

**SOAKAWAY INFILTRATION TEST RESULTS**  
BRE 365 method



<b>Project Name:</b>	Cosmeston Farm, Cosmeston
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<b>Project Ref:</b>	7061b
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<b>Test Location:</b>	ETP1
<b>Fill Number:</b>	1

<b>Soil Infiltration Rate</b>	5.46E-06 m/sec
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**Test results:**

Time (mins)	Water Level (m bgl)
0	0.51
1	0.51
2	0.51
3	0.51
4	0.51
7	0.52
10	0.52
25	0.54
50	0.57
60	0.58
75	0.60
105	0.65
145	0.68
210	0.73
270	0.78
330	0.82
690	1.10

**Pit Dimensions (m)**

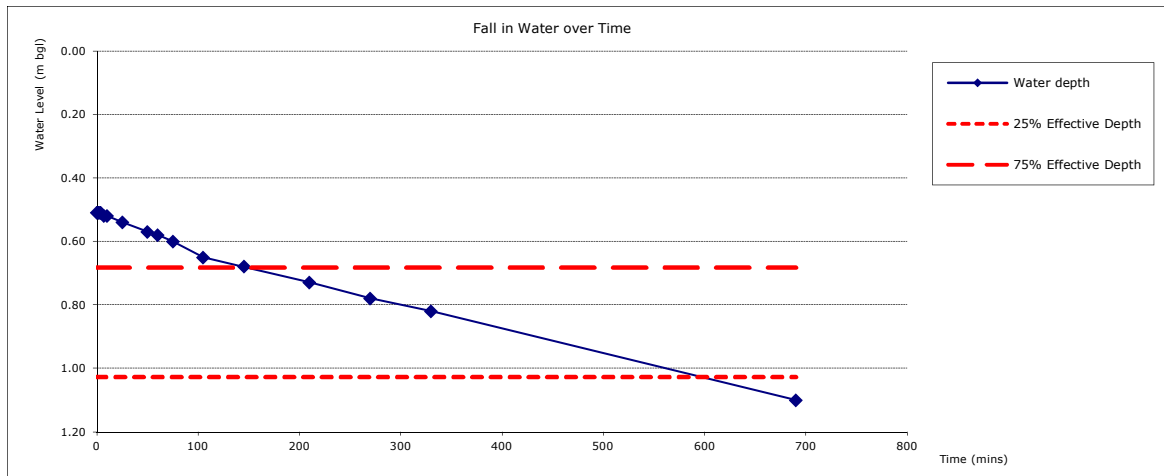
length	2.00
width	0.70
depth	1.20

Assumed Invert Level (m bgl)	0.00
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**See Trial Pit Log ETP1 for Ground Conditions**

**Remarks:**

1. Testing undertaken in general accordance with BRE Digest 365:2007
2. Trial pit was not filled with aggregate for test.
3. Some spalling of pit sides during excavation. Sides became unstable with addition of water.
4. Results extrapolated to obtain soakage rate



**Soil Infiltration Rate (m/sec)**  $f = \frac{V_{p75-25}}{\alpha_{p50} \times t_{p75-25}}$

$V_{p75-25}$	Effective depth storage volume of water in the trial pit between 75% and 25% effective depth	0.48
$\alpha_{p50}$	The internal surface area of the trial pit up to 50% effective depth and including the base area	3.263
$t_{p75-25}$	The time for the water level to fall from 75% to 25% effective depth	452

**Soil Infiltration Rate (m/sec)**  $f = \frac{0.483}{88450.60714}$

EXTRAPOLATED  $f$  **5.46E-06**

## SOAKAWAY INFILTRATION TEST RESULTS

### BRE 365 method



ENGINEERS  
GEOLOGISTS  
SCIENTISTS

**Project Name:** Cosmeston Farm, Cosmeston

**Project Ref:** 7061b

**Test Location:** ETP23  
**Fill Number:** 1

**Soil Infiltration Rate**

**6.02E-06 m/sec**

**Test results:**

Time (mins)	Water Level (m bgl)
0	0.22
3	0.23
5	0.23
80	0.35
150	0.44
200	0.50
285	0.58
355	0.65
<b>480</b>	<b>0.75</b>

