TO DETERMINE MASS SUSCEPTIBILITY OF SOIL & ASH SAMPLES
FROM DALBY CHARCOAL KILN SITE (DLB04)

Calibration samples	Mass	Bridge reading	Total susceptibility	Mass susceptibility
	g		k_T x 10^{-8} m^3	χ x 10^{-8} m^3 kg^{-1}
Manganese sulphate	50.00	62.0	4.06	81.2
High alumina cement	50.00	541	35.80	716

Test samples Type				
Soil ALDER	52.03	4.0	0.26	5
Soil ASH	52.99	20.5	1.34	25
Soil BIRCH	52.64	7.0	0.46	9
Soil HAZEL	52.14	5.2	0.34	7
Soil OAK	51.71	6.4	0.42	8
Soil WILLOW	50.63	5.2	0.34	7
Natural clay	52.88	6.5	0.43	8
Baked clay	53.60	189.0	12.48	233
Ash/charcoal layer N	52.43	330.0	21.82	416
Ash/charcoal layer E	52.71	394.0	26.06	494
Ash/charcoal layer S	52.85	265.0	17.51	331
Ash/charcoal layer W	52.82	338.0	22.35	423
Ash/charcoal layer Centre 1	52.79	484.0	32.02	607
Ash/charcoal layer Centre 2	52.77	289.0	19.10	362
Ash/charcoal layer Centre 3	51.41	301.0	19.90	387
Ash layer 1	52.76	270.0	17.84	338
Ash layer 2	52.88	282.0	18.64	352
Ash layer 3	52.02	306.0	20.23	389
Pre burn T/C 1 - 1	43.92	5.0	0.33	7
Pre burn T/C 1 - 4	47.91	3.3	0.22	5
Pre burn T/C 2 - 1	51.35	5.0	0.33	6
Pre burn T/C 2 - 4	51.29	4.7	0.31	6
Pre burn T/C 3 - 1	50.61	7.1	0.46	9
Pre burn T/C 3 - 4	51.50	7.2	0.47	9
Pre burn T/C 4 - 1	45.32	8.7	0.57	13
Pre burn T/C 4 - 4	49.54	8.4	0.55	11
Pre burn T/C 5 - 1	49.30	5.0	0.33	7
Pre burn T/C 5 - 4	49.79	6.8	0.45	9
Pre burn T/C 6 - 1	47.77	6.8	0.45	9
Pre burn T/C 6 - 4	49.45	5.9	0.39	8
Pre burn T/C 7 - 1	50.26	8.0	0.52	10
Pre burn T/C 7 - 4	50.64	7.3	0.48	9
Pre burn T/C 8 - 1	49.94	6.4	0.42	8
Pre burn T/C 8 - 4	50.23	5.5	0.36	7
Pre burn T/C 13 - 1	49.19	3.4	0.22	5
Pre burn T/C 13 - 4	48.97	4.0	0.26	5
Pre burn T/C 14 - 1	49.45	10.0	0.65	13
Pre burn T/C 14 - 4	50.68	6.8	0.45	9
Pre burn T/C 15 - 1	50.52	6.0	0.39	8
Pre burn T/C 15 - 4	50.35	6.9	0.45	9
Pre burn T/C 16 - 1	47.45	9.0	0.59	12
Pre burn T/C 16 - 4	50.86	12.1	0.79	16

Post burn T/C 1 - 1	51.88	79.0	5.19	100
Post burn T/C 1 - 4	51.15	22.8	1.49	29
Post burn T/C 2 - 1	51.89	8.2	0.54	10
Post burn T/C 2 - 4	50.91	5.5	0.36	7
Post burn T/C 3 - 1	51.94	13.0	0.85	16
Post burn T/C 3 - 4	51.11	6.9	0.45	9
Post burn T/C 4 - 1	51.55	25.5	1.67	32
Post burn T/C 4 - 4	51.37	20.0	1.31	25
Post burn T/C 5 - 1	51.01	9.1	0.60	12
Post burn T/C 5 - 4	51.44	6.9	0.45	9
Post burn T/C 6 - 1	50.48	57.8	3.78	75
Post burn T/C 6 - 4	51.10	24.0	1.57	31
Post burn T/C 7 - 1	51.94	9.6	0.63	12
Post burn T/C 7 - 4	50.97	7.4	0.48	10
Post burn T/C 8 - 1	52.10	36.4	2.38	46
Post burn T/C 8 - 4	51.72	10.6	0.69	13
Post burn T/C 13 - 1	51.29	40.7	2.67	52
Post burn T/C 13 - 4	51.42	37.5	2.46	48
Post burn T/C 14 - 1	51.37	29.2	1.91	37
Post burn T/C 14 - 4	51.63	25.8	1.69	33
Post burn T/C 15 - 1	51.37	14.0	0.92	18
Post burn T/C 15 - 4	51.49	7.0	0.46	9
Post burn T/C 16 - 1	51.55	15.3	1.00	19
Post burn T/C 16 - 4	51.64	6.9	0.45	9

Mean		) Soil &	10
Median		) natural	8
Standard Deviation	+/-	) clay	7
Mean		) Baked clay	394
Median		) Ash/charcoal	387
Standard Deviation	+/-	) layers	96
Mean		) Pre burn T/C	9
Median		) soil samples	9
Standard Deviation	+/-	) all	3
Mean		) Pre burn T/C	9
Median		) soil samples	9
Standard Deviation	+/-	) 1 cm depth	3
Mean		) Pre burn T/C	9
Median		) soil samples	9
Standard Deviation	+/-	) 4 cm depth	3
Mean		) Post burn T/C	28
Median		) soil samples	19
Standard Deviation	+/-	) all	23
Mean		) Post burn T/C	36
Median		) soil samples	26
Standard Deviation	+/-	) 1 cm depth	28
Mean		) Post burn T/C	19
Median		) soil samples	11
Standard Deviation	+/-	) 4 cm depth	13

Chart data

Total sus.	Meter	Total sus.	Meter
0	0		
4.06	62.0	4.06	62.0
		35.80	541

Slope & constant values as calculated by data trendline:

m	c	x	y
0.0655	0	62.0	4.0610
0.0663	-0.0483	62.0	4.0623
0.0663	-0.0483	541	35.8200

