

Appendix G

SOAKAWAY INFILTRATION TEST RESULTS

BRE 365 method



Project Name:	PROPOSED RESIDENTIAL DEVELOPMENT TY MAWR, PONTARDAWE		
Project Ref:	8293	Date of Testing:	14.09.22
Test Location:	TP1 (SA1)	Soil Infiltration Rate	NO TEST ACHEIVABLE
Fill Number:	1		

Test results:

Time (mins)	Water Level (m bgl)
No measurable head of water could be achieved to undertake soakaway test. Approximate estimate of 500 gallons water emptied into pit over 1 minute.	

Pit Dimensions (m)

Length	1.70
Width	1.80
Depth	2.00

Assumed Invert Level (m bgl)	N/A
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Ground Conditions:

GL - 0.3m	Grass over soft brown slightly sandy silty CLAY.
0.3 - 2.0m	Dark brown and black ashy slightly sandy slightly gravelly subangular COBBLES and BOULDERS. Possible slag also noted.

Remarks:

1. Testing undertaken in general accordance with BRE Digest 365:2016
2. Trial pit was not filled with aggregate for test.
3. Heavy spalling of pit walls during excavation.

SOAKAWAY INFILTRATION TEST RESULTS

BRE 365 method



Project Name:	PROPOSED RESIDENTIAL DEVELOPMENT TY MAWR, PONTARDAWE		
Project Ref:	8293	Date of Testing:	14.09.22
Test Location:	TP2 (SA2)	Soil Infiltration Rate	
Fill Number:	1		

NO TEST ACHEIVABLE

Test results:

Time (mins)	Water Level (m bgl)
No measurable head of water could be achieved to undertake soakaway test. Approximate estimate of 500 gallons water emptied into pit over 1 minute.	

Pit Dimensions (m)

Length	1.70
Width	1.80
Depth	2.00

Assumed Invert Level (m bgl)	N/A
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Ground Conditions:

GL - 0.2m	Grass over soft brown slightly sandy silty CLAY.
0.2- 0.4m	Light brown slightly clayey sandy angular to subrounded fine to coarse brick and sandstone GRAVEL.
0.4 - 2.5m	Dark brown and black ashy medium and coarse SAND and angular to subrounded fine to coarse slag brick and sandstone GRAVEL with medium subangular brick and sandstone cobble and boulder content. Possible slag also noted.

Remarks:

1. Testing undertaken in general accordance with BRE Digest 365:2016
2. Trial pit was not filled with aggregate for test.
3. Heavy spalling of pit walls during excavation.

BRE 365 method

Project Name:	PROPOSED RESIDENTIAL DEVELOPMENT TY MAWR, PONTARDAWE
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Project Ref:	8293
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Date of Testing:	14.09.22
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Test Location:	TP3 (SA3)
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Soil Infiltration Rate	4.89E-05 m/sec
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Fill Number:	1
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Test results:

[illegible]

Pit Dimensions (m)

Length	2.00
Width	0.65
Depth	0.85

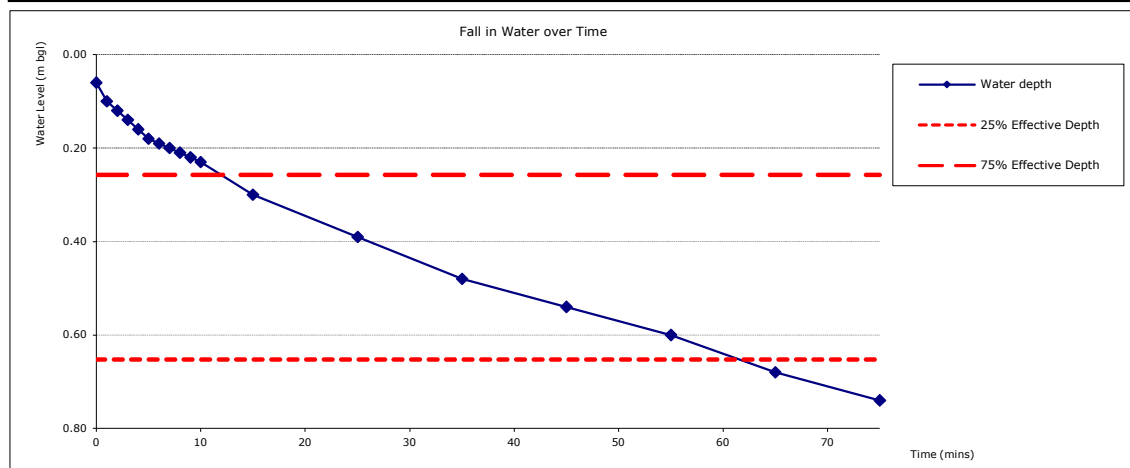
Assumed Invert Level (m bgl)	0.06
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Ground Conditions:

