Date of Test: 10-06-13

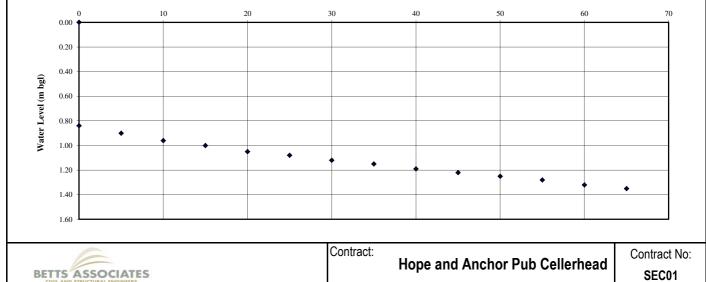
Hole ID: SA1 Start of Test

Test 1 11:35

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

| Time<br>(mins)<br>0.0<br>5.0 | Depth of water<br>(m bgl)<br>0.840<br>0.900 | Time<br>(mins) | Depth of<br>water<br>(m bgl) | Effective storage volume in trial pit $V_{(p75-25)}$ = between effective depths 25% to = 0.13 m <sup>3</sup> 75%.                   |
|------------------------------|---|----------------|------------------------------|---|
| 10.0<br>15.0<br>20.0<br>25.0 | 0.960<br>1.000<br>1.050<br>1.080            |                |                              | Initial surface area of trial pit up to<br>a $_{(p50)}$ = 50% effective depth and including = 1.32 m <sup>2</sup><br>the base area. |
| 30.0<br>35.0<br>40.0<br>45.0 | 1.120<br>1.150<br>1.190<br>1.220            |                |                              | $t_{(p75\cdot25)} = {Time for the water level to fall from } = 50 min$  |
| 50.0<br>55.0<br>60.0<br>65.0 | 1.250<br>1.280<br>1.320<br>1.350            |                |                              | Soil infiltration rate = $\frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$   |
|                              |   |                |                              | Depth (25%) = 1.335 Depth (75%) = 1.005 m   |
|                              |   |                |                              | Soil infiltration rate = 3.3E-05 m/sec  |
|                              |   |                |                              | Remarks * Extrapolated soil infiltration rate   |

Time (mins)



|                     |                            | Date of Test: 10-06-13             |                |                              |                         | Hole ID:<br>Start of Test                        | 1                       | SA1<br>Fest 2<br>1:35   |                      |       |                |
|---------------------|----------------------------|------------------------------------|----------------|------------------------------|-------------------------|--|-------------------------|---|----------------------|-------|----------------|
|                     |                            | Trial F                            | Pit            | Length                       | Width                   | Depth  | Depth                   | for Analysis  |                      |       |                |
|                     |                            | Dimensior                          |                | 1.00                         | 0.40                    | 1.50   |                         | 0.52  |                      |       |                |
|                     |                            |                                    |                |                              |                         |  |                         |   |                      |       |                |
| (n                  | ime<br>nins)<br>0.0        | Depth of water<br>(m bgl)<br>0.980 | Time<br>(mins) | Depth of<br>water<br>(m bgl) | V <sub>(p75-25)</sub> = | Effective sto<br>between effe<br>75%.            |                         | ne in trial pit<br>hs 25% to  | =                    | 0.10  | m <sup>3</sup> |
|                     | 5.0                        | 1.050                              |                |                              |                         |  |                         |   |                      |       |                |
| 1<br>2              | 0.0<br>5.0<br>25.0<br>40.0 | 1.080<br>1.100<br>1.150<br>1.220   |                |                              | a <sub>(p50)</sub> =    | Initial surface<br>50% effective<br>the base are | e depth ar              |   | =                    | 1.13  | m²             |
| 5                   | 55.0<br>70.0               | 1.300<br>1.350                     |                |                              | t <sub>(p75-25)</sub> = | Time for the<br>75 % to 25%                      | water leve<br>effective | el to fall from depth.  | =                    | 55    | min            |
|                     |                            |                                    |                |                              | Soil infil              | tration rate =                                   |                         | V <sub>(p75-25)</sub><br>t <sub>(p75-25)</sub> x a <sub>(p50)</sub> | x 60                 |       | -              |
|                     |                            |                                    |                |                              |                         | Depth (25%) =                                    | 1.37                    | Depth   | ו <sub>(75%)</sub> = | 1.110 | m              |
|                     |                            |                                    |                |                              |                         |  | Soil infil              | tration rate =  | 2.8                  | E-05  | m/sec          |
|                     |                            |                                    |                |                              | Remarks<br>* Extrapola  | ted soil infiltra                                | tion rate               |   |                      |       |                |
|                     |                            | <u>ι          </u> Ν               |                | I                            | Time (mins)             |  |                         |   |                      |       |                |
|                     | 0.00                       | 10                                 | 20             | 30                           | 40                      | 50   |                         | 60  | 70                   |       | 80             |
|                     | 0.20                       |                                    |                |                              |                         |  |                         |   |                      |       |                |
| 0                   | 0.40                       |                                    |                |                              |                         |  |                         |   |                      |       |                |
| (m bgl              | 0.60                       |                                    |                |                              |                         |  |                         |   |                      |       |                |
| Water Level (m bgl) | 0.80                       |                                    |                |                              |                         |  |                         |   |                      |       |                |
| Water               | 1.00                       |                                    |                |                              |                         |  |                         |   |                      |       |                |
| -                   | 1.20                       | • •                                | •              | •                            | •                       |  | •                       |   |                      |       |                |
|                     | 1.40                       |                                    |                |                              |                         |  |                         |   | •                    |       |                |
|                     | 1.60                       |                                    | l              |                              |                         |  |                         |   |                      |       |                |
| BET                 |                            | OCIATES                            |                |                              | Contract:               | Hope and   | Anchor                  | Pub Celler  | head                 |       | tract No       |

