

soakaway test

as per BRE Digest 365

client mr khan
project kings rd, rochdale
locn soakaway test hole 1
date 10th-11th Nov 2023

provide a clean vertical sided pit or trench

pit length	1.2	m
pit width	0.7	m
pit depth b GL	1.9	m
pit equiv dia	0.3	m
pit base area	0.84	sqm

TEST	DATE	INFILTRATION RATE	
		m/s	m/hr
TEST 1	10th Nov 2023	5.1E-05	1.8E-01
TEST 2	10th Nov 2023	4.0E-05	1.4E-01
TEST 3	11th Nov 2023	3.0E-05	1.1E-01
Design infiltration rate		4.0E-05	1.5E-01

test 1

10th Nov 2023

hr	time min	duration mins	depth from GL m	depth from base m	depth from wt m	% depth	wetted area sqm	volume cum
14	35	0	0.85	1.05	0.95	100	4.5	0.8
14	36	1	0.89	1.01	0.91	96	4.3	0.8
14	37	2	0.92	0.98	0.88	93	4.2	0.7
14	38	3	0.94	0.96	0.86	91	4.1	0.7
14	39	4	0.98	0.92	0.82	86	4.0	0.7
14	41	6	1.02	0.88	0.78	82	3.8	0.7
14	44	9	1.09	0.81	0.71	75	3.5	0.6
14	47	12	1.13	0.77	0.67	71	3.4	0.6
14	50	15	1.18	0.72	0.62	65	3.2	0.5
14	53	18	1.2	0.7	0.6	63	3.1	0.5
14	55	20	1.24	0.66	0.56	59	3.0	0.5
15	0	25	1.3	0.6	0.5	53	2.7	0.4
15	4	29	1.33	0.57	0.47	49	2.6	0.4
15	8	33	1.38	0.52	0.42	44	2.4	0.4
15	11	36	1.39	0.51	0.41	43	2.4	0.3
15	16	41	1.45	0.45	0.35	37	2.2	0.3
15	19	44	1.47	0.43	0.33	35	2.1	0.3
15	23	48	1.49	0.41	0.31	33	2.0	0.3
15	26	51	1.51	0.39	0.29	31	1.9	0.2
15	32	57	1.55	0.35	0.25	26	1.8	0.2
15	40	65	1.6	0.3	0.2	21	1.6	0.2
15	49	74	1.65	0.25	0.15	16	1.4	0.1
16	0	85	1.69	0.21	0.11			0.1
16	10	95	1.73	0.17	0.07			0.1
16	22	107	1.75	0.15	0.05			0.0
16	32	117	1.8	0.1	0	0	0.8	0.0

