

Table S1. – Elemental analysis used in this study.

Table S1. Elemental analysis of the organic matter and standards used in this study. All elemental data is reported as moles per 100 g of organic matter.

Name	Type	Detail	Month	Depth (cm)	N	C	H	O
Above Ground	Veg	Aboveground biomass			0.07	4.15	6.40	2.55
Below Ground	Veg	Belowground biomass			0.09	4.23	6.30	2.48
CHS	DOM	Streamwater DOM	December		0.10	2.81	3.47	2.33
CHS	DOM	Streamwater DOM	February		0.11	2.30	2.26	1.69
CHS BG Feb 14 b	DOM	Streamwater DOM	February		0.10	2.39	2.56	1.66
CHS BG Mar 14 b	DOM	Streamwater DOM	March		0.12	2.79	3.09	2.09
CHS BG May 14 b	DOM	Streamwater DOM	March		0.11	3.09	3.52	2.47
CHS BG Jun 14 b	DOM	Streamwater DOM	June		0.17	3.10	3.82	2.52
CHS BG Jul 14 b	DOM	Streamwater DOM	July		0.14	3.11	3.53	2.50
CHS BG Aug 14 b	DOM	Streamwater DOM	August		0.12	3.24	3.66	2.59
CHS BG Sep 14 b	DOM	Streamwater DOM	September		0.12	3.32	3.72	2.48
CHS BG Oct 14 b	DOM	Streamwater DOM	October		0.11	3.35	3.74	2.52
CHS BG Nov 14 b	DOM	Streamwater DOM	November		0.10	3.22	3.43	2.49
CHS BG Dec 14 b	DOM	Streamwater DOM	December		0.11	2.22	2.47	1.93
CHS BG Mar 15 b	DOM	Streamwater DOM	March		0.07	2.41	2.86	1.78
CHS BG Apr 15 b	DOM	Streamwater DOM	April		0.09	2.58	3.24	1.83
POM Jun 13	POM	Streamwater POM	June		0.17	3.18	5.23	1.98
POM Sep 14	POM	Streamwater POM	September		0.32	3.60	6.02	1.95
MH ERIO	Veg	Eriophorum			0.09	3.91	6.14	2.58
Litter	Veg	Litter			0.17	4.17	5.96	2.48
MH Litter	Veg	Litter			0.11	4.00	5.89	2.48
MH C1 0-2	Peat	Peat soil core		0-2	0.13	4.06	5.70	2.38
MH C1 2-4	Peat	Peat soil core		2-4	0.14	4.20	5.76	2.19
MH C1 4-6	Peat	Peat soil core		4-6	0.13	4.20	5.88	2.16
MH C1 6-8	Peat	Peat soil core		6-8	0.09	4.11	5.84	2.42
MH C1 8-10	Peat	Peat soil core		8-10	0.09	3.95	5.86	2.48
MH C1 10-12	Peat	Peat soil core		10-12	0.10	4.05	6.04	2.43
MH C1 12-14	Peat	Peat soil core		12-14	0.12	4.07	6.00	2.38
MH C1 14-16	Peat	Peat soil core		14-16	0.12	4.00	6.16	2.40
MH C1 16-18	Peat	Peat soil core		16-18	0.15	4.06	6.25	2.29
MH C1 18-20	Peat	Peat soil core		18-20	0.14	4.07	6.14	2.21
MH C1 20-25	Peat	Peat soil core		20-25	0.13	4.17	6.26	2.40
MH C1 25-30	Peat	Peat soil core		25-30	0.09	4.12	6.12	2.41
MH C1 30-35	Peat	Peat soil core		30-35	0.09	4.19	6.03	2.37
MH C1 35-40	Peat	Peat soil core		35-40	0.10	4.26	6.23	2.41
MH C1 40-45	Peat	Peat soil core		40-45	0.10	4.25	6.19	2.25
MH C1 45-50	Peat	Peat soil core		45-50	0.08	4.23	6.18	2.34
MH C1 50-60	Peat	Peat soil core		50-60	0.07	4.35	6.10	2.35
MH C1 60-70	Peat	Peat soil core		60-70	0.08	4.43	6.17	2.28
MH C1 70-80	Peat	Peat soil core		70-80	0.09	4.33	6.26	2.30
MH C1 80-90	Peat	Peat soil core		80-90	0.08	4.31	6.08	2.42

