SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA1
Test 1
Start of Test 11:35

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	1.50	0.66

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	0.840		
5.0	0.900		
10.0	0.960		
15.0	1.000		
20.0	1.050		
25.0	1.080		
30.0	1.120		
35.0	1.150		
40.0	1.190		
45.0	1.220		
50.0	1.250		
55.0	1.280		
60.0	1.320		
65.0	1.350		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.13 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 1.32 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 50 min

$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

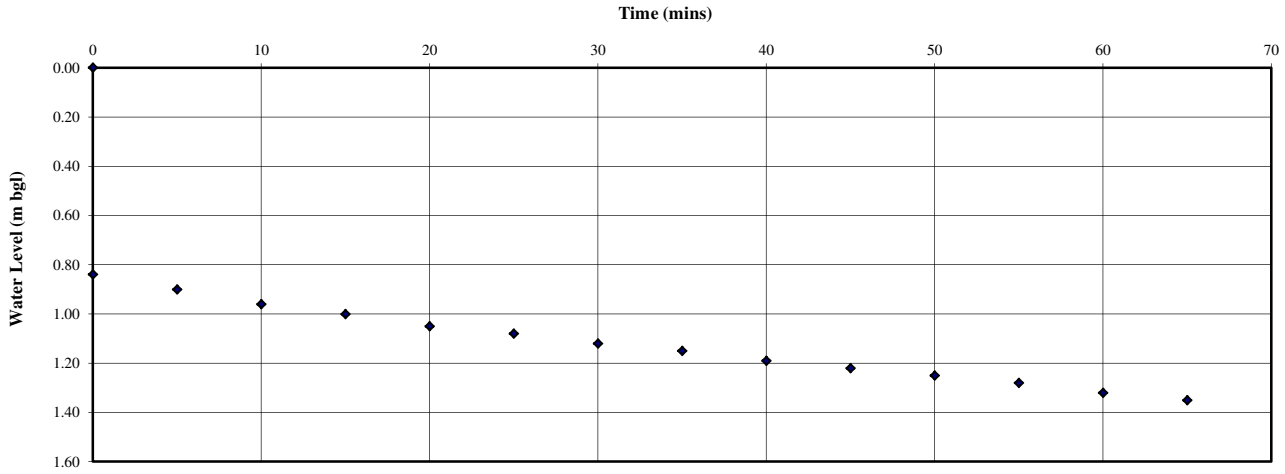
Depth $_{(25\%)}$ = 1.335 m

Depth $_{(75\%)}$ = 1.005 m

Soil infiltration rate = 3.3E-05 m/sec

Remarks

* Extrapolated soil infiltration rate



BETTS ASSOCIATES
CIVIL AND STRUCTURAL ENGINEERS

Contract: **Hope and Anchor Pub Cellerhead**

Contract No: **SEC01**

SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA1
Test 2
Start of Test 1:35

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	1.50	0.52

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	0.980		
5.0	1.050		
10.0	1.080		
15.0	1.100		
25.0	1.150		
40.0	1.220		
55.0	1.300		
70.0	1.350		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.10 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 1.13 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 55 min

