

[Biogeosciences]

Supplementary Material for

Scotland's Forgotten Carbon: A National Assessment of Mid-Latitude Fjord Sedimentary Carbon Stocks.

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1. Statistical Analysis

1. Spot Sample Data and Partial Seismic Data

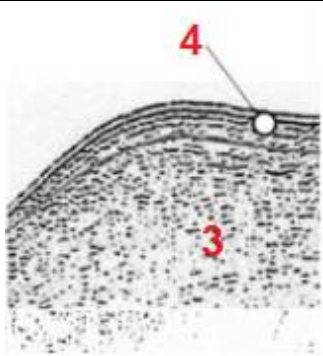
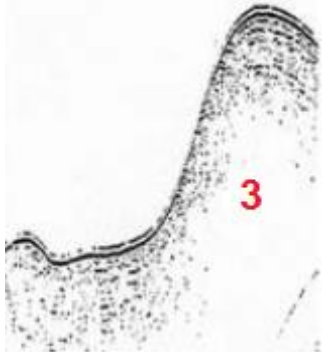
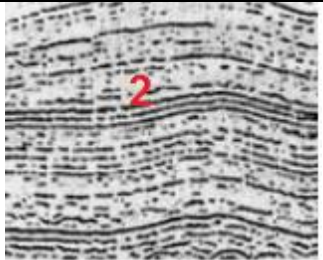
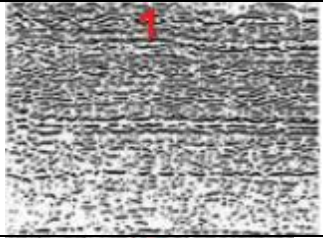
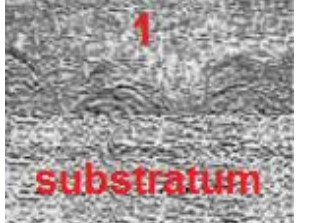
Fjord	ID	%TC	%OC	%IC	Location (Lat & long)
Gare Loch	GS 412	5.62	5.26	0.36	56.07633, -4.83017
Gare Loch	GS 414	4.38	3.83	0.55	56.0215, -4.79067
Loch Striven	GS 454	4.15	3.66	0.49	56.00417, -5.12333
Loch Striven	GS 456	3.91	2.31	1.60	55.96017, -5.08667
Loch Striven	GS 458	4.83	3.61	1.22	55.92067, -5.06217
Loch Riddon	GS 465	3.32	2.70	0.62	55.9535, -5.18933
Loch Portree	M 135	7.63	2.14	5.49	57.40967, -6.16117
Loch Long	GS 396	4.85	4.48	0.37	56.2015, -4.74567
Loch Long	GS 398	3.11	2.73	0.38	56.16433, -4.78917
Loch Long	GS 401	0.66	0.34	0.32	56.1025, -4.84883
Loch Goil	GS 402	7.10	4.54	2.56	56.16583, -4.90567
Loch Goil	GS 404	4.18	4.13	0.05	56.12267, -4.89483
Loch Fyne	GS 507	6.42	5.76	0.66	56.2655, -4.9305
Loch Fyne	GS 510	2.58	2.48	0.10	56.24166, -5.05233
Loch Fyne	GS 512	6.18	3.64	2.54	56.19017, -5.08733
Loch Fyne	GS 519	1.41	0.67	0.74	56.08083, -5.26933
Loch Fynne	GS 524	1.05	0.21	0.84	55.98833, -5.355
Loch Linnhe	56/06/134	0.23	0.14	0.09	56.685, -5.29333
Dale Voe	60-02/109	10.50	3.15	7.35	60.20667, -1.161767
Clift Sound	MD15-01	8.99	8.00	0.99	60.11943, -1.27727
Clift Sound	MD15-02	9.87	2.80	7.07	60.09987, -1.28453
Clift Sound	MD15-03	10.99	3.48	7.51	60.07995, -1.2975
Clift Sound	MD15-04	8.3	3.58	4.72	60.06635, -1.30778
Clift Sound	MD15-05	11.73	6.62	5.11	60.04765, -1.31588
Sand Sound	MD15-06	5.83	3.39	2.44	60.24485, -1.40295
Sand Sound	MD15-07	5.04	4.51	0.53	60.24477, -1.40418
Sand Sound	MD15-08	9.95	8.28	1.67	60.24477, -1.37952
Sand Sound	MD15-09	4.31	3.78	0.53	60.24178, -1.35835
Sand Sound	MD15-10	10.37	4.80	5.57	60.22822, -1.37052
Olna Firth	MD15-11	10.56	8.51	3.02	60.36277, -1.29588
Olna Firth	MD15-12	10.66	7.54	2.15	60.36425, -1.32315
Aith Voe	MD15-13	10.14	5.44	4.70	60.28945, -1.37488
Aith Voe	MD15-14	4.83	4.48	0.35	60.3055, -1.374
Busta Voe	MD15-15	40.71	38.38	2.33	60.39075, -1.36122
Busta Voe	MD15-16	33.96	7.68	26.28	60.38063, -1.35888
Busta Voe	MD15-17	24.15	3.76	20.39	60.3694, -1.37052
Vaila Sound	MD15-18	8.49	4.79	3.70	60.21943, -1.56408
Vaila Sound	MD15-19	7.42	3.51	3.91	60.213, -1.5624
Vaila Sound	MD15-20	8.14	4.07	4.07	60.21428, -1.58217
Vaila Sound	MD15-21	8.41	2.89	5.52	60.20567, -1.56747
Loch Ewe	GC009	7.20	0.48	6.72	57.906518, -5.687034
Loch Ewe	GS 1	3.59	2.34	1.25	57.847717, -5.626583
Loch Ewe	GS 2	5.49	2.26	3.23	57.847333, -5.628317
Loch Ewe	GS 3	5.53	2.91	2.62	57.848267, -5.625000
Loch Ewe	GS 4	5.28	2.09	3.19	57.845733, -5.646567
Loch Ewe	GS 5	2.64	1.55	1.09	57.833783, -5.651133
Loch Ewe	GS 6	3.82	1.28	2.54	57.816900, -5.635667
Loch Ewe	GS 7	6.13	5.29	0.84	57.796683, -5.629767
Loch Ewe	GS 8	5.72	5.18	0.54	57.787783, -5.634933
Loch Ewe	GS 9	4.44	3.68	0.76	57.786483, -5.634133

Supplementary Table 1. Location and carbon content of the spot samples collected as part of effort to constraint the upscaled estimates.

