Supplementary material

This is a supplement file for the article entitled **"Soil respiration across a variety of tree-covered urban green spaces in Helsinki, Finland"** by Esko Karvinen, Leif Backman, Leena Järvi, and Liisa Kulmala (2023). It contains three tables documenting the results of week-level Kruskal-Wallis tests conducted on soil respiration (Table S1), soil moisture (Table S2), and soil temperature (Table S3) measurement data to examine for differences between the measurement sites (Orchard, Forest, Park, and Streetside). For further details of the analysis, see the aforementioned article.

Table S1: Results of the week-level Kruskal-Wallis tests on soil respiration (R_{GF}). Significance is reported as: *p-value < 0.10, **p-value < 0.05, and ***p-value < 0.005. Number of replicates refers to the number of measurement replicates conducted at each site on each week, and DF refers to degrees of freedom.

		Number of replicates							
Date	Week	Orchard	Forest	Park	Streetside	DF	H Statistic	P-value	Significance
2020-05-14	20	0	8	8	8	2	0.585	0.746	
2020-05-19	21	0	8	8	8	2	2.205	0.332	
2020-05-29	22	0	8	7	8	2	2.646	0.266	
2020-06-08	23	0	8	8	8	2	3.695	0.158	
2020-06-12	24	0	8	8	8	2	5.315	0.070	*
2020-06-22	25	0	8	8	8	2	4.745	0.093	*
2020-06-26	26	0	8	8	8	2	6.995	0.030	**
2020-07-02	27	0	6	8	8	2	11.310	0.003	***
2020-07-10	28	0	7	8	8	2	5.146	0.076	*
2020-07-17	29	0	8	8	8	2	1.905	0.386	
2020-07-23	30	0	8	8	8	2	4.595	0.101	
2020-07-29	31	0	7	8	8	2	4.720	0.094	*
2020-08-04	32	0	7	8	8	2	1.791	0.408	
2020-08-10	33	0	8	8	8	2	0.380	0.827	
2020-08-21	34	0	8	8	8	2	6.720	0.035	**
2020-08-31	36	0	5	3	8	2	3.232	0.199	
2020-09-09	37	0	8	8	8	2	3.645	0.162	
2020-09-15	38	0	8	8	8	2	9.060	0.011	**
2020-09-21	39	0	8	8	8	2	3.500	0.174	
2020-09-28	40	0	8	8	8	2	7.620	0.022	**
2021-05-07	18	8	8	8	8	3	13.372	0.004	***
2021-05-11	19	8	8	8	8	3	17.915	0.000	***
2021-05-20	20	8	8	8	8	3	4.827	0.185	
2021-05-28	21	0	8	8	8	2	0.540	0.763	
2021-06-01	22	8	8	8	8	3	8.151	0.043	**
2021-06-10	23	8	8	8	8	3	11.534	0.009	**