|                     |                                     |   | SC             | AKAWA                        | Y TEST F                | RESULT   | S                       |  |                      |       |                |
|---------------------|-------------------------------------|---|----------------|------------------------------|-------------------------|--|-------------------------|--|----------------------|-------|----------------|
|                     |                                     | Date of Test:                             | 10-06-13       |                              |                         | Hole ID:<br>Start of Test                        | ١                       | SA1<br>Fest 3<br>2:55  |                      |       |                |
|                     |                                     | Trial                                     |                | Length                       | Width                   | Depth  |                         | for Analysis   |                      |       |                |
|                     |                                     | Dimensio                                  | ns (m)         | 1.00                         | 0.40                    | 1.50   |                         | 0.42   |                      |       |                |
| (r                  | ime<br>nins)<br>0.0                 | Depth of water<br>(m bgl)                 | Time<br>(mins) | Depth of<br>water<br>(m bgl) | V <sub>(p75-25)</sub> = | Effective stor<br>between effe<br>75%.           |                         | ne in trial pit<br>ths 25% to                                      | =                    | 0.08  | m <sup>3</sup> |
|                     | 5.0<br>20.0<br>35.0<br>50.0<br>55.0 | 1.120<br>1.180<br>1.240<br>1.300<br>1.350 |                |                              |                         | Initial surface<br>50% effective<br>the base are | e depth ar              |  | =                    | 0.99  | m <sup>2</sup> |
|                     |                                     |   |                |                              | t <sub>(p75-25)</sub> = | Time for the<br>75 % to 25%                      | water leve<br>effective | el to fall from<br>depth.  | =                    | 45    | min            |
|                     |                                     |   |                |                              | Soil infil              | tration rate =                                   |                         | V <sub>(p75-25)</sub><br>t <sub>(p75-25)</sub> x a <sub>(p50</sub> | <sub>))</sub> x 60   |       | -              |
|                     |                                     |   |                |                              |                         | Depth <sub>(25%)</sub> =                         | 1.395                   | Dept   | h <sub>(75%)</sub> = | 1.185 | m              |
|                     |                                     |   |                |                              |                         |  | Soil infil              | tration rate =   | 3.1E                 | -05   | m/sec          |
|                     |                                     |   |                |                              | Remarks * Extrapolat    | ed soil infiltra                                 | tion rate               |  |                      |       |                |
|                     | 0.00                                | 10  | 20             |                              | Time (mins)             | 40   | 50                      |  | 60                   |       | 70             |
|                     | 0.20                                |   |                |                              |                         |  |                         |  |                      |       |                |
| bgl)                | 0.40                                |   |                |                              |                         |  |                         |  |                      |       |                |
| Water Level (m bgl) | 0.60                                |   |                |                              |                         |  |                         |  |                      |       |                |
| Vater L             | 0.80                                |   |                |                              |                         |  |                         |  |                      |       |                |
| Δ                   | 1.20                                | •   | •              |                              | •                       |  |                         |  |                      |       |                |
|                     | 1.40                                |   |                |                              | •                       |  | •                       |  |                      | ٠     |                |

