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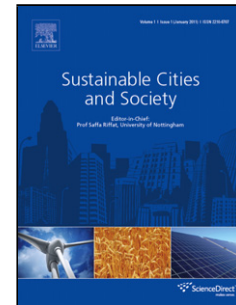
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Towards regenerative and positive impact architecture: a comparison of two net zero energy buildings

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Highlights

- The regenerative paradigm can reverse ecological foot print and provide a positive impact building.
- The use of plant or bio based construction materials can help to offset the environmental effects of climate change
- Operational energy has at least 50% higher impact than embodied energy over 100 year.
- A carbon neutral grid infrastructure or energy supply is a serious future challenge.
- Using LCA we proofed by evidence that the current state of the art zero energy objective cannot be the answer to our ecological and economic crises.
- Regenerative design can lead to beneficial footprint and positive impact buildings and can inform architects and building designers

Abstract

Regenerative design holds great promise for a new era of sustainable and positive impact architecture, sparking considerable interest among architects, building professionals and their clients. However, the translational arm of regenerative design in practice is in a relatively primitive state. Although a number of theoretical definitions and studies have been initiated, the early returns point to several inherent application problems. In this regard, the professional and scientific potential of regenerative architecture can only be fully realized by the identification of the key barriers to projects design, construction and operation. In this paper, we compare two state of the art buildings to address the critical steps in the transition from the negative impact reduction architecture to the positive impact regenerative architecture, utilizing life cycle

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