2021-06-16	24	8	8	8	8	3	8.298	0.040	**
2021-06-24	25	0	8	8	8	2	15.440	0.000	***
2021-06-29	26	8	8	8	8	3	7.321	0.062	*
2021-07-09	27	0	8	8	8	2	2.940	0.230	
2021-07-15	28	8	8	8	8	3	3.190	0.363	
2021-07-22	29	0	8	8	8	2	1.995	0.369	
2021-07-29	30	8	8	8	8	3	6.188	0.103	
2021-08-03	31	0	8	8	8	2	2.045	0.360	
2021-08-12	32	8	8	8	8	3	2.278	0.517	
2021-08-20	33	0	8	8	8	2	3.185	0.203	
2021-08-23	34	8	8	8	8	3	6.699	0.082	*
2021-09-02	35	0	8	8	8	2	4.385	0.112	
2021-09-06	36	8	8	8	8	3	6.156	0.104	
2021-09-14	37	0	8	8	8	2	7.955	0.019	**
2021-09-23	38	8	8	8	8	3	15.188	0.002	***
2021-09-30	39	0	8	8	8	2	9.680	0.008	**
2022-05-06	18	8	8	8	0	2	8.105	0.017	**
2022-05-11	19	8	8	8	0	2	1.905	0.386	
2022-05-18	20	8	8	8	0	2	4.340	0.114	
2022-05-24	21	8	8	8	0	2	5.645	0.059	*
2022-05-30	22	2	8	8	0	2	3.829	0.147	
2022-06-06	23	8	8	8	0	2	0.815	0.665	
2022-06-14	24	8	8	8	0	2	5.415	0.067	*
2022-06-21	25	8	8	8	0	2	3.935	0.140	
2022-06-27	26	8	8	8	0	2	11.375	0.003	***
2022-07-05	27	8	8	8	0	2	1.185	0.553	
2022-07-14	28	8	8	8	0	2	1.040	0.595	
2022-07-18	29	8	8	8	0	2	1.040	0.595	
2022-07-26	30	8	8	8	0	2	3.305	0.192	
2022-08-01	31	8	8	8	0	2	2.535	0.282	
2022-08-11	32	8	8	8	0	2	5.055	0.080	*
2022-08-16	33	8	8	8	0	2	0.620	0.733	
2022-08-22	34	8	8	8	0	2	15.965	0.000	***
2022-08-30	35	8	8	8	0	2	13.385	0.001	***
2022-09-06	36	8	8	8	0	2	4.085	0.130	
2022-09-16	37	8	8	8	0	2	7.715	0.021	**
2022-09-21	38	8	8	8	0	2	6.305	0.043	**
2022-09-26	39	8	8	8	0	2	10.905	0.004	***

Table S2: Results of the week-level Kruskal-Wallis tests on soil moisture. Significance is reported as: *p-value < 0.10, **p-value < 0.05, and ***p-value < 0.005. Number of replicates refers to the number of measurement replicates conducted at each site on each week, and DF refers to degrees of freedom.

		Number of replicates							
Date	Week	Orchard	Forest	Park	Streetside	DF	H Statistic	P-value	Significance
2020-05-14	20	0	0	0	0	-	-	-	

2020-05-22	21	0	6	6	0	1	0.006	0.936	
2020-05-29	22	0	6	6	3	2	0.625	0.732	
2020-06-08	23	0	6	6	3	2	1.358	0.507	
2020-06-12	24	0	6	6	4	2	1.161	0.560	
2020-06-22	25	0	6	6	4	2	0.989	0.610	
2020-06-26	26	0	6	6	4	2	1.430	0.489	
2020-07-02	27	0	6	6	4	2	0.544	0.762	
2020-07-10	28	0	6	6	4	2	1.208	0.547	
2020-07-17	29	0	6	6	4	2	1.176	0.555	
2020-07-23	30	0	6	5	4	2	4.463	0.107	
2020-07-29	31	0	6	6	4	2	0.577	0.749	
2020-08-04	32	0	6	6	4	2	5.762	0.056	*
2020-08-10	33	0	6	6	4	2	7.176	0.028	**
2020-08-21	34	0	6	6	4	2	8.074	0.018	**
2020-08-31	36	0	6	6	4	2	3.347	0.188	
2020-09-09	37	0	6	6	0	1	0.231	0.631	
2020-09-15	38	0	6	6	4	2	4.235	0.120	
2020-09-21	39	0	6	6	4	2	7.074	0.029	**
2020-09-28	40	0	6	6	4	2	5.000	0.082	*
2021-05-07	18	6	0	0	0	-	-	-	
2021-05-11	19	6	6	6	4	3	7.344	0.062	*
2021-05-20	20	6	6	6	4	3	6.664	0.083	*
2021-05-28	21	0	6	6	4	2	1.721	0.423	
2021-06-01	22	6	6	6	4	3	13.312	0.004	***
2021-06-10	23	6	6	6	4	3	7.403	0.060	*
2021-06-16	24	6	6	6	4	3	3.072	0.381	
2021-06-24	25	0	6	6	3	2	0.338	0.844	
2021-06-29	26	6	6	6	3	3	1.393	0.707	
2021-07-09	27	0	6	6	6	2	1.768	0.413	
2021-07-15	28	6	6	6	6	3	6.843	0.077	*
2021-07-22	29	0	0	0	0	-	-	-	
2021-07-29	30	6	6	6	6	3	12.980	0.005	**
2021-08-03	31	0	6	6	6	2	3.504	0.173	
2021-08-12	32	3	6	4	5	3	6.030	0.110	
2021-08-20	33	0	6	6	6	2	0.947	0.623	
2021-08-23	34	6	6	6	6	3	3.900	0.272	
2021-09-02	35	0	6	6	6	2	5.626	0.060	*
2021-09-06	36	6	6	6	6	3	9.376	0.025	**
2021-09-14	37	0	6	6	6	2	8.503	0.014	**
2021-09-23	38	6	6	6	6	3	12.180	0.007	**
2021-09-30	39	0	6	6	6	2	10.768	0.005	**
2022-05-06	18	6	6	6	0	2	11.240	0.004	***
2022-05-11	19	6	6	6	0	2	10.305	0.006	**
2022-05-18	20	6	6	6	0	2	8.465	0.015	**
2022-05-24	21	6	6	6	0	2	2.468	0.291	
2022-05-30	22	6	6	6	0	2	7.170	0.028	**
2022-06-06	23	6	6	6	0	2	11.942	0.003	***