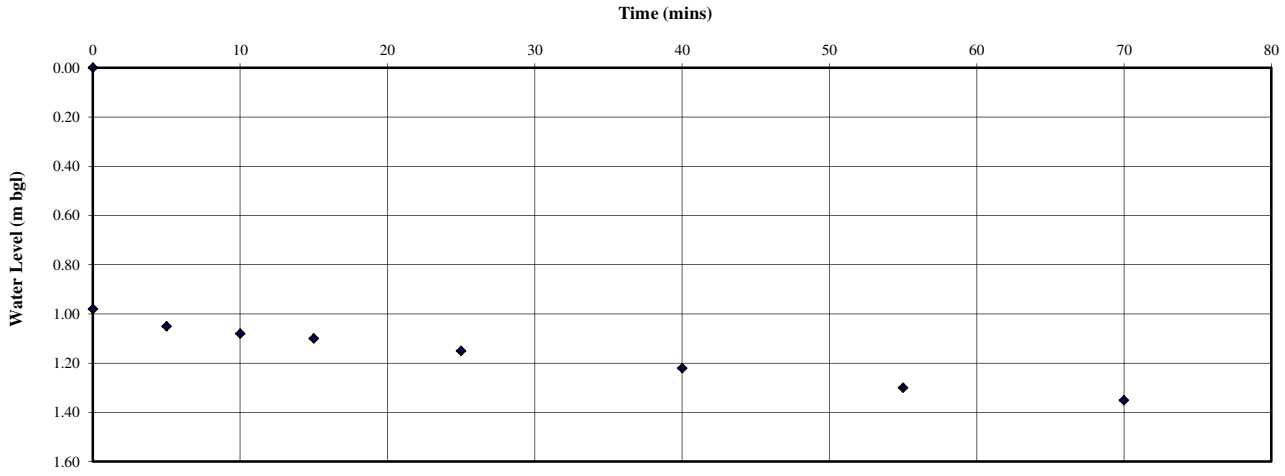
$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

Depth $_{(25\%)}$ = 1.37 Depth $_{(75\%)}$ = 1.110 m

Soil infiltration rate = 2.8E-05 m/sec

Remarks

* Extrapolated soil infiltration rate



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Contract: **Hope and Anchor Pub Cellerhead**

Contract No: **SEC01**

SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA1
Test 3
Start of Test 2:55

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	1.50	0.42

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	1.080		
5.0	1.120		
20.0	1.180		
35.0	1.240		
50.0	1.300		
65.0	1.350		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.08 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 0.99 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 45 min

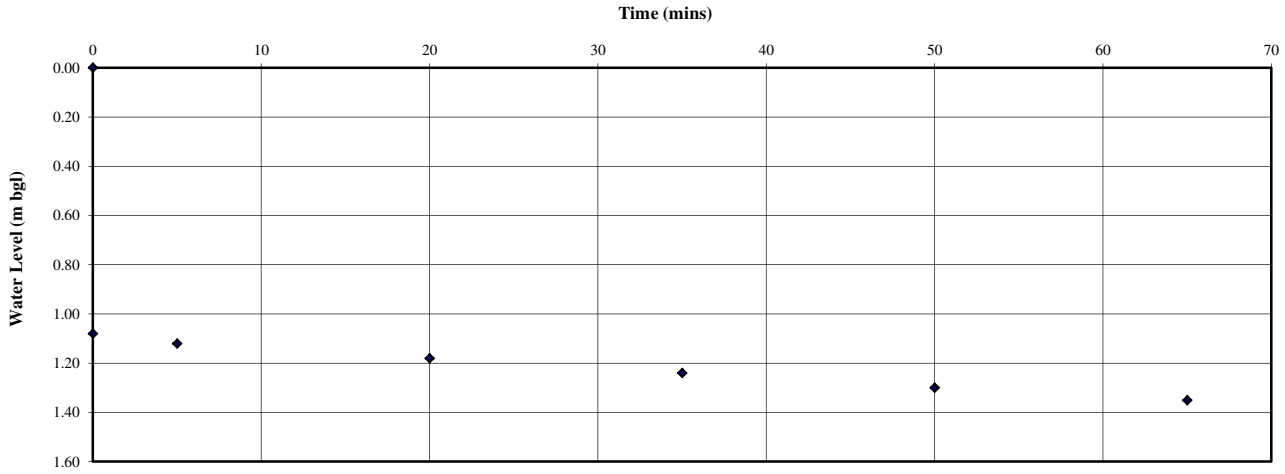
$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

