Soakaway Infiltration Test

Project No.: 24-0211
Site: Kingston Lands, Galway
Test Location: SA19
Test Date: 05 June 2025

RECEIVED: 16/10/2025

	width (m)	length (m)
test pit top dimensions	1.70	2.50
test pit base dimensions	1.70	1.15
test pit depth (m)	1.90	

Analysis using method as described in BRE DG 365 (2016) and CIRIA Report C753-The SUDS Manual (2015)

depth to groundwater before adding water (m) = Dry

Time (mins)	Depth to water surface (m)	Head of water in pit (m)
0	0.40	1.50
6	0.44	1.46
22	0.61	1.29
41	0.65	1.25
59	0.72	1.18
76	0.80	1.10
92	0.90	1.00
103	0.95	0.95
118	1.00	0.90
133	1.04	0.86
146	1.09	0.81
154	1.10	0.80
174	1.19	0.71

RESULTS (FROM GRAPH BELOW)

Test start

75% head of water at 1.13 m
depth to water surface (target) 0.78 m
time to reach target depth 71.0 mins

Test end

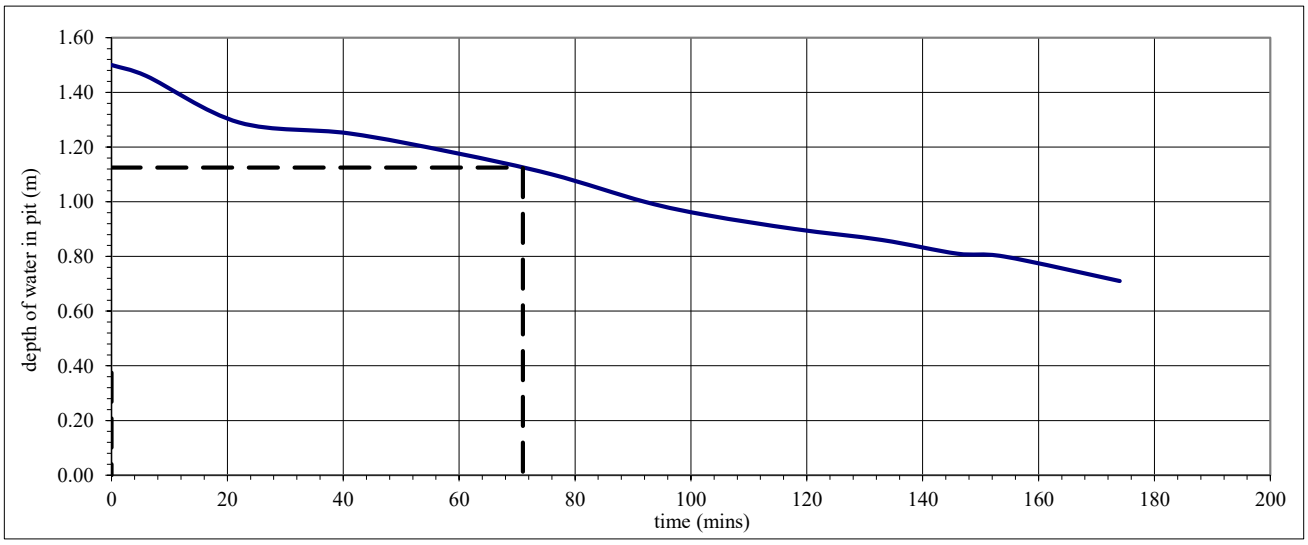
25% head of water at 0.38 m
depth to water surface (target) 1.53 m
time to reach target depth not reached

soil infiltration rate $f = \frac{V_{p75\text{-}25}}{a_{s50} \times t_{p75\text{-}25}}$

Infiltration rate (f) is very low

TARGET DEPTHS AND CALCULATED VALUES

Time (mins)	Depth to water surface (m)	Head of water in pit (m)	Time elapsed, $t_{p75\text{-}25}$ (mins)	Volume of water lost, $V_{p75\text{-}25}$ (m^3)	Area of walls and base at 50% drop, a_{s50} (m^2)	Soil infiltration rate, (m/min)	Soil infiltration rate, f (m/h)
71	0.78	1.13	N/A				
	1.53	0.38					



Soakaway Infiltration Test

Project No.: 24-0211
Site: Kingston Lands, Galway
Test Location: SA20
Test Date: 06 June 2025

RECEIVED: 15/10/2025

	width (m)	length (m)
test pit top dimensions	1.60	2.60
test pit base dimensions	1.55	1.30

Analysis using method as described in BRE DG 365 (2016) and CIRIA Report C753-The SUDS Manual (2015)

test pit depth (m) 1.25

depth to groundwater before adding water (m) = Dry

Time (mins)	Depth to water surface (m)	Head of water in pit (m)
0	0.54	0.71
5	0.56	0.69
21	0.66	0.59
56	0.75	0.50
67	0.80	0.45
87	0.89	0.36
97	0.90	0.35
116	0.91	0.34
128	0.93	0.32
158	1.00	0.25
175	1.02	0.23
182	1.05	0.20
190	1.08	0.17

RESULTS (FROM GRAPH BELOW)

Test start

75% head of water at 0.53 m
depth to water surface (target) 0.72 m
time to reach target depth 41.0 mins

