MANAGEMENT OF CONSTRUCTION WASTE IN THE CONTEXT OF PROJECT MANAGEMENT

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Degree of Master of Science in Project Management

Department of Building Economics

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Thesis submitted in partial fulfillment of the requirement for the degree of Master of Science in Project Management

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DECLARATION

I declare that this is my own work and this thesis does not incorporate without acknowledgement any material previously submitted for a Degree or Diploma in any other University or Institute of higher learning and to the best of my knowledge and belief it does not contain any material previously published or written by another person except where the acknowledgement is made in the text.

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The above candidate has carried out research for the Masters under my supervision.

…… ……...…….

Signature of the Supervisor Date

ACKNOWLEDGEMENT

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ABSTRACT

Construction waste is a Project Management problem occurring at site level. In the absence of guidelines, Project managers find it difficult to benchmark their site performance in waste management. On the other hand, how much waste a construction site would generate had been a question for local authorities in Colombo local authority limits. The volume of construction waste could be ascertained using the norm construction waste index at the stage of receipt of the new building applications by that particular local authority. The scarcity of dumping sites in Colombo Local Authority level is the issue behind this problem.

Project managers and municipal commissioners conducted a study to determine usable waste indices. Data was collected from fifty recently completed construction projects within the Colombo district. Gross floor area based waste index was calculated for each project and those indices were statistically analysed to find conclusions.

The study shows that the Colombo district local authorities should use the norm construction waste index of 0.114 in assessing the building applications for Construction of new buildings. However, necessary steps should be taken to influence and motivate builders (specifically their project managers) to reduce the waste at least to average levels. In addition, based on good track records of the builder (if available), they can deviate from this norm to the average level of 0.043. The construction waste index of 0.016 is an achievable target and any additional waste generated can be discriminated by way of acquiring an additional fee or taxes. Further, these recommendations are identified in order to support the efforts to make the building industry a better, greener and social responsible industry.

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Keywords: *Construction Waste, Waste Index, Colombo Local Authority level*

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LIST OF ABBREVIATIONS

Abbreviation	Description
BRE	Building Research Establishment
C&D	Construction and Demolition
CEA	Central Environment Authority
ICTAD	Institute for construction, Training and Development
NGO	Non-Governmental Organization
PMI	Project Management Institute
Q	Quartile
UDA	Urban Development Authority
P.S.	Pradeshiya Sabha

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