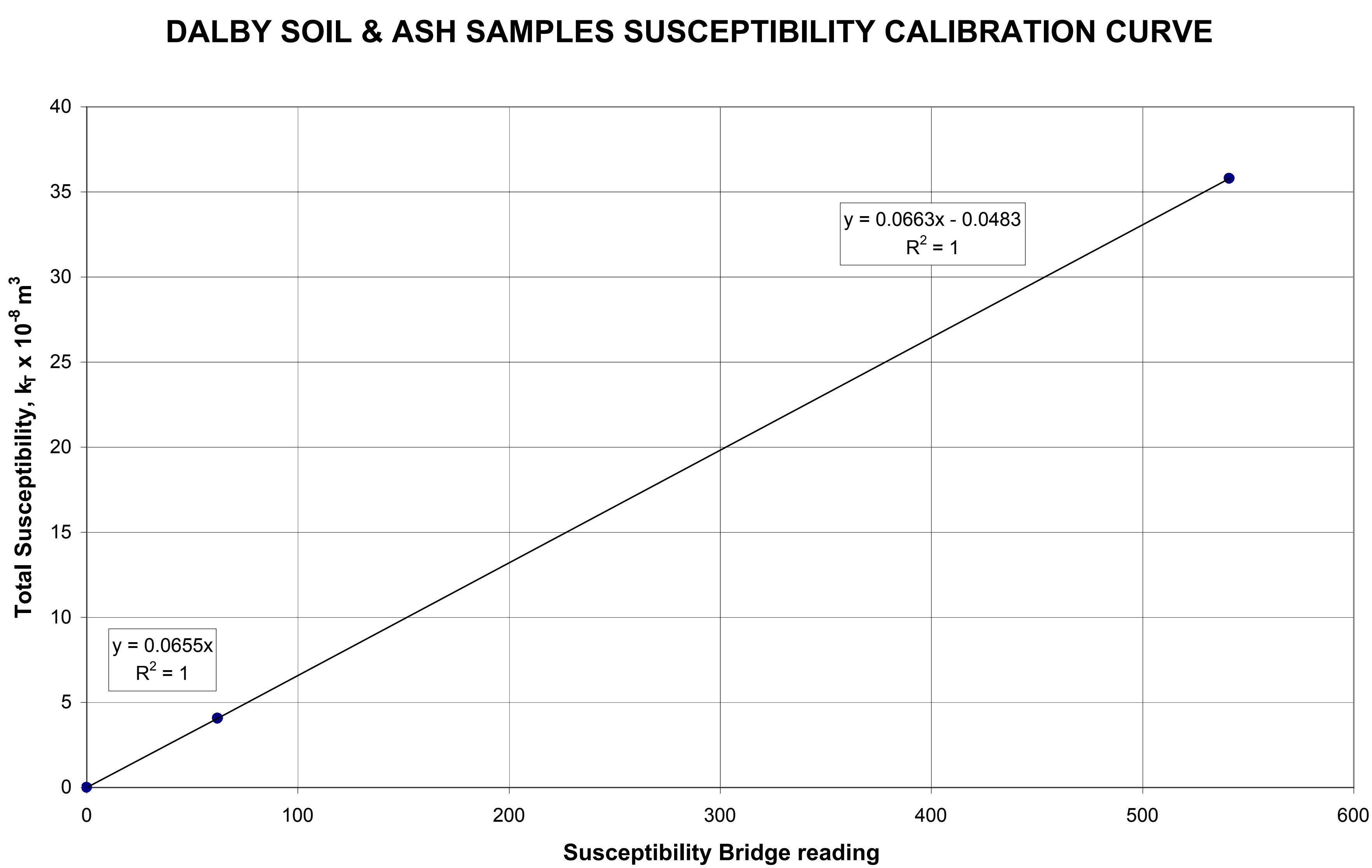
Slope & constant values as calculated from raw data:

m	c	x	y
0.06548	0	62.0	4.06
0.06626	-0.048309	62.0	4.06
0.06626	-0.048309	541	35.80

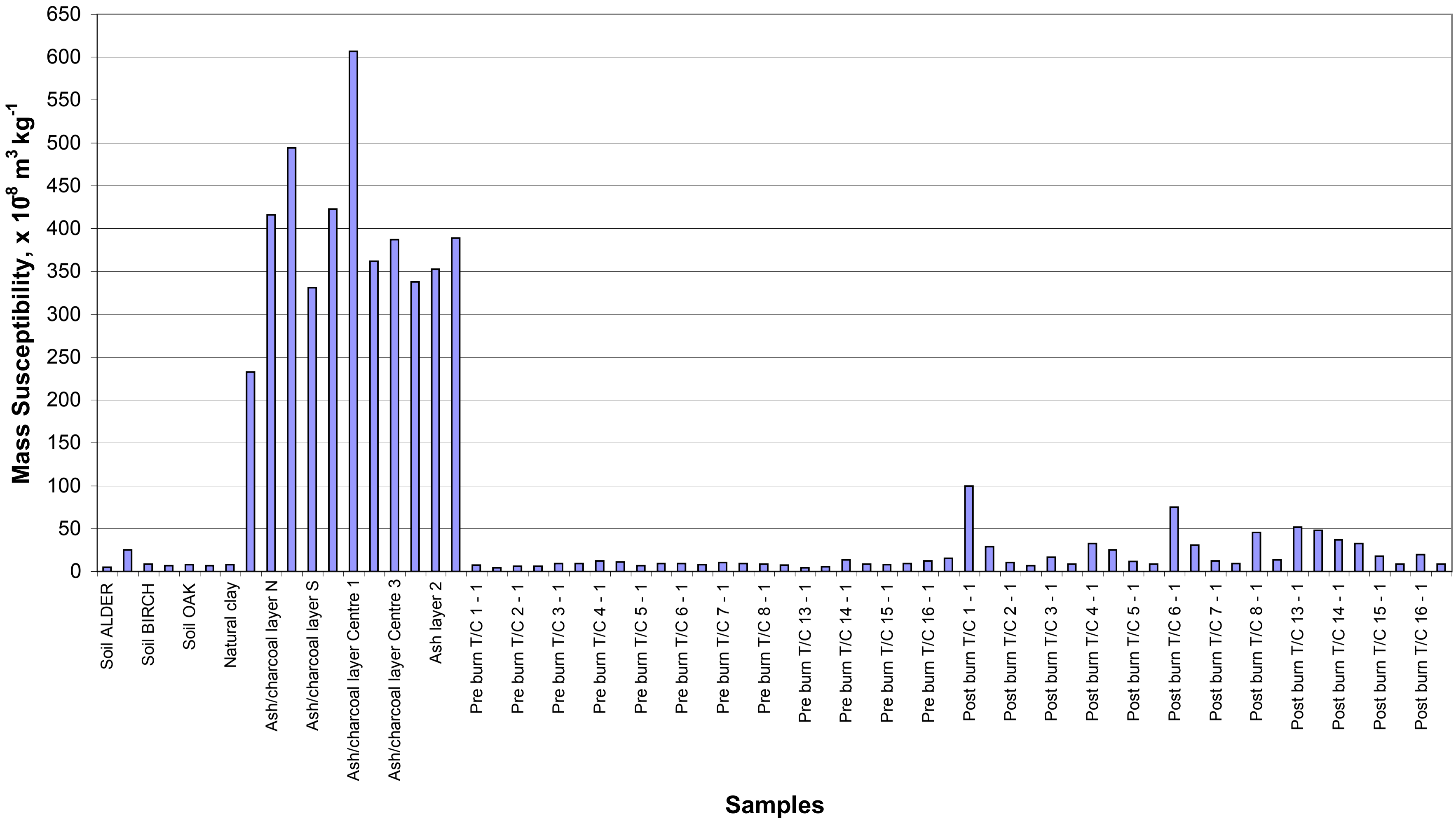
Above slope & constant values used in formula to calculate total susceptibility from the corresponding meter reading.