Fjord	Survey Line ID	Cruise ID	Method	URL
Loch Fyne	95931 -95939	1969/3	Sparker	http://mapapps2.bgs.ac.uk/geoindex_offshore/home.html
Loch Linnhe	45445928 - 45445938	2011/4	Surface Towed Boomer	http://mapapps2.bgs.ac.uk/geoindex_offshore/home.html
Loch Hourn	97823 - 97845	1973/WH/13	Pinger	http://mapapps2.bgs.ac.uk/geoindex_offshore/home.html
Loch Nevis	97823 - 97845	1973/WH/13	Pinger	http://mapapps2.bgs.ac.uk/geoindex_offshore/home.html
Loch Long	56634343 - 56634379	2015/1	Surface Towed Boomer	http://mapapps2.bgs.ac.uk/geoindex_offshore/home.html

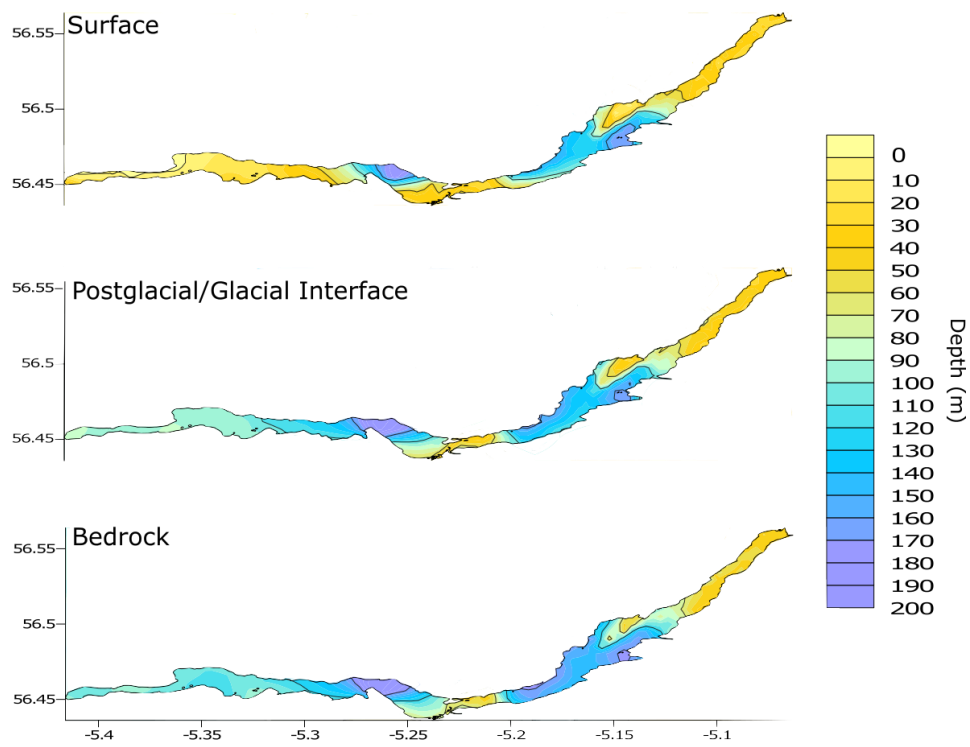
Supplementary Table 2. Seismic transects used to estimate basic sedimentary C stocks for use to constrain the upscaling efforts. .

2. Seismic Geophysical Reference Guide

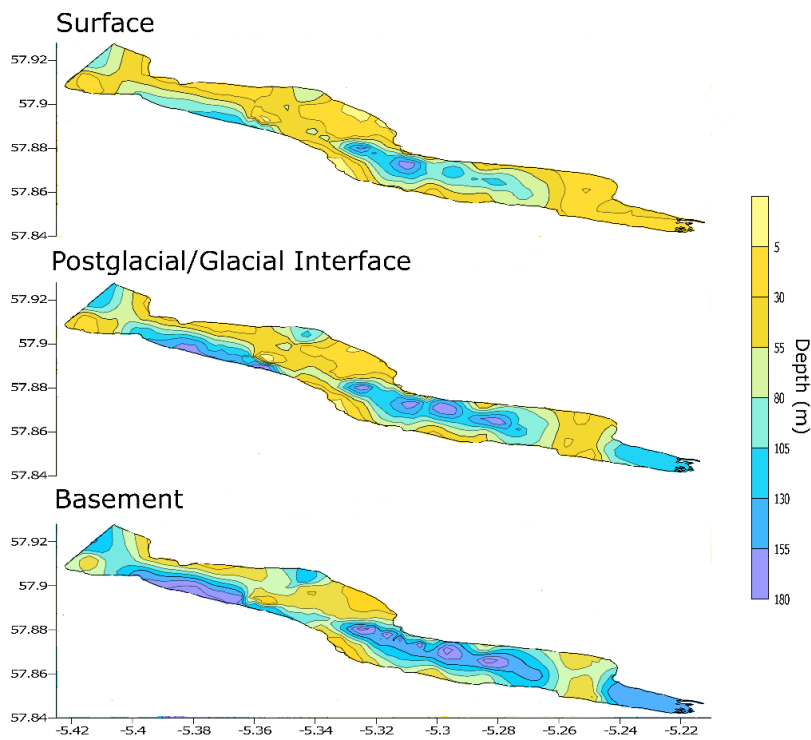
Acoustic Facies	Description	Sediment Unit	Sedimentary Process
	Thin deposit stratified	Postglacial	Lower supply Slow deposition
	Thick deposit transparent/semi-transparent		High supply Rapid deposition High water content
	Lower texture Stratified reflectors Denser texture	Glacial (Younger Dryas)	Varying Supply Glaciomarine
	Short discontinuous reflections Hyperbola (Boulders)		Glacial
	Short discontinuous reflections	Bedrock	

Supplementary Table 3. Reference guide used to interpolate the seismic profiles extracted from Baltzer et al. (2010) and further adapted with data from Howe et al. (2002), Stoker et al. (2009, 2010).