Contract: Hope and Anchor Pub Cellerhead Contract No: SEC01

1.60

|                                  |   | SO             | AKAW                         | AY TES  |                                   | ULT                | S                       |  |                         |       |                |
|----------------------------------|---|----------------|------------------------------|---------|-----------------------------------|--------------------|-------------------------|--|-------------------------|-------|----------------|
|                                  | Date of Test: ´                             | 10-06-13       |                              |         | Ho<br>Start o                     | ole ID:<br>of Test | ٦                       | SA2<br>Test 1<br>11:00                           |                         |       |                |
|                                  | Trial F                                     | Dit            | Length                       | Width   | n De                              | pth                | Depth                   | for Analysis                                     | 5                       |       |                |
|                                  | Dimensior                                   |                | 1.00                         | 0.40    | 1.0                               | 60                 |                         | 0.60   |                         |       |                |
| Time<br>(mins)<br>0.0<br>5.0     | Depth of water<br>(m bgl)<br>1.000<br>1.050 | Time<br>(mins) | Depth of<br>water<br>(m bgl) |         |                                   |                    |                         | me in trial pi<br>ths 25% to                     |                         | 0.12  | m <sup>8</sup> |
| 10.0<br>15.0<br>20.0<br>30.0     | 1.080<br>1.100<br>1.120<br>1.150            |                |                              | a (p    | <sub>50)</sub> = 50% e            |                    | e depth ar              | trial pit up to<br>nd including                  |                         | 1.24  | m²             |
| 45.0<br>60.0<br>75.0<br>90.0     | 1.180<br>1.220<br>1.250<br>1.280            |                |                              | t (p75- | <sub>25)</sub> = Time f<br>75 % t | for the<br>to 25%  | water leve<br>effective | el to fall fron<br>depth.                        | n <sub>=</sub>          | 150   | mi             |
| 105.0<br>120.0<br>135.0<br>150.0 | 1.310<br>1.340<br>1.370<br>1.400            |                |                              | Soi     | l infiltration                    | rate =             |                         | V <sub>(p75</sub> .<br>t <sub>(p75-25)</sub> x a |                         |       | -              |
| 165.0<br>180.0                   | 1.430<br>1.460                              |                |                              |         | Depth                             | (25%) =            | 1.45                    | De   | epth <sub>(75%)</sub> = | 1.150 | m              |
|                                  |   |                |                              | _       |                                   |                    | Soil infil              | Itration rate                                    | e = 1.1                 | E-05  | m/             |
|                                  |   |                |                              | Remar   | ks<br>polated soil                | infiltra           | tion rate               |  |                         |       |                |
|                                  |   |                |                              | Time (m |                                   |                    |                         |  |                         |       |                |
| 0.00                             | 20  | 40             | 50 8                         | 30 10   | 00                                | 120                | 140                     | 160  | 180                     |       | 2              |
| 0.20                             |   |                |                              |         |                                   |                    |                         |  |                         |       |                |
| 0.40                             |   |                |                              |         |                                   |                    |                         |  |                         |       |                |
| 0.60                             |   |                |                              |         |                                   |                    |                         |  |                         |       |                |
| 0.80                             |   |                |                              |         |                                   |                    |                         |  |                         |       |                |

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Contract:

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Hope and Anchor Pub Cellerhead

Water Level (m bgl)