Depth $_{(25\%)}$ = 1.395 | Depth $_{(75\%)}$ = 1.185 m

Soil infiltration rate = 3.1E-05 m/sec

Remarks

* Extrapolated soil infiltration rate



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Contract: **Hope and Anchor Pub Cellerhead**

Contract No: **SEC01**

SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA2
Test 1
Start of Test 11:00

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	1.60	0.60

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	1.000		
5.0	1.050		
10.0	1.080		
15.0	1.100		
20.0	1.120		
30.0	1.150		
45.0	1.180		
60.0	1.220		
75.0	1.250		
90.0	1.280		
105.0	1.310		
120.0	1.340		
135.0	1.370		
150.0	1.400		
165.0	1.430		
180.0	1.460		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.12 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 1.24 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 150 min

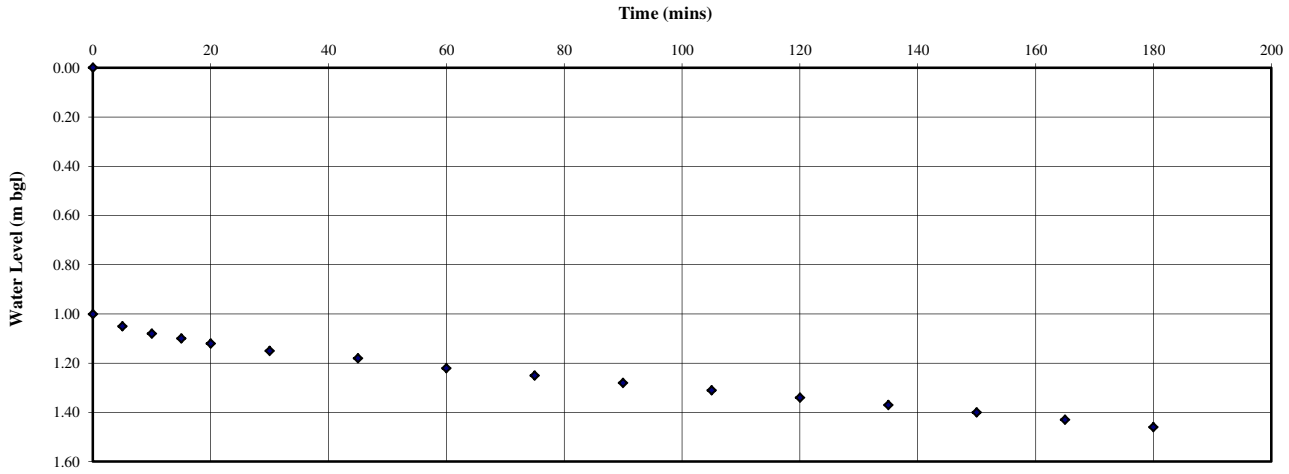
$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

Depth $_{(25\%)}$ = 1.45 | Depth $_{(75\%)}$ = 1.150 m

Soil infiltration rate = 1.1E-05 m/sec

Remarks

* Extrapolated soil infiltration rate



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Contract: **Hope and Anchor Pub Cellerhead**

Contract No: **SEC01**

SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA2
Test 2
Start of Test 1:15

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	1.60	0.61

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	0.990		
5.0	1.010		
15.0	1.030		
30.0	1.060		
45.0	1.090		
60.0	1.100		
75.0	1.130		
90.0	1.160		
120.0	1.220		
150.0	1.290		
180.0	1.360		
210.0	1.420		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.12 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 1.25 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 140 min