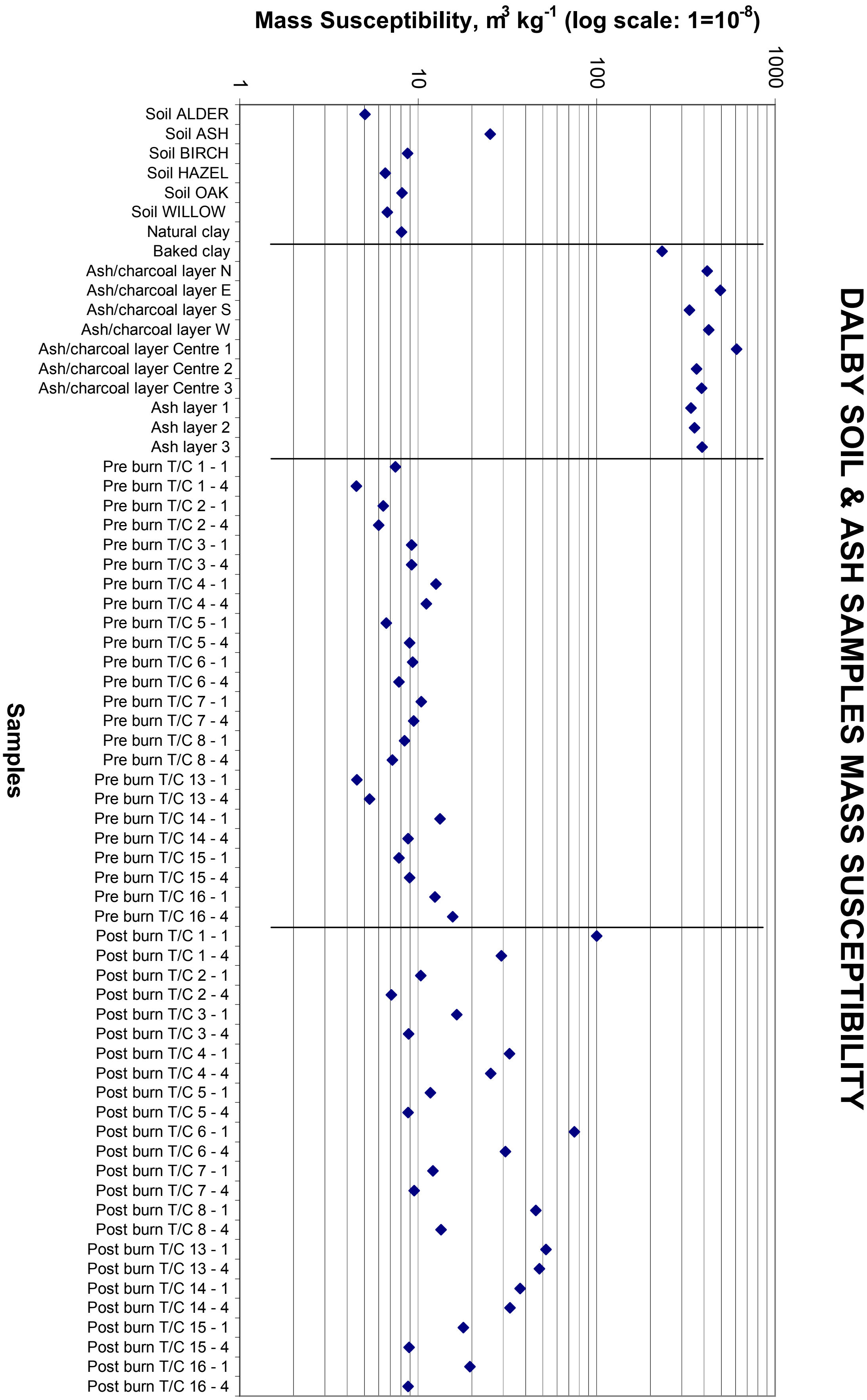
Pre burn T/C 1 - 1	7	Post burn T/C 1 - 1	100
Pre burn T/C 2 - 1	6	Post burn T/C 2 - 1	10
Pre burn T/C 3 - 1	9	Post burn T/C 3 - 1	16
Pre burn T/C 4 - 1	13	Post burn T/C 4 - 1	32
Pre burn T/C 5 - 1	7	Post burn T/C 5 - 1	12
Pre burn T/C 6 - 1	9	Post burn T/C 6 - 1	75
Pre burn T/C 7 - 1	10	Post burn T/C 7 - 1	12
Pre burn T/C 8 - 1	8	Post burn T/C 8 - 1	46
Pre burn T/C 13 - 1	5	Post burn T/C 13 - 1	52
Pre burn T/C 14 - 1	13	Post burn T/C 14 - 1	37
Pre burn T/C 15 - 1	8	Post burn T/C 15 - 1	18
Pre burn T/C 16 - 1	12	Post burn T/C 16 - 1	19

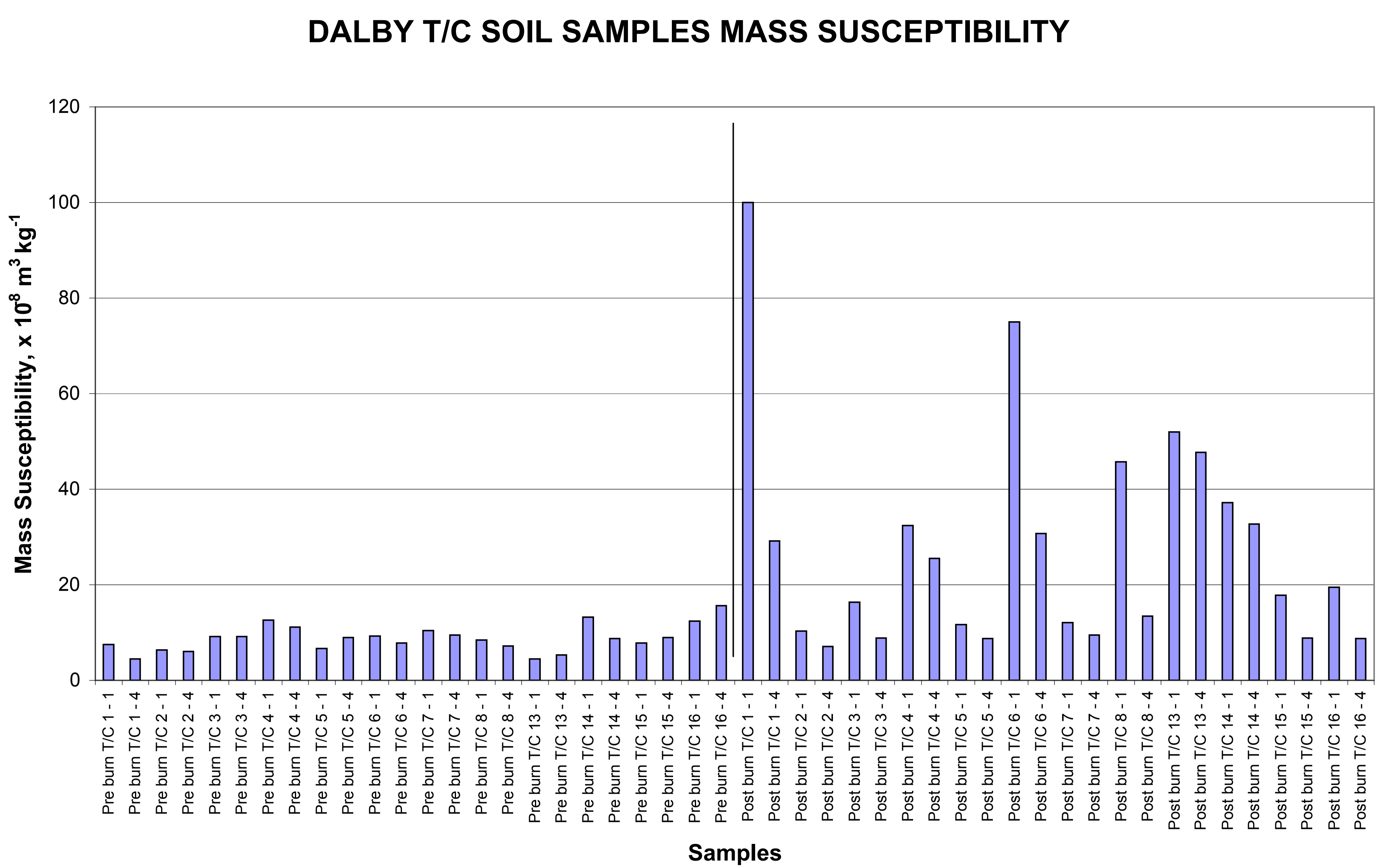
Pre burn T/C 1 - 4	5	Post burn T/C 1 - 4	29
Pre burn T/C 2 - 4	6	Post burn T/C 2 - 4	7
Pre burn T/C 3 - 4	9	Post burn T/C 3 - 4	9
Pre burn T/C 4 - 4	11	Post burn T/C 4 - 4	25
Pre burn T/C 5 - 4	9	Post burn T/C 5 - 4	9
Pre burn T/C 6 - 4	8	Post burn T/C 6 - 4	31
Pre burn T/C 7 - 4	9	Post burn T/C 7 - 4	10
Pre burn T/C 8 - 4	7	Post burn T/C 8 - 4	13
Pre burn T/C 13 - 4	5	Post burn T/C 13 - 4	48
Pre burn T/C 14 - 4	9	Post burn T/C 14 - 4	33
Pre burn T/C 15 - 4	9	Post burn T/C 15 - 4	9
Pre burn T/C 16 - 4	16	Post burn T/C 16 - 4	9