1.00

1.20

1.40 1.60

BETTS ASSOCIATES

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0.12 m<sup>3</sup>

1.24 m<sup>2</sup>

150 min

m/sec

200

| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$   |                |
|---|----------------|
| Time         Depth of water         Time         Depth of water         Time (mins)         Depth of water         Time for the water level to fall form         Time for the water level to fall from         Time for the water lev  |                |
| Dimensions (m)         1.00         0.40         1.60         0.61           Time (mins)         Depth of water (mins)         Time (mins)         Depth of water (mins)         Effective storage volume in trial pit (p75-25) = between effective depths 25% to 75%.         =         0.12 m           0.0         0.990   |                |
| Time<br>(mins)       Depth of water<br>(m bgl)       Time<br>(mins)       water<br>(m bgl)       Effective storage volume in trial pit<br>$V_{(p75-25)} =$ between effective depths 25% to $= 0.12$ m<br>75%.         0.0       0.990       100 <td></td>   |                |
| Time<br>(mins)       Depth of water<br>(m bgl)       Time<br>(mins)       water<br>(m bgl)       Effective storage volume in trial pit<br>$V_{(p75-25)} =$ between effective depths 25% to $= 0.12$ m<br>75%.         0.0       0.990       100 <td></td>   |                |
| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$   | m <sup>3</sup> |
| $30.0$ 1.060       Initial surface area of that pit up to $45.0$ 1.090 $a_{(p50)} = 50\%$ effective depth and including = 1.25 m $60.0$ 1.100 $a_{(p50)} = 50\%$ effective depth and including = 1.25 m $75.0$ 1.130 $b_{(p75-25)} = 10\%$ $90.0$ 1.160 $t_{(p75-25)} = 75\%$ to 25% effective depth. $150.0$ 1.290 $t_{(p75-25)} = 75\%$ to 25% effective depth. $180.0$ 1.360 $t_{(p75-25)} = \frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$   |                |
| 75.0 $1.130$ Image: matrix index in the image: matrix index in  | m²             |
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$  | min            |
| Depth (25%) = 1.4475 Depth (75%) = 1.143 r  | _              |
|   | m              |
| Soil infiltration rate = 1.2E-05  | m/sec          |
| Image: Constraint of the second se |                |
| 0         50         100         150         200           0.00         → <t< td=""><td></td></t<>  |                |

0.20 0.40

0.60 0.80 1.00

> 1.20 1.40 1.60

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Water Level (m bgl)

| Contract |  |                       |
|----------|--|-----------------------|
|          | Contract: Hope and Anchor Pub Cellerhead | Contract No:<br>SEC01 |

|                                     | Date of Test: 1                           | 10-06-13       |                              |                         | Hole ID:<br>Start of Test                        | Т                         | SA3<br>est 1<br>2:30  |           |               |                |
|-------------------------------------|---|----------------|------------------------------|-------------------------|--|---------------------------|---|-----------|---------------|----------------|
|                                     | Trial F                                   | Pit            | Length                       | Width                   | Depth  | Depth f                   | or Analysis   |           |               |                |
|                                     | Dimensior                                 | ns (m)         | 1.00                         | 0.40                    | 1.60   | (                         | ).44  |           |               |                |
| Time<br>(mins)<br>0.0               | Depth of water<br>(m bgl)<br>1.160        | Time<br>(mins) | Depth of<br>water<br>(m bgl) | V <sub>(p75-25)</sub> = | Effective stor<br>between effe<br>75%.           |                           | ne in trial pit<br>hs 25% to  | = 0       | ).09 m        | n <sup>3</sup> |
| 5.0<br>10.0<br>15.0<br>30.0<br>45.0 | 1.180<br>1.200<br>1.250<br>1.320<br>1.370 |                |                              | a <sub>(p50)</sub> =    | Initial surface<br>50% effective<br>the base are | e depth an                | ial pit up to<br>d including  | = 1       | .02 m         | n²             |
| 60.0<br>75.0<br>90.0                | 1.420<br>1.450<br>1.490                   |                |                              | t <sub>(p75-25)</sub> = | Time for the<br>75 % to 25%                      | water leve<br>effective o | l to fall from<br>depth.  | =         | 70 m          | nin            |
|                                     |   |                |                              | Soil infi               | Itration rate =                                  |                           | V <sub>(p75-25)</sub><br>t <sub>(p75-25)</sub> x a <sub>(p50)</sub> | x 60      |               |                |
|                                     |   |                |                              |                         | Depth (25%) =                                    | 1.49                      | Depth   | (75%) = 1 | .270 m        | n              |
|                                     |   |                |                              |                         |  | Soil infilt               | ration rate =   | 2.1E-0    | )5 m          | n/sec          |
|                                     |   |                |                              | Remarks<br>* Extrapola  | ted soil infiltra                                | tion rate                 |   |           |               |                |
| 0                                   | 10  | 20             | 30 40                        | Time (mins)<br>50       | 60   | 70                        | 80  | 90        |               | 100            |
| 0.00                                |   |                |                              |                         |  |                           |   |           |               |                |
| 0.40                                |   |                |                              |                         |  |                           |   |           |               |                |
| [bf] 0.60 —                         |   |                |                              |                         |  |                           |   |           |               | _              |
| 0900 Water Level (m bgl)            |   |                |                              |                         |  |                           |   |           |               | -              |
|                                     |   |                |                              |                         |  |                           |   |           |               | -              |
| 1.20                                | * *                                       |                | •                            | •                       | •  |                           | •   | •         |               | _              |
|                                     | SOCIATES                                  |                | , L                          | Contract:               | Hope and   | Anchor                    | Pub Celler  | nead      | Contra<br>SE( |                |

