0.2	11.6	O K																																																																																																																																																																																																																		
1440 min Summer	78.916	0.216	0.2	11.6	O K																																																																																																																																																																																																																		
2160 min Summer	78.909	0.209	0.2	11.2	O K																																																																																																																																																																																																																		
2880 min Summer	78.901	0.201	0.2	10.7	O K																																																																																																																																																																																																																		
4320 min Summer	78.883	0.183	0.2	9.6	O K																																																																																																																																																																																																																		
5760 min Summer	78.866	0.166	0.2	8.6	O K																																																																																																																																																																																																																		
7200 min Summer	78.850	0.150	0.2	7.7	O K																																																																																																																																																																																																																		
8640 min Summer	78.835	0.135	0.2	6.8	O K																																																																																																																																																																																																																		
10080 min Summer	78.821	0.121	0.2	6.1	O K																																																																																																																																																																																																																		
15 min Winter	78.796	0.096	0.2	4.7	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	29.648	0.0	26																																																																																																																																																																																																																				
30 min Summer	19.726	0.0	40																																																																																																																																																																																																																				
60 min Summer	12.800	0.0	70																																																																																																																																																																																																																				
120 min Summer	8.156	0.0	128																																																																																																																																																																																																																				
180 min Summer	6.242	0.0	186																																																																																																																																																																																																																				
240 min Summer	5.155	0.0	244																																																																																																																																																																																																																				
360 min Summer	3.898	0.0	360																																																																																																																																																																																																																				
480 min Summer	3.196	0.0	424																																																																																																																																																																																																																				
600 min Summer	2.740	0.0	486																																																																																																																																																																																																																				
720 min Summer	2.417	0.0	552																																																																																																																																																																																																																				
960 min Summer	1.983	0.0	684																																																																																																																																																																																																																				
1440 min Summer	1.501	0.0	964																																																																																																																																																																																																																				
2160 min Summer	1.134	0.0	1380																																																																																																																																																																																																																				
2880 min Summer	0.930	0.0	1792																																																																																																																																																																																																																				
4320 min Summer	0.704	0.0	2596																																																																																																																																																																																																																				
5760 min Summer	0.578	0.0	3352																																																																																																																																																																																																																				
7200 min Summer	0.495	0.0	4112																																																																																																																																																																																																																				
8640 min Summer	0.436	0.0	4848																																																																																																																																																																																																																				
10080 min Summer	0.391	0.0	5552																																																																																																																																																																																																																				
15 min Winter	29.648	0.0	26																																																																																																																																																																																																																				
©1982-2020 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates				Page 2	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022 File South Basin Sizing.srcx		Designed by OT Checked by NH			
Innovyze		Source Control 2020.1.3			
Summary of Results for 1 year Return Period					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	78.824	0.124	0.2	6.2	O K
60 min Winter	78.855	0.155	0.2	7.9	O K
120 min Winter	78.886	0.186	0.2	9.8	O K
180 min Winter	78.903	0.203	0.2	10.8	O K
240 min Winter	78.915	0.215	0.2	11.6	O K
360 min Winter	78.927	0.227	0.2	12.3	O K
480 min Winter	78.933	0.233	0.2	12.7	O K
600 min Winter	78.936	0.236	0.2	12.9	O K
720 min Winter	78.938	0.238	0.2	13.0	O K
960 min Winter	78.940	0.240	0.2	13.2	O K
1440 min Winter	78.937	0.237	0.2	13.0	O K
2160 min Winter	78.925	0.225	0.2	12.3	O K
2880 min Winter	78.911	0.211	0.2	11.4	O K
4320 min Winter	78.883	0.183	0.2	9.6	O K
5760 min Winter	78.857	0.157	0.2	8.1	O K
7200 min Winter	78.834	0.134	0.2	6.7	O K
8640 min Winter	78.812	0.112	0.2	5.6	O K
10080 min Winter	78.794	0.094	0.1	4.6	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	19.726	0.0	40		
60 min Winter	12.800	0.0	68		
120 min Winter	8.156	0.0	124		
180 min Winter	6.242	0.0	182		
240 min Winter	5.155	0.0	240		
360 min Winter	3.898	0.0	352		
480 min Winter	3.196	0.0	458		
600 min Winter	2.740	0.0	554		
720 min Winter	2.417	0.0	578		
960 min Winter	1.983	0.0	732		
1440 min Winter	1.501	0.0	1042		
2160 min Winter	1.134	0.0	1492		
2880 min Winter	0.930	0.0	1928		
4320 min Winter	0.704	0.0	2764		
5760 min Winter	0.578	0.0	3528		
7200 min Winter	0.495	0.0	4320		
8640 min Winter	0.436	0.0	5024		
10080 min Winter	0.391	0.0	5752		
©1982-2020 Innovyze					

Paul Basham Associates		Page 3
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END	
Date 12/08/2022 File South Basin Sizing.srcx	Designed by OT Checked by NH	
Innovyze Source Control 2020.1.3		

Rainfall Details

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

Time Area Diagram

Total Area (ha) 0.078

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.026	4 8	0.026	8 12	0.026

©1982-2020 Innovyze

Paul Basham Associates		Page 4																																
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																																	
Date 12/08/2022 File South Basin Sizing.srcx	Designed by OT Checked by NH																																	
Innovyze		Source Control 2020.1.3																																
<u>Model Details</u> Storage is Online Cover Level (m) 79.700 <u>Infiltration Basin Structure</u> Invert Level (m) 78.700 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.01782 Porosity 1.00 Infiltration Coefficient Side (m/hr) 0.01782 <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>45.0</td> <td>0.301</td> <td>71.5</td> <td>0.601</td> <td>103.5</td> <td>0.901</td> <td>141.1</td> </tr> <tr> <td>0.101</td> <td>53.2</td> <td>0.401</td> <td>81.5</td> <td>0.701</td> <td>115.4</td> <td>1.000</td> <td>154.8</td> </tr> <tr> <td>0.201</td> <td>62.0</td> <td>0.501</td> <td>92.2</td> <td>0.801</td> <td>128.0</td> <td>1.001</td> <td>154.9</td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	0.000	45.0	0.301	71.5	0.601	103.5	0.901	141.1	0.101	53.2	0.401	81.5	0.701	115.4	1.000	154.8	0.201	62.0	0.501	92.2	0.801	128.0	1.001	154.9
Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)																											
0.000	45.0	0.301	71.5	0.601	103.5	0.901	141.1																											
0.101	53.2	0.401	81.5	0.701	115.4	1.000	154.8																											
0.201	62.0	0.501	92.2	0.801	128.0	1.001	154.9																											
©1982-2020 Innovyze																																		

Paul Basham Associates				Page 1																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END																																																																																																																																																																																																																					
Date 12/08/2022 File South Basin Sizing.srcx		Designed by OT Checked by NH																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
Summary of Results for 30 year Return Period (+40%) Half Drain Time : 1084 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>78.962</td><td>0.262</td><td>0.2</td><td>14.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>79.029</td><td>0.329</td><td>0.3</td><td>19.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>79.094</td><td>0.394</td><td>0.3</td><td>24.4</td><td>O K</td></tr><tr><td>120 min Summer</td><td>79.155</td><td>0.455</td><td>0.3</td><td>29.6</td><td>O K</td></tr><tr><td>180 min Summer</td><td>79.187</td><td>0.487</td><td>0.3</td><td>32.4</td><td>O K</td></tr><tr><td>240 min Summer</td><td>79.206</td><td>0.506</td><td>0.4</td><td>34.2</td><td>O K</td></tr><tr><td>360 min Summer</td><td>79.231</td><td>0.531</td><td>0.4</td><td>36.5</td><td>O K</td></tr><tr><td>480 min Summer</td><td>79.244</td><td>0.544</td><td>0.4</td><td>37.8</td><td>O K</td></tr><tr><td>600 min Summer</td><td>79.252</td><td>0.552</td><td>0.4</td><td>38.5</td><td>O K</td></tr><tr><td>720 min Summer</td><td>79.255</td><td>0.555</td><td>0.4</td><td>38.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>79.258</td><td>0.558</td><td>0.4</td><td>39.1</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>79.258</td><td>0.558</td><td>0.4</td><td>39.1</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>79.250</td><td>0.550</td><td>0.4</td><td>38.4</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>79.238</td><td>0.538</td><td>0.4</td><td>37.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>79.209</td><td>0.509</td><td>0.4</td><td>34.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>79.181</td><td>0.481</td><td>0.3</td><td>31.9</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>79.155</td><td>0.455</td><td>0.3</td><td>29.6</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>79.132</td><td>0.432</td><td>0.3</td><td>27.6</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>79.109</td><td>0.409</td><td>0.3</td><td>25.7</td><td>O K</td></tr><tr><td>15 min Winter</td><td>78.988</td><td>0.288</td><td>0.2</td><td>16.4</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>101.754</td><td>0.0</td><td>27</td></tr><tr><td>30 min Summer</td><td>67.708</td><td>0.0</td><td>41</td></tr><tr><td>60 min Summer</td><td>43.136</td><td>0.0</td><td>70</td></tr><tr><td>120 min Summer</td><td>26.651</td><td>0.0</td><td>130</td></tr><tr><td>180 min Summer</td><td>19.868</td><td>0.0</td><td>188</td></tr><tr><td>240 min Summer</td><td>16.054</td><td>0.0</td><td>248</td></tr><tr><td>360 min Summer</td><td>11.891</td><td>0.0</td><td>364</td></tr><tr><td>480 min Summer</td><td>9.596</td><td>0.0</td><td>484</td></tr><tr><td>600 min Summer</td><td>8.121</td><td>0.0</td><td>602</td></tr><tr><td>720 min Summer</td><td>7.083</td><td>0.0</td><td>710</td></tr><tr><td>960 min Summer</td><td>5.703</td><td>0.0</td><td>814</td></tr><tr><td>1440 min Summer</td><td>4.198</td><td>0.0</td><td>1062</td></tr><tr><td>2160 min Summer</td><td>3.085</td><td>0.0</td><td>1472</td></tr><tr><td>2880 min Summer</td><td>2.477</td><td>0.0</td><td>1884</td></tr><tr><td>4320 min Summer</td><td>1.816</td><td>0.0</td><td>2724</td></tr><tr><td>5760 min Summer</td><td>1.456</td><td>0.0</td><td>3520</td></tr><tr><td>7200 min Summer</td><td>1.227</td><td>0.0</td><td>4328</td></tr><tr><td>8640 min Summer</td><td>1.067</td><td>0.0</td><td>5104</td></tr><tr><td>10080 min Summer</td><td>0.948</td><td>0.0</td><td>5856</td></tr><tr><td>15 min Winter</td><td>101.754</td><td>0.0</td><td>26</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	78.962	0.262	0.2	14.7	O K	30 min Summer	79.029	0.329	0.3	19.4	O K	60 min Summer	79.094	0.394	0.3	24.4	O K	120 min Summer	79.155	0.455	0.3	29.6	O K	180 min Summer	79.187	0.487	0.3	32.4	O K	240 min Summer	79.206	0.506	0.4	34.2	O K	360 min Summer	79.231	0.531	0.4	36.5	O K	480 min Summer	79.244	0.544	0.4	37.8	O K	600 min Summer	79.252	0.552	0.4	38.5	O K	720 min Summer	79.255	0.555	0.4	38.8	O K	960 min Summer	79.258	0.558	0.4	39.1	O K	1440 min Summer	79.258	0.558	0.4	39.1	O K	2160 min Summer	79.250	0.550	0.4	38.4	O K	2880 min Summer	79.238	0.538	0.4	37.1	O K	4320 min Summer	79.209	0.509	0.4	34.4	O K	5760 min Summer	79.181	0.481	0.3	31.9	O K	7200 min Summer	79.155	0.455	0.3	29.6	O K	8640 min Summer	79.132	0.432	0.3	27.6	O K	10080 min Summer	79.109	0.409	0.3	25.7	O K	15 min Winter	78.988	0.288	0.2	16.4	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	101.754	0.0	27	30 min Summer	67.708	0.0	41	60 min Summer	43.136	0.0	70	120 min Summer	26.651	0.0	130	180 min Summer	19.868	0.0	188	240 min Summer	16.054	0.0	248	360 min Summer	11.891	0.0	364	480 min Summer	9.596	0.0	484	600 min Summer	8.121	0.0	602	720 min Summer	7.083	0.0	710	960 min Summer	5.703	0.0	814	1440 min Summer	4.198	0.0	1062	2160 min Summer	3.085	0.0	1472	2880 min Summer	2.477	0.0	1884	4320 min Summer	1.816	0.0	2724	5760 min Summer	1.456	0.0	3520	7200 min Summer	1.227	0.0	4328	8640 min Summer	1.067	0.0	5104	10080 min Summer	0.948	0.0	5856	15 min Winter	101.754	0.0	26
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	78.962	0.262	0.2	14.7	O K																																																																																																																																																																																																																		
30 min Summer	79.029	0.329	0.3	19.4	O K																																																																																																																																																																																																																		
60 min Summer	79.094	0.394	0.3	24.4	O K																																																																																																																																																																																																																		
120 min Summer	79.155	0.455	0.3	29.6	O K																																																																																																																																																																																																																		
180 min Summer	79.187	0.487	0.3	32.4	O K																																																																																																																																																																																																																		
240 min Summer	79.206	0.506	0.4	34.2	O K																																																																																																																																																																																																																		
360 min Summer	79.231	0.531	0.4	36.5	O K																																																																																																																																																																																																																		
480 min Summer	79.244	0.544	0.4	37.8	O K																																																																																																																																																																																																																		
600 min Summer	79.252	0.552	0.4	38.5	O K																																																																																																																																																																																																																		
720 min Summer	79.255	0.555	0.4	38.8	O K																																																																																																																																																																																																																		
960 min Summer	79.258	0.558	0.4	39.1	O K																																																																																																																																																																																																																		
1440 min Summer	79.258	0.558	0.4	39.1	O K																																																																																																																																																																																																																		
2160 min Summer	79.250	0.550	0.4	38.4	O K																																																																																																																																																																																																																		
2880 min Summer	79.238	0.538	0.4	37.1	O K																																																																																																																																																																																																																		
4320 min Summer	79.209	0.509	0.4	34.4	O K																																																																																																																																																																																																																		
5760 min Summer	79.181	0.481	0.3	31.9	O K																																																																																																																																																																																																																		
7200 min Summer	79.155	0.455	0.3	29.6	O K																																																																																																																																																																																																																		
8640 min Summer	79.132	0.432	0.3	27.6	O K																																																																																																																																																																																																																		
10080 min Summer	79.109	0.409	0.3	25.7	O K																																																																																																																																																																																																																		
15 min Winter	78.988	0.288	0.2	16.4	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	101.754	0.0	27																																																																																																																																																																																																																				
30 min Summer	67.708	0.0	41																																																																																																																																																																																																																				
60 min Summer	43.136	0.0	70																																																																																																																																																																																																																				
120 min Summer	26.651	0.0	130																																																																																																																																																																																																																				
180 min Summer	19.868	0.0	188																																																																																																																																																																																																																				
240 min Summer	16.054	0.0	248																																																																																																																																																																																																																				
360 min Summer	11.891	0.0	364																																																																																																																																																																																																																				
480 min Summer	9.596	0.0	484																																																																																																																																																																																																																				
600 min Summer	8.121	0.0	602																																																																																																																																																																																																																				
720 min Summer	7.083	0.0	710																																																																																																																																																																																																																				
960 min Summer	5.703	0.0	814																																																																																																																																																																																																																				
1440 min Summer	4.198	0.0	1062																																																																																																																																																																																																																				
2160 min Summer	3.085	0.0	1472																																																																																																																																																																																																																				
2880 min Summer	2.477	0.0	1884																																																																																																																																																																																																																				
4320 min Summer	1.816	0.0	2724																																																																																																																																																																																																																				
5760 min Summer	1.456	0.0	3520																																																																																																																																																																																																																				
7200 min Summer	1.227	0.0	4328																																																																																																																																																																																																																				
8640 min Summer	1.067	0.0	5104																																																																																																																																																																																																																				
10080 min Summer	0.948	0.0	5856																																																																																																																																																																																																																				
15 min Winter	101.754	0.0	26																																																																																																																																																																																																																				
©1982-2020 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates				Page 2	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022 File South Basin Sizing.srcx		Designed by OT Checked by NH			
Innovyze		Source Control 2020.1.3			
Summary of Results for 30 year Return Period (+40%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	79.060	0.360	0.3	21.8	O K
60 min Winter	79.130	0.430	0.3	27.4	O K
120 min Winter	79.196	0.496	0.3	33.2	O K
180 min Winter	79.231	0.531	0.4	36.5	O K
240 min Winter	79.252	0.552	0.4	38.6	O K
360 min Winter	79.280	0.580	0.4	41.3	O K
480 min Winter	79.296	0.596	0.4	42.9	O K
600 min Winter	79.305	0.605	0.4	43.9	O K
720 min Winter	79.310	0.610	0.4	44.4	O K
960 min Winter	79.313	0.613	0.4	44.7	O K
1440 min Winter	79.311	0.611	0.4	44.5	O K
2160 min Winter	79.299	0.599	0.4	43.3	O K
2880 min Winter	79.281	0.581	0.4	41.4	O K
4320 min Winter	79.240	0.540	0.4	37.3	O K
5760 min Winter	79.200	0.500	0.3	33.6	O K
7200 min Winter	79.163	0.463	0.3	30.3	O K
8640 min Winter	79.130	0.430	0.3	27.4	O K
10080 min Winter	79.099	0.399	0.3	24.9	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	67.708	0.0	41		
60 min Winter	43.136	0.0	70		
120 min Winter	26.651	0.0	126		
180 min Winter	19.868	0.0	184		
240 min Winter	16.054	0.0	242		
360 min Winter	11.891	0.0	358		
480 min Winter	9.596	0.0	472		
600 min Winter	8.121	0.0	584		
720 min Winter	7.083	0.0	694		
960 min Winter	5.703	0.0	902		
1440 min Winter	4.198	0.0	1118		
2160 min Winter	3.085	0.0	1584		
2880 min Winter	2.477	0.0	2044		
4320 min Winter	1.816	0.0	2904		
5760 min Winter	1.456	0.0	3752		
7200 min Winter	1.227	0.0	4608		
8640 min Winter	1.067	0.0	5368		
10080 min Winter	0.948	0.0	6160		
©1982-2020 Innovyze					