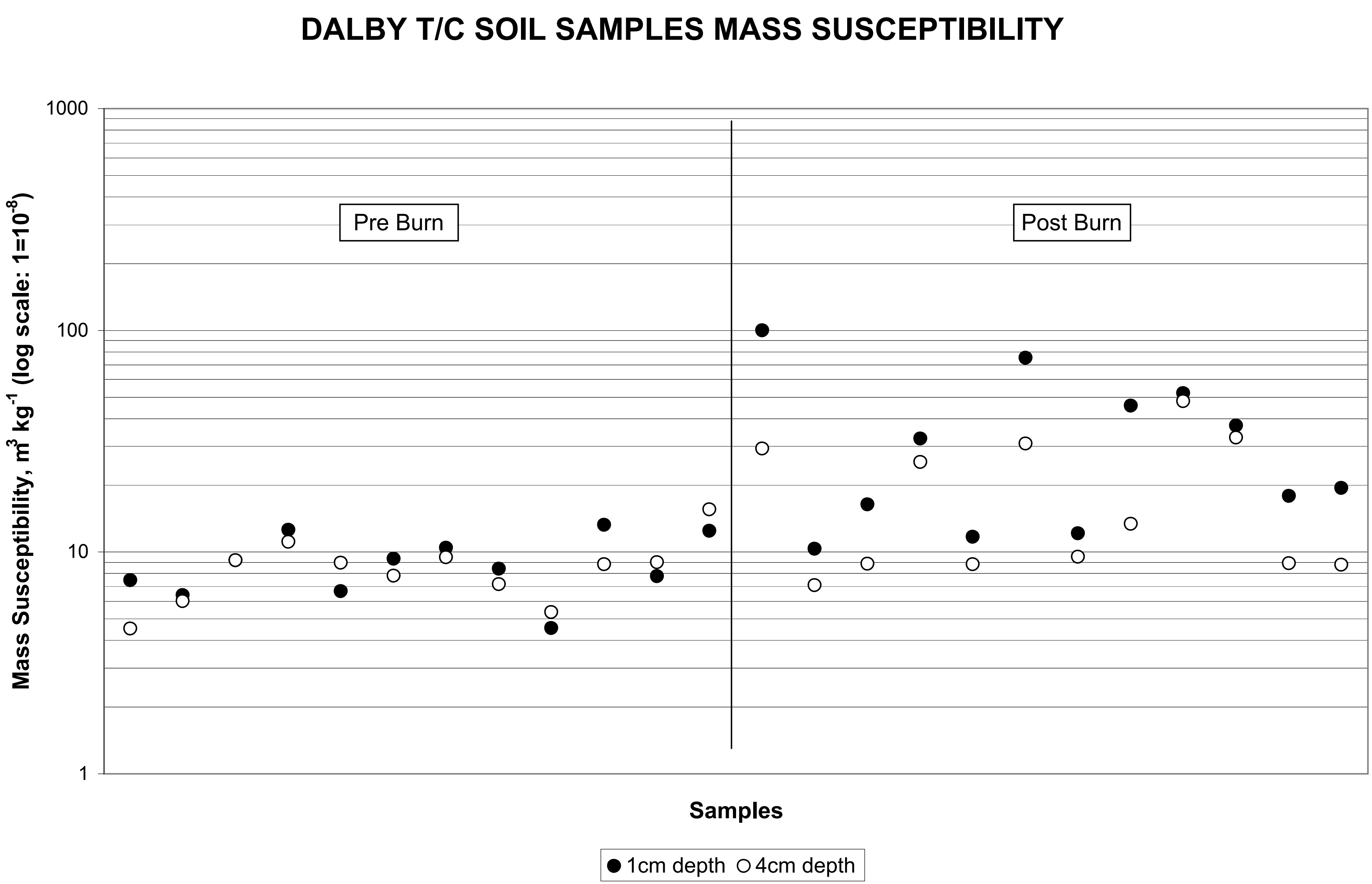

DALBY SOIL & ASH SAMPLES SUSCEPTIBILITY CALIBRATION CURVE
Total Susceptibility, k_T x 10^{-8} m^3
40
35
30
25
20
15
10
5
0
0
100
200
300
400
500
600
Susceptibility Bridge reading
y = 0.0663x - 0.0483
R^2 = 1
y = 0.0655x
R^2 = 1

DALBY SOIL & ASH SAMPLES MASS SUSCEPTIBILITY




DALBY SOIL & ASH SAMPLES MASS SUSCEPTIBILITY
Mass Susceptibility, m3 kg-1 (log scale: 1=10-8)
1
10
100
1000
Samples
Soil ALDER
Soil ASH
Soil BIRCH
Soil HAZEL
Soil OAK
Soil WILLOW
Natural clay
Baked clay
Ash/charcoal layer N
Ash/charcoal layer E
Ash/charcoal layer S
Ash/charcoal layer W
Ash/charcoal layer Centre 1
Ash/charcoal layer Centre 2
Ash/charcoal layer Centre 3
Ash layer 1
Ash layer 2
Ash layer 3
Pre burn T/C 1 - 1
Pre burn T/C 1 - 4
Pre burn T/C 2 - 1
Pre burn T/C 2 - 4
Pre burn T/C 3 - 1
Pre burn T/C 3 - 4
Pre burn T/C 4 - 1
Pre burn T/C 4 - 4
Pre burn T/C 5 - 1
Pre burn T/C 5 - 4
Pre burn T/C 6 - 1
Pre burn T/C 6 - 4
Pre burn T/C 7 - 1
Pre burn T/C 7 - 4
Pre burn T/C 8 - 1
Pre burn T/C 8 - 4
Pre burn T/C 13 - 1
Pre burn T/C 13 - 4
Pre burn T/C 14 - 1
Pre burn T/C 14 - 4
Pre burn T/C 15 - 1
Pre burn T/C 15 - 4
Pre burn T/C 16 - 1
Pre burn T/C 16 - 4
Post burn T/C 1 - 1
Post burn T/C 1 - 4
Post burn T/C 2 - 1
Post burn T/C 2 - 4
Post burn T/C 3 - 1
Post burn T/C 3 - 4
Post burn T/C 4 - 1
Post burn T/C 4 - 4
Post burn T/C 5 - 1
Post burn T/C 5 - 4
Post burn T/C 6 - 1
Post burn T/C 6 - 4
Post burn T/C 7 - 1
Post burn T/C 7 - 4
Post burn T/C 8 - 1
Post burn T/C 8 - 4
Post burn T/C 13 - 1
Post burn T/C 13 - 4
Post burn T/C 14 - 1
Post burn T/C 14 - 4
Post burn T/C 15 - 1
Post burn T/C 15 - 4
Post burn T/C 16 - 1
Post burn T/C 16 - 4