**Pit Dimensions (m)**

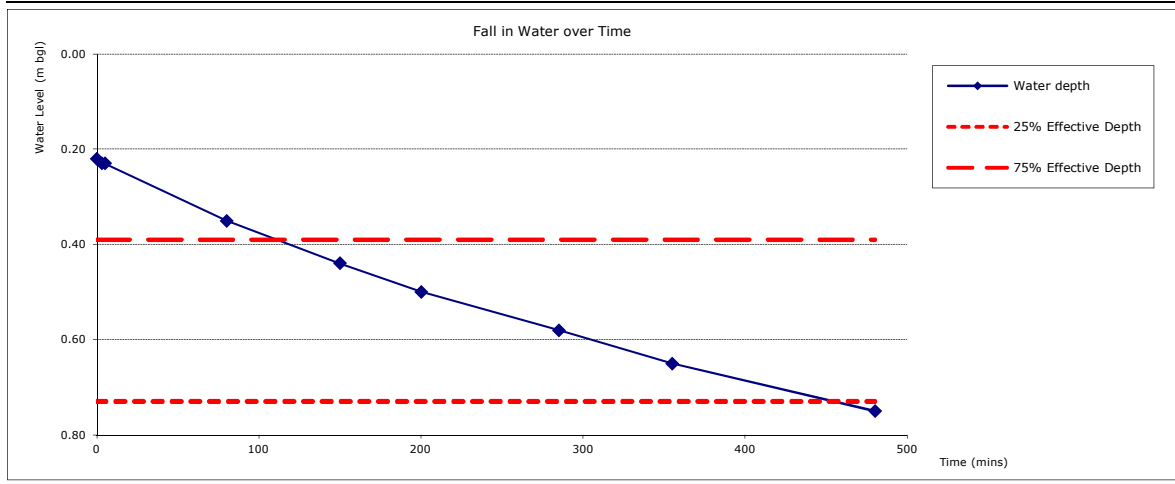
length	1.80
width	0.60
depth	0.90

**Assumed Invert Level (m bgl)** 0.00

**See Trial Pit Log ETP23 for Ground Conditions**

**Remarks:**

1. Testing undertaken in general accordance with BRE Digest 365:2007
2. Trial pit was not filled with aggregate for test.
3. Some spalling of pit sides during excavation. Sides became unstable with addition of water.
4. Results extrapolated to obtain soakage rate



**Soil Infiltration Rate (m/sec)**  $f = \frac{V_{p75-25}}{\alpha_{p50} \times t_{p75-25}}$

$V_{p75-25}$	Effective depth storage volume of water in the trial pit between 75% and 25% effective depth	0.37
$\alpha_{p50}$	The internal surface area of the trial pit up to 50% effective depth and including the base area	2.712
$t_{p75-25}$	The time for the water level to fall from 75% to 25% effective depth	375

**Soil Infiltration Rate (m/sec)**  $f = \frac{0.367}{61020}$

EXTRAPOLATED  $f$  **6.02E-06**

## SOAKAWAY INFILTRATION TEST RESULTS BRE 365 method



ENGINEERS  
GEOLOGISTS  
SCIENTISTS

Project Name:	Cosmeston Farm, Cosmeston
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Project Ref:	7061b
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Test Location:	ETP1
Fill Number:	1

Soil Infiltration Rate	test failed m/sec
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**Test results:**

Time (mins)	Water Level (m bgl)
0	0.51
1	0.51
2	0.51
3	0.51
4	0.51
7	0.52
10	0.52
25	0.54
50	0.57
60	0.58
75	0.60
105	0.65
145	0.68
210	0.73
270	0.78
330	0.82