|                              |   |                |                              |                         |  | <b>v</b>                |  |                      |       |          |
|------------------------------|---|----------------|------------------------------|-------------------------|--|-------------------------|--|----------------------|-------|----------|
|                              | Date of Test:                               | 10-06-13       |                              |                         | Hole ID:   |                         | SA3<br>Fest 2  |                      |       |          |
|                              |   |                |                              |                         | Start of Test                                    |                         | 2:30   |                      |       |          |
|                              | Trial F                                     | Pit            | Length                       | Width                   | Depth  | Depth                   | for Analysis   |                      |       |          |
|                              | Dimensio                                    | ns (m)         | 1.00                         | 0.40                    | 1.60   |                         | 0.36   |                      |       |          |
| Time<br>(mins)<br>0.0<br>5.0 | Depth of water<br>(m bgl)<br>1.240<br>1.270 | Time<br>(mins) | Depth of<br>water<br>(m bgl) | V <sub>(p75-25)</sub> = | Effective sto<br>= between effe<br>75%.          |                         | ne in trial pit<br>ths 25% to                                      | =                    | 0.07  | m³       |
| 10.0<br>30.0<br>45.0<br>60.0 | 1.310<br>1.350<br>1.380<br>1.410            |                |                              | a <sub>(p50)</sub> =    | Initial surface<br>50% effective<br>the base are | e depth ar              |  | =                    | 0.90  | m²       |
| 75.0<br>90.0<br>105.0        | 1.450<br>1.490<br>1.540                     |                |                              | t <sub>(p75-25)</sub> = | = Time for the<br>75 % to 25%                    | water leve<br>effective | el to fall from<br>depth.  | =                    | 85    | min      |
|                              |   |                |                              | Soil inf                | iltration rate =                                 |                         | V <sub>(p75-25)</sub><br>t <sub>(p75-25)</sub> x a <sub>(p50</sub> | <sub>))</sub> x 60   |       | -        |
|                              |   |                |                              | -                       | Depth (25%) =                                    | 1.51                    | Dept   | h <sub>(75%)</sub> = | 1.330 | m        |
|                              |   |                |                              |                         |  | Soil infil              | tration rate =   | 1.6                  | E-05  | m/sec    |
|                              |   |                |                              | Remarks                 | ated soil infiltra                               | ition rate              |  |                      |       |          |
|                              |   |                |                              | ]                       |  |                         |  |                      |       |          |
|                              |   |                | 10                           | Time (mins)             |  |                         | 100  |                      |       | 120      |
| 0.00<br>0.20<br>0.40         | 20  |                | 40                           | 60                      |  | 80                      |  | ·                    |       |          |
| Mater Level (m bgl)          |   |                |                              |                         |  |                         |  |                      |       |          |
| 1.40<br>1.60                 | * •   | •              | •                            |                         | •  |                         | •  | •                    |       |          |
| 1.00 -                       |   |                |                              | Contract:               | Hope and   | Anchor                  | · Pub Celler   | head                 | Con   | tract No |