DALBY T/C SOIL SAMPLES MASS SUSCEPTIBILITY
Mass Susceptibility, x 10-8 m3 kg-1
120
100
80
60
40
20
0
Pre burn T/C 1 - 1
Pre burn T/C 1 - 4
Pre burn T/C 2 - 1
Pre burn T/C 2 - 4
Pre burn T/C 3 - 1
Pre burn T/C 3 - 4
Pre burn T/C 4 - 1
Pre burn T/C 4 - 4
Pre burn T/C 5 - 1
Pre burn T/C 5 - 4
Pre burn T/C 6 - 1
Pre burn T/C 6 - 4
Pre burn T/C 7 - 1
Pre burn T/C 7 - 4
Pre burn T/C 8 - 1
Pre burn T/C 8 - 4
Pre burn T/C 13 - 1
Pre burn T/C 13 - 4
Pre burn T/C 14 - 1
Pre burn T/C 14 - 4
Pre burn T/C 15 - 1
Pre burn T/C 15 - 4
Pre burn T/C 16 - 1
Pre burn T/C 16 - 4
Post burn T/C 1 - 1
Post burn T/C 1 - 4
Post burn T/C 2 - 1
Post burn T/C 2 - 4
Post burn T/C 3 - 1
Post burn T/C 3 - 4
Post burn T/C 4 - 1
Post burn T/C 4 - 4
Post burn T/C 5 - 1
Post burn T/C 5 - 4
Post burn T/C 6 - 1
Post burn T/C 6 - 4
Post burn T/C 7 - 1
Post burn T/C 7 - 4
Post burn T/C 8 - 1
Post burn T/C 8 - 4
Post burn T/C 13 - 1
Post burn T/C 13 - 4
Post burn T/C 14 - 1
Post burn T/C 14 - 4
Post burn T/C 15 - 1
Post burn T/C 15 - 4
Post burn T/C 16 - 1
Post burn T/C 16 - 4
Samples



DALBY T/C SOIL SAMPLES MASS SUSCEPTIBILITY
Mass Susceptibility, m3 kg-1 (log scale: 1=10-8)
1000
100
10
1
Pre Burn
Post Burn
Samples
1cm depth
4cm depth

TO DETERMINE MASS QUADRATURE SUSCEPTIBILITY AND MAGNETIC VISCOSITY OF SOIL & ASH SAMPLES FROM DALBY CHARCOAL KILN SITE (DLB04)

Calibration samples	Mass g	PIM reading	Total quad. sus. Q x 10^{-8} m^3	Mass quad. sus. q x 10^{-8} m^3 kg^{-1}	Magnetic viscosity %
High alumina cement	50.00	154	0.20	4.0	
BS87	50.00	590	0.61	12.2	
BS62	40.64	1306	1.06	26.1	
Test samples Type					
Soil ALDER	52.03	8	0.01	0	3.7
Soil ASH	52.99	18	0.02	0	1.6
Soil BIRCH	52.64	19	0.02	0	5.0
Soil HAZEL	52.14	7	0.01	0	2.5
Soil OAK	51.71	9	0.01	0	2.6
Soil WILLOW	50.63	14	0.02	0	4.9
Natural clay	52.88	6	0.01	0	1.7
Baked clay	53.60	616	0.63	12	5.0
Ash/charcoal layer N	52.43	1266	1.04	20	4.8
Ash/charcoal layer E	52.71	1612	1.15	22	4.4
Ash/charcoal layer S	52.85	1040	0.92	17	5.3
Ash/charcoal layer W	52.82	1396	1.09	21	4.9
Ash/charcoal layer Centre 1	52.79	1552	1.14	22	3.6
Ash/charcoal layer Centre 2	52.77	1128	0.97	18	5.1
Ash/charcoal layer Centre 3	51.41	1134	0.98	19	4.9
Ash layer 1	52.76	1078	0.94	18	5.3
Ash layer 2	52.88	1076	0.94	18	5.1
Ash layer 3	52.02	1226	1.02	20	5.0
Pre burn T/C 1 - 1	43.92	7	0.01	0	2.6
Pre burn T/C 1 - 4	47.91	5	0.01	0	2.8
Pre burn T/C 2 - 1	51.35	9	0.01	0	3.3
Pre burn T/C 2 - 4	51.29	11	0.01	0	4.3
Pre burn T/C 3 - 1	50.61	10	0.01	0	2.6
Pre burn T/C 3 - 4	51.50	11	0.01	0	2.8
Pre burn T/C 4 - 1	45.32	8	0.01	0	1.7
Pre burn T/C 4 - 4	49.54	11	0.01	0	2.4
Pre burn T/C 5 - 1	49.30	10	0.01	0	3.7
Pre burn T/C 5 - 4	49.79	9	0.01	0	2.4
Pre burn T/C 6 - 1	47.77	7	0.01	0	1.9
Pre burn T/C 6 - 4	49.45	8	0.01	0	2.5
Pre burn T/C 7 - 1	50.26	9	0.01	0	2.1
Pre burn T/C 7 - 4	50.64	8	0.01	0	2.0
Pre burn T/C 8 - 1	49.94	8	0.01	0	2.3
Pre burn T/C 8 - 4	50.23	8	0.01	0	2.7
Pre burn T/C 13 - 1	49.19	6	0.01	0	3.2
Pre burn T/C 13 - 4	48.97	8	0.01	0	3.7
Pre burn T/C 14 - 1	49.45	12	0.01	0	2.2
Pre burn T/C 14 - 4	50.68	7	0.01	0	1.9
Pre burn T/C 15 - 1	50.52	7	0.01	0	2.1
Pre burn T/C 15 - 4	50.35	8	0.01	0	2.1
Pre burn T/C 16 - 1	47.45	8	0.01	0	1.6
Pre burn T/C 16 - 4	50.86	9	0.01	0	1.4

Post burn T/C 1 - 1	51.88	310	0.34	7	6.6
Post burn T/C 1 - 4	51.15	81	0.10	2	6.4
Post burn T/C 2 - 1	51.89	15	0.02	0	3.3
Post burn T/C 2 - 4	50.91	8	0.01	0	2.7
Post burn T/C 3 - 1	51.94	29	0.03	1	4.1
Post burn T/C 3 - 4	51.11	13	0.02	0	3.4
Post burn T/C 4 - 1	51.55	65	0.08	1	4.6
Post burn T/C 4 - 4	51.37	54	0.06	1	4.9
Post burn T/C 5 - 1	51.01	19	0.02	0	3.8
Post burn T/C 5 - 4	51.44	10	0.01	0	2.6
Post burn T/C 6 - 1	50.48	212	0.24	5	6.4
Post burn T/C 6 - 4	51.10	65	0.08	2	4.9
Post burn T/C 7 - 1	51.94	18	0.02	0	3.4
Post burn T/C 7 - 4	50.97	13	0.02	0	3.2
Post burn T/C 8 - 1	52.10	119	0.14	3	5.8
Post burn T/C 8 - 4	51.72	20	0.02	0	3.4
Post burn T/C 13 - 1	51.29	157	0.18	4	6.8
Post burn T/C 13 - 4	51.42	150	0.17	3	7.1
Post burn T/C 14 - 1	51.37	108	0.13	2	6.6
Post burn T/C 14 - 4	51.63	89	0.10	2	6.2
Post burn T/C 15 - 1	51.37	39	0.05	1	5.1
Post burn T/C 15 - 4	51.49	12	0.01	0	3.1
Post burn T/C 16 - 1	51.55	33	0.04	1	3.9
Post burn T/C 16 - 4	51.64	9	0.01	0	2.4

