

RESTORE FINAL ONLINE CONFERENCE 3RD DECEMBER 2020**Note:**

1) The title should be as brief as possible; 2) Your abstract must not be longer than 300 words, and it should state briefly and clearly the purpose, methods, results and conclusions of the work; 3) Please provide a short CV + Photo for upload on www.eurestore.eu/restore-final-conference/.

Title:**THE REUSE OF BUILDING MATERIALS IN LCA****Author & affiliation & e-mail:**

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Abstract: (max. 300 words)

To reduce the greenhouse gas emissions, resource depletion, and waste generation created by the construction sector, a paradigm shift from a linear extract-produce-use-dispose model to a circular repair-reuse-recycle-recover energy model is needed. When reusing building materials over multiple life cycles of buildings, it is challenging to account for the whole life cycle impacts of all these buildings. Indeed, if a material is reused in a second building after the demolition of the first building, which building should 'pay' for the environmental impacts of the production (A1-3) and end-of-life (C1-4) stages of the building material in question in each of the buildings' life cycle assessments (LCA)? Moreover, no consensus exists on which building life cycle the benefits and loads from Module D of the building material are allocated to. Also, little literature exists on the extra environmental impacts related to reuse such as transport to storage facilities or new construction sites, oversize percentages to fit availability and demand. In order to transparently account for the benefits of reusing building materials across multiple life cycles of buildings, advances in LCA methodologies are needed.

Keywords: (max.5, please use semicolons)

Reuse; circular economy; life cycle assessment; embodied carbon; buildings

Short CV: (max. 100 Words + Foto)

Catherine De Wolf is Assistant Professor of Design & Construction Management at the University of Technology Delft (TU Delft) and founder of [De Wolf Environmental Architecture Thinking](#). Previously, she was a postdoc at the Swiss Federal Institute of Technology (EPFL). After studying Civil Engineering and Architecture at the Vrije Universiteit Brussel (VUB) and the Université Libre de Bruxelles (ULB), she obtained a Masters of Science and a PhD in Architecture: Building Technology at the Massachusetts Institute of Technology (MIT).