SEC01

BETTS ASSOCIATES

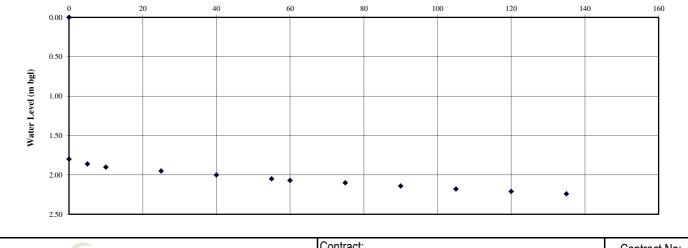
Date of Test: 10-06-13

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

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

| Time<br>(mins)<br>0.0<br>5.0  | Depth of water<br>(m bgl)<br>1.800<br>1.860 | Time<br>(mins) | Depth of<br>water<br>(m bgl) | Effective storage volume in trial pit $V_{(p75-25)}$ = between effective depths 25% to = 0.12 m <sup>3</sup> 75%.  |
|-------------------------------|---|----------------|------------------------------|--|
| 10.0<br>25.0<br>40.0<br>55.0  | 1.900<br>1.950<br>2.000<br>2.050            |                |                              | Initial surface area of trial pit up to<br>$a_{(p50)} = 50\%$ effective depth and including = 1.24 m <sup>2</sup><br>the base area.  |
| 60.0<br>75.0<br>90.0<br>105.0 | 2.070<br>2.100<br>2.140<br>2.180            |                |                              | t $_{(p75-25)} = \frac{\text{Time for the water level to fall from}}{75 \% \text{ to } 25\% \text{ effective depth.}} = 105 \text{ min}$   |
| 120.0<br>135.0                | 2.210<br>2.240                              |                |                              | Soil infiltration rate = $\frac{V_{(p75-25)}}{t_{(p75-25)} \times a_{(p50)} \times 60}$  |
|                               |   |                |                              | Depth (25%) = 2.25 Depth (75%) = 1.950 m   |
|                               |   |                |                              | Soil infiltration rate = 1.5E-05 m/sec   |
|                               |   |                |                              | Remarks<br>Fill material at upper levels, pit taken down into natural sand and test<br>performed at lower level. Soakaways in this area will be deep.<br>* Extrapolated soil infiltration rate |

Time (mins)



|                  | Contract: | Hope and Anchor Pub Cellerhead | Contract No: |
|------------------|-----------|--------------------------------|--------------|
| BETTS ASSOCIATES |           | hope and Anchor Pub Cellemead  | SEC01        |