Mean		) Soil &	0	3.1
Median		) natural	0	2.6
Standard Deviation	+/-	) clay	0	1.4
Mean		) Baked clay	19	4.8
Median		) Ash/charcoal	19	5.0
Standard Deviation	+/-	) layers	3	0.5
Mean		) Pre burn T/C	0	2.5
Median		) soil samples	0	2.4
Standard Deviation	+/-	) all	0	0.7
Mean		) Pre burn T/C	0	2.4
Median		) soil samples	0	2.2
Standard Deviation	+/-	) 1 cm depth	0	0.7
Mean		) Pre burn T/C	0	2.6
Median		) soil samples	0	2.4
Standard Deviation	+/-	) 4 cm depth	0	0.8
Mean		) Post burn T/C	2	4.6
Median		) soil samples	1	4.3
Standard Deviation	+/-	) all	2	1.5
Mean		) Post burn T/C	2	5.0
Median		) soil samples	1	4.8
Standard Deviation	+/-	) 1 cm depth	2	1.3
Mean		) Post burn T/C	1	4.2
Median		) soil samples	0	3.4
Standard Deviation	+/-	) 4 cm depth	1	1.6

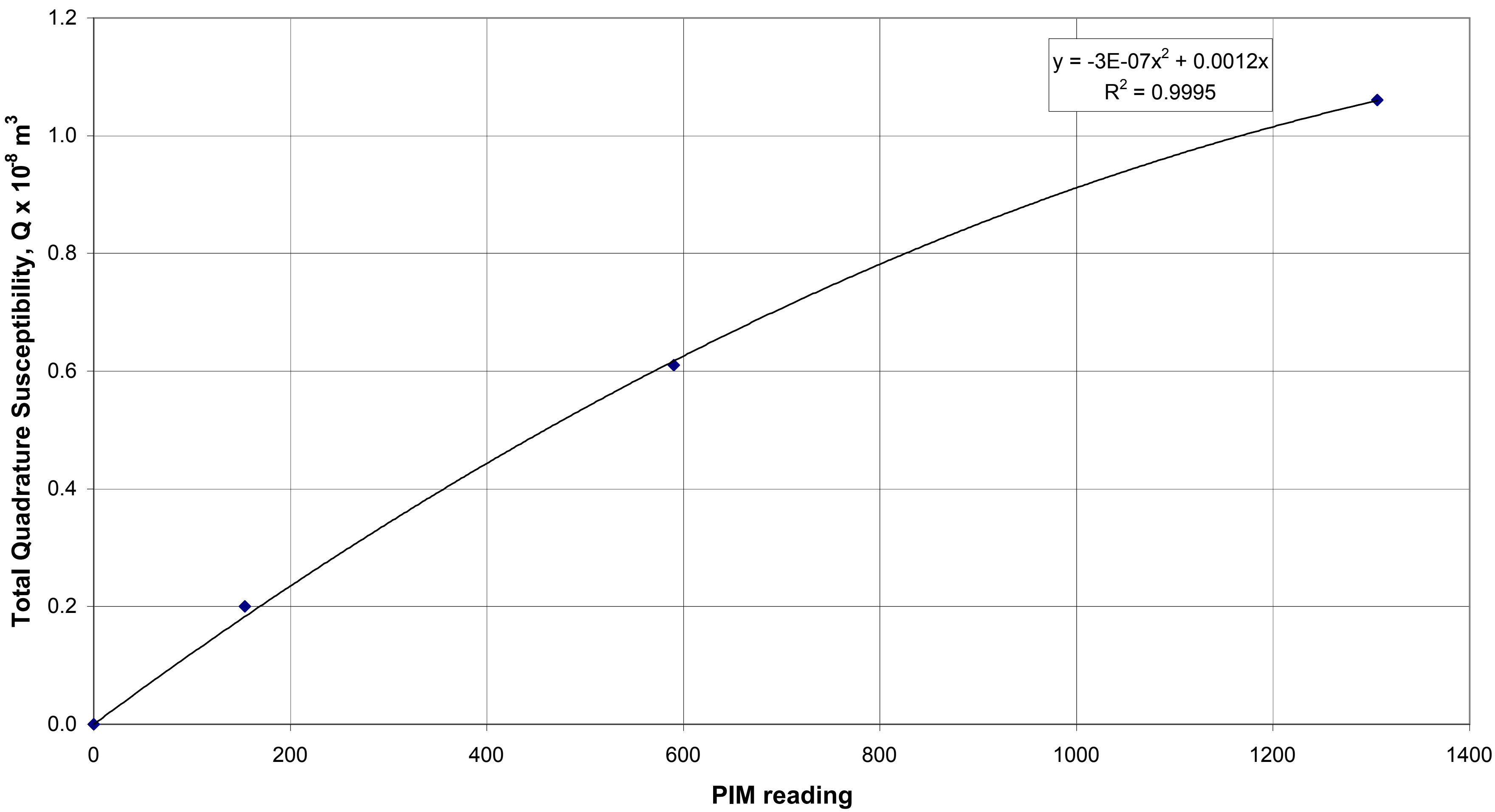
Chart data

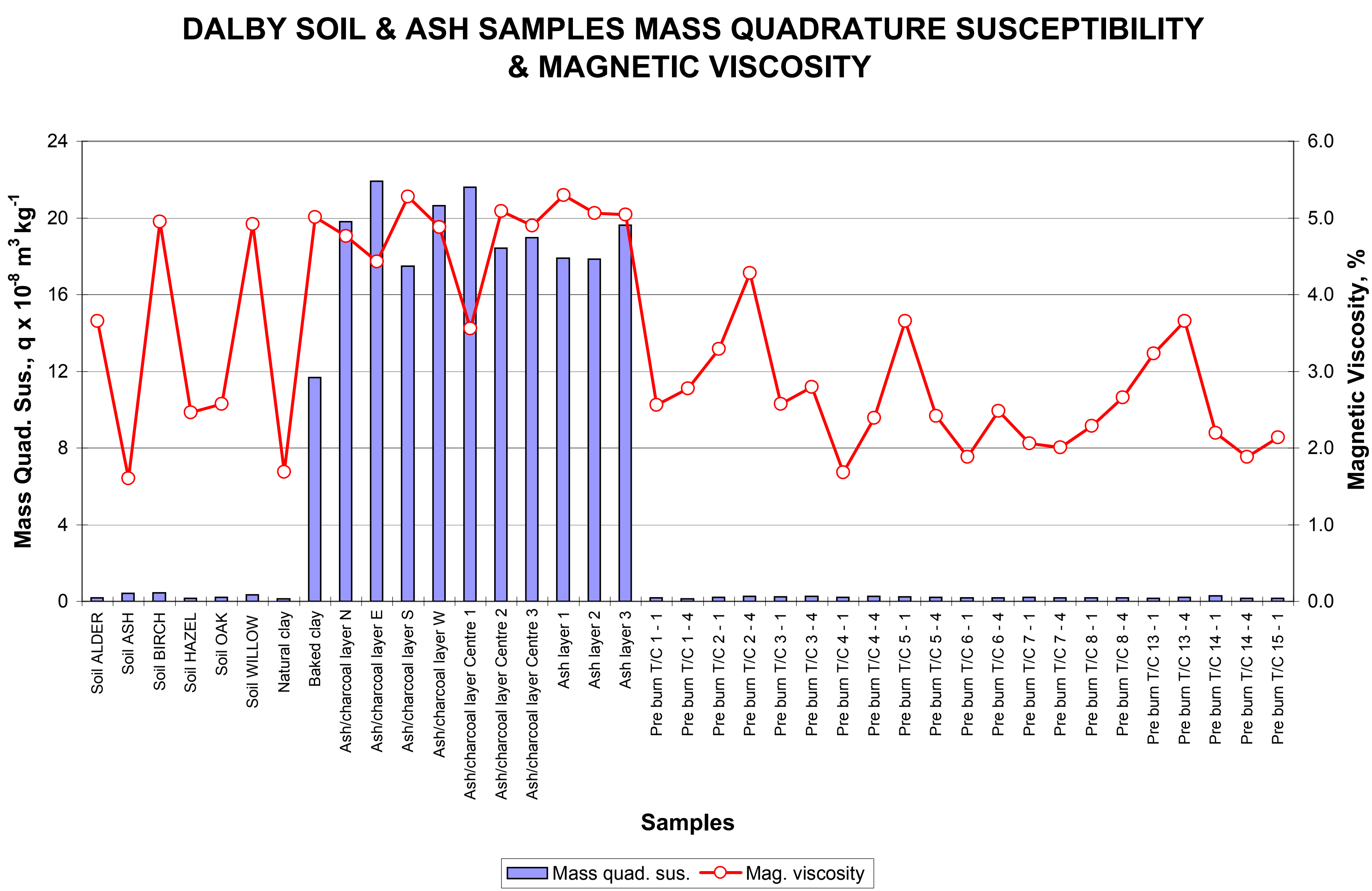
Total quad.	PIM
0	0
0.20	154
0.61	590
1.06	1306

