

Is recycling always the best option? Environmental assessment of recycling of seashell as aggregates in noise barriers

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Figure S1. Acoustic noise barrier dimensions (coarse aggregates are used for the porous concrete layer and fine aggregates for the structural concrete layer).

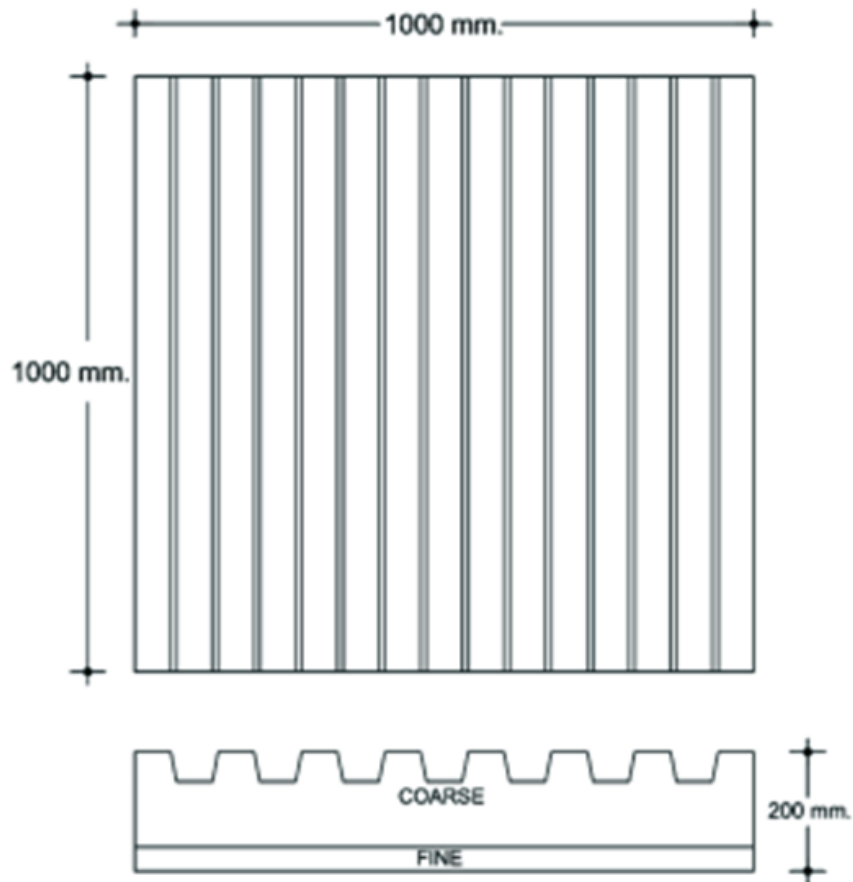


Table S1. Inventory data for the seashell waste pre-treatment per 1 m² of noise barrier when different calcination temperatures are applied (PCSW, 550 °C; PCSW-250, 250 °C; PCSW-135, 135 °C).

Parameters		PCSW	PCSW-250	PCSW-135
Seashell wastes	kg	301.8	301.8	301.8
Propane	kg	6.3	2.5	1.4
Diesel	g	140.0	70.0	37.8
Aluminum sulfate	g	7.2	7.2	7.2
Chlorine dioxide	g	1.8	1.8	1.8
Water	kg	280.0	280.0	280.0
Electricity (low voltage)	kWh	29.4	29.4	29.4
Emissions to air				
Ammonia	g	0.1	0.0	0.0
Particulates, SPM	g	1.8	0.9	0.5
Sulfur dioxide	g	9.0	4.5	2.4
Carbon dioxide	kg	32.5	16.3	8.8
Carbon monoxide	g	67.0	33.5	18.1
Nitrogen oxides	g	97.0	48.5	26.2
Emissions to water				
COD	g	27.0	27.0	27.0
BOD ₅	g	0.6	0.6	0.6
Suspended solids	g	1.5	1.5	1.5
Nitrogen oxides	g	0.3	0.3	0.3
Ammonia as N	g	0.3	0.3	0.3
Nitrate	g	0.9	0.9	0.9
Phosphate	g	0.3	0.3	0.3
Waste to landfill				
Sludge	kg	7.5	7.5	7.5
Slags and ashes	kg	6.0	6.0	6.0