volume @ 75% depth

V75

0.6 cu m

volume @ 25% depth

V25

0.2 cu m

time @ 75% depth

t75

9 mins

time @ 25% depth

t25

58 mins

pit surface area @ 50% depth

Ap50

2.65 sq m

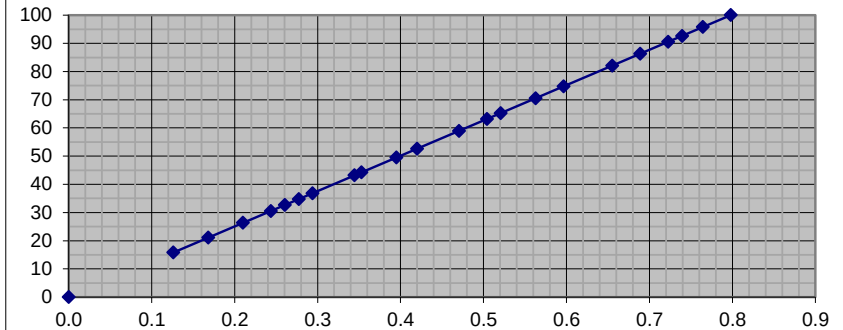
infiltration rate

f

5.1E-05 m/s

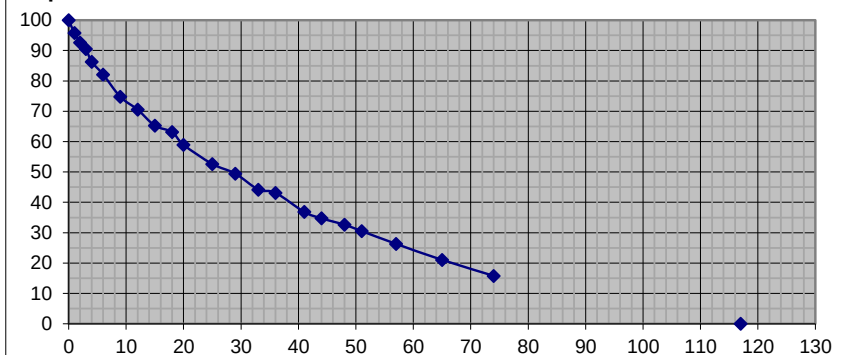
depth %

volume cum



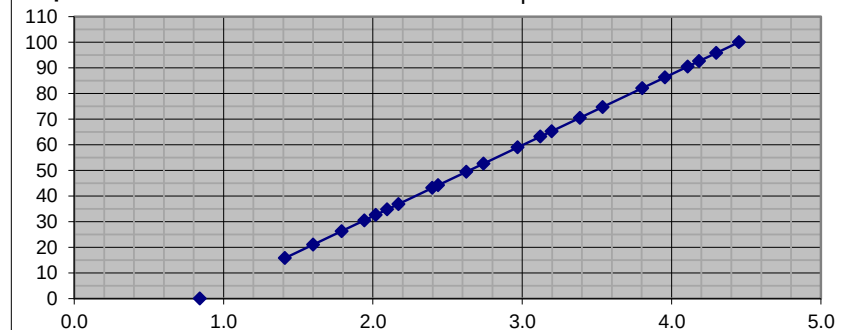
depth %

duration mins



depth %

wetted area sqm

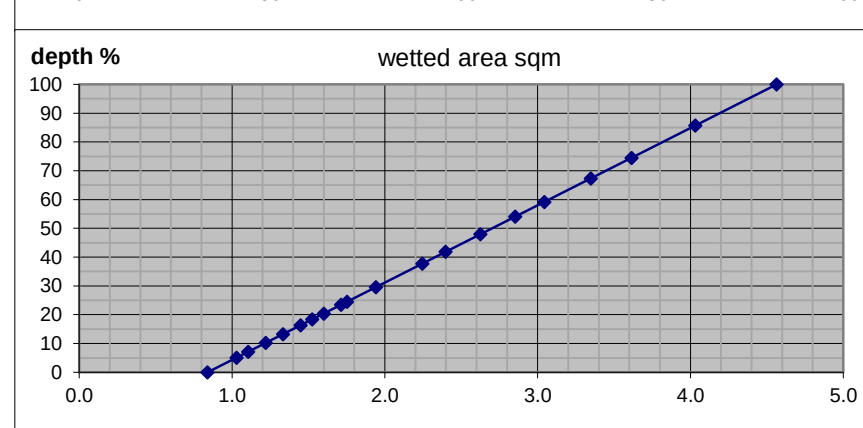
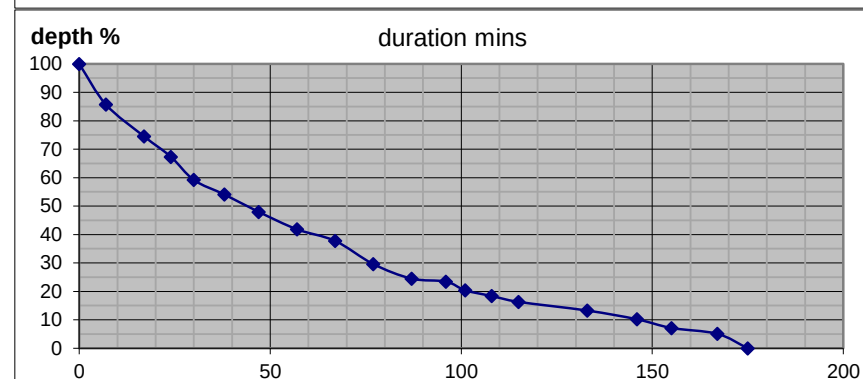
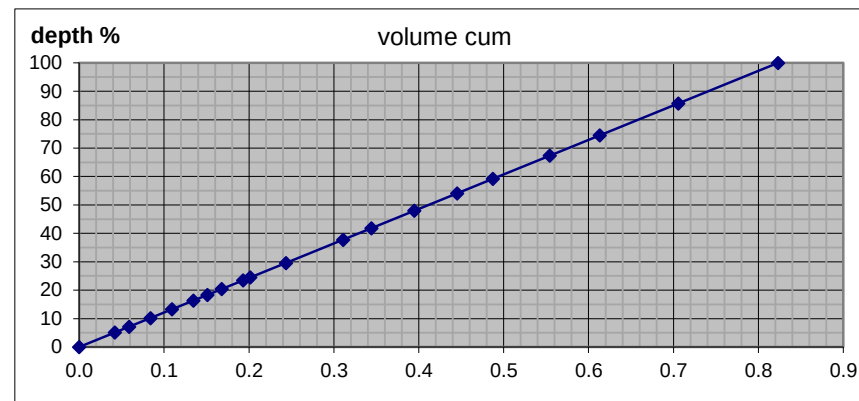