**Pit Dimensions (m)**

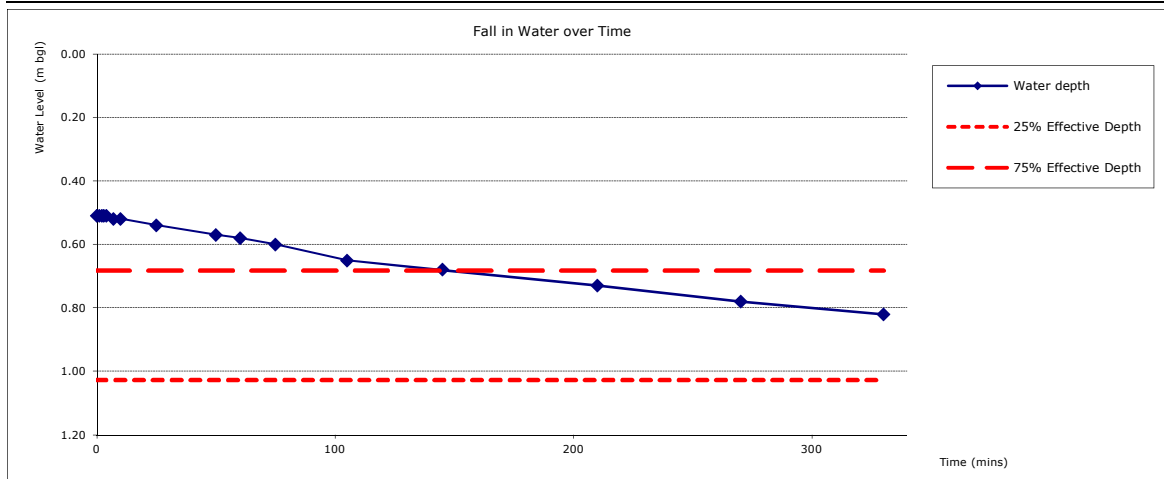
length	2.00
width	0.70
depth	1.20

Assumed Invert Level (m bgl)	0.00
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**See Trial Pit Log ETP1 for Ground Conditions**

**Remarks:**

1. Testing undertaken in general accordance with BRE Digest 365:2007
2. Trial pit was not filled with aggregate for test.
3. Some spalling of pit sides during excavation. Sides became unstable with addition of water.



**Soil Infiltration Rate (m/sec)**

$$f = \frac{V_{p75-25}}{\alpha_{p50} \times t_{p75-25}}$$

V <sub>p75-25</sub>	Effective depth storage volume of water in the trial pit between 75% and 25% effective depth	0.48
α <sub>p50</sub>	The internal surface area of the trial pit up to 50% effective depth and including the base area	3.263
t <sub>p75-25</sub>	The time for the water level to fall from 75% to 25% effective depth	n/a

**Soil Infiltration Rate (m/sec)**

$$f = \frac{0.483}{\text{no value}}$$

**f test failed**

## SOAKAWAY INFILTRATION TEST RESULTS

### BRE 365 method



**Project Name:** Cosmeston Farm, Cosmeston

**Project Ref:** 7061b

**Test Location:** ETP2

**Fill Number:** 1

**Soil Infiltration Rate** test failed m/sec

#### Test results:

Time (mins)	Water Level (m bgl)
0	0.48
1	0.48
2	0.48
3	0.48
4	0.48
5	0.48
6	0.48
10	0.48
15	0.48
30	0.48
35	0.48
60	0.48
110	0.48
170	0.48
258	0.48

