Supplementary Material

Table S1. Summary of multiple comparison tests between seismic line and adjacent peatland transects per site. Statistical significance indicated using an asterisk (*) following the p-value.

Multiple Comparisons (Kruskal-Wallis)			
Description	**Site**	**Test Statistic**	**Significance**
Comparison of gap fraction between transects	SL1	$C^2(2) = 45.514$	$p = 1.309 \times 10^{-10}$*
	SL2	$C^2(2) = 33.754$	$p = 4.682 \times 10^{-8}$*
	SL3	$C^2(2) = 34.482$	$p = 3.253 \times 10^{-8}$*
	SL4	$C^2(2) = 29.363$	$p = 4.205 \times 10^{-7}$*
	SL5	$C^2(2) = 27.956$	$p = 8.498 \times 10^{-7}$*
	SL6	$C^2(2) = 31.480$	$p = 1.459 \times 10^{-7}$*
Comparison of *Sphagnum* ground cover percentage between transects	SL1	$C^2(2) = 47.121$	$p = 5.856 \times 10^{-11}$*
	SL2	$C^2(2) = 27.244$	$p = 1.213 \times 10^{-6}$*
	SL3	$C^2(2) = 28.807$	$p = 7.961 \times 10^{-7}$*
	SL4	$C^2(2) = 31.664$	$p = 1.331 \times 10^{-7}$*
	SL5	$C^2(2) = 29.505$	$p = 3.917 \times 10^{-7}$*
	SL6	$C^2(2) = 29.754$	$p = 3.459 \times 10^{-7}$*
Comparison of VWC between transects	SL1	$C^2(2) = 44.319$	$p = 2.38 \times 10^{-10}$*
	SL2	$C^2(2) = 33.539$	$p = 5.21 \times 10^{-8}$*
	SL3	$C^2(2) = 19.686$	$p = 5.31 \times 10^{-5}$*
	SL4	$C^2(2) = 23.490$	$p = 7.93 \times 10^{-6}$*
	SL5	$C^2(2) = 17.213$	$p = 1.83 \times 10^{-4}$*
	SL6	$C^2(2) = 7.297$	$p = 0.026$
Comparison of shrub cover between transects	SL1	$C^2(2) = 3.190$	$p = 0.203$
	SL2	$C^2(2) = 3.725$	$p = 0.155$
	SL3	$C^2(2) = 3.137$	$p = 0.208$
	SL4	$C^2(2) = 12.413$	$p = 0.002$*

	SL5	C^2 (2) = 14.919	p = 5.76x10^{-4}*
	SL6	C^2 (2) = 4.669	p = 0.097
Comparison of smouldering potential between transects	SL1	C^2(2) = 38.167	p = 5.154x10^{-9}*
	SL2	C^2(2) = 33.880	p = 4.395x10^{-8}*
	SL3	C^2(2) = 5.569	p = 0.0618
	SL4	C^2(2) = 4.212	p = 0.1217
	SL5	C^2(2) = 9.899	p = 0.0071*
	SL6	C^2(2) = 0.665	p = 0.7173

Table S2. Peat bulk density of peatland (n=6) and seismic line (n=6) cores by depth intervals. Statistical significance for Mann-Whitney U test (W) are indicated using an asterisk (*) following p-values < 0.05, and (**) following p-values < 0.01.

Depth Interval (m)	Test Statistic	Significance
0 – 0.02	5.33	p = 0.521
0.02 – 0.04	5.33	p = 0.522
0.04 – 0.06	0.23	p = 0.631
0.06 – 0.08	0.23	p = 0.631
0.08 – 0.10	0.64	p = 0.423
0.10 – 0.12	1.09	p = 0.297
0.12 – 0.14	2.08	p = 0.150
0.14 – 0.16	4.33	p = 0.037*
0.16 – 0.18	0.41	p = 0.522
0.18 – 0.20	5.77	p = 0.016*
0.20 – 0.22	3.71	p = 0.054
0.22 – 0.24	3.69	p = 0.055
0.24 – 0.26	5.03	p = 0.025*
0.26 – 0.28	6.56	p = 0.010**

0.28 – 0.30	5.77	p = 0.016*
0.30 – 0.32	5.77	p = 0.016*
0.32 – 0.34	3.69	p = 0.055
0.34 – 0.36	4.02	p = 0.045*
0.36 – 0.38	1.64	p = 0.200
0.38 – 0.40	2.56	p = 0.109
0.40 – 0.42	6.56	p = 0.010*
0.42 – 0.44	5.04	p = 0.025*
0.44 – 0.46	3.69	p = 0.055
0.46 – 0.48	2.56	p = 0.109
0.48 – 0.50	2.13	p = 0.144
0.50 – 0.52	1.20	p = 0.273
0.52 – 0.54	3.96	p = 0.047*
0.54 – 0.56	0.27	p = 0.602
0.56 – 0.58	1.80	p = 0.180

