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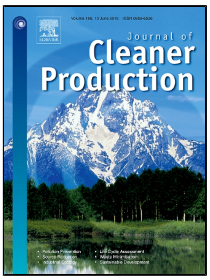

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Recycling screening waste and recycled mixed aggregates from construction and demolition waste in paved bike lanes

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Abstract

This research conducts a full-scale study on the use of recycled mixed aggregates from construction and demolition waste and its screening waste in an experimental bike lane. The subgrade and the natural and recycled materials used as the base and subbase courses were characterized in a laboratory. During the construction of the experimental section, densities and deflections were measured to evaluate the mechanical behaviour of the structural layers and to determine the Young's modulus of the natural and recycled materials. After the lane was open to traffic for two years, the moduli evolution of the materials were studied. For the first time, the results obtained have shown the feasibility of using screening waste that does not meet the physical-mechanical and chemical requirements for use on paved roads as structural layers in bike lanes.

Keywords:

Bike lane, backcalculation, recycled mixed aggregates, screening waste, construction and demolition waste.

Acronyms:

AASHTO - American Association of State Highway and Transportation Officials; CBR – California Bearing Ratio; CDW - construction and demolition waste; CRA - Catalogue of