#### Pit Dimensions (m)

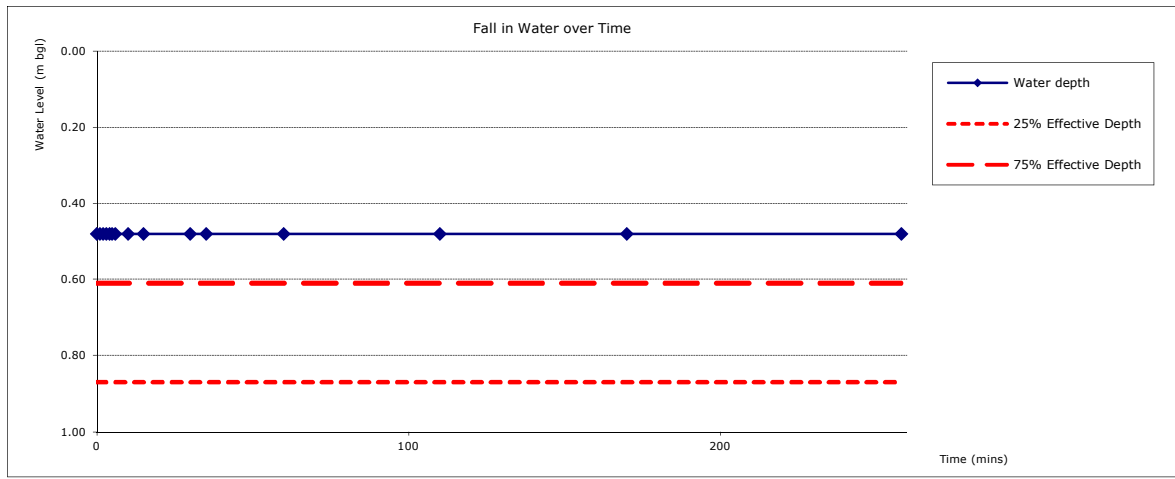
length	1.80
width	0.80
depth	1.00

Assumed Invert Level (m bgl) 0.00

**See Trial Pit Log ETP2 for Ground Conditions**

**Remarks:**

- Testing undertaken in general accordance with BRE Digest 365:2007
- Trial pit was not filled with aggregate for test.
- Some spalling of pit sides during excavation. Sides became unstable with addition of water.



#### Soil Infiltration Rate (m/sec)

$$f = \frac{V_{p75-25}}{\alpha_{p50} \times t_{p75-25}}$$

$V_{p75-25}$	Effective depth storage volume of water in the trial pit between 75% and 25% effective depth	0.37
$\alpha_{p50}$	The internal surface area of the trial pit up to 50% effective depth and including the base area	2.792
$t_{p75-25}$	The time for the water level to fall from 75% to 25% effective depth	n/a

#### Soil Infiltration Rate (m/sec)

$$f = \frac{0.374}{\text{no value}}$$

**f test failed**

# SOAKAWAY INFILTRATION TEST RESULTS

## BRE 365 method



ENGINEERS  
GEOLOGISTS  
SCIENTISTS

<b>Project Name:</b>	Cosmeston Farm, Cosmeston
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<b>Project Ref:</b>	7061b
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<b>Test Location:</b>	ETP3
<b>Fill Number:</b>	1

<b>Soil Infiltration Rate</b>	test failed m/sec
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**Test results:**

Time (mins)	Water Level (m bgl)
0	0.51
1	0.51
2	0.51
3	0.51
4	0.51
5	0.51
15	0.51
30	0.51
90	0.51
95	0.51
105	0.51
140	0.51
195	0.51
230	0.51