test 2

10th Nov 2023

hr	time min	duration mins	depth from GL m	depth from base m	depth from wt m	% depth	wetted area sqm	volume cum
17	33	0	0.85	1.05	0.98	100	4.6	0.8
17	40	7	0.99	0.91	0.84	86	4.0	0.7
17	50	17	1.1	0.8	0.73	74	3.6	0.6
17	57	24	1.17	0.73	0.66	67	3.3	0.6
18	3	30	1.25	0.65	0.58	59	3.0	0.5
18	11	38	1.3	0.6	0.53	54	2.9	0.4
18	20	47	1.36	0.54	0.47	48	2.6	0.4
18	30	57	1.42	0.48	0.41	42	2.4	0.3
18	40	67	1.46	0.44	0.37	38	2.2	0.3
18	50	77	1.54	0.36	0.29	30	1.9	0.2
19	0	87	1.59	0.31	0.24	24	1.8	0.2
19	9	96	1.6	0.3	0.23	23	1.7	0.2
19	14	101	1.63	0.27	0.2	20	1.6	0.2
19	21	108	1.65	0.25	0.18	18	1.5	0.2
19	28	115	1.67	0.23	0.16	16	1.4	0.1
19	46	133	1.7	0.2	0.13	13	1.3	0.1
19	59	146	1.73	0.17	0.1	10	1.2	0.1
20	8	155	1.76	0.14	0.07	7	1.1	0.1
20	20	167	1.78	0.12	0.05	5	1.0	0.0
20	28	175	1.83	0.07	0	0	0.8	0.0

volume @ 75% depth	V75	0.62	cu m
volume @ 25% depth	V25	0.2	cu m
time @ 75% depth	t75	17	mins
time @ 25% depth	t25	82.5	mins
pit surface area @ 50% depth	Ap50	2.7	sq m
infiltration rate	f	4.0E-05	m/s



test 3

11th Nov 2023

hr	time min	duration mins	depth from GL m	depth from base m	depth from wt m	% depth	wetted area sqm	volume cum
11	3	0	0.83	1.07	0.96	100	4.5	0.8
11	9	6	0.91	0.99	0.88	92	4.2	0.7
11	14	11	0.97	0.93	0.82	85	4.0	0.7
11	18	15	1.02	0.88	0.77	80	3.8	0.6
11	26	23	1.1	0.8	0.69	72	3.5	0.6
11	32	29	1.15	0.75	0.64	67	3.3	0.5
11	39	36	1.2	0.7	0.59	61	3.1	0.5
11	46	43	1.25	0.65	0.54	56	2.9	0.5
11	57	54	1.33	0.57	0.46	48	2.6	0.4
12	4	61	1.37	0.53	0.42	44	2.4	0.4
12	8	65	1.38	0.52	0.41	43	2.4	0.3
12	15	72	1.42	0.48	0.37	39	2.2	0.3
12	24	81	1.46	0.44	0.33	34	2.1	0.3
12	31	88	1.48	0.42	0.31	32	2.0	0.3
12	36	93	1.5	0.4	0.29	30	1.9	0.2
12	48	105	1.54	0.36	0.25	26	1.8	0.2
12	56	113	1.56	0.34	0.23	24	1.7	0.2
13	6	123	1.6	0.3	0.19	20	1.6	0.2
13	13	130	1.63	0.27	0.16	17	1.4	0.1
13	21	138	1.64	0.26	0.15	16	1.4	0.1
13	30	147	1.67	0.23	0.12	13	1.3	0.1
13	46	163	1.69	0.21	0.1	10	1.2	0.1
13	56	173	1.72	0.18	0.07			0.1
14	15	192	1.79	0.11	0			0.0

volume @ 75% depth	V75	0.61	cu m
volume @ 25% depth	V25	0.2	cu m
time @ 75% depth	t75	20	mins
time @ 25% depth	t25	105	mins
pit surface area @ 50% depth	Ap50	2.65	sq m

infiltration rate f **3.0E-05** m/s