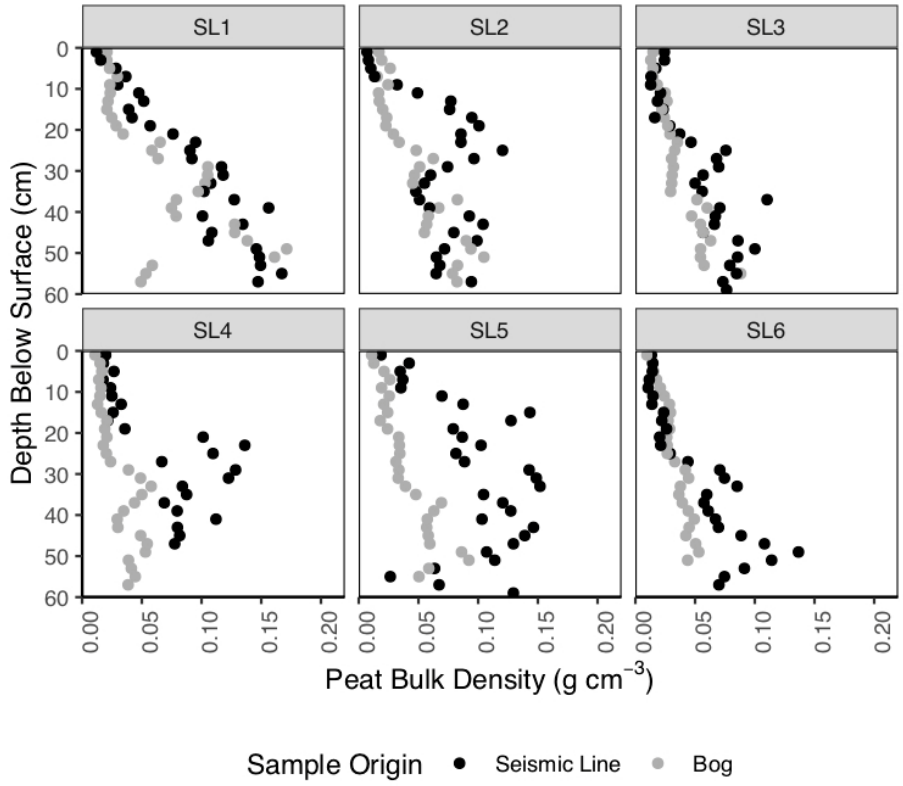

Figure S1. Peat bulk density (0.02 m intervals) of the core extracted from seismic line (n=1) and the core extracted from the adjacent treed portion of the bog (n=1) at each seismic line research site.

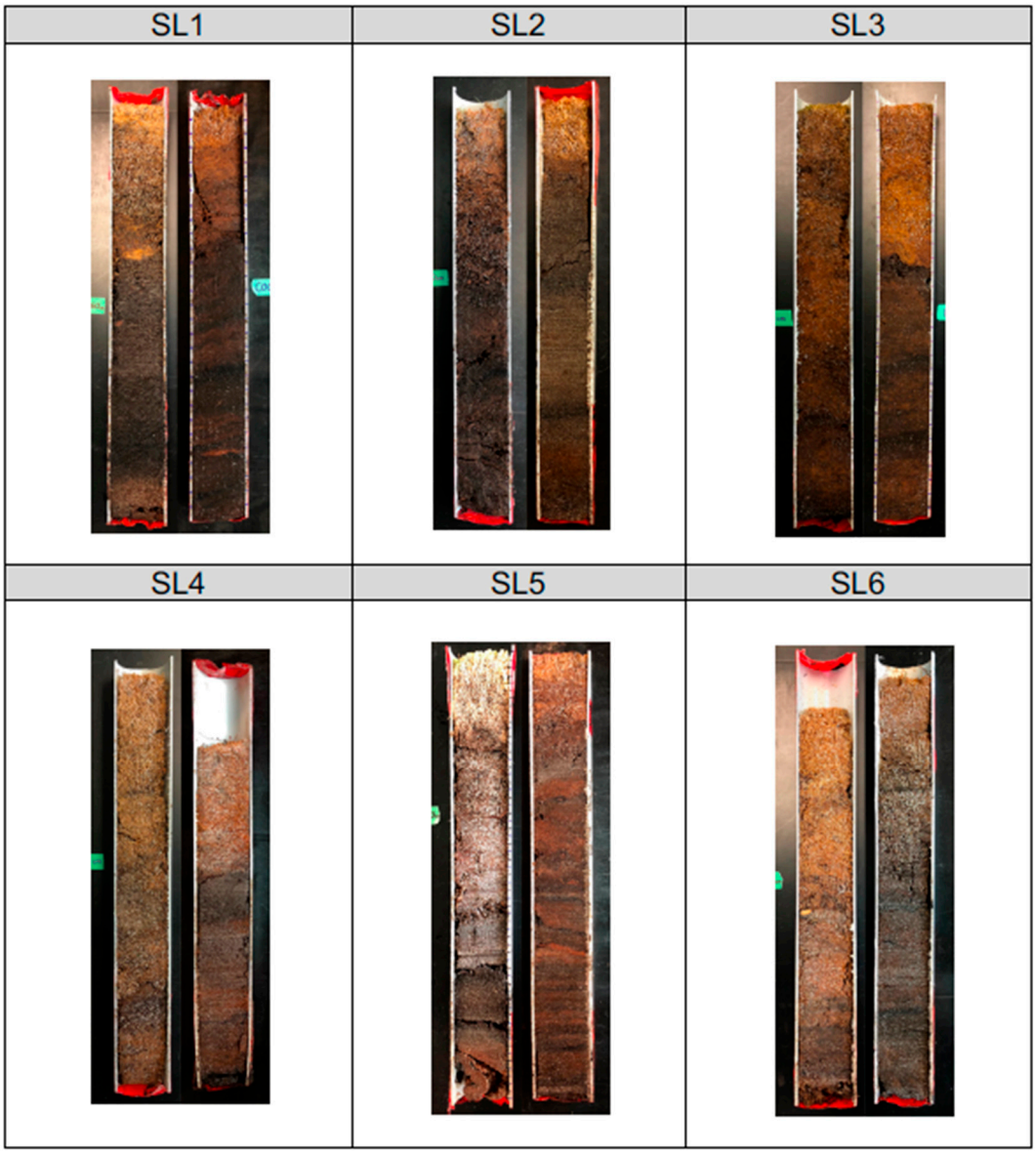

Figure S2. Peat profiles of the adjacent treed portion of the peatland (left) and the intersecting seismic line (right) at each research site.