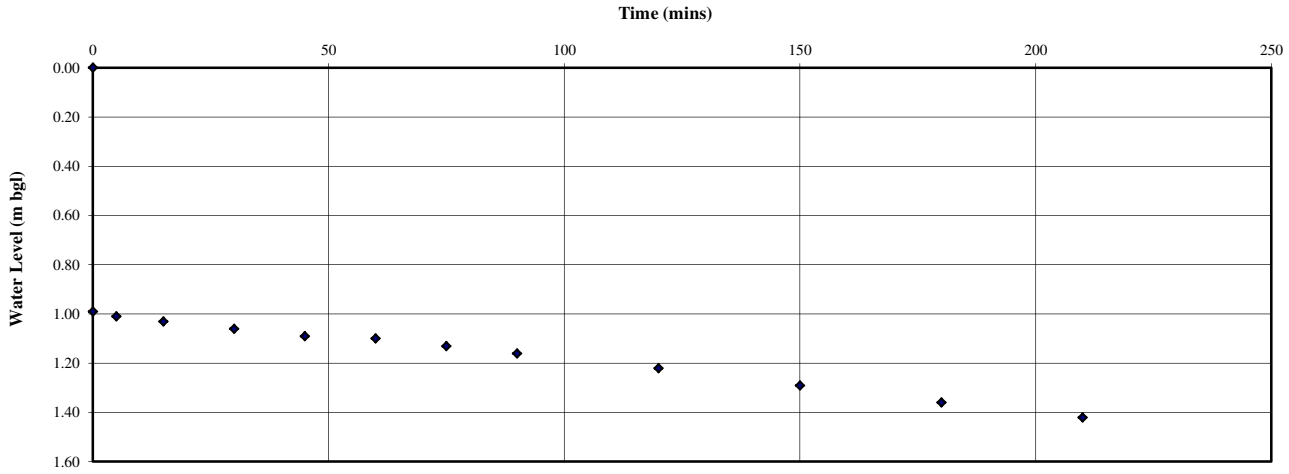
$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

Depth $_{(25\%)}$ = 1.4475 Depth $_{(75\%)}$ = 1.143 m

Soil infiltration rate = 1.2E-05 m/sec

Remarks

* Extrapolated soil infiltration rate



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CIVIL AND STRUCTURAL ENGINEERS

Contract: **Hope and Anchor Pub Cellerhead**

Contract No: **SEC01**

SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA3
Test 1
Start of Test 12:30

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	1.60	0.44

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	1.160		
5.0	1.180		
10.0	1.200		
15.0	1.250		
30.0	1.320		
45.0	1.370		
60.0	1.420		
75.0	1.450		
90.0	1.490		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.09 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 1.02 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 70 min

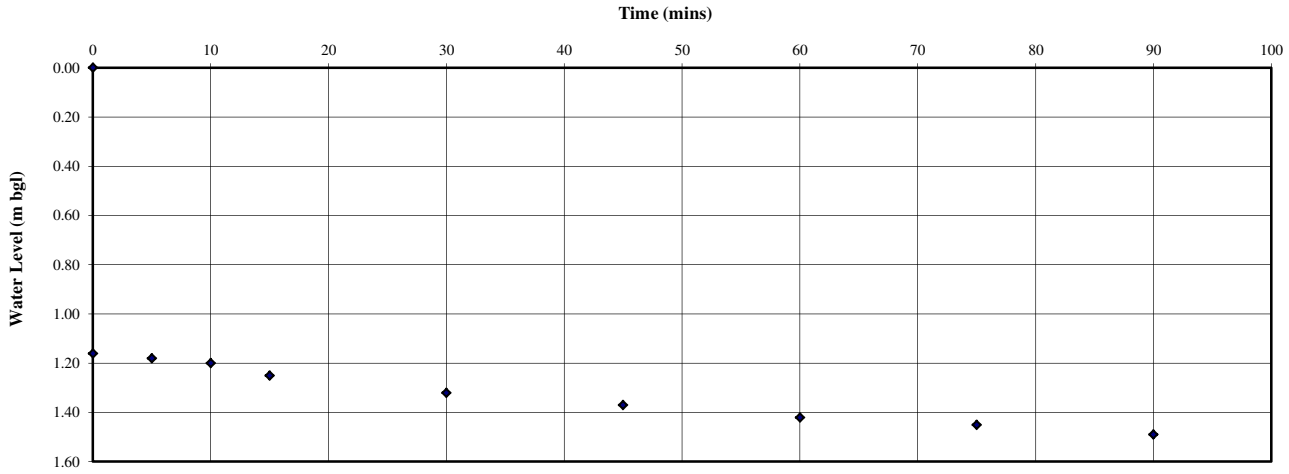
$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

