

Reduce, Reuse and Recycle: Grand Challenges in Construction Recovery Process

Authors : Abioye A. Oyenuga, Rao Bhamidiarri

Abstract : Hurling a successful Construction and Demolition Waste (C&DW) recycling operation around the globe is a challenge today, predominantly because secondary materials markets are yet to be integrated. Reducing, Reusing and recycling of (C&DW) have been employed over the years, and various techniques have been investigated. However, the economic and environmental viability of its application seems limited. This paper discusses the costs and benefits in using secondary materials and focus on investigating reuse and recycling process for five major types of construction materials: concrete, metal, wood, cardboard/paper, and plasterboard. Data obtained from demolition specialist and contractors are considered and evaluated. With the date source, the research paper found that construction material recovery process fully incorporate the 3R's process and shows how energy recovery by means of 3R's principles can be evaluated. This scrutiny leads to the empathy of grand challenges in construction material recovery process. Recommendations to deepen material recovery process are also discussed.

Keywords : construction and demolition waste (C&DW), 3R concept, recycling, reuse, waste management, UK

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