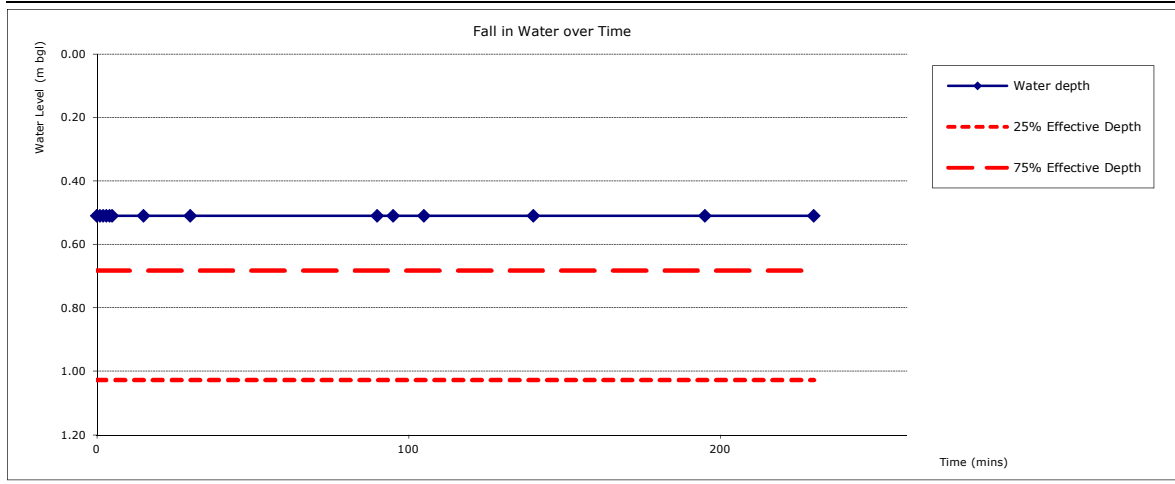
**Pit Dimensions (m)**

length	1.70
width	0.80
depth	1.20

Assumed Invert Level (m bgl)	0.00
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**See Trial Pit Log ETP3 for Ground Conditions**

<b>Remarks:</b>
1. Testing undertaken in general accordance with BRE Digest 365:2007
2. Trial pit was not filled with aggregate for test.
3. Some spalling of pit sides during excavation. Sides became unstable with addition of water.



**Soil Infiltration Rate (m/sec)**       $f = \frac{V_{p75-25}}{\alpha_{p50} \times t_{p75-25}}$

$V_{p75-25}$	Effective depth storage volume of water in the trial pit between 75% and 25% effective depth	0.47
$\alpha_{p50}$	The internal surface area of the trial pit up to 50% effective depth and including the base area	3.085
$t_{p75-25}$	The time for the water level to fall from 75% to 25% effective depth	n/a

**Soil Infiltration Rate (m/sec)**       $f = \frac{0.469}{\text{no value}}$

**$f$  test failed**

**SOAKAWAY INFILTRATION TEST RESULTS**  
BRE 365 method

<b>Project Name:</b>	Cosmeston Farm, Cosmeston
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<b>Project Ref:</b>	7061b
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<b>Test Location:</b>	ETP20
<b>Fill Number:</b>	1

<b>Soil Infiltration Rate</b>	test failed m/sec
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**Test results:**

Time (mins)	Water Level (m bgl)
0	0.28
1	0.28
2	0.28
3	0.28
4	0.28
5	0.28
20	0.28
60	0.27
120	0.27
300	0.27

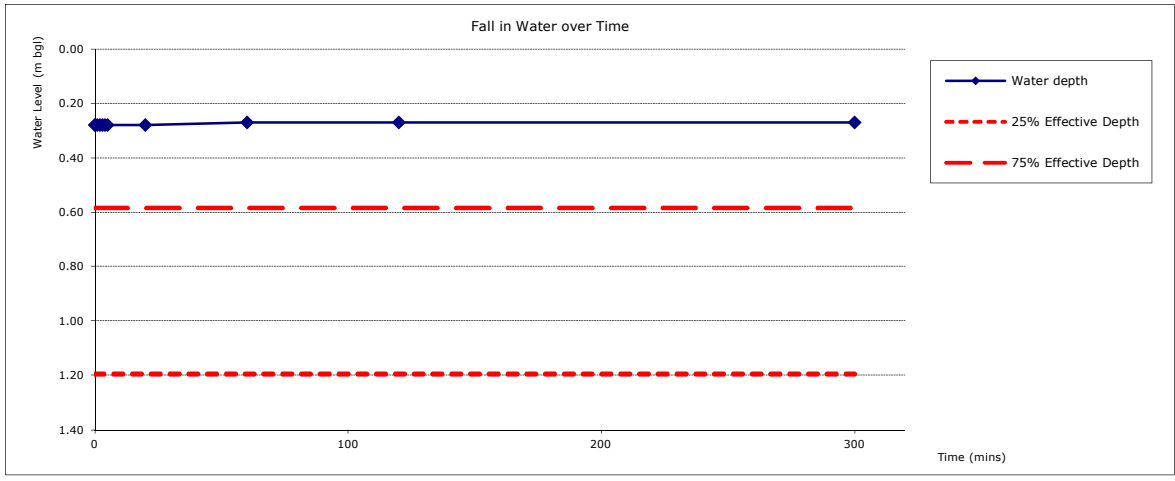
**Pit Dimensions (m)**

length	1.80
width	0.60
depth	1.50

Assumed Invert Level (m bgl)	0.00
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**See Trial Pit Log ETP20 for Ground Conditions**

