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## Editorial

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## Editorial

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Greetings everyone from Ottawa. I am delighted to be writing the editorial for the December 2022 issue of *Engineering Sustainability*. I have been member of the Editorial Panel for more than a year and I have enjoyed this journey of reading and reviewing diverse views and perspectives in this journal.

This issue of *Engineering Sustainability* brings together four papers, each focusing on important aspects of materials sourcing and construction and demolition waste (CDW) management in construction and infrastructure engineering projects. With this main topical theme in mind, the four papers are on the following topics: responsible sourcing and sustainable procurement of materials in construction (Ball *et al.*, 2022); recycling of CDW (Shao *et al.*, 2022); using cold recycled asphalt as sustainable paving alternative (Araneda *et al.*, 2022); and assessing the performance of sustainable backfills for retaining walls (Mandloi *et al.*, 2022).

The first paper of the issue (Ball *et al.*, 2022) starts off with presenting a roadmap to contribute to the UN's Sustainable Development Goals (SDGs) through responsible sourcing and green supply chains in architecture, engineering and construction (AEC) sectors. In order to identify the potential opportunities and obstacles to develop the roadmap, the authors employed a variety of methods including a structured review of responsible sourcing literature, document analysis and tracking, and validation by industry experts. The findings of the study demonstrate that the key opportunities of responsible sourcing are competitive advantage and stakeholder value, and the main obstacles are cost and a lack of structured frameworks.

The second paper presents a bibliometric review and analysis of CDW recycling with a focus on China (Shao *et al.*, 2022). Using VOSviewer and CiteSpace bibliometric analysis tools, the paper analyses 1090 articles on CDW recycling available in the core database of Web of Science for the period 2000 to 2021. The paper aims to provide guidance and understanding for readers to clarify the development trends in CDW recycling research based on time and location dimensions, point out research directions and hotspots, and promote sustainable development through CDW recycling.

The paper concludes with identifying a growing global research trend on the recycling and utilisation of CDW, with a mature shift of the research directions from recycling technology to recycling management (reduction, resource utilisation and harmless disposal).

In the third paper, Araneda *et al.* (2022) discuss the application of the cold-asphalt technique, using reclaimed asphalt pavement (RAP) with bitumen emulsion additive, as a sustainable paving alternative for low-volume roads (LVR). The cold recycled alternative was compared with the traditional hot-mix asphalt pavement (using virgin materials: bitumen and aggregates) through a life-cycle environmental impact analysis. The findings of the study demonstrate a 50% reduction in environmental impacts for the cold recycled paving alternative using RAP and bitumen emulsion compared with the traditional hot-mix pavement for an LVR case in Chile. The authors conclude that the two main reasons for this difference are the construction technique for the RAP alternative and the long transportation distances to hot-mix asphalt plants.

The fourth and final paper (Mandloi *et al.*, 2022) is concerned with performance evaluation of mechanically stabilised earth (MSE) retaining walls with two alternative sustainable backfill materials: steel slag and CDW. Laboratory experimental investigations (materials characterisation, assessment of strength and drainage properties) and finite-element numerical analysis (on a full-scale MSE wall) were carried out to compare the behaviour of these alternative materials with that of the traditional backfill material (granular sand) in retaining structures. The results of this research indicate an overall satisfactory performance of the sustainable backfill materials. Compared with the traditional backfill material, MSE walls with slag and CDW indicated significant reductions in horizontal wall displacements as well as lower reinforcement strains.

I hope you enjoy reading the full papers in this final issue of *Engineering Sustainability* for 2022. I should also mention that the journal publishes its most recent articles Ahead of Print on its Virtual Library homepage at <http://www.icevirtuallibrary.com/toc/jensu/0/0>. This allows you quicker access to fresh content and more recent papers as they become available online.

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