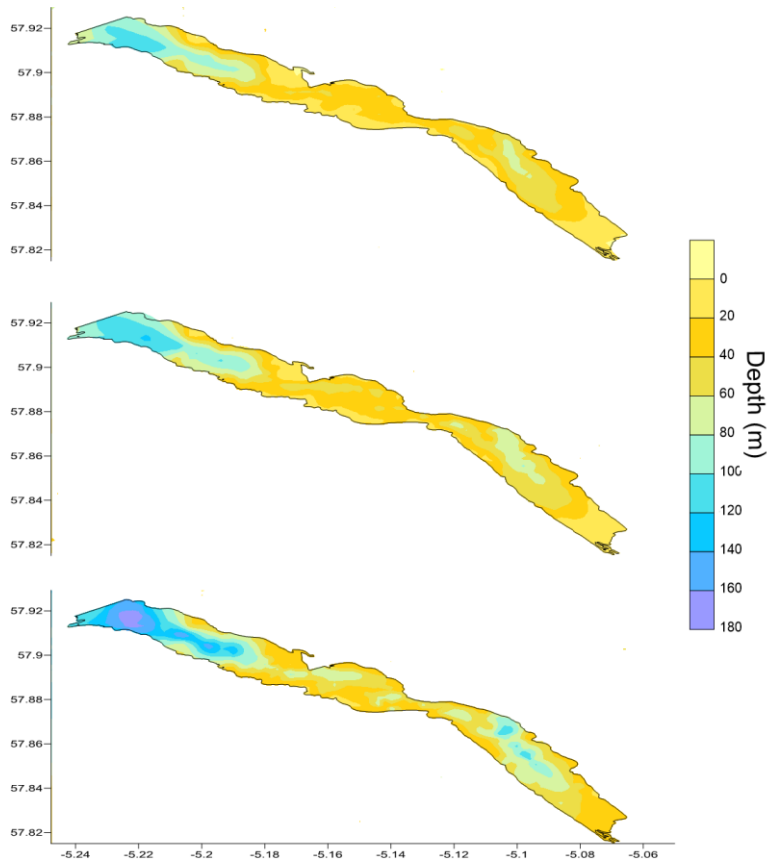
3. Seismic Horizon Models (Volumetric Estimations)



Supplementary Figure 1. Loch Etive: Contour maps defining the topography of each seismic horizon from which the volume of sediment was calculated.



Supplementary Figure 2. Little Loch Broom: Contour maps defining the topography of each seismic horizon from which the volume of sediment was calculated.



Supplementary Figure 3. Loch Broom: Contour maps defining the topography of each seismic horizon from which the volume of sediment was calculated.

4. Estimated C stocks of Individual fjords.

Fjord	Organic Carbon (Mt)				Inorganic Carbon (Mt)				Confidence Level
	Mean	σ	Min	Max	Mean	σ	Min	Max	
A'CHOIRE	0.16	0.04	0.14	0.18	0.22	0.07	0.13	0.46	Medium
A'CHUMHAINN	0.36	0.13	0.32	0.40	0.42	0.14	0.33	0.64	Medium
AILORT	0.72	0.21	0.68	0.76	0.76	0.28	0.71	0.90	Medium
AINORT	0.47	0.02	0.33	0.61	0.49	0.23	0.43	0.61	Medium
AIRDBHAIR	0.05	0.01	0.04	0.05	0.13	0.02	0.05	0.39	Low
AITH VOE	0.64	0.51	0.44	0.84	0.67	0.40	0.46	0.96	Medium
ALINE	0.21	0.08	0.17	0.25	0.28	0.08	0.17	0.53	Medium
ALSH	3.10	0.96	3.03	3.16	2.99	1.26	2.61	3.16	Medium
BALTA HARBOUR	0.23	0.18	0.17	0.30	0.30	0.14	0.17	0.57	Low
BASTA VOE	0.64	0.49	0.45	0.83	0.68	0.38	0.47	0.95	Low
BAY	1.73	0.53	1.72	1.75	1.72	0.71	1.60	1.79	Medium
BHROLLUM	0.30	0.10	0.29	0.31	0.37	0.12	0.30	0.58	Medium
BOISDALE	0.99	0.36	0.88	1.09	1.01	0.40	0.92	1.13	Medium
BROOM	2.41	0.47	3.35	1.47	2.69	0.44	3.57	1.81	Very High
BUIE	1.83	0.46	1.58	2.07	1.65	0.84	1.48	2.07	High
BURRA FIRTH	0.40	0.30	0.29	0.52	0.46	0.24	0.30	0.73	Medium
BUSTA VOE	0.49	0.40	0.34	0.64	0.54	0.31	0.36	0.82	Medium
A' CHAIM BHAIN	1.93	0.52	1.72	2.14	1.88	0.71	1.79	2.14	Low
CAMPBELTOWN	0.53	0.37	0.40	0.67	0.58	0.30	0.41	0.84	Low
CAOLISPORT	2.23	1.96	1.38	3.09	2.11	1.48	1.44	3.09	Medium
CARLOWAY	0.10	0.04	0.09	0.11	0.18	0.04	0.09	0.44	Low
CARRON	3.83	0.66	3.13	4.52	3.37	1.76	2.59	4.52	Medium
CAT FIRTH	0.38	0.30	0.26	0.49	0.44	0.23	0.28	0.71	Low
CLAIDH	0.52	0.16	0.50	0.54	0.57	0.21	0.52	0.74	Medium
COLLA FIRTH	0.16	0.13	0.11	0.20	0.23	0.10	0.11	0.50	Medium
CRAIGNISH	2.80	1.95	1.98	3.61	2.65	1.55	2.07	3.61	Medium
CRERAN	2.56	0.73	4.02	1.1	0.89	0.42	1.73	0.35	Very High
DALES VOE NORTH MAINLAND	0.42	0.34	0.30	0.55	0.48	0.26	0.31	0.75	High
DALES VOE SOUTH MAINLAND	0.47	0.37	0.33	0.61	0.52	0.29	0.34	0.80	Low
DON	0.05	0.02	0.04	0.06	0.14	0.02	0.05	0.40	Medium
DUGHAILL	0.23	0.07	0.22	0.23	0.30	0.09	0.23	0.53	Low
DUICH	1.87	0.21	1.48	2.27	1.70	0.86	1.41	2.27	High
DUNVEGAN	2.81	0.83	2.72	2.89	2.72	1.12	2.42	2.89	Medium
EISHORT	0.27	0.08	0.25	0.28	0.34	0.10	0.26	0.56	Medium
EPORT	0.43	0.13	0.40	0.46	0.49	0.17	0.41	0.68	Low
ERIBOLL	3.66	1.05	3.43	3.89	3.50	1.41	3.12	3.89	Medium
ERISORT	0.86	0.25	0.78	0.94	0.89	0.33	0.82	1.03	Low
ETIVE	11.51	0.37	12.25	10.77	6.2	0.27	6.74	5.66	Very High
EWE	8.26	1.51	7.83	8.68	7.17	3.43	5.92	8.68	High
EYNORT	0.19	0.06	0.18	0.20	0.27	0.08	0.18	0.50	Low
FEOCHAN	0.37	0.15	0.30	0.45	0.43	0.15	0.31	0.68	Medium
FYNE	40.04	1.80	34.33	45.75	34.39	12.92	24.61	45.75	High
GAIRLOCH	2.20	0.22	1.71	2.70	1.98	1.02	1.57	2.70	Medium
GARELOCH	1.58	0.81	1.28	1.88	1.55	0.73	1.33	1.88	High
GLUSS VOE	0.17	0.13	0.12	0.22	0.24	0.10	0.13	0.51	Low

