

Table S1 Summary of plant height, fresh weight, and coverage under different reclamation years

	Reclamation years		
	1st year	7th years	15th years
Plant height (cm)	72.72 ± 5.23 ^b	136.95 ± 3.29 ^a	78.70 ± 3.28 ^b
Dry weight (kg)	0.46 ± 0.07 ^b	0.69 ± 0.04 ^a	0.41 ± 0.04 ^b
Coverage (%)	54.08 ± 5.54 ^b	84.33 ± 2.01 ^a	76.75 ± 4.43 ^a

Values are mean ± standard error. Different lowercase letters of the same variable indicate significant differences at the level of $p < 0.05$.

Table S2. Redundancy analysis results for the soil carbon content of different components.

Sorting axis	Axis 1	Axis 2	Axis 3	Axis 4
Eigenvalues	0.22	0.07	0.02	0.01
Pseudo-canonical correlation	0.80	0.64	0.39	0.39
Explained variation (cumulative)/%	21.74	29.05	30.95	32.26
Explained fitted variation (cumulative)/%	65.61	97.68	93.41	97.36
Canonical eigenvalues	0.33			

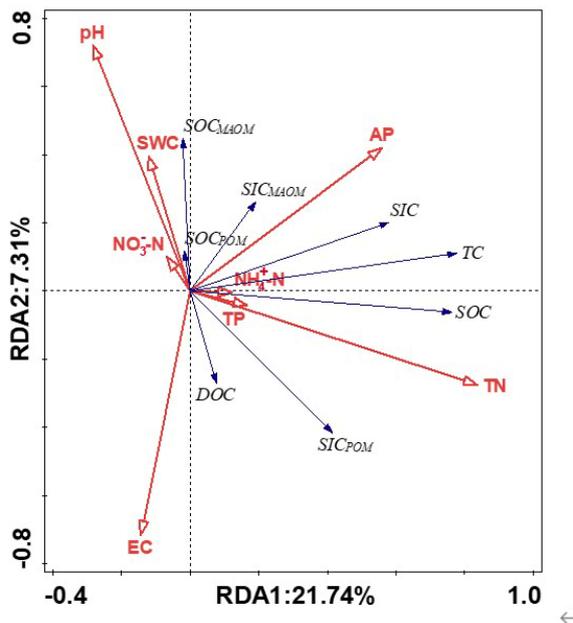


Figure S1. The relative abundance for single factors influences the soil carbon content of different components. (TC, soil total carbon; SOC, soil organic carbon; SIC, soil inorganic carbon; DOC, soil dissolved organic carbon; SOC_{POM}, SOC in POM fraction; SOC_{MAOM}, SOC in MAOM fraction; SIC_{POM}, SIC in POM fraction; SIC_{MAOM}, SIC in MAOM fraction; TN, soil total nitrogen; NH₄⁺-N, soil soluble ammonium nitrogen; NO₃⁻-N, soil soluble nitrate nitrogen; TP, soil total phosphorus; AP, soil available phosphorus; SWC, soil water content; pH, soil pH; and EC, soil electrical conductivity).