2022-06-14	24	6	6	6	0	2	1.497	0.473	
2022-06-21	25	6	6	6	0	2	0.561	0.755	
2022-06-27	26	6	6	6	0	2	2.433	0.296	
2022-07-05	27	6	6	6	0	2	3.709	0.157	
2022-07-14	28	6	6	6	0	2	8.000	0.018	**
2022-07-18	29	6	6	6	0	2	5.719	0.057	*
2022-07-26	30	6	6	6	0	2	3.520	0.172	
2022-08-01	31	6	6	6	0	2	2.889	0.236	
2022-08-11	32	6	6	6	0	2	7.228	0.027	**
2022-08-16	33	6	6	6	0	2	5.719	0.057	*
2022-08-22	34	6	6	6	0	2	9.732	0.008	**
2022-08-30	35	6	6	6	0	2	11.556	0.003	***
2022-09-06	36	6	6	6	0	2	15.158	0.001	***
2022-09-16	37	6	6	6	0	2	8.561	0.014	**
2022-09-21	38	6	6	6	0	2	12.772	0.002	***
2022-09-26	39	6	6	6	0	2	10.047	0.007	**

Table S3: Results of the week-level Kruskal-Wallis tests on soil temperature. Significance is reported as: *p-value < 0.10, **p-value < 0.05, and ***p-value < 0.005. Number of replicates refers to the number of measurement replicates conducted at each site on each week, and DF refers to degrees of freedom.