GOIL	1.51	0.45	1.41	1.60	1.38	0.68	1.15	1.60	High
GRESHORNISH	0.42	0.13	0.41	0.42	0.48	0.17	0.44	0.65	High
GRIMSHADER	0.07	0.02	0.07	0.07	0.16	0.03	0.07	0.41	Low
GRUINART	0.52	0.28	0.42	0.62	0.57	0.25	0.44	0.80	Low
GRUTING VOE	0.98	0.87	0.63	1.33	0.98	0.66	0.65	1.33	Low
HOLY LOCH	0.64	0.17	0.62	0.67	0.64	0.28	0.48	0.80	Medium
HOURN	5.64	0.24	4.68	6.59	4.92	2.48	3.69	6.59	High
INCHARD	0.47	0.14	0.44	0.51	0.53	0.18	0.46	0.72	Medium
INDAAL	4.09	3.15	2.67	5.50	3.80	2.43	2.78	5.50	Low
INVER	0.51	0.14	0.45	0.57	0.57	0.19	0.47	0.77	Medium
KENTRA BAY	0.07	0.02	0.07	0.07	0.15	0.03	0.07	0.41	Medium
KISHORN	0.59	0.19	0.58	0.60	0.64	0.25	0.62	0.77	High
LAX FIRTH	0.28	0.22	0.20	0.37	0.35	0.17	0.21	0.62	Low
LAXFORD	1.39	0.05	1.16	1.62	1.28	0.61	1.16	1.62	Medium
LEURBOST	0.15	0.05	0.14	0.16	0.23	0.06	0.15	0.47	Low
LEVEN	1.40	0.10	1.33	1.47	1.29	0.55	1.05	1.47	Medium
LINNHE (Upper) & EIL	10.78	3.46	9.69	11.87	8.86	2.47	5.08	11.87	High
LINNHE(lower)	38.96	4.98	36.97	42.87	20.42	4.01	18.34	23.11	Medium
LITTLE LOCH BROOM	1.57	0.59	0.275	0.39	1.42	0.75	2.92	1.21	Very High
LONG ALSH	0.25	0.04	0.20	0.29	0.30	0.11	0.21	0.51	Medium
LONG CLYDE	6.29	1.71	6.00	6.57	5.48	2.75	4.62	6.57	High
MELFORT	1.41	0.93	1.02	1.80	1.38	0.75	1.07	1.80	Medium
MID YELL	0.26	0.20	0.19	0.34	0.33	0.16	0.20	0.60	Low
MOIDART NORTH CHANNEL	0.10	0.03	0.10	0.10	0.18	0.04	0.10	0.43	Medium
MOIDART SOUTH CHANNEL	0.28	0.03	0.25	0.31	0.33	0.12	0.22	0.54	Medium
NA CILLE	0.14	0.12	0.10	0.19	0.22	0.09	0.10	0.49	Low
NA KEAL	5.28	0.71	4.57	5.99	4.61	2.30	3.60	5.99	Low
NA LATHAICH	0.32	0.13	0.29	0.36	0.39	0.14	0.30	0.61	Medium
NAN CEALL	0.28	0.09	0.28	0.29	0.35	0.11	0.29	0.57	Medium
NEDD	0.07	0.02	0.07	0.07	0.15	0.03	0.07	0.41	Low
NEVIS	4.77	0.25	3.92	5.61	4.18	2.11	3.14	5.61	High
ODHAIRN	0.10	0.03	0.10	0.11	0.19	0.04	0.10	0.44	Low
OLNA VOE	0.54	0.44	0.37	0.71	0.59	0.34	0.39	0.87	Medium
PORTREE	0.32	0.02	0.24	0.41	0.37	0.15	0.29	0.53	High
RESORT	0.36	0.13	0.32	0.41	0.43	0.14	0.33	0.65	Medium
RIDDON	0.24	0.14	0.18	0.30	0.31	0.11	0.18	0.57	High
RONAS VOE	0.97	0.78	0.67	1.28	0.98	0.60	0.70	1.28	Low
RYAN	5.97	2.97	4.44	7.49	5.56	2.62	4.63	7.49	Low
SANDSOUND VOE	1.04	0.93	0.67	1.41	1.04	0.70	0.70	1.41	Medium
SCRIDAIN	4.46	0.63	3.97	4.95	3.91	1.91	3.18	4.95	Medium
SEAFORTH	2.48	0.68	2.23	2.74	2.40	0.92	2.30	2.74	High
SHELL	0.73	0.23	0.67	0.78	0.77	0.28	0.70	0.92	High
SKIPORT	0.24	0.08	0.23	0.26	0.32	0.10	0.24	0.54	Low
SLAPIN	0.25	0.02	0.19	0.31	0.31	0.12	0.22	0.50	Medium
SLIGACHAN	0.25	0.02	0.18	0.31	0.30	0.12	0.22	0.49	Medium
SNIZORT BEG	1.09	0.35	1.00	1.18	1.11	0.43	1.05	1.20	High
SPELVE	1.53	0.36	1.34	1.72	1.40	0.69	1.23	1.72	High
STORNOWAY	0.27	0.09	0.25	0.29	0.34	0.11	0.26	0.57	Low
STRIVEN	1.81	1.07	1.36	2.27	1.75	0.89	1.41	2.27	High