GL - 0.2m	Grass over soft brown slightly sandy silty CLAY.
0.2 - 0.6m	Soft to firm light brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded sandstone and mudstone.
0.6 - 0.85m	Dark brown and black ashy medium and coarse SAND and angular to subrounded fine to coarse slag, brick and sandstone GRAVEL.

Remarks:

1. Testing undertaken in general accordance with BRE Digest 365:2016
2. Trial pit was not filled with aggregate for test.
3. Some spalling of pit walls during excavation.



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	0.51
α_{p50}	The internal surface area of the trial pit up to 50% effective depth and including the base area	3.3935
t_{p75-25}	The time for the water level to fall from 75% to 25% effective depth	52

Soil Infiltration Rate (m/sec)

$$\frac{f}{0.514} = 10498.64063$$

f 4.89E-05

SOAKAWAY INFILTRATION TEST RESULTS

BRE 365 method



Project Name:	PROPOSED RESIDENTIAL DEVELOPMENT TY MAWR, PONTARDAWE
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Project Ref:	8293
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Date of Testing:	14.09.22
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Test Location:	TP3 (SA3)
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Soil Infiltration Rate	3.94E-05 m/sec
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Fill Number:	2
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Test results:

Time (mins)	Water Level (m bgl)
0	0.15
1	0.17
2	0.18
3	0.20
4	0.21
5	0.22
6	0.22
7	0.23
8	0.24
9	0.24
10	0.25
20	0.35
30	0.42
40	0.48
50	0.55
60	0.62
70	0.67
80	0.72
100	0.77
120	0.83

Pit Dimensions (m)

Length	2.00
Width	0.65
Depth	0.85

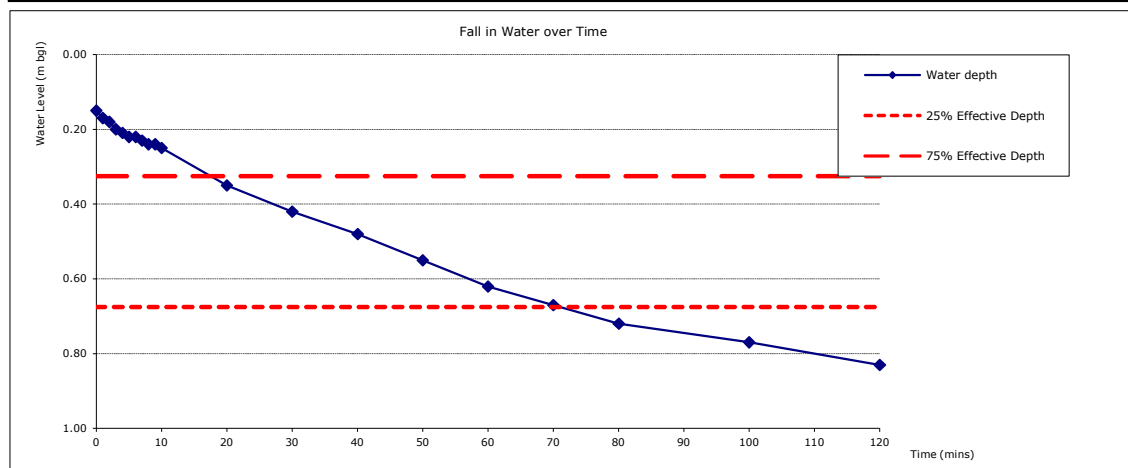
Assumed Invert Level (m bgl)	0.15
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Ground Conditions:

GL - 0.2m	Grass over soft brown slightly sandy silty CLAY.
0.2 - 0.6m	Soft to firm light brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded sandstone and mudstone.
0.6 - 0.85m	Dark brown and black ashy medium and coarse SAND and angular to subrounded fine to coarse slag, brick and sandstone GRAVEL.

