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**“Methods to reduce construction waste and its
impact to construction industry”**

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ABSTRACT

Generally, construction activity on site can generate large amounts of waste materials that need to be disposed of, known as construction waste. Construction waste includes waste generated during construction activities such as the materials' packaging or the demolition and materials surplus products. Waste in construction will leads to negatively impact the construction project, including increases in the project's cost. However, common issues of construction waste including error design of project, procurement procedure, mismanagement of material storage somehow arise the percentage of waste on site. As the construction waste could contribute to negative impacts in construction works, this study is conducted to identify the methods to reduce the construction waste on site. There were three objectives have been set which are to identify the major factors of increasing construction waste in the construction industry, to investigate the methods of reducing construction waste in the construction industry and to point out the potential impact on reducing waste in the construction industry. A set of questionnaires prepared as the data collection tool to achieve results through selected respondents. Developers, contractors, professionals like the Architect, Engineer, and quantity surveyors were the respondents who have good construction industry knowledge. The outcome of this research includes with potential methods or ways to reduce construction waste to promote a good culture for waste management to achieve sustainable development in the construction industry.

Keywords: Construction waste, Waste reduction, Waste Management, Sustainable construction, Construction project.

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CHAPTER 1

INTRODUCTION

1.1 Background of research

Construction waste comprises materials such as bricks, concrete, wood, electric wiring, nails, and insulation that are damaged or useless during the construction process for various reasons. (Othman, A. and Abdelrahim, S. (2019). Waste in construction will negatively impact the construction project, including increases in the project's cost. The increasing need for new buildings to fulfill community requirements ultimately increases construction waste (Ikau et al., 2016).

Construction waste also has significant economic, environmental, and societal impacts. The cost of waste produced by the building is estimated to be millions of dollars per year. One of the most expensive components of a project's cost is construction materials. The waste in construction will parallel increase according to the project received due to lack of waste management; thus, the leading causes of the project's cost inaccuracy. Some of the factors that can be identified are Incomplete information, late design revisions, imprecise specifications, a lack of communication, overordering, and detailed errors. All contribute to waste generation. The design phase is the most common source of faults and mistakes, leading to increased construction waste.

Although the quantity and quality of construction waste generated by any particular project changes depending on the Project's circumstances and materials, building waste contribute worth approximately 35% of all waste generated by other industries. (Polat et al., 2017). By proper waste management, the percentage of waste might be reduced in a period; thus, reducing construction waste in the construction