STROMNESS VOE	0.15	0.14	0.10	0.21	0.23	0.11	0.10	0.51	Low
SULLOM VOE	2.79	2.10	1.99	3.59	2.64	1.65	2.08	3.59	Low
SUNART	9.4	0.2	9.8	9	10.1	0.17	10.44	9.76	Very High
SWEEN	3.01	2.33	2.01	4.01	2.83	1.80	2.09	4.01	Medium
SWINING VOE	0.28	0.23	0.20	0.37	0.35	0.17	0.21	0.62	Low
TAMANAVAY	0.22	0.08	0.20	0.25	0.30	0.09	0.21	0.53	Medium
TARBERT	1.31	0.63	1.05	1.58	1.30	0.58	1.09	1.58	Low
TEACUIS	0.26	0.09	0.24	0.29	0.34	0.11	0.25	0.56	Medium
TORRIDON	11.12	2.35	8.55	13.69	9.62	5.39	6.43	13.69	High
URA FIRTH	0.29	0.23	0.20	0.37	0.35	0.18	0.21	0.63	Low
USKAVAGH	0.24	0.08	0.23	0.26	0.32	0.10	0.24	0.54	Low
VIDLIN VOE	0.41	0.33	0.29	0.53	0.46	0.25	0.30	0.74	Medium
WEISDALE VOE	0.78	0.71	0.51	1.06	0.80	0.53	0.53	1.11	Low
WEST LOCH	1.42	0.52	1.27	1.58	1.41	0.58	1.32	1.58	Medium
TARBERT HARRIS									
WEST LOCH	2.41	2.12	1.49	3.34	2.28	1.59	1.55	3.34	Medium
TARBERT KINTYRE									
WHALE FIRTH	0.49	0.37	0.34	0.63	0.53	0.29	0.36	0.81	Low
WHITENESS VOE	0.51	0.46	0.33	0.69	0.55	0.35	0.34	0.85	Low

Supplementary Table 4. Estimated postglacial sedimentary C stocks for individual fjords broken down into OC and IC. Additionally; the assigned confidence level for each estimate is listed.

Fjord	Organic Carbon (Mt)				Inorganic Carbon (Mt)				Confidence Level
	Mean	σ	Min	Max	Mean	σ	Min	Max	
A'CHOIRE	0.0396	0.009	0.0216	0.0576	0.09	0.018	0.054	0.1296	Low
A'CHUMHAINN	0.058	0.029	0.058	0.087	0.145	0.029	0.116	0.174	Low
AILORT	0.124	0.062	0.124	0.186	0.31	0.062	0.248	0.372	Low
AINORT	0.1364	0.031	0.0744	0.1984	0.31	0.062	0.186	0.4464	Low
AIRDBHAIR	0.008	0.004	0.008	0.012	0.02	0.004	0.016	0.024	Very Low
AITH VOE	0.08	0.04	0.08	0.12	0.2	0.04	0.16	0.24	Low
ALINE	0.03	0.015	0.03	0.045	0.075	0.015	0.06	0.09	Low
ALSH	0.55	0.275	0.55	0.825	1.375	0.275	1.1	1.65	Low
BALTA HARBOUR	0.03	0.015	0.03	0.045	0.075	0.015	0.06	0.09	Very Low
BASTA VOE	0.082	0.041	0.082	0.123	0.205	0.041	0.164	0.246	Very Low
BAY	0.312	0.156	0.312	0.468	0.78	0.156	0.624	0.936	Low
BHROLLUM	0.052	0.026	0.052	0.078	0.13	0.026	0.104	0.156	Low
BOISDALE	0.16	0.08	0.16	0.24	0.4	0.08	0.32	0.48	Low
BROOM	0.51	0.18	0.15	0.87	1.21	0.25	0.71	1.71	High
BUIE	0.4664	0.106	0.2544	0.6784	1.06	0.212	0.636	1.5264	Medium
BURRA FIRTH	0.052	0.026	0.052	0.078	0.13	0.026	0.104	0.156	Low
BUSTA VOE	0.062	0.031	0.062	0.093	0.155	0.031	0.124	0.186	Low
A' CHAIM BHAIN	0.312	0.156	0.312	0.468	0.78	0.156	0.624	0.936	Very Low
CAMPBELTOWN	0.072	0.036	0.072	0.108	0.18	0.036	0.144	0.216	Very Low
CAOLISPORT	0.25	0.125	0.25	0.375	0.625	0.125	0.5	0.75	Low
CARLOWAY	0.016	0.008	0.016	0.024	0.04	0.008	0.032	0.048	Very Low
CARRON	1.0164	0.231	0.5544	1.4784	2.31	0.462	1.386	3.3264	Low
CAT FIRTH	0.048	0.024	0.048	0.072	0.12	0.024	0.096	0.144	Very Low
CLAIDH	0.09	0.045	0.09	0.135	0.225	0.045	0.18	0.27	Low
COLLA FIRTH	0.02	0.01	0.02	0.03	0.05	0.01	0.04	0.06	Low
CRAIGNISH	0.36	0.18	0.36	0.54	0.9	0.18	0.72	1.08	Low
CRERAN	0.3857	0.133	0.266	0.532	0.931	1.197	0.532	3.192	High
DALES VOE NORTH									Low
MAINLAND	0.054	0.027	0.054	0.081	0.135	0.027	0.108	0.162	
DALES VOE SOUTH									Very Low
MAINLAND	0.06	0.03	0.06	0.09	0.15	0.03	0.12	0.18	
DON	0.008	0.004	0.008	0.012	0.02	0.004	0.016	0.024	Low
DUGHAILL	0.04	0.02	0.04	0.06	0.1	0.02	0.08	0.12	Very Low
DUICH	0.5104	0.116	0.2784	0.7424	1.16	0.232	0.696	1.6704	Low
DUNVEGAN	0.494	0.247	0.494	0.741	1.235	0.247	0.988	1.482	Low
EISHORT	0.046	0.023	0.046	0.069	0.115	0.023	0.092	0.138	Low
EPORT	0.072	0.036	0.072	0.108	0.18	0.036	0.144	0.216	Very Low
ERIBOLL	0.622	0.311	0.622	0.933	1.555	0.311	1.244	1.866	Low
ERISORT	0.142	0.071	0.142	0.213	0.355	0.071	0.284	0.426	Very Low
ETIVE	1.01	0.13	0.75	1.27	2.39	0.23	1.93	2.85	High
EWE	1.9536	0.444	1.0656	2.8416	4.44	0.888	2.664	6.3936	Low
EYNORT	0.032	0.016	0.032	0.048	0.08	0.016	0.064	0.096	Very Low
FEOCHAN	0.054	0.027	0.054	0.081	0.135	0.027	0.108	0.162	Low
FYNE	7.722	1.755	4.212	11.232	17.55	3.51	10.53	25.272	Medium
GAIRLOCH	0.6072	0.138	0.3312	0.8832	1.38	0.276	0.828	1.9872	Low
GARELOCH	0.232	0.116	0.232	0.348	0.58	0.116	0.464	0.696	Low
GLUSS VOE	0.022	0.011	0.022	0.033	0.055	0.011	0.044	0.066	Very Low
GOIL	0.3608	0.082	0.1968	0.5248	0.82	0.164	0.492	1.1808	Low
GRESHORNISH	0.076	0.038	0.076	0.114	0.19	0.038	0.152	0.228	Low