Depth $_{(25\%)}$ = 1.49 | Depth $_{(75\%)}$ = 1.270 m

Soil infiltration rate = 2.1E-05 m/sec

Remarks

* Extrapolated soil infiltration rate



	Contract:	Contract No:
BETTS ASSOCIATES CIVIL AND STRUCTURAL ENGINEERS	**Hope and Anchor Pub Cellerhead**	**SEC01**

SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA3
Test 2
Start of Test 2:30

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	1.60	0.36

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	1.240		
5.0	1.270		
10.0	1.310		
30.0	1.350		
45.0	1.380		
60.0	1.410		
75.0	1.450		
90.0	1.490		
105.0	1.540		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.07 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 0.90 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 85 min

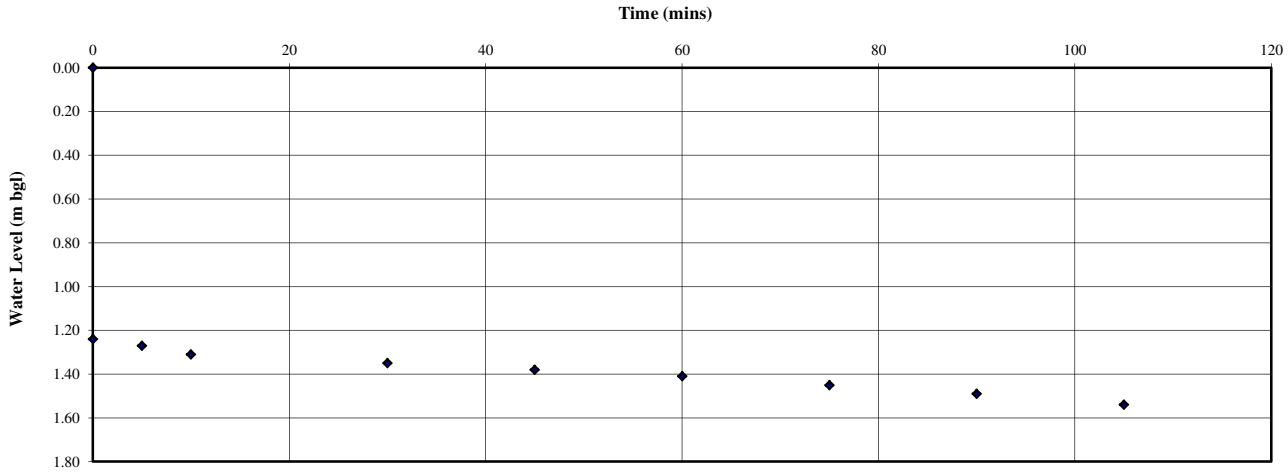
$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

Depth $_{(25\%)}$ = 1.51 | Depth $_{(75\%)}$ = 1.330 m

Soil infiltration rate = 1.6E-05 m/sec

Remarks

* Extrapolated soil infiltration rate



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CIVIL AND STRUCTURAL ENGINEERS

Contract: **Hope and Anchor Pub Cellerhead**

Contract No: **SEC01**

SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA4
Test 1
Start of Test 12:35

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	2.40	0.60

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	1.800		
5.0	1.860		
10.0	1.900		
25.0	1.950		
40.0	2.000		
55.0	2.050		
60.0	2.070		
75.0	2.100		
90.0	2.140		
105.0	2.180		
120.0	2.210		
135.0	2.240		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.12 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 1.24 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 105 min

