Construction Waste Management
Methods Used by Contractors in the Northern Region

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ABSTRACT

The construction industry produces a significant amount of building waste. The government is taking action to tackle the problem, such as by introducing a construction waste landfill charge, and promoting prefabrication to reduce onsite waste generation. This paper reports an ongoing study on the use of construction waste management methods by contractor and its impact on waste reduction in the Northern Region. A questionnaire survey was administered to experienced professionals, such as main contractors, sub-contractors, and consultancy agencies. The results revealed that construction waste reduction is one of the major benefits when emphasizing on the sizing and amount of materials to be ordered in reducing wastage with the mean response of normally practiced toward mostly practiced. Source reduction by accurate estimating and ordering of materials are the methods that are mostly used by industry participants in minimizing construction waste. But when there are wastes, the respondents prefer to reuse, burn or land fill as the methods for disposing construction waste at their sites. This implies that contractors in the Northern Region try to reduce their construction wastes at...
the very earliest stage in construction but they like to use burning as a method of disposing which is not good for the environment.

Keywords: Construction waste, northern region, waste management, waste minimization, waste reduction

Introduction

Definition of Construction Waste

Construction waste materials consist of the debris generated during the construction, renovation, and demolition of buildings, roads, bridges and all other work related to civil engineering. Construction waste materials often contain bulky, heavy materials that include concrete, wood, asphalt (from roads and roofing shingles), gypsum (the main component of drywall), metals, bricks, glass, plastics, PVC, trees, stumps, earth, and rock from clearing sites (U.S. Environmental Protection Agency, 2008).

Construction waste may contain hazardous material which may affect humans and the environment. Hazardous wastes commonly generated during construction activities include paints, solvents, adhesives, caulsks, pesticides, wood preservatives, oil, or stored materials (such as solvents or pesticides) that have exceeded their shelf life. Others common examples of hazardous construction wastes are asbestos, polychlorinated biphenyls (PCBs) and heavy metals that can be released during demolition or renovation of existing structures (U.S Environmental Protection Agency, 2008).

Construction waste is becoming a serious environmental problem in many large cities in the world (Chen, Li & Wong, 2002; Ferguson, Kermode, Nash, Sketch & Huxford, 1995; Shen, Tam & Ho, 2002; Smallwood, 2000). According to statistical data, construction and demolition (C&D) debris frequently makes up 10% to 30% of the waste received at many landfill sites around the world (Fishbein, 1998).

In the Malaysian construction industry, data is not readily available on the current structure of construction waste flows by the source of generation, type of waste, intermediate and final disposal and the amount of waste reduced at source, reused or recycled on-site or off-site. A study by Hassan, Yusoff, Sulaiman and Rahman (1998) shows that on average, the breakdown of waste generation according to source are 36.73% from household waste, 28.34% from industrial and construction waste while other sources (market and commercial waste, institutional