GRIMSHADER	0.012	0.006	0.012	0.018	0.03	0.006	0.024	0.036	Very Low
GRUINART	0.076	0.038	0.076	0.114	0.19	0.038	0.152	0.228	Very Low
GRUTING VOE	0.114	0.057	0.114	0.171	0.285	0.057	0.228	0.342	Very Low
HOLY LOCH	0.1496	0.034	0.0816	0.2176	0.34	0.068	0.204	0.4896	Medium
HOURN	1.4828	0.337	0.8088	2.1568	3.37	0.674	2.022	4.8528	Medium
INCHARD	0.08	0.04	0.08	0.12	0.2	0.04	0.16	0.24	Low
INDAAL	0.484	0.242	0.484	0.726	1.21	0.242	0.968	1.452	Very Low
INVER	0.082	0.041	0.082	0.123	0.205	0.041	0.164	0.246	Low
KENTRA BAY	0.012	0.006	0.012	0.018	0.03	0.006	0.024	0.036	Low
KISHORN	0.108	0.054	0.108	0.162	0.27	0.054	0.216	0.324	Low
LAX FIRTH	0.036	0.018	0.036	0.054	0.09	0.018	0.072	0.108	Very Low
LAXFORD	0.3652	0.083	0.1992	0.5312	0.83	0.166	0.498	1.1952	Low
LEURBOST	0.026	0.013	0.026	0.039	0.065	0.013	0.052	0.078	Very Low
LEVEN	0.33	0.075	0.18	0.48	0.75	0.15	0.45	1.08	Low
LINNHE (Upper) & EIL	0.5706	0.317	0.634	1.2046	7.608	0.634	0.634	8.876	Low
LINNHE(lower)	2.30	0.23	1.78	3.82523	30.60184	2.1	27.98	32.48	Medium
LITTLE LOCH BROOM	1.86	0.14	1.58	2.14	2.12	0.38	1.36	2.88	High
LONG ALSH	0.066	0.015	0.036	0.096	0.15	0.03	0.09	0.216	Low
LONG CLYDE	1.4784	0.336	0.8064	2.1504	3.36	0.672	2.016	4.8384	Medium
MELFORT	0.186	0.093	0.186	0.279	0.465	0.093	0.372	0.558	Low
MID YELL	0.034	0.017	0.034	0.051	0.085	0.017	0.068	0.102	Very Low
MOIDART NORTH CHANNEL	0.018	0.009	0.018	0.027	0.045	0.009	0.036	0.054	Low
MOIDART SOUTH CHANNEL	0.0704	0.016	0.0384	0.1024	0.16	0.032	0.096	0.2304	Low
NA CILLE	0.018	0.009	0.018	0.027	0.045	0.009	0.036	0.054	Very Low
NA KEAL	1.3464	0.306	0.7344	1.9584	3.06	0.612	1.836	4.4064	Very Low
NA LATHAICH	0.052	0.026	0.052	0.078	0.13	0.026	0.104	0.156	Low
NAN CEALL	0.05	0.025	0.05	0.075	0.125	0.025	0.1	0.15	Low
NEDD	0.012	0.006	0.012	0.018	0.03	0.006	0.024	0.036	Very Low
NEVIS	1.2628	0.287	0.6888	1.8368	2.87	0.574	1.722	4.1328	Medium
ODHAIRN	0.018	0.009	0.018	0.027	0.045	0.009	0.036	0.054	Very Low
OLNA VOE	0.068	0.034	0.068	0.102	0.17	0.034	0.136	0.204	Low
PORTREE	0.0924	0.021	0.0504	0.1344	0.21	0.042	0.126	0.3024	Low
RESORT	0.058	0.029	0.058	0.087	0.145	0.029	0.116	0.174	Low
RIDDON	0.032	0.016	0.032	0.048	0.08	0.016	0.064	0.096	Low
RONAS VOE	0.122	0.061	0.122	0.183	0.305	0.061	0.244	0.366	Very Low
RYAN	0.806	0.403	0.806	1.209	2.015	0.403	1.612	2.418	Very Low
SANDSOUND VOE	0.122	0.061	0.122	0.183	0.305	0.061	0.244	0.366	Low
SCRIDAIN	1.1132	0.253	0.6072	1.6192	2.53	0.506	1.518	3.6432	Low
SEAFORTH	0.404	0.202	0.404	0.606	1.01	0.202	0.808	1.212	Low
SHELL	0.122	0.061	0.122	0.183	0.305	0.061	0.244	0.366	Low
SKIPORT	0.042	0.021	0.042	0.063	0.105	0.021	0.084	0.126	Very Low
SLAPIN	0.0704	0.016	0.0384	0.1024	0.16	0.032	0.096	0.2304	Low
SLIGACHAN	0.0704	0.016	0.0384	0.1024	0.16	0.032	0.096	0.2304	Low
SNIZORT BEG	0.182	0.091	0.182	0.273	0.455	0.091	0.364	0.546	Low
SPELVE	0.3872	0.088	0.2112	0.5632	0.88	0.176	0.528	1.2672	Medium
STORNOWAY	0.046	0.023	0.046	0.069	0.115	0.023	0.092	0.138	Very Low
STRIVEN	0.246	0.123	0.246	0.369	0.615	0.123	0.492	0.738	Low
STROMNESS VOE	0.018	0.009	0.018	0.027	0.045	0.009	0.036	0.054	Very Low
SULLOM VOE	0.362	0.181	0.362	0.543	0.905	0.181	0.724	1.086	Very Low