Paul Basham Associates		Page 3
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END	
Date 12/08/2022 File South Basin Sizing.srcx	Designed by OT Checked by NH	
Innovyze		Source Control 2020.1.3

Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	20.000	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.078

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.026	4 8	0.026	8 12	0.026

©1982-2020 Innovyze

Paul Basham Associates		Page 4																																
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																																	
Date 12/08/2022 File South Basin Sizing.srcx	Designed by OT Checked by NH																																	
Innovyze		Source Control 2020.1.3																																
<u>Model Details</u> Storage is Online Cover Level (m) 79.700 <u>Infiltration Basin Structure</u> Invert Level (m) 78.700 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.01782 Porosity 1.00 Infiltration Coefficient Side (m/hr) 0.01782 <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>45.0</td> <td>0.301</td> <td>71.5</td> <td>0.601</td> <td>103.5</td> <td>0.901</td> <td>141.1</td> </tr> <tr> <td>0.101</td> <td>53.2</td> <td>0.401</td> <td>81.5</td> <td>0.701</td> <td>115.4</td> <td>1.000</td> <td>154.8</td> </tr> <tr> <td>0.201</td> <td>62.0</td> <td>0.501</td> <td>92.2</td> <td>0.801</td> <td>128.0</td> <td>1.001</td> <td>154.9</td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	0.000	45.0	0.301	71.5	0.601	103.5	0.901	141.1	0.101	53.2	0.401	81.5	0.701	115.4	1.000	154.8	0.201	62.0	0.501	92.2	0.801	128.0	1.001	154.9
Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)																											
0.000	45.0	0.301	71.5	0.601	103.5	0.901	141.1																											
0.101	53.2	0.401	81.5	0.701	115.4	1.000	154.8																											
0.201	62.0	0.501	92.2	0.801	128.0	1.001	154.9																											
©1982-2020 Innovyze																																		

Paul Basham Associates				Page 1																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END																																																																																																																																																																																																																					
Date 12/08/2022 File South Basin Sizing.srcx		Designed by OT Checked by NH																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
Summary of Results for 100 year Return Period (+40%) Half Drain Time : 1202 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>79.024</td><td>0.324</td><td>0.3</td><td>19.0</td><td>O K</td></tr><tr><td>30 min Summer</td><td>79.106</td><td>0.406</td><td>0.3</td><td>25.4</td><td>O K</td></tr><tr><td>60 min Summer</td><td>79.185</td><td>0.485</td><td>0.3</td><td>32.3</td><td>O K</td></tr><tr><td>120 min Summer</td><td>79.257</td><td>0.557</td><td>0.4</td><td>39.1</td><td>O K</td></tr><tr><td>180 min Summer</td><td>79.293</td><td>0.593</td><td>0.4</td><td>42.7</td><td>O K</td></tr><tr><td>240 min Summer</td><td>79.315</td><td>0.615</td><td>0.4</td><td>44.9</td><td>O K</td></tr><tr><td>360 min Summer</td><td>79.342</td><td>0.642</td><td>0.4</td><td>47.9</td><td>O K</td></tr><tr><td>480 min Summer</td><td>79.358</td><td>0.658</td><td>0.4</td><td>49.5</td><td>O K</td></tr><tr><td>600 min Summer</td><td>79.366</td><td>0.666</td><td>0.4</td><td>50.4</td><td>O K</td></tr><tr><td>720 min Summer</td><td>79.370</td><td>0.670</td><td>0.4</td><td>50.9</td><td>O K</td></tr><tr><td>960 min Summer</td><td>79.371</td><td>0.671</td><td>0.4</td><td>51.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>79.369</td><td>0.669</td><td>0.4</td><td>50.8</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>79.359</td><td>0.659</td><td>0.4</td><td>49.7</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>79.344</td><td>0.644</td><td>0.4</td><td>48.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>79.310</td><td>0.610</td><td>0.4</td><td>44.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>79.277</td><td>0.577</td><td>0.4</td><td>41.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>79.247</td><td>0.547</td><td>0.4</td><td>38.0</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>79.220</td><td>0.520</td><td>0.4</td><td>35.4</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>79.194</td><td>0.494</td><td>0.3</td><td>33.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>79.054</td><td>0.354</td><td>0.3</td><td>21.3</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>131.851</td><td>0.0</td><td>27</td></tr><tr><td>30 min Summer</td><td>88.566</td><td>0.0</td><td>41</td></tr><tr><td>60 min Summer</td><td>56.713</td><td>0.0</td><td>70</td></tr><tr><td>120 min Summer</td><td>35.004</td><td>0.0</td><td>130</td></tr><tr><td>180 min Summer</td><td>25.973</td><td>0.0</td><td>188</td></tr><tr><td>240 min Summer</td><td>20.877</td><td>0.0</td><td>248</td></tr><tr><td>360 min Summer</td><td>15.365</td><td>0.0</td><td>366</td></tr><tr><td>480 min Summer</td><td>12.341</td><td>0.0</td><td>484</td></tr><tr><td>600 min Summer</td><td>10.402</td><td>0.0</td><td>602</td></tr><tr><td>720 min Summer</td><td>9.042</td><td>0.0</td><td>720</td></tr><tr><td>960 min Summer</td><td>7.241</td><td>0.0</td><td>844</td></tr><tr><td>1440 min Summer</td><td>5.284</td><td>0.0</td><td>1090</td></tr><tr><td>2160 min Summer</td><td>3.848</td><td>0.0</td><td>1496</td></tr><tr><td>2880 min Summer</td><td>3.068</td><td>0.0</td><td>1908</td></tr><tr><td>4320 min Summer</td><td>2.226</td><td>0.0</td><td>2728</td></tr><tr><td>5760 min Summer</td><td>1.771</td><td>0.0</td><td>3528</td></tr><tr><td>7200 min Summer</td><td>1.483</td><td>0.0</td><td>4328</td></tr><tr><td>8640 min Summer</td><td>1.284</td><td>0.0</td><td>5112</td></tr><tr><td>10080 min Summer</td><td>1.137</td><td>0.0</td><td>5944</td></tr><tr><td>15 min Winter</td><td>131.851</td><td>0.0</td><td>26</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	79.024	0.324	0.3	19.0	O K	30 min Summer	79.106	0.406	0.3	25.4	O K	60 min Summer	79.185	0.485	0.3	32.3	O K	120 min Summer	79.257	0.557	0.4	39.1	O K	180 min Summer	79.293	0.593	0.4	42.7	O K	240 min Summer	79.315	0.615	0.4	44.9	O K	360 min Summer	79.342	0.642	0.4	47.9	O K	480 min Summer	79.358	0.658	0.4	49.5	O K	600 min Summer	79.366	0.666	0.4	50.4	O K	720 min Summer	79.370	0.670	0.4	50.9	O K	960 min Summer	79.371	0.671	0.4	51.0	O K	1440 min Summer	79.369	0.669	0.4	50.8	O K	2160 min Summer	79.359	0.659	0.4	49.7	O K	2880 min Summer	79.344	0.644	0.4	48.1	O K	4320 min Summer	79.310	0.610	0.4	44.4	O K	5760 min Summer	79.277	0.577	0.4	41.0	O K	7200 min Summer	79.247	0.547	0.4	38.0	O K	8640 min Summer	79.220	0.520	0.4	35.4	O K	10080 min Summer	79.194	0.494	0.3	33.1	O K	15 min Winter	79.054	0.354	0.3	21.3	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	131.851	0.0	27	30 min Summer	88.566	0.0	41	60 min Summer	56.713	0.0	70	120 min Summer	35.004	0.0	130	180 min Summer	25.973	0.0	188	240 min Summer	20.877	0.0	248	360 min Summer	15.365	0.0	366	480 min Summer	12.341	0.0	484	600 min Summer	10.402	0.0	602	720 min Summer	9.042	0.0	720	960 min Summer	7.241	0.0	844	1440 min Summer	5.284	0.0	1090	2160 min Summer	3.848	0.0	1496	2880 min Summer	3.068	0.0	1908	4320 min Summer	2.226	0.0	2728	5760 min Summer	1.771	0.0	3528	7200 min Summer	1.483	0.0	4328	8640 min Summer	1.284	0.0	5112	10080 min Summer	1.137	0.0	5944	15 min Winter	131.851	0.0	26
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	79.024	0.324	0.3	19.0	O K																																																																																																																																																																																																																		
30 min Summer	79.106	0.406	0.3	25.4	O K																																																																																																																																																																																																																		
60 min Summer	79.185	0.485	0.3	32.3	O K																																																																																																																																																																																																																		
120 min Summer	79.257	0.557	0.4	39.1	O K																																																																																																																																																																																																																		
180 min Summer	79.293	0.593	0.4	42.7	O K																																																																																																																																																																																																																		
240 min Summer	79.315	0.615	0.4	44.9	O K																																																																																																																																																																																																																		
360 min Summer	79.342	0.642	0.4	47.9	O K																																																																																																																																																																																																																		
480 min Summer	79.358	0.658	0.4	49.5	O K																																																																																																																																																																																																																		
600 min Summer	79.366	0.666	0.4	50.4	O K																																																																																																																																																																																																																		
720 min Summer	79.370	0.670	0.4	50.9	O K																																																																																																																																																																																																																		
960 min Summer	79.371	0.671	0.4	51.0	O K																																																																																																																																																																																																																		
1440 min Summer	79.369	0.669	0.4	50.8	O K																																																																																																																																																																																																																		
2160 min Summer	79.359	0.659	0.4	49.7	O K																																																																																																																																																																																																																		
2880 min Summer	79.344	0.644	0.4	48.1	O K																																																																																																																																																																																																																		
4320 min Summer	79.310	0.610	0.4	44.4	O K																																																																																																																																																																																																																		
5760 min Summer	79.277	0.577	0.4	41.0	O K																																																																																																																																																																																																																		
7200 min Summer	79.247	0.547	0.4	38.0	O K																																																																																																																																																																																																																		
8640 min Summer	79.220	0.520	0.4	35.4	O K																																																																																																																																																																																																																		
10080 min Summer	79.194	0.494	0.3	33.1	O K																																																																																																																																																																																																																		
15 min Winter	79.054	0.354	0.3	21.3	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	131.851	0.0	27																																																																																																																																																																																																																				
30 min Summer	88.566	0.0	41																																																																																																																																																																																																																				
60 min Summer	56.713	0.0	70																																																																																																																																																																																																																				
120 min Summer	35.004	0.0	130																																																																																																																																																																																																																				
180 min Summer	25.973	0.0	188																																																																																																																																																																																																																				
240 min Summer	20.877	0.0	248																																																																																																																																																																																																																				
360 min Summer	15.365	0.0	366																																																																																																																																																																																																																				
480 min Summer	12.341	0.0	484																																																																																																																																																																																																																				
600 min Summer	10.402	0.0	602																																																																																																																																																																																																																				
720 min Summer	9.042	0.0	720																																																																																																																																																																																																																				
960 min Summer	7.241	0.0	844																																																																																																																																																																																																																				
1440 min Summer	5.284	0.0	1090																																																																																																																																																																																																																				
2160 min Summer	3.848	0.0	1496																																																																																																																																																																																																																				
2880 min Summer	3.068	0.0	1908																																																																																																																																																																																																																				
4320 min Summer	2.226	0.0	2728																																																																																																																																																																																																																				
5760 min Summer	1.771	0.0	3528																																																																																																																																																																																																																				
7200 min Summer	1.483	0.0	4328																																																																																																																																																																																																																				
8640 min Summer	1.284	0.0	5112																																																																																																																																																																																																																				
10080 min Summer	1.137	0.0	5944																																																																																																																																																																																																																				
15 min Winter	131.851	0.0	26																																																																																																																																																																																																																				
©1982-2020 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates				Page 2	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022 File South Basin Sizing.srcx		Designed by OT Checked by NH			
Innovyze		Source Control 2020.1.3			
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	79.143	0.443	0.3	28.5	O K
60 min Winter	79.228	0.528	0.4	36.2	O K
120 min Winter	79.305	0.605	0.4	43.9	O K
180 min Winter	79.344	0.644	0.4	48.1	O K
240 min Winter	79.368	0.668	0.4	50.6	O K
360 min Winter	79.398	0.698	0.5	54.1	O K
480 min Winter	79.416	0.716	0.5	56.1	Flood Risk
600 min Winter	79.426	0.726	0.5	57.3	Flood Risk
720 min Winter	79.432	0.732	0.5	58.0	Flood Risk
960 min Winter	79.435	0.735	0.5	58.4	Flood Risk
1440 min Winter	79.430	0.730	0.5	57.8	Flood Risk
2160 min Winter	79.416	0.716	0.5	56.1	Flood Risk
2880 min Winter	79.395	0.695	0.5	53.7	O K
4320 min Winter	79.348	0.648	0.4	48.5	O K
5760 min Winter	79.302	0.602	0.4	43.6	O K
7200 min Winter	79.261	0.561	0.4	39.4	O K
8640 min Winter	79.223	0.523	0.4	35.8	O K
10080 min Winter	79.189	0.489	0.3	32.6	O K
Storm Event	Rain (mm/hr)		Flooded Volume (m³)	Time-Peak (mins)	
30 min Winter	88.566		0.0	41	
60 min Winter	56.713		0.0	70	
120 min Winter	35.004		0.0	128	
180 min Winter	25.973		0.0	186	
240 min Winter	20.877		0.0	242	
360 min Winter	15.365		0.0	358	
480 min Winter	12.341		0.0	474	
600 min Winter	10.402		0.0	586	
720 min Winter	9.042		0.0	698	
960 min Winter	7.241		0.0	910	
1440 min Winter	5.284		0.0	1140	
2160 min Winter	3.848		0.0	1604	
2880 min Winter	3.068		0.0	2052	
4320 min Winter	2.226		0.0	2944	
5760 min Winter	1.771		0.0	3808	
7200 min Winter	1.483		0.0	4616	
8640 min Winter	1.284		0.0	5448	
10080 min Winter	1.137		0.0	6248	
©1982-2020 Innovyze					