		Number of replicates							
Date	Week	Orchard	Forest	Park	Streetside	DF	H Statistic	P-value	Significance
2020-05-14	20	0	0	0	0	-	-	-	
2020-05-19	21	0	8	8	8	2	15.368	0.000	***
2020-05-29	22	0	8	7	8	2	16.507	0.000	***
2020-06-08	23	0	8	8	8	2	18.272	0.000	***
2020-06-12	24	0	8	8	8	2	17.019	0.000	***
2020-06-22	25	0	8	8	8	2	14.901	0.001	***
2020-06-26	26	0	8	8	8	2	15.365	0.000	***
2020-07-02	27	0	6	8	8	2	15.617	0.000	***
2020-07-10	28	0	7	8	8	2	13.793	0.001	***
2020-07-17	29	0	8	8	8	2	14.077	0.001	***
2020-07-23	30	0	8	8	8	2	15.818	0.000	***
2020-07-29	31	0	7	8	8	2	15.052	0.001	***
2020-08-04	32	0	7	8	8	2	13.868	0.001	***
2020-08-10	33	0	8	8	8	2	5.267	0.072	*
2020-08-21	34	0	8	8	8	2	11.115	0.004	***
2020-08-31	36	0	5	3	8	2	11.458	0.003	***
2020-09-09	37	0	8	8	8	2	18.240	0.000	***
2020-09-15	38	0	8	8	8	2	3.280	0.194	
2020-09-21	39	0	8	8	8	2	9.437	0.009	**
2020-09-28	40	0	8	8	8	2	12.269	0.002	***
2021-05-07	18	8	8	8	8	3	20.853	0.000	***
2021-05-11	19	8	8	8	8	3	12.085	0.007	**
2021-05-20	20	8	8	8	8	3	24.743	0.000	***

2021-05-28	21	0	8	8	8	2	12.031	0.002	***
2021-06-01	22	8	8	8	8	3	21.075	0.000	***
2021-06-10	23	8	8	8	8	3	25.804	0.000	***
2021-06-16	24	8	8	8	8	3	21.793	0.000	***
2021-06-24	25	0	8	8	8	2	16.980	0.000	***
2021-06-29	26	8	8	8	0	2	12.484	0.002	***
2021-07-09	27	0	8	8	8	2	15.655	0.000	***
2021-07-15	28	8	8	8	8	3	17.193	0.001	***
2021-07-22	29	0	8	8	8	2	18.240	0.000	***
2021-07-29	30	8	8	8	8	3	21.259	0.000	***
2021-08-03	31	0	8	8	8	2	20.165	0.000	***
2021-08-12	32	8	8	8	8	3	17.263	0.001	***
2021-08-20	33	0	8	8	8	2	16.234	0.000	***
2021-08-23	34	8	8	8	8	3	20.538	0.000	***
2021-09-02	35	0	8	8	8	2	4.353	0.113	
2021-09-06	36	8	8	8	5	3	16.665	0.001	***
2021-09-14	37	0	8	8	8	2	10.665	0.005	**
2021-09-23	38	8	8	8	8	3	13.760	0.003	***
2021-09-30	39	0	8	8	8	2	6.528	0.038	**
2022-05-06	18	8	8	8	0	2	19.574	0.000	***
2022-05-11	19	8	8	8	0	2	11.922	0.003	***
2022-05-18	20	8	8	8	0	2	7.128	0.028	**
2022-05-24	21	8	8	8	0	2	8.694	0.013	**
2022-05-30	22	2	8	8	0	2	11.284	0.004	***
2022-06-06	23	8	8	8	0	2	15.679	0.000	***
2022-06-14	24	8	8	8	0	2	11.540	0.003	***
2022-06-21	25	8	8	8	0	2	17.565	0.000	***
2022-06-27	26	8	8	8	0	2	1.284	0.526	
2022-07-05	27	8	8	8	0	2	1.355	0.508	
2022-07-14	28	8	8	8	0	2	12.660	0.002	***
2022-07-18	29	8	8	8	0	2	17.420	0.000	***
2022-07-26	30	8	8	8	0	2	2.027	0.363	
2022-08-01	31	8	8	8	0	2	6.582	0.037	**
2022-08-11	32	8	8	8	0	2	3.094	0.213	
2022-08-16	33	8	8	8	0	2	0.875	0.646	
2022-08-22	34	8	8	8	0	2	7.215	0.027	**
2022-08-30	35	8	8	8	0	2	14.895	0.001	***
2022-09-06	36	8	8	8	0	2	16.045	0.000	***
2022-09-16	37	8	8	8	0	2	0.135	0.935	
2022-09-21	38	8	8	8	0	2	2.459	0.292	
2022-09-26	39	8	8	8	0	2	2.643	0.267	