SUNART	2.07	0.27	1.53	2.61	4.93	0.55	3.83	6.03	Very High
SWEEN	0.364	0.182	0.364	0.546	0.91	0.182	0.728	1.092	Low
SWINING VOE	0.036	0.018	0.036	0.054	0.09	0.018	0.072	0.108	Very Low
TAMANAVAY	0.036	0.018	0.036	0.054	0.09	0.018	0.072	0.108	Low
TARBERT	0.19	0.095	0.19	0.285	0.475	0.095	0.38	0.57	Very Low
TEACUIS	0.044	0.022	0.044	0.066	0.11	0.022	0.088	0.132	Low
TORRIDON	3.08	0.7	1.68	4.48	7	1.4	4.2	10.08	Low
URA FIRTH	0.036	0.018	0.036	0.054	0.09	0.018	0.072	0.108	Very Low
USKAVAGH	0.042	0.021	0.042	0.063	0.105	0.021	0.084	0.126	Very Low
VIDLIN VOE	0.052	0.026	0.052	0.078	0.13	0.026	0.104	0.156	Low
WEISDALE VOE	0.092	0.046	0.092	0.138	0.23	0.046	0.184	0.276	Very Low
WEST LOCH TARBERT HARRIS	0.23	0.115	0.23	0.345	0.575	0.115	0.46	0.69	Low
WEST LOCH TARBERT KINTYRE	0.27	0.135	0.27	0.405	0.675	0.135	0.54	0.81	Low
WHALE FIRTH	0.062	0.031	0.062	0.093	0.155	0.031	0.124	0.186	Very Low
WHITENESS VOE	0.06	0.03	0.06	0.09	0.15	0.03	0.12	0.18	Very Low

Supplementary Table 5. Estimated glacial sedimentary C stocks for individual fjords broken down into OC and IC. Additionally; the assigned confidence level for each estimate is listed.

Fjord	Organic Carbon (t yr ⁻¹)				Inorganic Carbon (t yr ⁻¹)			
	Mean	σ	Min	Max	Mean	σ	Min	Max
A'CHOIRE	13.57	3.76	11.84	15.31	19.46	6.33	10.97	39.73
A'CHUMHAINN	31.31	11.25	27.79	34.83	36.91	12.60	28.97	56.06
AILORT	62.86	18.42	59.42	66.30	66.52	24.58	61.93	78.42
AINORT	40.68	2.14	28.63	52.73	42.71	19.81	37.80	52.73
AIRDBHAIR	3.97	1.29	3.83	4.10	11.54	1.63	4.00	34.24
AITH VOE	55.66	44.51	38.33	73.00	58.61	34.35	39.95	83.17
ALINE	17.89	6.78	14.37	21.40	24.32	6.97	14.98	46.52
ALSH	269.23	83.05	263.54	274.92	259.93	109.56	226.60	274.92
BALTA HARBOUR	20.28	15.74	14.37	26.19	26.37	12.26	14.98	49.93
BASTA VOE	55.73	42.67	39.29	72.17	58.75	33.29	40.95	82.58
BAY	150.78	45.67	149.50	152.06	149.17	61.60	139.33	155.81
BHROLLUM	25.92	8.32	24.92	26.92	32.06	10.54	25.97	50.44
BOISDALE	85.70	31.52	76.67	94.73	87.48	34.97	79.91	98.61
BROOM	209.57	40.87	291.30	127.83	233.91	38.26	310.43	157.39
BUIE	158.77	39.62	137.25	180.30	143.90	73.17	128.81	180.30
BURRA FIRTH	35.02	26.01	24.92	45.12	39.84	20.44	25.97	63.37
BUSTA VOE	42.85	34.85	29.71	55.98	46.93	26.86	30.96	71.09
A' CHAIM BHAIN	167.89	45.52	149.50	186.27	163.80	61.55	155.81	186.27
CAMPBELTOWN	46.42	32.57	34.50	58.33	50.39	26.10	35.96	72.76
CAOLISPORT	194.07	170.68	119.79	268.35	183.73	128.29	124.85	268.35
CARLOWAY	8.81	3.60	7.67	9.94	16.00	3.71	7.99	38.39
CARRON	332.68	57.73	272.45	392.91	292.97	152.79	224.84	392.91
CAT FIRTH	32.86	26.03	23.00	42.71	37.84	20.17	23.97	61.66
CLAIDH	45.07	14.29	43.12	47.01	49.95	18.20	44.95	64.71
COLLA FIRTH	13.64	10.90	9.58	17.71	20.29	8.44	9.99	43.90
CRAIGNISH	243.34	169.24	172.50	314.18	230.23	134.54	179.79	314.18
CRERAN	222.61	63.48	349.57	95.65	77.39	36.52	150.43	30.43
DALES VOE NORTH MAINLAND	36.88	29.39	25.87	47.88	41.51	22.76	26.97	65.33
DALES VOE SOUTH MAINLAND	41.04	32.58	28.75	53.32	45.31	25.24	29.96	69.20
DON	4.43	1.96	3.83	5.04	11.94	1.93	4.00	34.90
DUGHAILL	19.79	6.48	19.17	20.41	26.34	8.14	19.98	45.82
DUICH	162.89	18.21	128.48	197.31	147.45	75.03	122.58	197.31
DUNVEGAN	244.13	72.46	236.70	251.55	236.24	97.59	210.00	251.55
EISHORT	23.25	6.83	22.04	24.46	29.54	9.12	22.97	48.70
EPORT	37.12	11.67	34.50	39.73	42.43	14.65	35.96	59.54
ERIBOLL	318.12	91.12	298.04	338.21	304.61	122.84	271.55	338.21
ERISORT	75.02	22.03	68.04	82.00	77.63	28.51	70.92	89.57
ETIVE	1000.87	32.17	1065.22	936.52	539.13	23.48	586.09	492.17
EWE	718.13	131.18	681.06	755.21	623.18	297.85	515.08	755.21
EYNORT	16.30	5.31	15.33	17.27	23.04	6.57	15.98	43.59
FEOCHAN	32.53	13.09	25.87	39.19	37.80	12.98	26.97	59.16
FYNE	3481.81	156.73	2985.12	3978.51	2990.21	1123.74	2139.94	3978.51
GAIRLOCH	191.62	19.22	148.51	234.73	172.08	88.98	136.81	234.73
GARELOCH	137.26	70.02	111.16	163.35	134.43	63.17	115.86	163.35
GLUSS VOE	14.67	11.18	10.54	18.80	21.25	8.76	10.99	44.68
GOIL	130.91	39.49	122.34	139.48	120.01	59.30	99.99	139.48
GRESHORNISH	36.12	11.26	35.82	36.42	41.74	15.06	37.95	56.77
GRIMSHADER	6.06	2.03	5.75	6.36	13.49	2.48	5.99	35.84
GRUINART	45.31	24.48	36.42	54.20	49.60	21.57	37.95	69.82
GRUTING VOE	85.04	75.60	54.62	115.46	85.09	57.01	56.93	115.46
HOLY LOCH	55.80	14.49	53.78	57.83	55.65	23.98	41.46	69.52