Remarks:

1. Testing undertaken in general accordance with BRE Digest 365:2016
2. Trial pit was not filled with aggregate for test.
3. Some spalling of pit walls during excavation.



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	0.46
α_{p50}	The internal surface area of the trial pit up to 50% effective depth and including the base area	3.155
t_{p75-25}	The time for the water level to fall from 75% to 25% effective depth	61

Soil Infiltration Rate (m/sec)

$$f = \frac{0.455}{11547.3}$$

$$f = 3.94E-05$$

BRE 365 method



Date of Testing:	14.09.22
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Test Location:	TP3 (SA3)
Fill Number:	3

Soil Infiltration Rate	3.78E-06 m/sec
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Pit Dimensions (m)

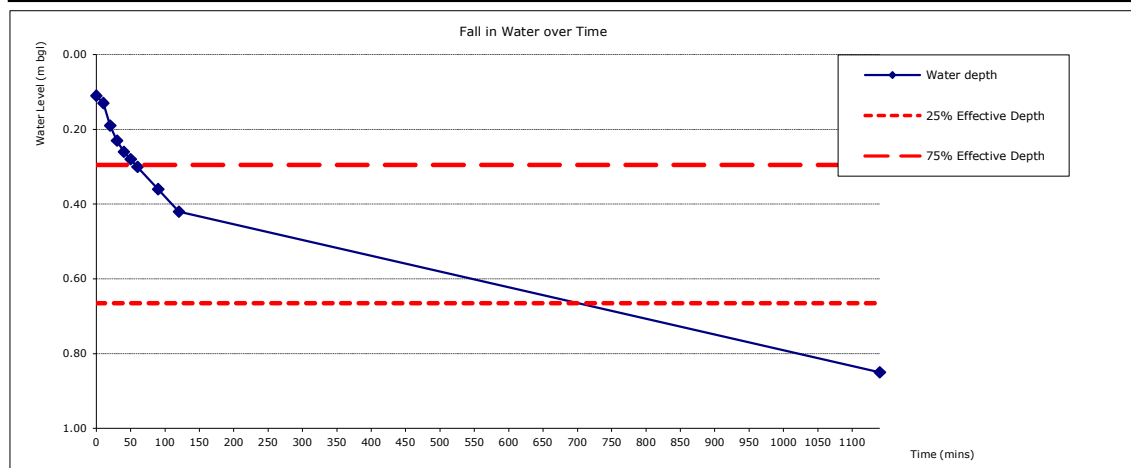
[illegible]

Length	2.00
Width	0.65
Depth	0.85

Assumed Invert Level (m bgl)	0.11
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Ground Conditions:	
GL - 0.2m	Grass over soft brown slightly sandy silty CLAY.
0.2 - 0.6m	Soft to firm light brown slightly sandy slightly gravelly CLAY. Gravel is angular to subrounded sandstone and mudstone.
0.6 - 0.85m	Dark brown and black ashly medium and coarse SAND and angular to subrounded fine to coarse slag, brick and sandstone GRAVEL.

1. Testing undertaken in general accordance with BRE Digest 365:2016
2. Trial pit was not filled with aggregate for test.
3. Some spalling of pit walls during excavation.



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

V_{p75-25}	Effective depth storage volume of water in the trial pit between 75% and 25% effective depth	0.48
α_{p50}	The internal surface area of the trial pit up to 50% effective depth and including the base area	3.261
t_{p75-25}	The time for the water level to fall from 75% to 25% effective depth	651

Soil Infiltration Rate (m/sec)	f	0.481
		127406.5116

f 3.78E-06