Test end

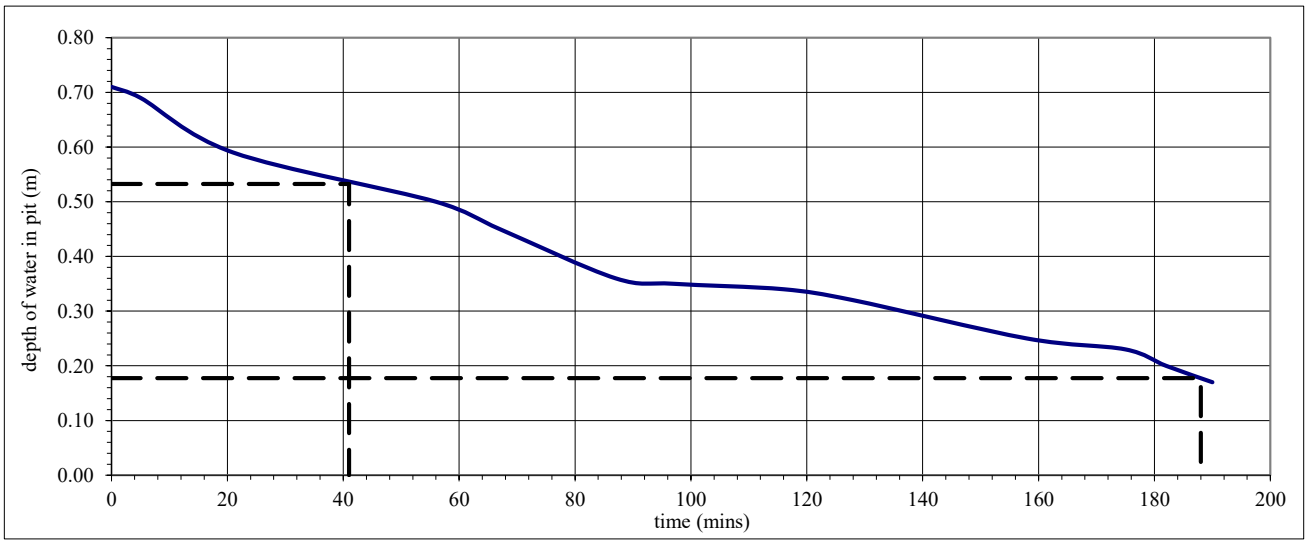
25% head of water at 0.18 m
depth to water surface (target) 1.07 m
time to reach target depth 188.0 mins

soil infiltration rate $f = \frac{V_{p75\text{-}25}}{a_{s50} \times t_{p75\text{-}25}}$

Test infiltration rate (f) = 2.50E-05 m/s

TARGET DEPTHS AND CALCULATED VALUES

Time (mins)	Depth to water surface (m)	Head of water in pit (m)	Time elapsed, $t_{p75\text{-}25}$ (mins)	Volume of water lost, $V_{p75\text{-}25}$ (m^3)	Area of walls and base at 50% drop, a_{s50} (m^2)	Soil infiltration rate, (m/min)	Soil infiltration rate, f (m/h)
41	0.72	0.53	147	0.93	4.21	1.5E-03	0.090
188	1.07	0.18					



APPENDIX I – SOAKAWAY PHOTOGRAPHS

RECEIVED: 16/10/2025

RECEIVED: 16/10/2025

SA01

RECEIVED: 16/10/2025

SA01

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-03
EH Number
SA01
(m) 0.1 0.2 0.3 0.4 0.5

SA01

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-03
EH Number
SA01
(m) 0.1 0.2 0.3 0.4 0.5

SA01

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-03
EH Number
SA 02
(m) 0.1 0.2 0.3 0.4 0.5

SA02

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-03
EH Number
SA 02
(m)
0.1
0.2
0.3
0.4
0.5

SA02

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-03
TH Number
SA02
(m) 0.1 0.2 0.3 0.4 0.5

SA02

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-03
EH Number
SA 02
(m) 0.1 0.2 0.3 0.4 0.5

SA02

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-03
EH Number
SA03
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SA03

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-03
Eff Number
SA03
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SA03

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-03
Pit Number
SA03
(m) 0.1 0.2 0.3 0.4 0.5

SA03

RECEIVED: 16/10/2025
CAUSEWAY GEOTECH
Project Name
KINGSTON LANDS GALWAY
Project Number
240211
Date
2025-06-03
TP Number
SA03
(m) 0.1 0.2 0.3 0.4 0.5

SA03

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-04
EH Number
SA04
(m) 0.1 0.2 0.3 0.4 0.5

SA04

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS GALWAY
Project Number
24-0211
Date
2025-06-04
EH Number
SA 04
(m) 0.1 0.2 0.4 0.5

SA04

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-04
EH Number
SA04
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0.4
0.5
(m)

SA04

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS GALWAY
Project Number
240211
Date
2025-06-04
TP Number
SA04
(m)
0.1
0.2
0.3
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SA04

RECEIVED: 16/10/2025

SA05

RECEIVED: 16/10/2025

SA05

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-06
EH Number
SA05
(m)
0.1
0.2
0.3
0.4
0.5

SA05

RECEIVED: 16/10/2025
CAUSEWAY GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-06
EH Number
SA05
(m) 0.1 0.3 0.4 0.5

SA05

RECEIVED: 16/10/2025
CAUSEWAY GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-06
EH Number
SA06
(m) 0.1 0.2 0.3 0.4 0.5

SA06

RECEIVED: 16/10/2025

SA06

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-06
EH Number
SA06
(m) 0.1 0.2 0.3 0.4 0.5

SA06

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-06
EH Number
SA06
0.3
0.4
0.5

SA06

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-06
EH Number
SA07
(m) 0.1 0.2 0.3 0.4 0.5

SA07

RECEIVED: 16/10/2025
CAUSEWAY
GEOTECH
Project Name
KINGSTON LANDS, GALWAY
Project Number
24-0211
Date
2025-06-06
EH Number
SA07
(m)
0.1
0.2
0.3
0.4
0.5

SA07

SA07