Paul Basham Associates		Page 3																																										
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																																											
Date 12/08/2022 File South Basin Sizing.srcx	Designed by OT Checked by NH																																											
Innovyze		Source Control 2020.1.3																																										
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FSR</td> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Return Period (years)</td> <td>100</td> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Region</td> <td>England and Wales</td> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>M5-60 (mm)</td> <td>20.000</td> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Ratio R</td> <td>0.350</td> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> <td>Climate Change %</td> <td>+40</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.078 <table> <thead> <tr> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From: To:</th> <th>(ha)</th> <th>From: To:</th> <th>(ha)</th> <th>From: To:</th> <th>(ha)</th> </tr> </thead> <tbody> <tr> <td>0 4</td> <td>0.026</td> <td>4 8</td> <td>0.026</td> <td>8 12</td> <td>0.026</td> </tr> </tbody> </table>			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)	20.000	Shortest Storm (mins)	15	Ratio R	0.350	Longest Storm (mins)	10080	Summer Storms	Yes	Climate Change %	+40	Time (mins)	Area	Time (mins)	Area	Time (mins)	Area	From: To:	(ha)	From: To:	(ha)	From: To:	(ha)	0 4	0.026	4 8	0.026	8 12	0.026
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)	20.000	Shortest Storm (mins)	15																																									
Ratio R	0.350	Longest Storm (mins)	10080																																									
Summer Storms	Yes	Climate Change %	+40																																									
Time (mins)	Area	Time (mins)	Area	Time (mins)	Area																																							
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)																																							
0 4	0.026	4 8	0.026	8 12	0.026																																							
©1982-2020 Innovyze																																												

Paul Basham Associates		Page 4																																
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																																	
Date 12/08/2022 File South Basin Sizing.srcx	Designed by OT Checked by NH																																	
Innovyze		Source Control 2020.1.3																																
<u>Model Details</u> Storage is Online Cover Level (m) 79.700 <u>Infiltration Basin Structure</u> Invert Level (m) 78.700 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.01782 Porosity 1.00 Infiltration Coefficient Side (m/hr) 0.01782 <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>45.0</td> <td>0.301</td> <td>71.5</td> <td>0.601</td> <td>103.5</td> <td>0.901</td> <td>141.1</td> </tr> <tr> <td>0.101</td> <td>53.2</td> <td>0.401</td> <td>81.5</td> <td>0.701</td> <td>115.4</td> <td>1.000</td> <td>154.8</td> </tr> <tr> <td>0.201</td> <td>62.0</td> <td>0.501</td> <td>92.2</td> <td>0.801</td> <td>128.0</td> <td>1.001</td> <td>154.9</td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	0.000	45.0	0.301	71.5	0.601	103.5	0.901	141.1	0.101	53.2	0.401	81.5	0.701	115.4	1.000	154.8	0.201	62.0	0.501	92.2	0.801	128.0	1.001	154.9
Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)																											
0.000	45.0	0.301	71.5	0.601	103.5	0.901	141.1																											
0.101	53.2	0.401	81.5	0.701	115.4	1.000	154.8																											
0.201	62.0	0.501	92.2	0.801	128.0	1.001	154.9																											
©1982-2020 Innovyze																																		