MH C1 90-95	Peat	Peat soil core	90-95	0.08	4.26	6.04	2.46
MH C1 95-100	Peat	Peat soil core	95-100	0.07	4.34	5.75	2.28
MH C2 0-2	Peat	Peat soil core	0-2	0.10	4.12	6.02	2.35
MH C2 2-4	Peat	Peat soil core	2-4	0.12	4.11	5.77	2.21
MH C2 4-6	Peat	Peat soil core	4-6	0.13	4.18	5.73	2.16
MH C2 6-8	Peat	Peat soil core	6-8	0.10	4.09	5.61	2.12
MH C2 8-10	Peat	Peat soil core	8-10	0.07	3.90	5.84	2.56
MH C2 10-12	Peat	Peat soil core	10-12	0.07	3.88	5.87	2.57
MH C2 12-14	Peat	Peat soil core	12-14	0.07	3.91	5.85	2.42
MH C2 14-16	Peat	Peat soil core	14-16	0.07	4.01	5.95	2.46
MH C2 16-18	Peat	Peat soil core	16-18	0.07	3.90	5.70	2.61
MH C2 18-20	Peat	Peat soil core	18-20	0.09	4.18	5.80	2.23
MH C2 20-25	Peat	Peat soil core	20-25	0.10	4.26	5.77	2.20
MH C2 25-30	Peat	Peat soil core	25-30	0.12	4.15	5.95	2.30
MH C2 30-35	Peat	Peat soil core	30-35	0.10	4.21	5.87	2.34
MH C2 35-40	Peat	Peat soil core	35-40	0.10	4.33	5.92	2.27
MH C2 40-45	Peat	Peat soil core	40-45	0.09	4.24	5.97	2.32
MH C2 45-50	Peat	Peat soil core	45-50	0.09	4.28	5.89	2.27
MH C2 50-60	Peat	Peat soil core	50-60	0.08	4.36	5.89	2.30
MH C2 60-70	Peat	Peat soil core	60-70	0.08	4.31	5.95	2.29
MH C2 70-80	Peat	Peat soil core	70-80	0.09	4.46	5.83	2.29
MH C2 80-90	Peat	Peat soil core	80-90	0.09	4.41	5.95	2.17
MH C2 90-95	Peat	Peat soil core	90-95	0.09	4.29	6.06	2.32
MH C2 95-100	Peat	Peat soil core	95-100	0.09	4.32	5.93	2.17
Shallow - Base	Soil DOM	Soil waterDOM	December	0.14	4.30	5.92	2.05
Deep	Soil DOM	Soil waterDOM	December	0.14	4.24	5.94	2.03
Deep - Base	Soil DOM	Soil waterDOM	December	0.14	4.24	5.78	1.98
Shallow	Soil DOM	Soil waterDOM	January	0.15	4.22	5.69	2.10
Deep	Soil DOM	Soil waterDOM	January	0.13	3.88	5.06	1.98
Dipwell	Soil DOM	Soil waterDOM	January	0.19	3.75	5.53	2.13
Shallow	Soil DOM	Soil waterDOM	February	0.13	3.94	5.60	2.09
Deep	Soil DOM	Soil waterDOM	February	0.14	3.88	4.61	1.85
Dipwell	Soil DOM	Soil waterDOM	February	0.22	4.00	4.62	1.87
Shallow	Soil DOM	Soil waterDOM	March	0.15	4.20	5.78	2.04
Deep	Soil DOM	Soil waterDOM	March	0.13	4.02	4.82	2.00
Dipwell	Soil DOM	Soil waterDOM	March	0.19	4.20	5.03	1.94
Deep	Soil POM	Soil waterPOM	December	0.09	4.34	5.57	2.16
Shallow	Soil DOM	Soil waterDOM	December	0.15	4.17	6.00	2.06
SPHAG CAP	Veg	Sphagnum		0.05	3.66	6.06	2.80
SPHAG GREEN	Veg	Sphagnum		0.08	3.80	6.20	2.61
STANDARD	LIGNIN	Standard		0.06	5.14	6.03	1.81
STANDARD	CELLULOSE	Standard		0.00	3.60	6.25	3.21
STANDARD	HUMIC ACID	Standard		0.06	2.99	3.68	2.03
STANDARD	GLUTEN	Standard		1.00	3.86	6.55	1.96
STANDARD	GLUTEN	Standard		0.95	3.88	6.83	1.95
STANDARD	GLUTEN	Standard		0.96	3.89	6.75	1.98
STANDARD	GLUTEN	Standard	*	0.99	3.94	6.83	2.00