$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

Depth $_{(25\%)}$ = 2.25 m

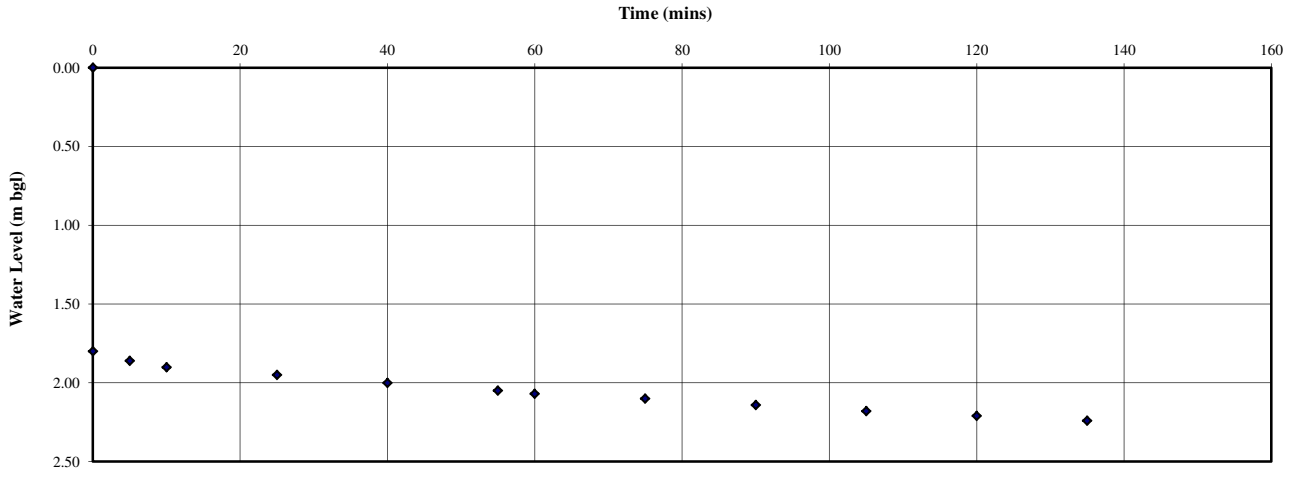
Depth $_{(75\%)}$ = 1.950 m

Soil infiltration rate = 1.5E-05 m/sec

Remarks

Fill material at upper levels, pit taken down into natural sand and test performed at lower level. Soakaways in this area will be deep.

* Extrapolated soil infiltration rate



SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA4
Test 2

Start of Test 2:50

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	2.40	0.47

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	1.930		
5.0	1.960		
10.0	1.980		
15.0	2.000		
40.0	2.040		
50.0	2.060		
65.0	2.100		
80.0	2.130		
95.0	2.160		
110.0	2.190		
125.0	2.220		
140.0	2.250		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.09 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 1.06 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 100 min