Paul Basham Associates				Page 1																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END																																																																																																																																																																																																																					
Date 12/08/2022 File Infiltration Crate in R...		Designed by OT Checked by NH																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
<u>Summary of Results for 1 year Return Period</u> Half Drain Time : 324 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>79.280</td><td>0.020</td><td>0.1</td><td>2.4</td><td>O K</td></tr><tr><td>30 min Summer</td><td>79.286</td><td>0.026</td><td>0.1</td><td>3.1</td><td>O K</td></tr><tr><td>60 min Summer</td><td>79.293</td><td>0.033</td><td>0.1</td><td>3.9</td><td>O K</td></tr><tr><td>120 min Summer</td><td>79.299</td><td>0.039</td><td>0.2</td><td>4.7</td><td>O K</td></tr><tr><td>180 min Summer</td><td>79.302</td><td>0.042</td><td>0.2</td><td>5.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>79.304</td><td>0.044</td><td>0.2</td><td>5.3</td><td>O K</td></tr><tr><td>360 min Summer</td><td>79.306</td><td>0.046</td><td>0.2</td><td>5.6</td><td>O K</td></tr><tr><td>480 min Summer</td><td>79.308</td><td>0.048</td><td>0.2</td><td>5.7</td><td>O K</td></tr><tr><td>600 min Summer</td><td>79.308</td><td>0.048</td><td>0.2</td><td>5.8</td><td>O K</td></tr><tr><td>720 min Summer</td><td>79.309</td><td>0.049</td><td>0.2</td><td>5.8</td><td>O K</td></tr><tr><td>960 min Summer</td><td>79.309</td><td>0.049</td><td>0.2</td><td>5.8</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>79.307</td><td>0.047</td><td>0.2</td><td>5.7</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>79.305</td><td>0.045</td><td>0.2</td><td>5.3</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>79.302</td><td>0.042</td><td>0.2</td><td>5.0</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>79.297</td><td>0.037</td><td>0.2</td><td>4.4</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>79.294</td><td>0.034</td><td>0.1</td><td>4.0</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>79.291</td><td>0.031</td><td>0.1</td><td>3.7</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>79.288</td><td>0.028</td><td>0.1</td><td>3.4</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>79.286</td><td>0.026</td><td>0.1</td><td>3.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>79.282</td><td>0.022</td><td>0.1</td><td>2.7</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>29.032</td><td>0.0</td><td>26</td></tr><tr><td>30 min Summer</td><td>19.293</td><td>0.0</td><td>40</td></tr><tr><td>60 min Summer</td><td>12.513</td><td>0.0</td><td>68</td></tr><tr><td>120 min Summer</td><td>7.969</td><td>0.0</td><td>124</td></tr><tr><td>180 min Summer</td><td>6.097</td><td>0.0</td><td>180</td></tr><tr><td>240 min Summer</td><td>5.038</td><td>0.0</td><td>208</td></tr><tr><td>360 min Summer</td><td>3.813</td><td>0.0</td><td>270</td></tr><tr><td>480 min Summer</td><td>3.126</td><td>0.0</td><td>336</td></tr><tr><td>600 min Summer</td><td>2.680</td><td>0.0</td><td>404</td></tr><tr><td>720 min Summer</td><td>2.363</td><td>0.0</td><td>472</td></tr><tr><td>960 min Summer</td><td>1.938</td><td>0.0</td><td>610</td></tr><tr><td>1440 min Summer</td><td>1.467</td><td>0.0</td><td>878</td></tr><tr><td>2160 min Summer</td><td>1.109</td><td>0.0</td><td>1264</td></tr><tr><td>2880 min Summer</td><td>0.909</td><td>0.0</td><td>1648</td></tr><tr><td>4320 min Summer</td><td>0.688</td><td>0.0</td><td>2384</td></tr><tr><td>5760 min Summer</td><td>0.565</td><td>0.0</td><td>3120</td></tr><tr><td>7200 min Summer</td><td>0.484</td><td>0.0</td><td>3888</td></tr><tr><td>8640 min Summer</td><td>0.426</td><td>0.0</td><td>4584</td></tr><tr><td>10080 min Summer</td><td>0.382</td><td>0.0</td><td>5344</td></tr><tr><td>15 min Winter</td><td>29.032</td><td>0.0</td><td>26</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	79.280	0.020	0.1	2.4	O K	30 min Summer	79.286	0.026	0.1	3.1	O K	60 min Summer	79.293	0.033	0.1	3.9	O K	120 min Summer	79.299	0.039	0.2	4.7	O K	180 min Summer	79.302	0.042	0.2	5.1	O K	240 min Summer	79.304	0.044	0.2	5.3	O K	360 min Summer	79.306	0.046	0.2	5.6	O K	480 min Summer	79.308	0.048	0.2	5.7	O K	600 min Summer	79.308	0.048	0.2	5.8	O K	720 min Summer	79.309	0.049	0.2	5.8	O K	960 min Summer	79.309	0.049	0.2	5.8	O K	1440 min Summer	79.307	0.047	0.2	5.7	O K	2160 min Summer	79.305	0.045	0.2	5.3	O K	2880 min Summer	79.302	0.042	0.2	5.0	O K	4320 min Summer	79.297	0.037	0.2	4.4	O K	5760 min Summer	79.294	0.034	0.1	4.0	O K	7200 min Summer	79.291	0.031	0.1	3.7	O K	8640 min Summer	79.288	0.028	0.1	3.4	O K	10080 min Summer	79.286	0.026	0.1	3.1	O K	15 min Winter	79.282	0.022	0.1	2.7	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	29.032	0.0	26	30 min Summer	19.293	0.0	40	60 min Summer	12.513	0.0	68	120 min Summer	7.969	0.0	124	180 min Summer	6.097	0.0	180	240 min Summer	5.038	0.0	208	360 min Summer	3.813	0.0	270	480 min Summer	3.126	0.0	336	600 min Summer	2.680	0.0	404	720 min Summer	2.363	0.0	472	960 min Summer	1.938	0.0	610	1440 min Summer	1.467	0.0	878	2160 min Summer	1.109	0.0	1264	2880 min Summer	0.909	0.0	1648	4320 min Summer	0.688	0.0	2384	5760 min Summer	0.565	0.0	3120	7200 min Summer	0.484	0.0	3888	8640 min Summer	0.426	0.0	4584	10080 min Summer	0.382	0.0	5344	15 min Winter	29.032	0.0	26
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	79.280	0.020	0.1	2.4	O K																																																																																																																																																																																																																		
30 min Summer	79.286	0.026	0.1	3.1	O K																																																																																																																																																																																																																		
60 min Summer	79.293	0.033	0.1	3.9	O K																																																																																																																																																																																																																		
120 min Summer	79.299	0.039	0.2	4.7	O K																																																																																																																																																																																																																		
180 min Summer	79.302	0.042	0.2	5.1	O K																																																																																																																																																																																																																		
240 min Summer	79.304	0.044	0.2	5.3	O K																																																																																																																																																																																																																		
360 min Summer	79.306	0.046	0.2	5.6	O K																																																																																																																																																																																																																		
480 min Summer	79.308	0.048	0.2	5.7	O K																																																																																																																																																																																																																		
600 min Summer	79.308	0.048	0.2	5.8	O K																																																																																																																																																																																																																		
720 min Summer	79.309	0.049	0.2	5.8	O K																																																																																																																																																																																																																		
960 min Summer	79.309	0.049	0.2	5.8	O K																																																																																																																																																																																																																		
1440 min Summer	79.307	0.047	0.2	5.7	O K																																																																																																																																																																																																																		
2160 min Summer	79.305	0.045	0.2	5.3	O K																																																																																																																																																																																																																		
2880 min Summer	79.302	0.042	0.2	5.0	O K																																																																																																																																																																																																																		
4320 min Summer	79.297	0.037	0.2	4.4	O K																																																																																																																																																																																																																		
5760 min Summer	79.294	0.034	0.1	4.0	O K																																																																																																																																																																																																																		
7200 min Summer	79.291	0.031	0.1	3.7	O K																																																																																																																																																																																																																		
8640 min Summer	79.288	0.028	0.1	3.4	O K																																																																																																																																																																																																																		
10080 min Summer	79.286	0.026	0.1	3.1	O K																																																																																																																																																																																																																		
15 min Winter	79.282	0.022	0.1	2.7	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	29.032	0.0	26																																																																																																																																																																																																																				
30 min Summer	19.293	0.0	40																																																																																																																																																																																																																				
60 min Summer	12.513	0.0	68																																																																																																																																																																																																																				
120 min Summer	7.969	0.0	124																																																																																																																																																																																																																				
180 min Summer	6.097	0.0	180																																																																																																																																																																																																																				
240 min Summer	5.038	0.0	208																																																																																																																																																																																																																				
360 min Summer	3.813	0.0	270																																																																																																																																																																																																																				
480 min Summer	3.126	0.0	336																																																																																																																																																																																																																				
600 min Summer	2.680	0.0	404																																																																																																																																																																																																																				
720 min Summer	2.363	0.0	472																																																																																																																																																																																																																				
960 min Summer	1.938	0.0	610																																																																																																																																																																																																																				
1440 min Summer	1.467	0.0	878																																																																																																																																																																																																																				
2160 min Summer	1.109	0.0	1264																																																																																																																																																																																																																				
2880 min Summer	0.909	0.0	1648																																																																																																																																																																																																																				
4320 min Summer	0.688	0.0	2384																																																																																																																																																																																																																				
5760 min Summer	0.565	0.0	3120																																																																																																																																																																																																																				
7200 min Summer	0.484	0.0	3888																																																																																																																																																																																																																				
8640 min Summer	0.426	0.0	4584																																																																																																																																																																																																																				
10080 min Summer	0.382	0.0	5344																																																																																																																																																																																																																				
15 min Winter	29.032	0.0	26																																																																																																																																																																																																																				
©1982-2020 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates				Page 2	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022 File Infiltration Crate in R...		Designed by OT Checked by NH			
Innovyze		Source Control 2020.1.3			
Summary of Results for 1 year Return Period					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	79.289	0.029	0.1	3.5	O K
60 min Winter	79.297	0.037	0.2	4.4	O K
120 min Winter	79.304	0.044	0.2	5.3	O K
180 min Winter	79.308	0.048	0.2	5.7	O K
240 min Winter	79.310	0.050	0.2	6.0	O K
360 min Winter	79.312	0.052	0.2	6.2	O K
480 min Winter	79.313	0.053	0.2	6.4	O K
600 min Winter	79.313	0.053	0.2	6.4	O K
720 min Winter	79.313	0.053	0.2	6.4	O K
960 min Winter	79.312	0.052	0.2	6.3	O K
1440 min Winter	79.309	0.049	0.2	5.9	O K
2160 min Winter	79.304	0.044	0.2	5.3	O K
2880 min Winter	79.300	0.040	0.2	4.8	O K
4320 min Winter	79.294	0.034	0.2	4.1	O K
5760 min Winter	79.290	0.030	0.1	3.6	O K
7200 min Winter	79.286	0.026	0.1	3.2	O K
8640 min Winter	79.284	0.024	0.1	2.8	O K
10080 min Winter	79.282	0.022	0.1	2.6	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	19.293	0.0	39		
60 min Winter	12.513	0.0	66		
120 min Winter	7.969	0.0	122		
180 min Winter	6.097	0.0	176		
240 min Winter	5.038	0.0	226		
360 min Winter	3.813	0.0	284		
480 min Winter	3.126	0.0	362		
600 min Winter	2.680	0.0	438		
720 min Winter	2.363	0.0	514		
960 min Winter	1.938	0.0	658		
1440 min Winter	1.467	0.0	930		
2160 min Winter	1.109	0.0	1340		
2880 min Winter	0.909	0.0	1732		
4320 min Winter	0.688	0.0	2472		
5760 min Winter	0.565	0.0	3232		
7200 min Winter	0.484	0.0	3968		
8640 min Winter	0.426	0.0	4672		
10080 min Winter	0.382	0.0	5440		
©1982-2020 Innovyze					

Paul Basham Associates		Page 3
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END	
Date 12/08/2022 File Infiltration Crate in R...	Designed by OT Checked by NH	
Innovyze	Source Control 2020.1.3	

Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	1	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.600	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.045

Time (mins) Area			Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)	From:	To:	(ha)
0	4	0.015	4	8	0.015	8	12	0.015

Paul Basham Associates		Page 4																		
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																			
Date 12/08/2022	Designed by OT																			
File Infiltration Crate in R...	Checked by NH																			
Innovyze		Source Control 2020.1.3																		
<u>Model Details</u> Storage is Online Cover Level (m) 81.060 <u>Cellular Storage Structure</u> Invert Level (m) 79.260 Safety Factor 3.0 Infiltration Coefficient Base (m/hr) 0.01847 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.01847 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>126.0</td> <td>126.0</td> <td>1.201</td> <td>0.0</td> <td>194.0</td> </tr> <tr> <td>1.200</td> <td>126.0</td> <td>194.0</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	126.0	126.0	1.201	0.0	194.0	1.200	126.0	194.0			
Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)															
0.000	126.0	126.0	1.201	0.0	194.0															
1.200	126.0	194.0																		
©1982-2020 Innovyze																				

Paul Basham Associates				Page 1	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022 File Infiltration Crate in R...		Designed by OT Checked by NH			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 30 year Return Period (+40%)</u>					
Half Drain Time : 890 minutes.					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	79.329	0.069	0.2	8.2	O K
30 min Summer	79.351	0.091	0.2	10.8	O K
60 min Summer	79.374	0.114	0.2	13.7	O K
120 min Summer	79.398	0.138	0.2	16.5	O K
180 min Summer	79.410	0.150	0.2	18.0	O K
240 min Summer	79.418	0.158	0.2	18.9	O K
360 min Summer	79.428	0.168	0.2	20.1	O K
480 min Summer	79.433	0.173	0.2	20.7	O K
600 min Summer	79.435	0.175	0.2	20.9	O K
720 min Summer	79.435	0.175	0.2	21.0	O K
960 min Summer	79.435	0.175	0.2	21.0	O K
1440 min Summer	79.432	0.172	0.2	20.6	O K
2160 min Summer	79.425	0.165	0.2	19.7	O K
2880 min Summer	79.415	0.155	0.2	18.6	O K
4320 min Summer	79.396	0.136	0.2	16.2	O K
5760 min Summer	79.377	0.117	0.2	14.1	O K
7200 min Summer	79.361	0.101	0.2	12.1	O K
8640 min Summer	79.347	0.087	0.2	10.5	O K
10080 min Summer	79.336	0.076	0.2	9.1	O K
15 min Winter	79.337	0.077	0.2	9.2	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
15 min Summer	99.599	0.0	26		
30 min Summer	66.289	0.0	41		
60 min Summer	42.256	0.0	70		
120 min Summer	26.136	0.0	128		
180 min Summer	19.503	0.0	188		
240 min Summer	15.762	0.0	246		
360 min Summer	11.674	0.0	364		
480 min Summer	9.423	0.0	482		
600 min Summer	7.975	0.0	600		
720 min Summer	6.956	0.0	674		
960 min Summer	5.602	0.0	786		
1440 min Summer	4.124	0.0	1040		
2160 min Summer	3.031	0.0	1452		
2880 min Summer	2.434	0.0	1852		
4320 min Summer	1.785	0.0	2648		
5760 min Summer	1.431	0.0	3456		
7200 min Summer	1.206	0.0	4184		
8640 min Summer	1.049	0.0	4920		
10080 min Summer	0.932	0.0	5552		
15 min Winter	99.599	0.0	26		
©1982-2020 Innovyze					

Paul Basham Associates				Page 2	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022 File Infiltration Crate in R...		Designed by OT Checked by NH			
Innovyze		Source Control 2020.1.3			
<u>Summary of Results for 30 year Return Period (+40%)</u>					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	79.362	0.102	0.2	12.2	O K
60 min Winter	79.388	0.128	0.2	15.3	O K
120 min Winter	79.415	0.155	0.2	18.6	O K
180 min Winter	79.430	0.170	0.2	20.3	O K
240 min Winter	79.439	0.179	0.2	21.4	O K
360 min Winter	79.451	0.191	0.2	22.8	O K
480 min Winter	79.457	0.197	0.2	23.6	O K
600 min Winter	79.461	0.201	0.2	24.0	O K
720 min Winter	79.462	0.202	0.2	24.2	O K
960 min Winter	79.462	0.202	0.2	24.1	O K
1440 min Winter	79.457	0.197	0.2	23.5	O K
2160 min Winter	79.445	0.185	0.2	22.1	O K
2880 min Winter	79.430	0.170	0.2	20.4	O K
4320 min Winter	79.400	0.140	0.2	16.7	O K
5760 min Winter	79.372	0.112	0.2	13.4	O K
7200 min Winter	79.348	0.088	0.2	10.5	O K
8640 min Winter	79.329	0.069	0.2	8.2	O K
10080 min Winter	79.315	0.055	0.2	6.6	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	66.289	0.0	40		
60 min Winter	42.256	0.0	68		
120 min Winter	26.136	0.0	126		
180 min Winter	19.503	0.0	184		
240 min Winter	15.762	0.0	242		
360 min Winter	11.674	0.0	358		
480 min Winter	9.423	0.0	472		
600 min Winter	7.975	0.0	584		
720 min Winter	6.956	0.0	694		
960 min Winter	5.602	0.0	900		
1440 min Winter	4.124	0.0	1118		
2160 min Winter	3.031	0.0	1580		
2880 min Winter	2.434	0.0	2024		
4320 min Winter	1.785	0.0	2860		
5760 min Winter	1.431	0.0	3640		
7200 min Winter	1.206	0.0	4392		
8640 min Winter	1.049	0.0	5016		
10080 min Winter	0.932	0.0	5552		
©1982-2020 Innovyze					