Pre burn T/C 1 - 1	0	2.6	Pre burn T/C 1 - 4	0	2.8
Pre burn T/C 2 - 1	0	3.3	Pre burn T/C 2 - 4	0	4.3
Pre burn T/C 3 - 1	0	2.6	Pre burn T/C 3 - 4	0	2.8
Pre burn T/C 4 - 1	0	1.7	Pre burn T/C 4 - 4	0	2.4
Pre burn T/C 5 - 1	0	3.7	Pre burn T/C 5 - 4	0	2.4
Pre burn T/C 6 - 1	0	1.9	Pre burn T/C 6 - 4	0	2.5
Pre burn T/C 7 - 1	0	2.1	Pre burn T/C 7 - 4	0	2.0
Pre burn T/C 8 - 1	0	2.3	Pre burn T/C 8 - 4	0	2.7
Pre burn T/C 13 - 1	0	3.2	Pre burn T/C 13 - 4	0	3.7
Pre burn T/C 14 - 1	0	2.2	Pre burn T/C 14 - 4	0	1.9
Pre burn T/C 15 - 1	0	2.1	Pre burn T/C 15 - 4	0	2.1
Pre burn T/C 16 - 1	0	1.6	Pre burn T/C 16 - 4	0	1.4

Post burn T/C 1 - 1	7	6.6	Post burn T/C 1 - 4	2	6.4
Post burn T/C 2 - 1	0	3.3	Post burn T/C 2 - 4	0	2.7
Post burn T/C 3 - 1	1	4.1	Post burn T/C 3 - 4	0	3.4
Post burn T/C 4 - 1	1	4.6	Post burn T/C 4 - 4	1	4.9
Post burn T/C 5 - 1	0	3.8	Post burn T/C 5 - 4	0	2.6
Post burn T/C 6 - 1	5	6.4	Post burn T/C 6 - 4	2	4.9
Post burn T/C 7 - 1	0	3.4	Post burn T/C 7 - 4	0	3.2
Post burn T/C 8 - 1	3	5.8	Post burn T/C 8 - 4	0	3.4
Post burn T/C 13 - 1	4	6.8	Post burn T/C 13 - 4	3	7.1
Post burn T/C 14 - 1	2	6.6	Post burn T/C 14 - 4	2	6.2
Post burn T/C 15 - 1	1	5.1	Post burn T/C 15 - 4	0	3.1
Post burn T/C 16 - 1	1	3.9	Post burn T/C 16 - 4	0	2.4

DALBY SOIL & ASH SAMPLES QUADRATURE SUSCEPTIBILITY CALIBRATION CURVE





DALBY SOIL & ASH SAMPLES MASS QUADRATURE SUSCEPTIBILITY & MAGNETIC VISCOSITY
Mass Quad. Sus., q x 10-8 m3 kg-1
Magnetic Viscosity, %
0
4
8
12
16
20
24
0.0
1.0
2.0
3.0
4.0
5.0
6.0
Soil ALDER
Soil ASH
Soil BIRCH
Soil HAZEL
Soil OAK
Soil WILLOW
Natural clay
Baked clay
Ash/charcoal layer N
Ash/charcoal layer E
Ash/charcoal layer S
Ash/charcoal layer W
Ash/charcoal layer Centre 1
Ash/charcoal layer Centre 2
Ash/charcoal layer Centre 3
Ash layer 1
Ash layer 2
Ash layer 3
Pre burn T/C 1 - 1
Pre burn T/C 1 - 4
Pre burn T/C 2 - 1
Pre burn T/C 2 - 4
Pre burn T/C 3 - 1
Pre burn T/C 3 - 4
Pre burn T/C 4 - 1
Pre burn T/C 4 - 4
Pre burn T/C 5 - 1
Pre burn T/C 5 - 4
Pre burn T/C 6 - 1
Pre burn T/C 6 - 4
Pre burn T/C 7 - 1
Pre burn T/C 7 - 4
Pre burn T/C 8 - 1
Pre burn T/C 8 - 4
Pre burn T/C 13 - 1
Pre burn T/C 13 - 4
Pre burn T/C 14 - 1
Pre burn T/C 14 - 4
Pre burn T/C 15 - 1
Samples
Mass quad. sus.
Mag. viscosity

DETERMINATION OF MASS SUSCEPTIBILITY, MASS QUADRATURE SUSCEPTIBILITY AND MAGNETIC VISCOSITY OF SOIL & ASH SAMPLES FROM DALBY CHARCOAL KILN SITE (DLB04)

Calibration samples	Mass g	Bridge reading	Total susceptibility k_T x 10^{-8} m^3	Mass susceptibility χ x 10^{-8} m^3 kg^{-1}	PIM reading	Total quad. sus. Q x 10^{-8} m^3	Mass quad. sus. q x 10^{-8} m^3 kg^{-1}	Magnetic viscosity %
Manganese sulphate	50.00	62.0	4.06	81.2				
High alumina cement	50.00	541	35.80	716	154	0.20	4.0	
BS87	50.00				590	0.61	12.2	
BS62	40.64				1306	1.00	26.1	
Test samples								
Soil ALDER	52.03	4.0	0.26	5	8	0.01	0	3.7
Soil ASH	52.99	20.5	1.34	25	18	0.02	0	1.6
Soil BIRCH	52.64	7.0	0.46	9	19	0.02	0	5.0
Soil HAZEL	52.14	5.2	0.34	7	7	0.01	0	2.5
Soil OAK	51.71	6.4	0.42	8	9	0.01	0	2.6
Soil WILLOW	50.63	5.2	0.34	7	14	0.02	0	4.9
Natural clay	52.88	6.5	0.43	8	6	0.01	0	1.7
Baked clay	53.60	189.0	12.48	233	616	0.63	12	5.0
Ash/charcoal layer N	52.43	330.0	21.82	416	1266	1.04	20	4.8
Ash/charcoal layer E	52.71	394.0	26.06	494	1612	1.15	22	4.4
Ash/charcoal layer S	52.85	265.0	17.51	331	1040	0.92	17	5.3
Ash/charcoal layer W	52.82	338.0	22.35	423	1396	1.09	21	4.9
Ash/charcoal layer Centre 1	52.79	484.0	32.02	607	1552	1.14	22	3.6
Ash/charcoal layer Centre 2	52.77	289.0	19.10	362	1128	0.97	18	5.1
Ash/charcoal layer Centre 3	51.41	301.0	19.90	387	1134	0.98	19	4.9
Ash layer 1	52.76	270.0	17.84	338	1078	0.94	18	5.3
Ash layer 2	52.88	282.0	18.64	352	1076	0.94	18	5.1
Ash layer 3	52.02	306.0	20.23	389	1226	1.02	20	5.0