$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

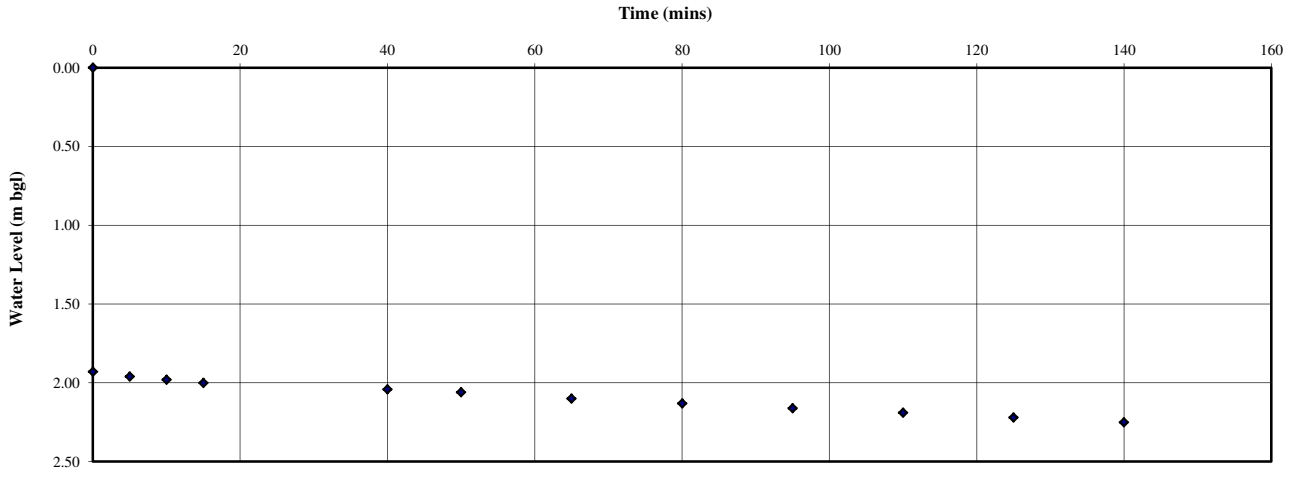
Depth $_{(25\%)}$ = 2.2825 Depth $_{(75\%)}$ = 2.048 m

Soil infiltration rate = 1.5E-05 m/sec

Remarks

Fill material at upper levels, pit taken down into natural sand and test performed at lower level. Soakaways in this area will be deep.

* Extrapolated soil infiltration rate



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Contract: **Hope and Anchor Pub Cellerhead**

Contract No: **SEC01**

SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA5
Test 1
Start of Test 1:30

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	1.70	0.55

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	1.150		
5.0	1.230		
10.0	1.290		
25.0	1.350		
30.0	1.380		
45.0	1.430		
60.0	1.460		
75.0	1.490		
90.0	1.520		
105.0	1.550		
120.0	1.580		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.11 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 1.17 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 100 min

$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

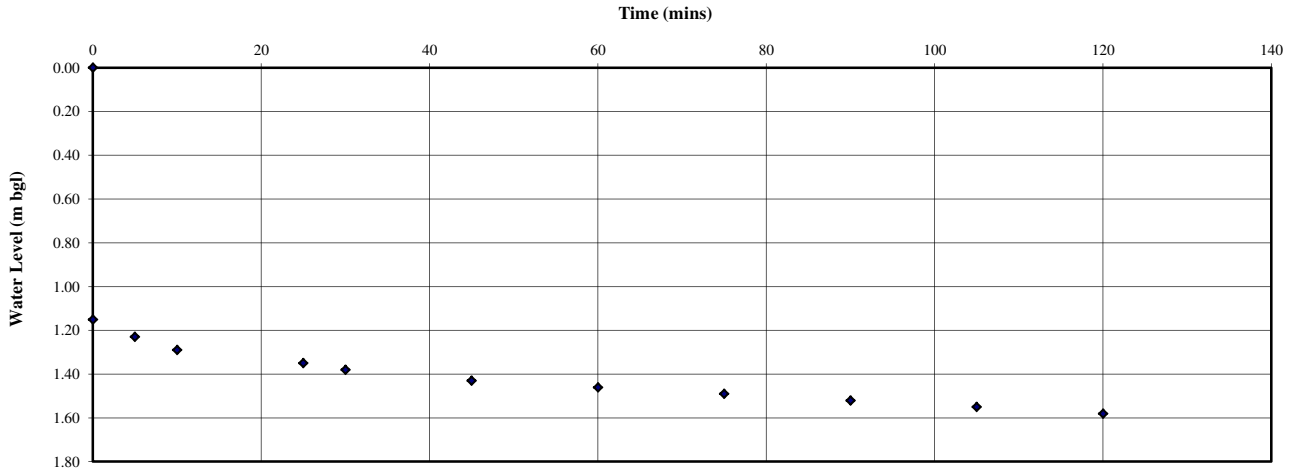
Depth $_{(25\%)}$ = 1.5625 | Depth $_{(75\%)}$ = 1.288 m

Soil infiltration rate = 1.6E-05 m/sec

Remarks

Fill material at upper levels, pit taken down into natural sand and test performed at lower level. Soakaways in this area will be deep.