Paul Basham Associates		Page 3																																										
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																																											
Date 12/08/2022	Designed by OT																																											
File Infiltration Crate in R...	Checked by NH																																											
Innovyze		Source Control 2020.1.3																																										
<u>Rainfall Details</u> <table> <tr> <td>Rainfall Model</td> <td>FSR</td> <td>Winter Storms</td> <td>Yes</td> </tr> <tr> <td>Return Period (years)</td> <td>30</td> <td>Cv (Summer)</td> <td>0.750</td> </tr> <tr> <td>Region</td> <td>England and Wales</td> <td>Cv (Winter)</td> <td>0.840</td> </tr> <tr> <td>M5-60 (mm)</td> <td>19.600</td> <td>Shortest Storm (mins)</td> <td>15</td> </tr> <tr> <td>Ratio R</td> <td>0.350</td> <td>Longest Storm (mins)</td> <td>10080</td> </tr> <tr> <td>Summer Storms</td> <td>Yes</td> <td>Climate Change %</td> <td>+40</td> </tr> </table> <u>Time Area Diagram</u> Total Area (ha) 0.045 <table> <thead> <tr> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> <th>Time (mins)</th> <th>Area</th> </tr> <tr> <th>From: To:</th> <th>(ha)</th> <th>From: To:</th> <th>(ha)</th> <th>From: To:</th> <th>(ha)</th> </tr> </thead> <tbody> <tr> <td>0 4</td> <td>0.015</td> <td>4 8</td> <td>0.015</td> <td>8 12</td> <td>0.015</td> </tr> </tbody> </table>			Rainfall Model	FSR	Winter Storms	Yes	Return Period (years)	30	Cv (Summer)	0.750	Region	England and Wales	Cv (Winter)	0.840	M5-60 (mm)	19.600	Shortest Storm (mins)	15	Ratio R	0.350	Longest Storm (mins)	10080	Summer Storms	Yes	Climate Change %	+40	Time (mins)	Area	Time (mins)	Area	Time (mins)	Area	From: To:	(ha)	From: To:	(ha)	From: To:	(ha)	0 4	0.015	4 8	0.015	8 12	0.015
Rainfall Model	FSR	Winter Storms	Yes																																									
Return Period (years)	30	Cv (Summer)	0.750																																									
Region	England and Wales	Cv (Winter)	0.840																																									
M5-60 (mm)	19.600	Shortest Storm (mins)	15																																									
Ratio R	0.350	Longest Storm (mins)	10080																																									
Summer Storms	Yes	Climate Change %	+40																																									
Time (mins)	Area	Time (mins)	Area	Time (mins)	Area																																							
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)																																							
0 4	0.015	4 8	0.015	8 12	0.015																																							
©1982-2020 Innovyze																																												

Paul Basham Associates		Page 4																		
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																			
Date 12/08/2022	Designed by OT																			
File Infiltration Crate in R...	Checked by NH																			
Innovyze		Source Control 2020.1.3																		
<u>Model Details</u> Storage is Online Cover Level (m) 81.060 <u>Cellular Storage Structure</u> Invert Level (m) 79.260 Safety Factor 3.0 Infiltration Coefficient Base (m/hr) 0.01847 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.01847 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>126.0</td> <td>126.0</td> <td>1.201</td> <td>0.0</td> <td>194.0</td> </tr> <tr> <td>1.200</td> <td>126.0</td> <td>194.0</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	126.0	126.0	1.201	0.0	194.0	1.200	126.0	194.0			
Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)															
0.000	126.0	126.0	1.201	0.0	194.0															
1.200	126.0	194.0																		
©1982-2020 Innovyze																				

Paul Basham Associates				Page 1																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END																																																																																																																																																																																																																					
Date 12/08/2022 File Infiltration Crate in R...		Designed by OT Checked by NH																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
Summary of Results for 100 year Return Period (+40%) Half Drain Time : 1170 minutes. <table><thead><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr></thead><tbody><tr><td>15 min Summer</td><td>79.349</td><td>0.089</td><td>0.2</td><td>10.7</td><td>O K</td></tr><tr><td>30 min Summer</td><td>79.379</td><td>0.119</td><td>0.2</td><td>14.3</td><td>O K</td></tr><tr><td>60 min Summer</td><td>79.411</td><td>0.151</td><td>0.2</td><td>18.1</td><td>O K</td></tr><tr><td>120 min Summer</td><td>79.443</td><td>0.183</td><td>0.2</td><td>21.9</td><td>O K</td></tr><tr><td>180 min Summer</td><td>79.460</td><td>0.200</td><td>0.2</td><td>23.9</td><td>O K</td></tr><tr><td>240 min Summer</td><td>79.470</td><td>0.210</td><td>0.2</td><td>25.2</td><td>O K</td></tr><tr><td>360 min Summer</td><td>79.484</td><td>0.224</td><td>0.2</td><td>26.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>79.491</td><td>0.231</td><td>0.2</td><td>27.6</td><td>O K</td></tr><tr><td>600 min Summer</td><td>79.495</td><td>0.235</td><td>0.2</td><td>28.1</td><td>O K</td></tr><tr><td>720 min Summer</td><td>79.496</td><td>0.236</td><td>0.2</td><td>28.3</td><td>O K</td></tr><tr><td>960 min Summer</td><td>79.496</td><td>0.236</td><td>0.2</td><td>28.2</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>79.491</td><td>0.231</td><td>0.2</td><td>27.7</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>79.481</td><td>0.221</td><td>0.2</td><td>26.5</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>79.470</td><td>0.210</td><td>0.2</td><td>25.1</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>79.446</td><td>0.186</td><td>0.2</td><td>22.3</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>79.424</td><td>0.164</td><td>0.2</td><td>19.6</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>79.403</td><td>0.143</td><td>0.2</td><td>17.2</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>79.385</td><td>0.125</td><td>0.2</td><td>15.0</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>79.370</td><td>0.110</td><td>0.2</td><td>13.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>79.360</td><td>0.100</td><td>0.2</td><td>12.0</td><td>O K</td></tr></tbody></table> <table><thead><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr></thead><tbody><tr><td>15 min Summer</td><td>128.960</td><td>0.0</td><td>26</td></tr><tr><td>30 min Summer</td><td>86.656</td><td>0.0</td><td>41</td></tr><tr><td>60 min Summer</td><td>55.544</td><td>0.0</td><td>70</td></tr><tr><td>120 min Summer</td><td>34.343</td><td>0.0</td><td>130</td></tr><tr><td>180 min Summer</td><td>25.523</td><td>0.0</td><td>188</td></tr><tr><td>240 min Summer</td><td>20.520</td><td>0.0</td><td>248</td></tr><tr><td>360 min Summer</td><td>15.103</td><td>0.0</td><td>366</td></tr><tr><td>480 min Summer</td><td>12.133</td><td>0.0</td><td>484</td></tr><tr><td>600 min Summer</td><td>10.229</td><td>0.0</td><td>602</td></tr><tr><td>720 min Summer</td><td>8.892</td><td>0.0</td><td>722</td></tr><tr><td>960 min Summer</td><td>7.122</td><td>0.0</td><td>896</td></tr><tr><td>1440 min Summer</td><td>5.200</td><td>0.0</td><td>1126</td></tr><tr><td>2160 min Summer</td><td>3.787</td><td>0.0</td><td>1516</td></tr><tr><td>2880 min Summer</td><td>3.021</td><td>0.0</td><td>1932</td></tr><tr><td>4320 min Summer</td><td>2.193</td><td>0.0</td><td>2732</td></tr><tr><td>5760 min Summer</td><td>1.744</td><td>0.0</td><td>3520</td></tr><tr><td>7200 min Summer</td><td>1.461</td><td>0.0</td><td>4320</td></tr><tr><td>8640 min Summer</td><td>1.265</td><td>0.0</td><td>5024</td></tr><tr><td>10080 min Summer</td><td>1.120</td><td>0.0</td><td>5752</td></tr><tr><td>15 min Winter</td><td>128.960</td><td>0.0</td><td>26</td></tr></tbody></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	79.349	0.089	0.2	10.7	O K	30 min Summer	79.379	0.119	0.2	14.3	O K	60 min Summer	79.411	0.151	0.2	18.1	O K	120 min Summer	79.443	0.183	0.2	21.9	O K	180 min Summer	79.460	0.200	0.2	23.9	O K	240 min Summer	79.470	0.210	0.2	25.2	O K	360 min Summer	79.484	0.224	0.2	26.8	O K	480 min Summer	79.491	0.231	0.2	27.6	O K	600 min Summer	79.495	0.235	0.2	28.1	O K	720 min Summer	79.496	0.236	0.2	28.3	O K	960 min Summer	79.496	0.236	0.2	28.2	O K	1440 min Summer	79.491	0.231	0.2	27.7	O K	2160 min Summer	79.481	0.221	0.2	26.5	O K	2880 min Summer	79.470	0.210	0.2	25.1	O K	4320 min Summer	79.446	0.186	0.2	22.3	O K	5760 min Summer	79.424	0.164	0.2	19.6	O K	7200 min Summer	79.403	0.143	0.2	17.2	O K	8640 min Summer	79.385	0.125	0.2	15.0	O K	10080 min Summer	79.370	0.110	0.2	13.1	O K	15 min Winter	79.360	0.100	0.2	12.0	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	128.960	0.0	26	30 min Summer	86.656	0.0	41	60 min Summer	55.544	0.0	70	120 min Summer	34.343	0.0	130	180 min Summer	25.523	0.0	188	240 min Summer	20.520	0.0	248	360 min Summer	15.103	0.0	366	480 min Summer	12.133	0.0	484	600 min Summer	10.229	0.0	602	720 min Summer	8.892	0.0	722	960 min Summer	7.122	0.0	896	1440 min Summer	5.200	0.0	1126	2160 min Summer	3.787	0.0	1516	2880 min Summer	3.021	0.0	1932	4320 min Summer	2.193	0.0	2732	5760 min Summer	1.744	0.0	3520	7200 min Summer	1.461	0.0	4320	8640 min Summer	1.265	0.0	5024	10080 min Summer	1.120	0.0	5752	15 min Winter	128.960	0.0	26
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	79.349	0.089	0.2	10.7	O K																																																																																																																																																																																																																		
30 min Summer	79.379	0.119	0.2	14.3	O K																																																																																																																																																																																																																		
60 min Summer	79.411	0.151	0.2	18.1	O K																																																																																																																																																																																																																		
120 min Summer	79.443	0.183	0.2	21.9	O K																																																																																																																																																																																																																		
180 min Summer	79.460	0.200	0.2	23.9	O K																																																																																																																																																																																																																		
240 min Summer	79.470	0.210	0.2	25.2	O K																																																																																																																																																																																																																		
360 min Summer	79.484	0.224	0.2	26.8	O K																																																																																																																																																																																																																		
480 min Summer	79.491	0.231	0.2	27.6	O K																																																																																																																																																																																																																		
600 min Summer	79.495	0.235	0.2	28.1	O K																																																																																																																																																																																																																		
720 min Summer	79.496	0.236	0.2	28.3	O K																																																																																																																																																																																																																		
960 min Summer	79.496	0.236	0.2	28.2	O K																																																																																																																																																																																																																		
1440 min Summer	79.491	0.231	0.2	27.7	O K																																																																																																																																																																																																																		
2160 min Summer	79.481	0.221	0.2	26.5	O K																																																																																																																																																																																																																		
2880 min Summer	79.470	0.210	0.2	25.1	O K																																																																																																																																																																																																																		
4320 min Summer	79.446	0.186	0.2	22.3	O K																																																																																																																																																																																																																		
5760 min Summer	79.424	0.164	0.2	19.6	O K																																																																																																																																																																																																																		
7200 min Summer	79.403	0.143	0.2	17.2	O K																																																																																																																																																																																																																		
8640 min Summer	79.385	0.125	0.2	15.0	O K																																																																																																																																																																																																																		
10080 min Summer	79.370	0.110	0.2	13.1	O K																																																																																																																																																																																																																		
15 min Winter	79.360	0.100	0.2	12.0	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	128.960	0.0	26																																																																																																																																																																																																																				
30 min Summer	86.656	0.0	41																																																																																																																																																																																																																				
60 min Summer	55.544	0.0	70																																																																																																																																																																																																																				
120 min Summer	34.343	0.0	130																																																																																																																																																																																																																				
180 min Summer	25.523	0.0	188																																																																																																																																																																																																																				
240 min Summer	20.520	0.0	248																																																																																																																																																																																																																				
360 min Summer	15.103	0.0	366																																																																																																																																																																																																																				
480 min Summer	12.133	0.0	484																																																																																																																																																																																																																				
600 min Summer	10.229	0.0	602																																																																																																																																																																																																																				
720 min Summer	8.892	0.0	722																																																																																																																																																																																																																				
960 min Summer	7.122	0.0	896																																																																																																																																																																																																																				
1440 min Summer	5.200	0.0	1126																																																																																																																																																																																																																				
2160 min Summer	3.787	0.0	1516																																																																																																																																																																																																																				
2880 min Summer	3.021	0.0	1932																																																																																																																																																																																																																				
4320 min Summer	2.193	0.0	2732																																																																																																																																																																																																																				
5760 min Summer	1.744	0.0	3520																																																																																																																																																																																																																				
7200 min Summer	1.461	0.0	4320																																																																																																																																																																																																																				
8640 min Summer	1.265	0.0	5024																																																																																																																																																																																																																				
10080 min Summer	1.120	0.0	5752																																																																																																																																																																																																																				
15 min Winter	128.960	0.0	26																																																																																																																																																																																																																				
©1982-2020 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates				Page 2	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022 File Infiltration Crate in R...		Designed by OT Checked by NH			
Innovyze		Source Control 2020.1.3			
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	79.394	0.134	0.2	16.0	O K
60 min Winter	79.430	0.170	0.2	20.3	O K
120 min Winter	79.466	0.206	0.2	24.7	O K
180 min Winter	79.486	0.226	0.2	27.0	O K
240 min Winter	79.498	0.238	0.2	28.5	O K
360 min Winter	79.514	0.254	0.2	30.4	O K
480 min Winter	79.523	0.263	0.2	31.5	O K
600 min Winter	79.529	0.269	0.2	32.1	O K
720 min Winter	79.532	0.272	0.2	32.5	O K
960 min Winter	79.533	0.273	0.2	32.7	O K
1440 min Winter	79.526	0.266	0.2	31.8	O K
2160 min Winter	79.512	0.252	0.2	30.2	O K
2880 min Winter	79.496	0.236	0.2	28.2	O K
4320 min Winter	79.460	0.200	0.2	24.0	O K
5760 min Winter	79.427	0.167	0.2	19.9	O K
7200 min Winter	79.396	0.136	0.2	16.3	O K
8640 min Winter	79.370	0.110	0.2	13.2	O K
10080 min Winter	79.348	0.088	0.2	10.5	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	86.656	0.0	41		
60 min Winter	55.544	0.0	70		
120 min Winter	34.343	0.0	128		
180 min Winter	25.523	0.0	186		
240 min Winter	20.520	0.0	244		
360 min Winter	15.103	0.0	360		
480 min Winter	12.133	0.0	474		
600 min Winter	10.229	0.0	590		
720 min Winter	8.892	0.0	702		
960 min Winter	7.122	0.0	922		
1440 min Winter	5.200	0.0	1300		
2160 min Winter	3.787	0.0	1640		
2880 min Winter	3.021	0.0	2100		
4320 min Winter	2.193	0.0	2984		
5760 min Winter	1.744	0.0	3808		
7200 min Winter	1.461	0.0	4552		
8640 min Winter	1.265	0.0	5280		
10080 min Winter	1.120	0.0	5960		
©1982-2020 Innovyze					