**Remarks:**  
 1. Testing undertaken in general accordance with BRE Digest 365:2007  
 2. Trial pit was not filled with aggregate for test.  
 3. Some spalling of pit sides during excavation. Sides became unstable with addition of water.



**Soil Infiltration Rate (m/sec)**       $f = \frac{V_{p75-25}}{\alpha_{p50} \times t_{p75-25}}$

$V_{p75-25}$	Effective depth storage volume of water in the trial pit between 75% and 25% effective depth	0.66
$\alpha_{p50}$	The internal surface area of the trial pit up to 50% effective depth and including the base area	4.008
$t_{p75-25}$	The time for the water level to fall from 75% to 25% effective depth	n/a

**Soil Infiltration Rate (m/sec)**       $f = \frac{0.659}{\text{no value}}$   
 $f$  test failed

**SOAKAWAY INFILTRATION TEST RESULTS**  
BRE 365 method



**Project Name:** Cosmeston Farm, Cosmeston

**Project Ref:** 7061b

**Test Location:** ETP23  
**Fill Number:** 1

**Soil Infiltration Rate**

test failed m/sec

**Test results:**

Time (mins)	Water Level (m bgl)
0	0.22
3	0.23
5	0.23
80	0.35
150	0.44
200	0.50
285	0.58
355	0.65

**Pit Dimensions (m)**

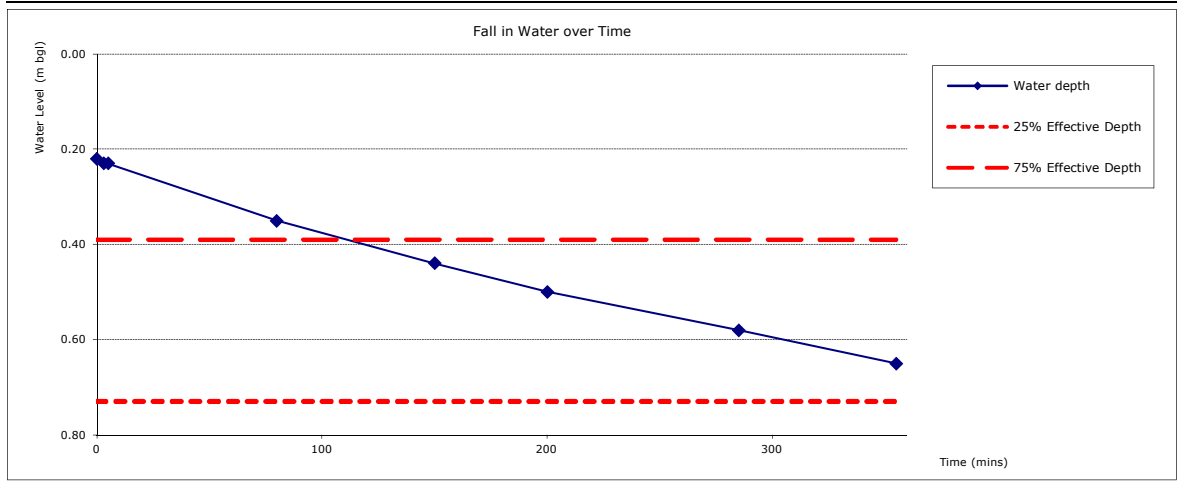
length	1.80
width	0.60
depth	0.90

**Assumed Invert Level (m bgl)** 0.00

**See Trial Pit Log ETP23 for Ground Conditions**

**Remarks:**

1. Testing undertaken in general accordance with BRE Digest 365:2007
2. Trial pit was not filled with aggregate for test.
3. Some spalling of pit sides during excavation. Sides became unstable with addition of water.



