

Analysis of Construction Waste Generation and Its Effect in a Construction Site

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Abstract : The generation of solid waste and its effective management are debated topics in Sri Lanka as well as in the global environment. It was estimated that the most of the waste generated in global was originated from construction and demolition of buildings. Thus, the proportion of construction waste in solid waste generation cannot be underestimated. The construction waste, which is the by-product generated and removed from work sites is collected in direct and indirect processes. Hence, the objectives of this research are to identify the proportion of construction waste which can be reused and identify the methods to reduce the waste generation without reducing the quality of the process. A 6-storey building construction site was selected for this research. The site was divided into six zones depending on the process. Ten waste materials were identified by considering the adverse effects on safety and health of people and the economic value of them. The generated construction waste in each zone was recorded per week for a period of five months. The data revealed that sand, cement, wood used for form work and rusted steel rods were the generated waste which has higher economic value in all zones. Structured interviews were conducted to gather information on how the materials are categorized as waste and the capability of reducing, reusing and recycling the waste. It was identified that waste is generated in following processes; ineffective storage of material for a longer time and improper handling of material during the work process. Further, the alteration of scheduled activities of construction work also yielded more waste. Finally, a proper management of construction waste is suggested to reduce and reuse waste.

Keywords : construction-waste, effective management, reduce, reuse

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