Paul Basham Associates		Page 3
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END	
Date 12/08/2022 File Infiltration Crate in R...	Designed by OT Checked by NH	
Innovyze	Source Control 2020.1.3	

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)	19.600	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.045

Time (mins) Area			Time (mins) Area			Time (mins) Area		
From:	To:	(ha)	From:	To:	(ha)	From:	To:	(ha)
0	4	0.015	4	8	0.015	8	12	0.015

Paul Basham Associates		Page 4																		
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																			
Date 12/08/2022	Designed by OT																			
File Infiltration Crate in R...	Checked by NH																			
Innovyze		Source Control 2020.1.3																		
<u>Model Details</u> Storage is Online Cover Level (m) 81.060 <u>Cellular Storage Structure</u> Invert Level (m) 79.260 Safety Factor 3.0 Infiltration Coefficient Base (m/hr) 0.01847 Porosity 0.95 Infiltration Coefficient Side (m/hr) 0.01847 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Inf. Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>126.0</td> <td>126.0</td> <td>1.201</td> <td>0.0</td> <td>194.0</td> </tr> <tr> <td>1.200</td> <td>126.0</td> <td>194.0</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)	0.000	126.0	126.0	1.201	0.0	194.0	1.200	126.0	194.0			
Depth (m)	Area (m ²)	Inf. Area (m ²)	Depth (m)	Area (m ²)	Inf. Area (m ²)															
0.000	126.0	126.0	1.201	0.0	194.0															
1.200	126.0	194.0																		
©1982-2020 Innovyze																				

Paul Basham Associates				Page 0																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END																																																																																																																																																																																																																					
Date 12/08/2022 File POND 2 SIZING S3D UPDAT...		Designed by OT Checked by NH																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
<u>Summary of Results for 1 year Return Period</u> Half Drain Time : 21 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>80.514</td><td>0.064</td><td>0.7</td><td>1.0</td><td>O K</td></tr><tr><td>30 min Summer</td><td>80.526</td><td>0.076</td><td>0.8</td><td>1.2</td><td>O K</td></tr><tr><td>60 min Summer</td><td>80.530</td><td>0.080</td><td>0.8</td><td>1.3</td><td>O K</td></tr><tr><td>120 min Summer</td><td>80.526</td><td>0.076</td><td>0.8</td><td>1.2</td><td>O K</td></tr><tr><td>180 min Summer</td><td>80.518</td><td>0.068</td><td>0.7</td><td>1.1</td><td>O K</td></tr><tr><td>240 min Summer</td><td>80.512</td><td>0.062</td><td>0.7</td><td>0.9</td><td>O K</td></tr><tr><td>360 min Summer</td><td>80.501</td><td>0.051</td><td>0.7</td><td>0.8</td><td>O K</td></tr><tr><td>480 min Summer</td><td>80.495</td><td>0.045</td><td>0.6</td><td>0.7</td><td>O K</td></tr><tr><td>600 min Summer</td><td>80.491</td><td>0.041</td><td>0.5</td><td>0.6</td><td>O K</td></tr><tr><td>720 min Summer</td><td>80.487</td><td>0.037</td><td>0.5</td><td>0.5</td><td>O K</td></tr><tr><td>960 min Summer</td><td>80.482</td><td>0.032</td><td>0.4</td><td>0.5</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>80.476</td><td>0.026</td><td>0.3</td><td>0.4</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>80.470</td><td>0.020</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>80.467</td><td>0.017</td><td>0.2</td><td>0.2</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>80.463</td><td>0.013</td><td>0.2</td><td>0.2</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>80.461</td><td>0.011</td><td>0.1</td><td>0.2</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>80.460</td><td>0.010</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>80.458</td><td>0.008</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>80.458</td><td>0.008</td><td>0.1</td><td>0.1</td><td>O K</td></tr><tr><td>15 min Winter</td><td>80.522</td><td>0.072</td><td>0.7</td><td>1.1</td><td>O K</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>29.186</td><td>0.0</td><td>20</td></tr><tr><td>30 min Summer</td><td>19.401</td><td>0.0</td><td>29</td></tr><tr><td>60 min Summer</td><td>12.584</td><td>0.0</td><td>46</td></tr><tr><td>120 min Summer</td><td>8.016</td><td>0.0</td><td>78</td></tr><tr><td>180 min Summer</td><td>6.133</td><td>0.0</td><td>110</td></tr><tr><td>240 min Summer</td><td>5.068</td><td>0.0</td><td>140</td></tr><tr><td>360 min Summer</td><td>3.834</td><td>0.0</td><td>198</td></tr><tr><td>480 min Summer</td><td>3.143</td><td>0.0</td><td>258</td></tr><tr><td>600 min Summer</td><td>2.695</td><td>0.0</td><td>318</td></tr><tr><td>720 min Summer</td><td>2.376</td><td>0.0</td><td>378</td></tr><tr><td>960 min Summer</td><td>1.949</td><td>0.0</td><td>498</td></tr><tr><td>1440 min Summer</td><td>1.475</td><td>0.0</td><td>740</td></tr><tr><td>2160 min Summer</td><td>1.115</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>0.914</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>0.692</td><td>0.0</td><td>2180</td></tr><tr><td>5760 min Summer</td><td>0.568</td><td>0.0</td><td>2912</td></tr><tr><td>7200 min Summer</td><td>0.487</td><td>0.0</td><td>3648</td></tr><tr><td>8640 min Summer</td><td>0.429</td><td>0.0</td><td>4400</td></tr><tr><td>10080 min Summer</td><td>0.385</td><td>0.0</td><td>5000</td></tr><tr><td>15 min Winter</td><td>29.186</td><td>0.0</td><td>21</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	80.514	0.064	0.7	1.0	O K	30 min Summer	80.526	0.076	0.8	1.2	O K	60 min Summer	80.530	0.080	0.8	1.3	O K	120 min Summer	80.526	0.076	0.8	1.2	O K	180 min Summer	80.518	0.068	0.7	1.1	O K	240 min Summer	80.512	0.062	0.7	0.9	O K	360 min Summer	80.501	0.051	0.7	0.8	O K	480 min Summer	80.495	0.045	0.6	0.7	O K	600 min Summer	80.491	0.041	0.5	0.6	O K	720 min Summer	80.487	0.037	0.5	0.5	O K	960 min Summer	80.482	0.032	0.4	0.5	O K	1440 min Summer	80.476	0.026	0.3	0.4	O K	2160 min Summer	80.470	0.020	0.2	0.3	O K	2880 min Summer	80.467	0.017	0.2	0.2	O K	4320 min Summer	80.463	0.013	0.2	0.2	O K	5760 min Summer	80.461	0.011	0.1	0.2	O K	7200 min Summer	80.460	0.010	0.1	0.1	O K	8640 min Summer	80.458	0.008	0.1	0.1	O K	10080 min Summer	80.458	0.008	0.1	0.1	O K	15 min Winter	80.522	0.072	0.7	1.1	O K	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	29.186	0.0	20	30 min Summer	19.401	0.0	29	60 min Summer	12.584	0.0	46	120 min Summer	8.016	0.0	78	180 min Summer	6.133	0.0	110	240 min Summer	5.068	0.0	140	360 min Summer	3.834	0.0	198	480 min Summer	3.143	0.0	258	600 min Summer	2.695	0.0	318	720 min Summer	2.376	0.0	378	960 min Summer	1.949	0.0	498	1440 min Summer	1.475	0.0	740	2160 min Summer	1.115	0.0	1104	2880 min Summer	0.914	0.0	1468	4320 min Summer	0.692	0.0	2180	5760 min Summer	0.568	0.0	2912	7200 min Summer	0.487	0.0	3648	8640 min Summer	0.429	0.0	4400	10080 min Summer	0.385	0.0	5000	15 min Winter	29.186	0.0	21
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	80.514	0.064	0.7	1.0	O K																																																																																																																																																																																																																		
30 min Summer	80.526	0.076	0.8	1.2	O K																																																																																																																																																																																																																		
60 min Summer	80.530	0.080	0.8	1.3	O K																																																																																																																																																																																																																		
120 min Summer	80.526	0.076	0.8	1.2	O K																																																																																																																																																																																																																		
180 min Summer	80.518	0.068	0.7	1.1	O K																																																																																																																																																																																																																		
240 min Summer	80.512	0.062	0.7	0.9	O K																																																																																																																																																																																																																		
360 min Summer	80.501	0.051	0.7	0.8	O K																																																																																																																																																																																																																		
480 min Summer	80.495	0.045	0.6	0.7	O K																																																																																																																																																																																																																		
600 min Summer	80.491	0.041	0.5	0.6	O K																																																																																																																																																																																																																		
720 min Summer	80.487	0.037	0.5	0.5	O K																																																																																																																																																																																																																		
960 min Summer	80.482	0.032	0.4	0.5	O K																																																																																																																																																																																																																		
1440 min Summer	80.476	0.026	0.3	0.4	O K																																																																																																																																																																																																																		
2160 min Summer	80.470	0.020	0.2	0.3	O K																																																																																																																																																																																																																		
2880 min Summer	80.467	0.017	0.2	0.2	O K																																																																																																																																																																																																																		
4320 min Summer	80.463	0.013	0.2	0.2	O K																																																																																																																																																																																																																		
5760 min Summer	80.461	0.011	0.1	0.2	O K																																																																																																																																																																																																																		
7200 min Summer	80.460	0.010	0.1	0.1	O K																																																																																																																																																																																																																		
8640 min Summer	80.458	0.008	0.1	0.1	O K																																																																																																																																																																																																																		
10080 min Summer	80.458	0.008	0.1	0.1	O K																																																																																																																																																																																																																		
15 min Winter	80.522	0.072	0.7	1.1	O K																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	29.186	0.0	20																																																																																																																																																																																																																				
30 min Summer	19.401	0.0	29																																																																																																																																																																																																																				
60 min Summer	12.584	0.0	46																																																																																																																																																																																																																				
120 min Summer	8.016	0.0	78																																																																																																																																																																																																																				
180 min Summer	6.133	0.0	110																																																																																																																																																																																																																				
240 min Summer	5.068	0.0	140																																																																																																																																																																																																																				
360 min Summer	3.834	0.0	198																																																																																																																																																																																																																				
480 min Summer	3.143	0.0	258																																																																																																																																																																																																																				
600 min Summer	2.695	0.0	318																																																																																																																																																																																																																				
720 min Summer	2.376	0.0	378																																																																																																																																																																																																																				
960 min Summer	1.949	0.0	498																																																																																																																																																																																																																				
1440 min Summer	1.475	0.0	740																																																																																																																																																																																																																				
2160 min Summer	1.115	0.0	1104																																																																																																																																																																																																																				
2880 min Summer	0.914	0.0	1468																																																																																																																																																																																																																				
4320 min Summer	0.692	0.0	2180																																																																																																																																																																																																																				
5760 min Summer	0.568	0.0	2912																																																																																																																																																																																																																				
7200 min Summer	0.487	0.0	3648																																																																																																																																																																																																																				
8640 min Summer	0.429	0.0	4400																																																																																																																																																																																																																				
10080 min Summer	0.385	0.0	5000																																																																																																																																																																																																																				
15 min Winter	29.186	0.0	21																																																																																																																																																																																																																				
©1982-2020 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates					Page 1	
Lancaster Court Fareham Hampshire, PO15 5TU			MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022			Designed by OT			
File POND 2 SIZING S3D UPDAT...			Checked by NH			
Innovyze			Source Control 2020.1.3			
Summary of Results for 1 year Return Period						
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	
30 min Winter	80.534	0.084	0.8	1.3	O K	
60 min Winter	80.536	0.086	0.8	1.4	O K	
120 min Winter	80.526	0.076	0.8	1.2	O K	
180 min Winter	80.514	0.064	0.7	1.0	O K	
240 min Winter	80.504	0.054	0.7	0.8	O K	
360 min Winter	80.494	0.044	0.6	0.6	O K	
480 min Winter	80.488	0.038	0.5	0.6	O K	
600 min Winter	80.483	0.033	0.4	0.5	O K	
720 min Winter	80.480	0.030	0.4	0.4	O K	
960 min Winter	80.475	0.025	0.3	0.4	O K	
1440 min Winter	80.470	0.020	0.2	0.3	O K	
2160 min Winter	80.465	0.015	0.2	0.2	O K	
2880 min Winter	80.463	0.013	0.1	0.2	O K	
4320 min Winter	80.460	0.010	0.1	0.1	O K	
5760 min Winter	80.458	0.008	0.1	0.1	O K	
7200 min Winter	80.457	0.007	0.1	0.1	O K	
8640 min Winter	80.456	0.006	0.1	0.1	O K	
10080 min Winter	80.456	0.006	0.1	0.1	O K	
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)			
30 min Winter	19.401	0.0	30			
60 min Winter	12.584	0.0	48			
120 min Winter	8.016	0.0	82			
180 min Winter	6.133	0.0	114			
240 min Winter	5.068	0.0	142			
360 min Winter	3.834	0.0	202			
480 min Winter	3.143	0.0	260			
600 min Winter	2.695	0.0	322			
720 min Winter	2.376	0.0	384			
960 min Winter	1.949	0.0	502			
1440 min Winter	1.475	0.0	746			
2160 min Winter	1.115	0.0	1076			
2880 min Winter	0.914	0.0	1444			
4320 min Winter	0.692	0.0	2144			
5760 min Winter	0.568	0.0	2976			
7200 min Winter	0.487	0.0	3648			
8640 min Winter	0.429	0.0	4360			
10080 min Winter	0.385	0.0	4928			
©1982-2020 Innovyze						