HOURN	490.30	21.14	407.39	573.21	428.05	215.25	320.69	573.21
INCHARD	41.22	12.17	38.33	44.12	46.26	15.97	39.95	62.66
INDAAL	355.22	274.04	231.91	478.53	330.84	210.92	241.71	478.53
INVER	44.52	11.88	39.29	49.75	49.16	16.14	40.95	66.66
KENTRA BAY	5.93	1.82	5.75	6.12	13.38	2.39	5.99	35.67
KISHORN	51.08	16.65	50.42	51.75	55.81	21.64	53.94	67.14
LAX FIRTH	24.64	19.52	17.25	32.03	30.33	15.13	17.98	54.08
LAXFORD	121.00	4.20	100.82	141.18	111.53	52.97	101.21	141.18
LEURBOST	13.19	4.35	12.46	13.92	20.14	5.35	12.98	41.21
LEVEN	121.56	8.30	115.56	127.57	112.00	48.15	91.45	127.57
LINNHE (Upper) & EIL	937.40	301.08	842.27	1032.52	770.22	215.12	441.37	1032.52
LINNHE(lower)	3387.88	433.04	3214.78	3727.83	1775.65	348.70	1594.78	2009.57
LITTLE LOCH BROOM	136.52	51.30	23.91	33.91	123.48	65.22	253.91	105.22
LONG ALSH	21.66	3.05	17.81	25.51	26.40	9.80	18.29	43.97
LONG CLYDE	546.62	149.11	521.73	571.51	476.21	238.85	401.90	571.51
MELFORT	122.83	80.73	89.12	156.53	120.26	65.29	92.89	156.53
MID YELL	23.03	17.79	16.29	29.77	28.88	13.86	16.98	52.47
MOIDART NORTH CHANNEL	8.78	2.78	8.62	8.93	16.05	3.61	8.99	37.67
MOIDART SOUTH CHANNEL	24.55	2.33	21.89	27.21	28.87	10.33	19.51	46.87
NA CILLE	12.55	10.49	8.62	16.47	19.28	8.04	8.99	43.02
NA KEAL	458.79	61.77	397.09	520.48	401.02	199.85	313.38	520.48
NA LATHAICH	28.03	11.15	24.92	31.15	33.87	11.79	25.97	53.45
NAN CEALL	24.60	7.63	23.96	25.23	30.85	9.99	24.97	49.24
NEDD	5.97	1.92	5.75	6.19	13.41	2.43	5.99	35.72
NEVIS	414.50	21.33	340.84	488.16	363.09	183.49	273.42	488.16
ODHAIRN	9.10	3.04	8.62	9.58	16.33	3.71	8.99	38.13
OLNA VOE	47.21	37.96	32.58	61.83	50.91	29.28	33.96	75.24
PORTREE	28.10	1.80	20.49	35.72	31.92	13.44	25.61	45.88
RESORT	31.61	11.02	27.79	35.43	37.17	12.49	28.97	56.49
RIDDON	20.75	11.77	15.33	26.17	26.85	9.94	15.98	49.91
RONAS VOE	84.78	68.01	58.46	111.10	85.18	52.47	60.93	111.10
RYAN	518.76	258.57	386.20	651.32	483.50	228.11	402.52	651.32
SANDSOUND VOE	90.70	81.29	58.46	122.94	90.24	61.26	60.93	122.94
SCRIDAIN	387.64	55.12	344.94	430.33	340.02	165.89	276.33	430.33
SEAFORTH	215.78	59.28	193.58	237.97	208.42	79.82	200.35	237.97
SHELL	63.36	19.57	58.46	68.25	66.86	24.75	60.93	79.80
SKIPORT	21.22	7.10	20.12	22.31	27.64	8.67	20.98	47.17
SLAPIN	21.94	1.48	16.66	27.21	26.63	10.25	19.51	43.15
SLIGACHAN	21.40	1.53	15.59	27.21	26.18	10.25	19.51	42.39
SNIZORT BEG	94.83	30.03	87.21	102.44	96.16	37.26	90.89	104.09
SPELVE	133.09	31.35	116.49	149.68	121.89	60.33	107.30	149.68
STORNOWAY	23.72	7.45	22.04	25.41	29.95	9.36	22.97	49.37
STRIVEN	157.51	92.78	117.87	197.14	152.31	77.77	122.85	197.14
STROMNESS VOE	13.24	12.16	8.62	17.86	19.87	9.15	8.99	44.01
SULLOM VOE	242.63	182.49	173.46	311.80	229.71	143.15	180.79	311.80
SUNART	817.39	17.39	852.17	782.61	878.26	14.78	907.83	848.70
SWEEN	261.53	202.75	174.41	348.65	245.96	156.44	181.78	348.65
SWINING VOE	24.61	19.57	17.25	31.96	30.30	15.15	17.98	54.02
TAMANAVAY	19.28	7.12	17.25	21.31	25.75	7.88	17.98	46.46
TARBERT	114.34	55.19	91.04	137.63	113.16	50.54	94.89	137.63
TEACUIS	22.97	7.62	21.08	24.86	29.22	9.15	21.97	48.98
TORRIDON	966.88	204.46	743.12	1190.65	836.61	469.06	559.16	1190.65
URA FIRTH	24.86	20.26	17.25	32.48	30.52	15.61	17.98	54.39

USKAVAGH	21.27	7.05	20.12	22.42	27.69	8.65	20.98	47.25
VIDLIN VOE	35.51	28.30	24.92	46.10	40.26	21.92	25.97	64.07
WEISDALE VOE	68.15	61.60	44.08	92.23	69.77	46.40	45.95	96.83
WEST LOCH TARBERT HARRIS	123.70	45.03	110.21	137.20	122.76	50.13	114.86	137.20
WEST LOCH TARBERT KINTYRE	209.71	184.20	129.37	290.05	197.90	138.46	134.84	290.05
WHALE FIRTH	42.25	32.13	29.71	54.80	46.43	25.08	30.96	70.24
WHITENESS VOE	44.47	40.14	28.75	60.19	48.25	30.24	29.96	74.08

Supplementary Table 6. Estimated postglacial C burial rates (tonnes yr⁻¹) for each of the 11 fjords.

5. References

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