Pre burn T/C 1 - 1	43.92	5.0	0.33	7	7	0.01	0	2.6
Pre burn T/C 1 - 4	47.91	3.3	0.22	5	5	0.01	0	2.8
Pre burn T/C 2 - 1	51.35	5.0	0.33	6	9	0.01	0	3.3
Pre burn T/C 2 - 4	51.29	4.7	0.31	6	11	0.01	0	4.3
Pre burn T/C 3 - 1	50.61	7.1	0.46	9	10	0.01	0	2.6
Pre burn T/C 3 - 4	51.50	7.2	0.47	9	11	0.01	0	2.8
Pre burn T/C 4 - 1	45.32	8.7	0.57	13	8	0.01	0	1.7
Pre burn T/C 4 - 4	49.54	8.4	0.55	11	11	0.01	0	2.4
Pre burn T/C 5 - 1	49.30	5.0	0.33	7	10	0.01	0	3.7
Pre burn T/C 5 - 4	49.79	6.8	0.45	9	9	0.01	0	2.4
Pre burn T/C 6 - 1	47.77	6.8	0.45	9	7	0.01	0	1.9
Pre burn T/C 6 - 4	49.45	5.9	0.39	8	8	0.01	0	2.5
Pre burn T/C 7 - 1	50.26	8.0	0.52	10	9	0.01	0	2.1
Pre burn T/C 7 - 4	50.64	7.3	0.48	9	8	0.01	0	2.0
Pre burn T/C 8 - 1	49.94	6.4	0.42	8	8	0.01	0	2.3
Pre burn T/C 8 - 4	50.23	5.5	0.36	7	8	0.01	0	2.7
Pre burn T/C 13 - 1	49.19	3.4	0.22	5	6	0.01	0	3.2
Pre burn T/C 13 - 4	48.97	4.0	0.26	5	8	0.01	0	3.7
Pre burn T/C 14 - 1	49.45	10.0	0.65	13	12	0.01	0	2.2
Pre burn T/C 14 - 4	50.68	6.8	0.45	9	7	0.01	0	1.9
Pre burn T/C 15 - 1	50.52	6.0	0.39	8	7	0.01	0	2.1
Pre burn T/C 15 - 4	50.35	6.9	0.45	9	8	0.01	0	2.1
Pre burn T/C 16 - 1	47.45	9.0	0.59	12	8	0.01	0	1.6
Pre burn T/C 16 - 4	50.86	12.1	0.79	16	9	0.01	0	1.4
Post burn T/C 1 - 1	51.88	79.0	5.19	100	310	0.34	7	6.6
Post burn T/C 1 - 4	51.15	22.8	1.49	29	81	0.10	2	6.4
Post burn T/C 2 - 1	51.89	8.2	0.54	10	15	0.02	0	3.3
Post burn T/C 2 - 4	50.91	5.5	0.36	7	8	0.01	0	2.7
Post burn T/C 3 - 1	51.94	13.0	0.85	16	29	0.03	1	4.1
Post burn T/C 3 - 4	51.11	6.9	0.45	9	13	0.02	0	3.4
Post burn T/C 4 - 1	51.55	25.5	1.67	32	65	0.08	1	4.6
Post burn T/C 4 - 4	51.37	20.0	1.31	25	54	0.06	1	4.9
Post burn T/C 5 - 1	51.01	9.1	0.60	12	19	0.02	0	3.8
Post burn T/C 5 - 4	51.44	6.9	0.45	9	10	0.01	0	2.6
Post burn T/C 6 - 1	50.48	57.8	3.78	75	212	0.24	5	6.4
Post burn T/C 6 - 4	51.10	24.0	1.57	31	65	0.08	2	4.9
Post burn T/C 7 - 1	51.94	9.6	0.63	12	18	0.02	0	3.4
Post burn T/C 7 - 4	50.97	7.4	0.48	10	13	0.02	0	3.2
Post burn T/C 8 - 1	52.10	36.4	2.38	46	119	0.14	3	5.8
Post burn T/C 8 - 4	51.72	10.6	0.69	13	20	0.02	0	3.4
Post burn T/C 13 - 1	51.29	40.7	2.67	52	157	0.18	4	6.8
Post burn T/C 13 - 4	51.42	37.5	2.46	48	150	0.17	3	7.1
Post burn T/C 14 - 1	51.37	29.2	1.91	37	108	0.13	2	6.6
Post burn T/C 14 - 4	51.63	25.8	1.69	33	89	0.10	2	6.2
Post burn T/C 15 - 1	51.37	14.0	0.92	18	39	0.05	1	5.1
Post burn T/C 15 - 4	51.49	7.0	0.46	9	12	0.01	0	3.1
Post burn T/C 16 - 1	51.55	15.3	1.00	19	33	0.04	1	3.9
Post burn T/C 16 - 4	51.64	6.9	0.45	9	9	0.01	0	2.4

DETERMINATION OF MASS SUSCEPTIBILITY, MASS QUADRATURE SUSCEPTIBILITY AND MAGNETIC VISCOSITY OF SOIL & ASH SAMPLES FROM DALBY CHARCOAL KILN SITE (DLB04) (cont'd)

Sample groups' statistical analysis		Mass susceptibility $\chi \times 10^{-8}\ m^3\ kg^{-1}$	Mass quad. sus. $q \times 10^{-8}\ m^3\ kg^{-1}$	Magnetic viscosity %
Mean	)	10	0	3.4
Median	) Soil	7	0	3.1
Standard Deviation	)	8	0	1.4
Mean	)	7	0	3.7
Median	) Soil excl ASH	7	0	3.7
Standard Deviation	)	1	0	1.2
Mean	) Ash/charcoal	410	19	4.8
Median	) layers	388	19	5.0
Standard Deviation	)	84	2	0.5
Mean	) Pre burn T/C	9	0	2.5
Median	) soil samples	9	0	2.4
Standard Deviation	) all	3	0	0.7
Mean	) Pre burn T/C	9	0	2.4
Median	) soil samples	9	0	2.2
Standard Deviation	) 1 cm depth	3	0	0.7
Mean	) Pre burn T/C	9	0	2.6
Median	) soil samples	9	0	2.4
Standard Deviation	) 4 cm depth	3	0	0.8
Mean	) Post burn T/C	28	2	4.6
Median	) soil samples	19	1	4.3
Standard Deviation	) all	23	2	1.5
Mean	) Post burn T/C	36	2	5.0
Median	) soil samples	26	1	4.8
Standard Deviation	) 1 cm depth	28	2	1.3
Mean	) Post burn T/C	19	1	4.2
Median	) soil samples	11	0	3.4
Standard Deviation	) 4 cm depth	13	1	1.6