Paul Basham Associates		Page 2
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END	
Date 12/08/2022	Designed by OT	
File POND 2 SIZING S3D UPDAT...	Checked by NH	
Innovyze		Source Control 2020.1.3

Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	1	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.700	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+0

Time Area Diagram

Total Area (ha) 0.027

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.009	4 8	0.009	8 12	0.009

©1982-2020 Innovyze

Paul Basham Associates		Page 3
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END	
Date 12/08/2022	Designed by OT	
File POND 2 SIZING S3D UPDAT...	Checked by NH	
Innovyze		Source Control 2020.1.3

Model Details

Storage is Online Cover Level (m) 80.950

Infiltration Basin Structure

Invert Level (m) 80.450 Safety Factor 2.0

Infiltration Coefficient Base (m/hr) 0.24288 Porosity 1.00

Infiltration Coefficient Side (m/hr) 0.24288

Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)
0.000	13.6	0.201	26.1	0.401	41.0	0.501	49.3
0.101	19.6	0.301	33.3	0.500	49.3		

©1982-2020 Innovyze

Paul Basham Associates				Page 0																																																																																																																																																																																																																			
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END																																																																																																																																																																																																																					
Date 12/08/2022 File POND 2 SIZING S3D UPDAT...		Designed by OT Checked by NH																																																																																																																																																																																																																					
Innovyze		Source Control 2020.1.3																																																																																																																																																																																																																					
<u>Summary of Results for 30 year Return Period (+40%)</u> Half Drain Time : 42 minutes. <table><tr><th>Storm Event</th><th>Max Level (m)</th><th>Max Depth (m)</th><th>Max Infiltration (l/s)</th><th>Max Volume (m³)</th><th>Status</th></tr><tr><td>15 min Summer</td><td>80.653</td><td>0.203</td><td>1.3</td><td>4.0</td><td>Flood Risk</td></tr><tr><td>30 min Summer</td><td>80.688</td><td>0.238</td><td>1.5</td><td>4.9</td><td>Flood Risk</td></tr><tr><td>60 min Summer</td><td>80.703</td><td>0.253</td><td>1.6</td><td>5.4</td><td>Flood Risk</td></tr><tr><td>120 min Summer</td><td>80.701</td><td>0.251</td><td>1.6</td><td>5.3</td><td>Flood Risk</td></tr><tr><td>180 min Summer</td><td>80.689</td><td>0.239</td><td>1.5</td><td>5.0</td><td>Flood Risk</td></tr><tr><td>240 min Summer</td><td>80.676</td><td>0.226</td><td>1.4</td><td>4.6</td><td>Flood Risk</td></tr><tr><td>360 min Summer</td><td>80.651</td><td>0.201</td><td>1.3</td><td>4.0</td><td>Flood Risk</td></tr><tr><td>480 min Summer</td><td>80.630</td><td>0.180</td><td>1.2</td><td>3.4</td><td>O K</td></tr><tr><td>600 min Summer</td><td>80.612</td><td>0.162</td><td>1.1</td><td>3.0</td><td>O K</td></tr><tr><td>720 min Summer</td><td>80.595</td><td>0.145</td><td>1.1</td><td>2.6</td><td>O K</td></tr><tr><td>960 min Summer</td><td>80.569</td><td>0.119</td><td>0.9</td><td>2.0</td><td>O K</td></tr><tr><td>1440 min Summer</td><td>80.531</td><td>0.081</td><td>0.8</td><td>1.3</td><td>O K</td></tr><tr><td>2160 min Summer</td><td>80.500</td><td>0.050</td><td>0.7</td><td>0.8</td><td>O K</td></tr><tr><td>2880 min Summer</td><td>80.492</td><td>0.042</td><td>0.5</td><td>0.6</td><td>O K</td></tr><tr><td>4320 min Summer</td><td>80.482</td><td>0.032</td><td>0.4</td><td>0.5</td><td>O K</td></tr><tr><td>5760 min Summer</td><td>80.476</td><td>0.026</td><td>0.3</td><td>0.4</td><td>O K</td></tr><tr><td>7200 min Summer</td><td>80.472</td><td>0.022</td><td>0.3</td><td>0.3</td><td>O K</td></tr><tr><td>8640 min Summer</td><td>80.470</td><td>0.020</td><td>0.2</td><td>0.3</td><td>O K</td></tr><tr><td>10080 min Summer</td><td>80.468</td><td>0.018</td><td>0.2</td><td>0.2</td><td>O K</td></tr><tr><td>15 min Winter</td><td>80.673</td><td>0.223</td><td>1.4</td><td>4.5</td><td>Flood Risk</td></tr></table> <table><tr><th>Storm Event</th><th>Rain (mm/hr)</th><th>Flooded Volume (m³)</th><th>Time-Peak (mins)</th></tr><tr><td>15 min Summer</td><td>100.138</td><td>0.0</td><td>22</td></tr><tr><td>30 min Summer</td><td>66.644</td><td>0.0</td><td>32</td></tr><tr><td>60 min Summer</td><td>42.476</td><td>0.0</td><td>50</td></tr><tr><td>120 min Summer</td><td>26.265</td><td>0.0</td><td>84</td></tr><tr><td>180 min Summer</td><td>19.594</td><td>0.0</td><td>118</td></tr><tr><td>240 min Summer</td><td>15.832</td><td>0.0</td><td>150</td></tr><tr><td>360 min Summer</td><td>11.728</td><td>0.0</td><td>214</td></tr><tr><td>480 min Summer</td><td>9.466</td><td>0.0</td><td>278</td></tr><tr><td>600 min Summer</td><td>8.011</td><td>0.0</td><td>338</td></tr><tr><td>720 min Summer</td><td>6.988</td><td>0.0</td><td>400</td></tr><tr><td>960 min Summer</td><td>5.628</td><td>0.0</td><td>520</td></tr><tr><td>1440 min Summer</td><td>4.142</td><td>0.0</td><td>758</td></tr><tr><td>2160 min Summer</td><td>3.045</td><td>0.0</td><td>1104</td></tr><tr><td>2880 min Summer</td><td>2.445</td><td>0.0</td><td>1468</td></tr><tr><td>4320 min Summer</td><td>1.793</td><td>0.0</td><td>2204</td></tr><tr><td>5760 min Summer</td><td>1.438</td><td>0.0</td><td>2920</td></tr><tr><td>7200 min Summer</td><td>1.211</td><td>0.0</td><td>3672</td></tr><tr><td>8640 min Summer</td><td>1.053</td><td>0.0</td><td>4376</td></tr><tr><td>10080 min Summer</td><td>0.936</td><td>0.0</td><td>5024</td></tr><tr><td>15 min Winter</td><td>100.138</td><td>0.0</td><td>22</td></tr></table>						Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status	15 min Summer	80.653	0.203	1.3	4.0	Flood Risk	30 min Summer	80.688	0.238	1.5	4.9	Flood Risk	60 min Summer	80.703	0.253	1.6	5.4	Flood Risk	120 min Summer	80.701	0.251	1.6	5.3	Flood Risk	180 min Summer	80.689	0.239	1.5	5.0	Flood Risk	240 min Summer	80.676	0.226	1.4	4.6	Flood Risk	360 min Summer	80.651	0.201	1.3	4.0	Flood Risk	480 min Summer	80.630	0.180	1.2	3.4	O K	600 min Summer	80.612	0.162	1.1	3.0	O K	720 min Summer	80.595	0.145	1.1	2.6	O K	960 min Summer	80.569	0.119	0.9	2.0	O K	1440 min Summer	80.531	0.081	0.8	1.3	O K	2160 min Summer	80.500	0.050	0.7	0.8	O K	2880 min Summer	80.492	0.042	0.5	0.6	O K	4320 min Summer	80.482	0.032	0.4	0.5	O K	5760 min Summer	80.476	0.026	0.3	0.4	O K	7200 min Summer	80.472	0.022	0.3	0.3	O K	8640 min Summer	80.470	0.020	0.2	0.3	O K	10080 min Summer	80.468	0.018	0.2	0.2	O K	15 min Winter	80.673	0.223	1.4	4.5	Flood Risk	Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)	15 min Summer	100.138	0.0	22	30 min Summer	66.644	0.0	32	60 min Summer	42.476	0.0	50	120 min Summer	26.265	0.0	84	180 min Summer	19.594	0.0	118	240 min Summer	15.832	0.0	150	360 min Summer	11.728	0.0	214	480 min Summer	9.466	0.0	278	600 min Summer	8.011	0.0	338	720 min Summer	6.988	0.0	400	960 min Summer	5.628	0.0	520	1440 min Summer	4.142	0.0	758	2160 min Summer	3.045	0.0	1104	2880 min Summer	2.445	0.0	1468	4320 min Summer	1.793	0.0	2204	5760 min Summer	1.438	0.0	2920	7200 min Summer	1.211	0.0	3672	8640 min Summer	1.053	0.0	4376	10080 min Summer	0.936	0.0	5024	15 min Winter	100.138	0.0	22
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status																																																																																																																																																																																																																		
15 min Summer	80.653	0.203	1.3	4.0	Flood Risk																																																																																																																																																																																																																		
30 min Summer	80.688	0.238	1.5	4.9	Flood Risk																																																																																																																																																																																																																		
60 min Summer	80.703	0.253	1.6	5.4	Flood Risk																																																																																																																																																																																																																		
120 min Summer	80.701	0.251	1.6	5.3	Flood Risk																																																																																																																																																																																																																		
180 min Summer	80.689	0.239	1.5	5.0	Flood Risk																																																																																																																																																																																																																		
240 min Summer	80.676	0.226	1.4	4.6	Flood Risk																																																																																																																																																																																																																		
360 min Summer	80.651	0.201	1.3	4.0	Flood Risk																																																																																																																																																																																																																		
480 min Summer	80.630	0.180	1.2	3.4	O K																																																																																																																																																																																																																		
600 min Summer	80.612	0.162	1.1	3.0	O K																																																																																																																																																																																																																		
720 min Summer	80.595	0.145	1.1	2.6	O K																																																																																																																																																																																																																		
960 min Summer	80.569	0.119	0.9	2.0	O K																																																																																																																																																																																																																		
1440 min Summer	80.531	0.081	0.8	1.3	O K																																																																																																																																																																																																																		
2160 min Summer	80.500	0.050	0.7	0.8	O K																																																																																																																																																																																																																		
2880 min Summer	80.492	0.042	0.5	0.6	O K																																																																																																																																																																																																																		
4320 min Summer	80.482	0.032	0.4	0.5	O K																																																																																																																																																																																																																		
5760 min Summer	80.476	0.026	0.3	0.4	O K																																																																																																																																																																																																																		
7200 min Summer	80.472	0.022	0.3	0.3	O K																																																																																																																																																																																																																		
8640 min Summer	80.470	0.020	0.2	0.3	O K																																																																																																																																																																																																																		
10080 min Summer	80.468	0.018	0.2	0.2	O K																																																																																																																																																																																																																		
15 min Winter	80.673	0.223	1.4	4.5	Flood Risk																																																																																																																																																																																																																		
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)																																																																																																																																																																																																																				
15 min Summer	100.138	0.0	22																																																																																																																																																																																																																				
30 min Summer	66.644	0.0	32																																																																																																																																																																																																																				
60 min Summer	42.476	0.0	50																																																																																																																																																																																																																				
120 min Summer	26.265	0.0	84																																																																																																																																																																																																																				
180 min Summer	19.594	0.0	118																																																																																																																																																																																																																				
240 min Summer	15.832	0.0	150																																																																																																																																																																																																																				
360 min Summer	11.728	0.0	214																																																																																																																																																																																																																				
480 min Summer	9.466	0.0	278																																																																																																																																																																																																																				
600 min Summer	8.011	0.0	338																																																																																																																																																																																																																				
720 min Summer	6.988	0.0	400																																																																																																																																																																																																																				
960 min Summer	5.628	0.0	520																																																																																																																																																																																																																				
1440 min Summer	4.142	0.0	758																																																																																																																																																																																																																				
2160 min Summer	3.045	0.0	1104																																																																																																																																																																																																																				
2880 min Summer	2.445	0.0	1468																																																																																																																																																																																																																				
4320 min Summer	1.793	0.0	2204																																																																																																																																																																																																																				
5760 min Summer	1.438	0.0	2920																																																																																																																																																																																																																				
7200 min Summer	1.211	0.0	3672																																																																																																																																																																																																																				
8640 min Summer	1.053	0.0	4376																																																																																																																																																																																																																				
10080 min Summer	0.936	0.0	5024																																																																																																																																																																																																																				
15 min Winter	100.138	0.0	22																																																																																																																																																																																																																				
©1982-2020 Innovyze																																																																																																																																																																																																																							

