

Supplementary information:

Table S1. Mean concentrations of DO, DOC, DIN species and SRP at input solutions in each group

Treatment	Salinity					
	0	5	10	20	30	36
	DO/($\mu\text{mol}\cdot\text{L}^{-1}$)					
Control	284.4	274.5	266.9	253.3	238.4	231.2
River spiked	283.7	275.6	267.5	251.8	237.5	230.0
Both spiked	284.7	276.4	264.9	250.2	239.4	232.0
	DOC/($\mu\text{mol}\cdot\text{L}^{-1}$)					
Control	360.0	343.1	319.2	284.2	250.6	225.3
River spiked	358.9	342.0	323.8	286.9	255.1	228.4
Both spiked	362.1	347.0	323.2	283.5	251.8	230.0
	NO_3^- /($\mu\text{mol}\cdot\text{L}^{-1}$)					
Control	12.5	11.2	9.8	6.7	3.9	2.3
River spiked	99.8	86.3	72.7	45.6	18.6	2.4
Both spiked	99.8	101.9	98.7	98.1	101.2	99.3
	NH_4^+ /($\mu\text{mol}\cdot\text{L}^{-1}$)					
Control	4.71	4.25	4.02	3.35	2.75	2.41
River spiked	4.60	4.22	3.98	3.41	2.82	2.49
Both spiked	4.82	4.19	4.08	3.45	2.89	2.52
	NO_2^- /($\mu\text{mol}\cdot\text{L}^{-1}$)					
Control	0.41	0.40	0.38	0.40	0.35	0.36
River spiked	0.40	0.41	0.39	0.35	0.32	0.33
Both spiked	0.42	0.40	0.40	0.38	0.32	0.31
	SRP/($\mu\text{mol}\cdot\text{L}^{-1}$)					
Control	1.18	1.01	0.94	0.72	0.46	0.35
River spiked	1.19	1.02	0.95	0.74	0.48	0.34
Both spiked	1.18	1.02	0.97	0.71	0.48	0.34

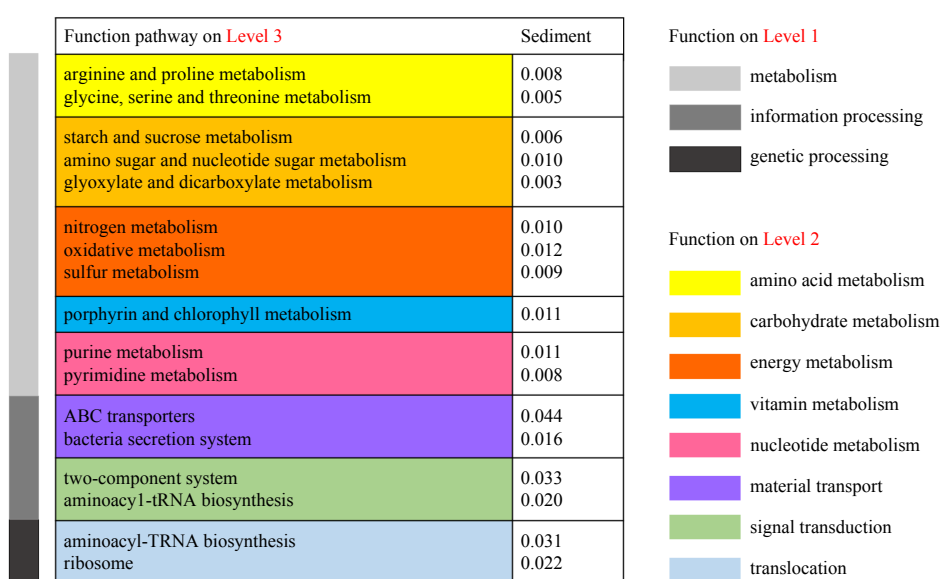


Fig. S1. The predicted functional profiles (different functions levels; Wang et al., 2020) of the sampling sediment in the Dublin Bay. The number indicates the relative abundance for each function (total abundance, 1).