**Soil Infiltration Rate (m/sec)**  $f = \frac{V_{p75-25}}{\alpha_{p50} \times t_{p75-25}}$

$V_{p75-25}$	Effective depth storage volume of water in the trial pit between 75% and 25% effective depth	0.37
$\alpha_{p50}$	The internal surface area of the trial pit up to 50% effective depth and including the base area	2.712
$t_{p75-25}$	The time for the water level to fall from 75% to 25% effective depth	n/a

**Soil Infiltration Rate (m/sec)**  $f = \frac{0.367}{\text{no value}}$   
 $f$  test failed

**SOAKAWAY INFILTRATION TEST RESULTS**  
BRE 365 method

<b>Project Name:</b>	Cosmeston Farm, Cosmeston
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<b>Project Ref:</b>	7061b
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<b>Test Location:</b>	ETP26
<b>Fill Number:</b>	1

<b>Soil Infiltration Rate</b>	<b>3.85E-05 m/sec</b>
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**Test results:**

Time (mins)	Water Level (m bgl)
0	0.31
1	0.33
2	0.34
5	0.37
20	0.47
40	0.60
65	0.74
100	0.91

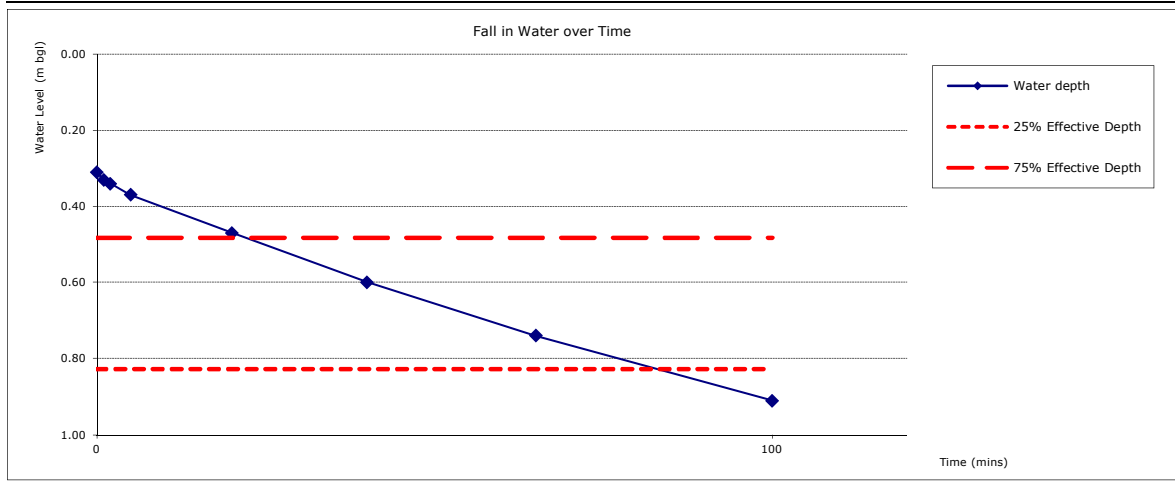
**Pit Dimensions (m)**

length	1.80
width	0.70
depth	1.00

Assumed Invert Level (m bgl)	0.00
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See Trial Pit Log ETP26 for Ground Conditions

<b>Remarks:</b>
1. Testing undertaken in general accordance with BRE Digest 365:2007
2. Trial pit was not filled with aggregate for test.
3. Some spalling of pit sides during excavation. Sides became unstable with addition of water.