Paul Basham Associates				Page 1	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022 File POND 2 SIZING S3D UPDAT...		Designed by OT Checked by NH			
Innovyze		Source Control 2020.1.3			
Summary of Results for 30 year Return Period (+40%)					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
30 min Winter	80.710	0.260	1.6	5.6	Flood Risk
60 min Winter	80.726	0.276	1.7	6.1	Flood Risk
120 min Winter	80.718	0.268	1.6	5.8	Flood Risk
180 min Winter	80.699	0.249	1.5	5.3	Flood Risk
240 min Winter	80.680	0.230	1.5	4.7	Flood Risk
360 min Winter	80.645	0.195	1.3	3.8	O K
480 min Winter	80.616	0.166	1.2	3.1	O K
600 min Winter	80.591	0.141	1.0	2.5	O K
720 min Winter	80.571	0.121	1.0	2.1	O K
960 min Winter	80.539	0.089	0.8	1.4	O K
1440 min Winter	80.500	0.050	0.7	0.7	O K
2160 min Winter	80.488	0.038	0.5	0.6	O K
2880 min Winter	80.482	0.032	0.4	0.5	O K
4320 min Winter	80.474	0.024	0.3	0.3	O K
5760 min Winter	80.469	0.019	0.2	0.3	O K
7200 min Winter	80.467	0.017	0.2	0.2	O K
8640 min Winter	80.465	0.015	0.2	0.2	O K
10080 min Winter	80.463	0.013	0.2	0.2	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	66.644	0.0	33		
60 min Winter	42.476	0.0	52		
120 min Winter	26.265	0.0	90		
180 min Winter	19.594	0.0	124		
240 min Winter	15.832	0.0	160		
360 min Winter	11.728	0.0	226		
480 min Winter	9.466	0.0	288		
600 min Winter	8.011	0.0	350		
720 min Winter	6.988	0.0	412		
960 min Winter	5.628	0.0	530		
1440 min Winter	4.142	0.0	744		
2160 min Winter	3.045	0.0	1104		
2880 min Winter	2.445	0.0	1460		
4320 min Winter	1.793	0.0	2140		
5760 min Winter	1.438	0.0	2936		
7200 min Winter	1.211	0.0	3640		
8640 min Winter	1.053	0.0	4416		
10080 min Winter	0.936	0.0	5016		
©1982-2020 Innovyze					

Paul Basham Associates		Page 2
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END	
Date 12/08/2022	Designed by OT	
File POND 2 SIZING S3D UPDAT...	Checked by NH	
Innovyze		Source Control 2020.1.3

Rainfall Details

Rainfall Model	FSR	Winter Storms	Yes
Return Period (years)	30	Cv (Summer)	0.750
Region	England and Wales	Cv (Winter)	0.840
M5-60 (mm)	19.700	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.027

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.009	4 8	0.009	8 12	0.009

©1982-2020 Innovyze

Paul Basham Associates		Page 3																								
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																									
Date 12/08/2022	Designed by OT																									
File POND 2 SIZING S3D UPDAT...	Checked by NH																									
Innovyze		Source Control 2020.1.3																								
<u>Model Details</u> Storage is Online Cover Level (m) 80.950 <u>Infiltration Basin Structure</u> Invert Level (m) 80.450 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.24288 Porosity 1.00 Infiltration Coefficient Side (m/hr) 0.24288 <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>13.6</td> <td>0.201</td> <td>26.1</td> <td>0.401</td> <td>41.0</td> <td>0.501</td> <td>49.3</td> </tr> <tr> <td>0.101</td> <td>19.6</td> <td>0.301</td> <td>33.3</td> <td>0.500</td> <td>49.3</td> <td></td> <td></td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	0.000	13.6	0.201	26.1	0.401	41.0	0.501	49.3	0.101	19.6	0.301	33.3	0.500	49.3		
Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)																			
0.000	13.6	0.201	26.1	0.401	41.0	0.501	49.3																			
0.101	19.6	0.301	33.3	0.500	49.3																					
©1982-2020 Innovyze																										

Paul Basham Associates				Page 0	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022 File POND 2 SIZING S3D UPDAT...		Designed by OT Checked by NH			
Innovyze		Source Control 2020.1.3			
Summary of Results for 100 year Return Period (+40%)					
Half Drain Time : 49 minutes.					
Storm Event	Max Level (m)	Max Depth (m)	Max Infiltration (l/s)	Max Volume (m³)	Status
15 min Summer	80.700	0.250	1.6	5.3	Flood Risk
30 min Summer	80.743	0.293	1.8	6.7	Flood Risk
60 min Summer	80.765	0.315	1.9	7.4	Flood Risk
120 min Summer	80.765	0.315	1.9	7.4	Flood Risk
180 min Summer	80.753	0.303	1.8	7.0	Flood Risk
240 min Summer	80.738	0.288	1.7	6.5	Flood Risk
360 min Summer	80.710	0.260	1.6	5.6	Flood Risk
480 min Summer	80.686	0.236	1.5	4.9	Flood Risk
600 min Summer	80.665	0.215	1.4	4.3	Flood Risk
720 min Summer	80.646	0.196	1.3	3.8	O K
960 min Summer	80.615	0.165	1.1	3.0	O K
1440 min Summer	80.569	0.119	0.9	2.0	O K
2160 min Summer	80.525	0.075	0.8	1.2	O K
2880 min Summer	80.501	0.051	0.7	0.8	O K
4320 min Summer	80.488	0.038	0.5	0.6	O K
5760 min Summer	80.481	0.031	0.4	0.4	O K
7200 min Summer	80.477	0.027	0.3	0.4	O K
8640 min Summer	80.473	0.023	0.3	0.3	O K
10080 min Summer	80.471	0.021	0.2	0.3	O K
15 min Winter	80.723	0.273	1.7	6.0	Flood Risk
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
15 min Summer	129.682	0.0	22		
30 min Summer	87.133	0.0	32		
60 min Summer	55.837	0.0	50		
120 min Summer	34.509	0.0	84		
180 min Summer	25.637	0.0	118		
240 min Summer	20.604	0.0	152		
360 min Summer	15.169	0.0	216		
480 min Summer	12.185	0.0	280		
600 min Summer	10.272	0.0	342		
720 min Summer	8.930	0.0	404		
960 min Summer	7.152	0.0	524		
1440 min Summer	5.221	0.0	766		
2160 min Summer	3.803	0.0	1124		
2880 min Summer	3.033	0.0	1472		
4320 min Summer	2.201	0.0	2200		
5760 min Summer	1.751	0.0	2880		
7200 min Summer	1.466	0.0	3608		
8640 min Summer	1.270	0.0	4400		
10080 min Summer	1.124	0.0	5136		
15 min Winter	129.682	0.0	22		
©1982-2020 Innovyze					

Paul Basham Associates				Page 1	
Lancaster Court Fareham Hampshire, PO15 5TU		MOORHILL, MOORHILL ROAD, WEST END			
Date 12/08/2022 File POND 2 SIZING S3D UPDAT...		Designed by OT Checked by NH			
Innovyze		Source Control 2020.1.3			
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	80.770	0.320	1.9	7.5	Flood Risk
60 min Winter	80.792	0.342	2.0	8.3	Flood Risk
120 min Winter	80.788	0.338	2.0	8.2	Flood Risk
180 min Winter	80.768	0.318	1.9	7.5	Flood Risk
240 min Winter	80.746	0.296	1.8	6.7	Flood Risk
360 min Winter	80.707	0.257	1.6	5.5	Flood Risk
480 min Winter	80.674	0.224	1.4	4.6	Flood Risk
600 min Winter	80.646	0.196	1.3	3.8	O K
720 min Winter	80.622	0.172	1.2	3.2	O K
960 min Winter	80.584	0.134	1.0	2.3	O K
1440 min Winter	80.531	0.081	0.8	1.3	O K
2160 min Winter	80.497	0.047	0.6	0.7	O K
2880 min Winter	80.488	0.038	0.5	0.6	O K
4320 min Winter	80.479	0.029	0.4	0.4	O K
5760 min Winter	80.473	0.023	0.3	0.3	O K
7200 min Winter	80.470	0.020	0.2	0.3	O K
8640 min Winter	80.467	0.017	0.2	0.2	O K
10080 min Winter	80.466	0.016	0.2	0.2	O K
Storm Event	Rain (mm/hr)	Flooded Volume (m³)	Time-Peak (mins)		
30 min Winter	87.133	0.0	33		
60 min Winter	55.837	0.0	54		
120 min Winter	34.509	0.0	90		
180 min Winter	25.637	0.0	126		
240 min Winter	20.604	0.0	162		
360 min Winter	15.169	0.0	228		
480 min Winter	12.185	0.0	292		
600 min Winter	10.272	0.0	356		
720 min Winter	8.930	0.0	418		
960 min Winter	7.152	0.0	538		
1440 min Winter	5.221	0.0	776		
2160 min Winter	3.803	0.0	1104		
2880 min Winter	3.033	0.0	1448		
4320 min Winter	2.201	0.0	2200		
5760 min Winter	1.751	0.0	2928		
7200 min Winter	1.466	0.0	3560		
8640 min Winter	1.270	0.0	4280		
10080 min Winter	1.124	0.0	5136		
©1982-2020 Innovyze					

Paul Basham Associates		Page 2
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END	
Date 12/08/2022	Designed by OT	
File POND 2 SIZING S3D UPDAT...	Checked by NH	
Innovyze		Source Control 2020.1.3

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)	19.700	Shortest Storm (mins)	15
Ratio R	0.350	Longest Storm (mins)	10080
Summer Storms	Yes	Climate Change %	+40

Time Area Diagram

Total Area (ha) 0.027

Time (mins)	Area	Time (mins)	Area	Time (mins)	Area
From: To:	(ha)	From: To:	(ha)	From: To:	(ha)
0 4	0.009	4 8	0.009	8 12	0.009

©1982-2020 Innovyze

Paul Basham Associates		Page 3																								
Lancaster Court Fareham Hampshire, PO15 5TU	MOORHILL, MOORHILL ROAD, WEST END																									
Date 12/08/2022	Designed by OT																									
File POND 2 SIZING S3D UPDAT...	Checked by NH																									
Innovyze		Source Control 2020.1.3																								
<u>Model Details</u> Storage is Online Cover Level (m) 80.950 <u>Infiltration Basin Structure</u> Invert Level (m) 80.450 Safety Factor 2.0 Infiltration Coefficient Base (m/hr) 0.24288 Porosity 1.00 Infiltration Coefficient Side (m/hr) 0.24288 <table border="1"> <thead> <tr> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> <th>Depth (m)</th> <th>Area (m²)</th> </tr> </thead> <tbody> <tr> <td>0.000</td> <td>13.6</td> <td>0.201</td> <td>26.1</td> <td>0.401</td> <td>41.0</td> <td>0.501</td> <td>49.3</td> </tr> <tr> <td>0.101</td> <td>19.6</td> <td>0.301</td> <td>33.3</td> <td>0.500</td> <td>49.3</td> <td></td> <td></td> </tr> </tbody> </table>			Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	0.000	13.6	0.201	26.1	0.401	41.0	0.501	49.3	0.101	19.6	0.301	33.3	0.500	49.3		
Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)	Depth (m)	Area (m ²)																			
0.000	13.6	0.201	26.1	0.401	41.0	0.501	49.3																			
0.101	19.6	0.301	33.3	0.500	49.3																					
©1982-2020 Innovyze																										