#### AKAWAY TEGT DEGI тο

|                                     |               | 30                          | JARAWA                       | T IESI I                                   | KESULI                    | 5                        |                       |                      |       |        |
|-------------------------------------|---------------|-----------------------------|------------------------------|--|---------------------------|--------------------------|-----------------------|----------------------|-------|--------|
|                                     | Date of Test: | 10-06-13                    |                              |  | Hole ID:<br>Start of Test | Т                        | SA4<br>fest 2<br>2:50 |                      |       |        |
|                                     | Trial F       | Trial Pit<br>Dimensions (m) |                              | Width                                      | Depth                     | Depth f                  | or Analysis           |                      |       |        |
|                                     | Dimensio      |                             |                              | 0.40                                       | 2.40                      | 0.47                     |                       |                      |       |        |
|                                     |               |                             |                              |  |                           |                          |                       |                      |       |        |
| Time<br>(mins                       |               | Time<br>(mins)              | Depth of<br>water<br>(m bgl) | V <sub>(p75-25)</sub> =                    | =                         | 0.09                     | m <sup>3</sup>        |                      |       |        |
| 0.0                                 |               |                             |                              |  | 75%.                      |                          |                       |                      |       |        |
| 5.0                                 |               |                             |                              |  |                           |                          |                       |                      |       |        |
| 10.0                                |               |                             |                              |  |                           |                          | 6 m <sup>2</sup>      |                      |       |        |
| <u>15.0</u><br>40.0                 |               |                             |                              | a <sub>(p50)</sub> =                       | =                         | 1.06                     |                       |                      |       |        |
| 50.0                                |               |                             |                              |  |                           |                          |                       |                      |       |        |
| 65.0                                |               |                             |                              |  |                           |                          |                       |                      |       |        |
| 80.0                                |               |                             |                              | ·  | Time for the              | water leve               | I to fall from        | _                    | 400   |        |
| 95.0                                | ) 2.160       |                             |                              | l (p75-25) -                               | Time for the 75 % to 25%  | effective of             | depth.                | =                    | 100   | min    |
| 110.0                               | 0 2.190       |                             |                              |  |                           |                          |                       |                      |       |        |
| 125.0                               | 0 2.220       |                             |                              |  |                           |                          |                       |                      |       |        |
| 140.0                               | 0 2.250       |                             |                              | Soil infi                                  | tration rate =            |                          | V <sub>(p75-25)</sub> |                      |       |        |
|                                     |               |                             |                              | t <sub>(p75-25)</sub> x a <sub>(p50)</sub> |                           |                          |                       |                      |       |        |
|                                     |               |                             |                              |  | Depth (25%) =             | 2.2825                   | Depti                 | n <sub>(75%)</sub> = | 2.048 | m      |
|                                     |               |                             |                              |  |                           | Soil infiltration rate = |                       |                      |       | m/sec  |
|                                     |               |                             |                              | Remarks                                    |                           |                          |                       |                      |       |        |
|                                     |               |                             |                              |  |                           |                          |                       |                      |       |        |
|                                     |               |                             |                              |  |                           |                          | en down into n        |                      |       | d test |
|                                     |               |                             |                              | performed                                  | at lower level.           | Soakawa                  | ys in this area       | will be d            | eep.  |        |
|                                     |               |                             |                              | * Extranala                                | ted soil infiltrat        | tion rata                |                       |                      |       |        |
|                                     |               |                             |                              | Exilapoia                                  |                           | lion rate                |                       |                      |       |        |
|                                     |               |                             |                              | Time (mins)                                |                           |                          |                       |                      |       |        |
| 0.00                                | 0 20          | 40                          | 60                           | 80   | 100                       |                          | 120                   | 140                  |       | 160    |
| 0.00                                |               |                             |                              |  |                           |                          |                       |                      |       |        |
| 0.50                                |               |                             |                              |  |                           |                          |                       |                      |       |        |
|                                     |               |                             |                              |  |                           |                          |                       |                      |       |        |
| ng<br>ng                            |               |                             |                              |  |                           |                          |                       |                      |       |        |
| Water Level (m bgl)<br>1.00<br>1.20 |               |                             |                              |  |                           |                          |                       |                      |       |        |
| ter L                               |               |                             |                              |  |                           |                          |                       |                      |       |        |
| A 1.50                              | ,             |                             |                              |  |                           |                          |                       |                      |       |        |

Contract: Contract No: Hope and Anchor Pub Cellerhead BETTS ASSOCIATES SEC01

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|-------------------------------------|---|----------------|------------------------------|--|---------------|-------|-----------------------------|-----|------|-----|
|                                     | Date of Test: <sup>7</sup>                |                |                              |  |               |       |                             |     |      |     |
|                                     | Trial F                                   | Pit            | Length                       | Width  | Depth         | Depth | for Analysis                |     |      |     |
|                                     | Dimensior                                 |                | 1.00                         | 1.00 0.40 1.70   |               |       | 0.55                        |     |      |     |
| Time<br>(mins)<br>0.0               | Depth of water<br>(m bgl)<br>1.150        | Time<br>(mins) | Depth of<br>water<br>(m bgl) | V <sub>(p75-25)</sub> =  | =             | 0.11  | m <sup>3</sup>              |     |      |     |
| 5.0<br>10.0<br>25.0<br>30.0<br>45.0 | 1.230<br>1.290<br>1.350<br>1.380<br>1.430 |                |                              | a <sub>(p50)</sub> =   | =             | 1.17  | m²                          |     |      |     |
| 60.0<br>75.0<br>90.0<br>105.0       | 1.460<br>1.490<br>1.520<br>1.550          |                |                              | t $_{(p75-25)} = \frac{1}{75\%}$ to 25% effective depth.   |               |       |                             |     | 100  | min |
| 120.0                               | 1.580                                     |                |                              | Soil infiltration rate = $V_{(p75-25)}$<br>t $_{(p75-25)}$ x a $_{(p50)}$  |               |       |                             |     | x 60 |     |
|                                     |   |                |                              |  | Depth (25%) = |       | th <sub>(75%)</sub> = 1.288 |     |      |     |
|                                     |   |                |                              | Soil infiltration rate =       1.6E-05       m/s         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 |               |       |                             |     |      |     |
| 0.00                                | 20  | 40             | <u> </u>                     | <b>Time (mins)</b> 60  | 80            | 100   |                             | 120 |      | 140 |
| 0.40 (m pgl)                        |   |                |                              |  |               |       |                             |     |      |     |
| ₿ 1.20<br>1.40                      | • •                                       | •              | •                            | •  | •             | ,     | •                           |     |      |     |