* Extrapolated soil infiltration rate



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Contract: **Hope and Anchor Pub Cellerhead**

Contract No: **SEC01**

SOAKAWAY TEST RESULTS

Date of Test: 10-06-13

Hole ID: SA5
Test 2
Start of Test 3:00

Trial Pit Dimensions (m)	Length	Width	Depth	Depth for Analysis
	1.00	0.40	1.70	0.55

Time (mins)	Depth of water (m bgl)	Time (mins)	Depth of water (m bgl)
0.0	1.150		
5.0	1.210		
10.0	1.250		
25.0	1.320		
40.0	1.370		
55.0	1.420		
70.0	1.470		
85.0	1.520		
90.0	1.570		

$V_{(p75-25)}$ = Effective storage volume in trial pit between effective depths 25% to 75%. = 0.11 m^3

$a_{(p50)}$ = Initial surface area of trial pit up to 50% effective depth and including the base area. = 1.17 m^2

$t_{(p75-25)}$ = Time for the water level to fall from 75 % to 25% effective depth. = 75 min

$$\text{Soil infiltration rate} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$$

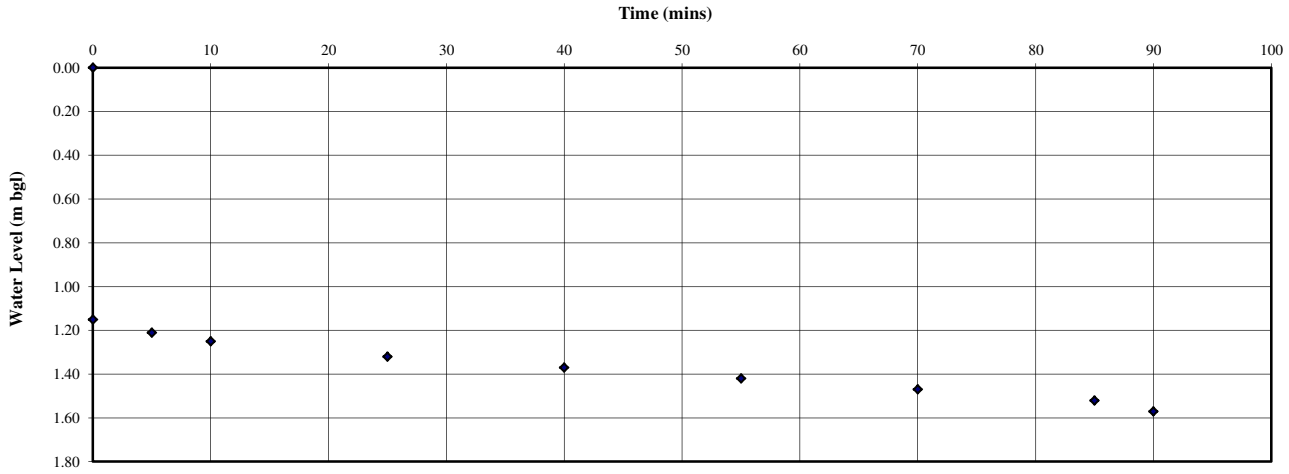
Depth $_{(25\%)}$ = 1.5625 Depth $_{(75\%)}$ = 1.288 m

Soil infiltration rate = 2.1E-05 m/sec

Remarks

Fill material at upper levels, pit taken down into natural sand and test performed at lower level. Soakaways in this area will be deep.

* Extrapolated soil infiltration rate



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Contract: **Hope and Anchor Pub Cellerhead**

Contract No: **SEC01**