**Soil Infiltration Rate (m/sec)**  $f = \frac{V_{p75-25}}{\alpha_{p50} \times t_{p75-25}}$

$V_{p75-25}$	Effective depth storage volume of water in the trial pit between 75% and 25% effective depth	0.43
$\alpha_{p50}$	The internal surface area of the trial pit up to 50% effective depth and including the base area	2.985
$t_{p75-25}$	The time for the water level to fall from 75% to 25% effective depth	63

**Soil Infiltration Rate (m/sec)**  $f = \frac{0.435}{11285.93382}$   
 $f$  **3.85E-05**



## SOAKAWAY INFILTRATION TEST RESULTS

### BRE 365 method



<b>Project Name:</b>	Cosmeston Farm, Cosmeston
<b>Project Ref:</b>	7061b
<b>Test Location:</b>	ETP25
<b>Fill Number:</b>	1

<b>Soil Infiltration Rate</b>	test failed m/sec
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#### Test results:

Time (mins)	Water Level (m bgl)
0	0.41
1	0.41
2	0.42
3	0.42
4	0.42
5	0.42
18	0.42
32	0.42
65	0.42
90	0.42
155	0.42
240	0.42
302	0.42

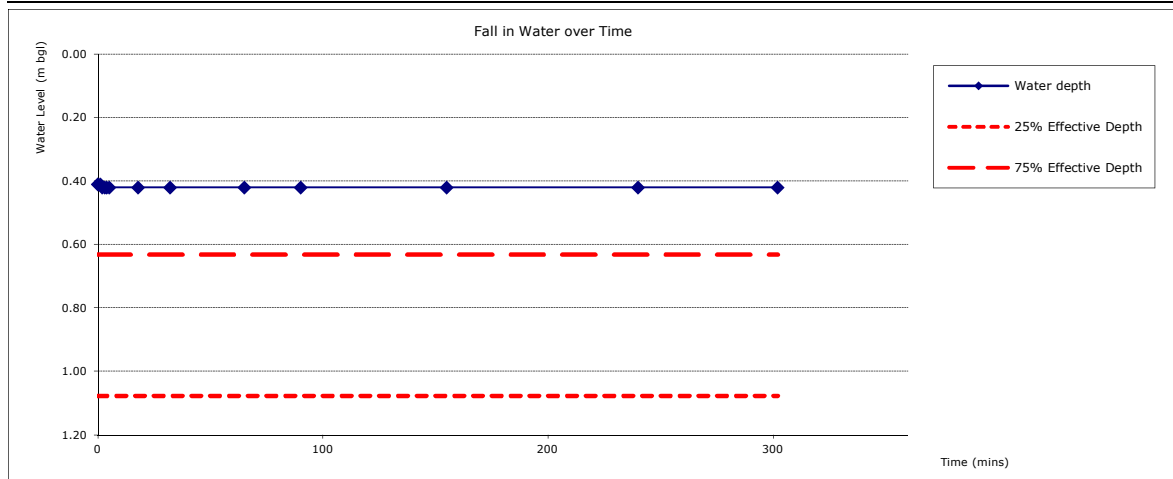
#### Pit Dimensions (m)

length	1.70
width	0.70
depth	1.30

<b>Assumed Invert Level (m bgl)</b>	0.00
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#### See Trial Pit Log ETP25 for Ground Conditions

<p><b>Remarks:</b></p> <ol style="list-style-type: none"> <li>1. Testing undertaken in general accordance with BRE Digest 365:2007</li> <li>2. Trial pit was not filled with aggregate for test.</li> <li>3. Some spalling of pit sides during excavation. Sides became unstable with addition of water.</li> </ol>
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**Soil Infiltration Rate (m/sec)**       $f = \frac{V_{p75-25}}{\alpha_{p50} \times t_{p75-25}}$

$V_{p75-25}$	Effective depth storage volume of water in the trial pit between 75% and 25% effective depth	0.53
$\alpha_{p50}$	The internal surface area of the trial pit up to 50% effective depth and including the base area	3.326
$t_{p75-25}$	The time for the water level to fall from 75% to 25% effective depth	n/a

**Soil Infiltration Rate (m/sec)**       $f = \frac{0.530}{\text{no value}}$

**$f$  test failed**