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|  |   |   |        |                         |   | U          |  |                      |       |                     |  |  |  |
|--|---|---|--------|-------------------------|---|------------|--|----------------------|-------|---------------------|--|--|--|
|  | Date of Test: 10-06-13                      |   |        | Hole ID: SA5<br>Test 2  |   |            |  |                      |       |                     |  |  |  |
|  |   |   |        |                         | Start of Test   |            | 3:00   |                      |       |                     |  |  |  |
|  | Trial F                                     | Pit   | Length | Width                   | Depth   | Depth      | for Analysis   |                      |       |                     |  |  |  |
|  | Dimensio                                    | ns (m)  | 1.00   | 0.40                    | 1.70  |            | 0.55   |                      |       |                     |  |  |  |
| Time<br>(mins)<br>0.0<br>5.0   | Depth of water<br>(m bgl)<br>1.150<br>1.210 | (m bgl)(mins)water<br>(m bgl)Ellective stora1.150(m bgl)V (p75-25) = between effect<br>75%. |        |                         |   |            |  |                      |       |                     |  |  |  |
| 10.0<br>25.0<br>40.0<br>55.0   | 1.250<br>1.320<br>1.370<br>1.420            |   |        | a <sub>(p50)</sub> =    | Initial surface area of trial pit up to<br>a $_{(p50)}$ = 50% effective depth and including = 1.1<br>the base area. |            |  |                      |       |                     |  |  |  |
| 70.0<br>85.0<br>90.0   | 1.470<br>1.520<br>1.570                     |   |        | t <sub>(p75-25)</sub> = | Time for the<br>75 % to 25%   | water leve | el to fall from<br>depth.  | =                    | 75    | min                 |  |  |  |
|  |   |   |        | Soil infil              | tration rate =  |            | V <sub>(p75-25)</sub><br>t <sub>(p75-25)</sub> x a <sub>(p50</sub> | <sub>o)</sub> x 60   |       | -                   |  |  |  |
|  |   |   |        |                         | Depth <sub>(25%)</sub> =  | 1.5625     | Dept   | h <sub>(75%)</sub> = | 1.288 | m                   |  |  |  |
|  |   |   |        |                         |   | Soil infil | tration rate =   | 2.11                 | E-05  | m/sec               |  |  |  |
|  |   |   |        | performed               |   | Soakawa    | en down into n<br>ys in this area                                  |                      |       | d test              |  |  |  |
| 0  | 10  | 20  | 30 40  | Time (mins)             | 60  | 70         | 80   | 90                   |       | 100                 |  |  |  |
| 0.00 •<br>0.20 -   |   |   |        |                         |   |            |  |                      |       |                     |  |  |  |
| 0.20   |   |   |        |                         |   |            |  |                      |       |                     |  |  |  |
| ()<br>18<br>19<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10<br>10 |   |   |        |                         |   |            |  |                      |       |                     |  |  |  |
| → 000 mater Level (m bgl)  |   |   |        |                         |   |            |  |                      |       |                     |  |  |  |
| 1.00 -   |   |   |        |                         |   |            |  |                      |       |                     |  |  |  |
| <b>B</b> 1.20  | •   |   |        |                         |   |            |  |                      |       |                     |  |  |  |
| 1.40 -   |   | •   | +      |                         | •   | •          |  |                      |       |                     |  |  |  |
| 1.60 -   |   |   |        |                         |   |            |  | * •                  |       |                     |  |  |  |
| 1.80   |   |   |        |                         |   |            |  |                      |       |                     |  |  |  |
| BETTS A  | SSOCIATES                                   |   |        | Contract:               | Hope and  | Anchor     | · Pub Celler   | head                 |       | ntract No:<br>SEC01 |  |  |  |