APPLICATION AND ACCEPTANCE OF ECO-FRIENDLY WALLING MATERIALS FOR STATE SECTOR PROJECTS

MASTER OF SCIENCE

IN

CONSTRUCTION PROJECT MANAGEMENT

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DECLARATION

I hereby affirm that this dissertation report is an outcome of my own effort for the best of my knowledge and it contains my own work for the fulfillment of requirement for the higher degree of Masters of Science in Construction Project Management. It does not include any previous written materials submitted for the award of any preliminary degree, higher education or published by any other person or institution except where acknowledgement and references are made in the text.

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DEDICATION

I would like to dedicate This Report,

To my Parents, Husband,

for their eternal love, affection

and

encouragement which strive me

to make my dream a reality,

and

the teachers, who lead me

to the path of success and honor.

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ABSTRACT

Eco-friendly materials have promptly grown worldwide with its demarcating benefits to the construction industry. However, in Sri Lanka, construction industry still primarily use traditional methods and standard materials (e.g. conventional bricks and cement masonry blocks). The usage of the Eco-Friendly wall materials is still lagging behind in Sri Lankan construction industry.

Developing countries are also largely responsible for increasing global warming from housing and construction industry. And 90% of households are having thermal issues due to the heated interior of the houses in Sri Lanka hence it is highly required to use alternative Eco-Friendly materials for construction purposes to solve these problems as a developing country. However, it is required to identify why there is less demand in using Eco-friendly construction materials for the construction purposes.

This thesis aims to explore why there is a less demand for Eco-friendly materials for wall construction in Government construction projects in Sri Lanka. Further, it is required to analyze the factors that contribute to lack of demand for Eco-Friendly wall materials in Government construction sector in Sri Lanka and find the strategies to overcome this problem.

The study analyzed the data under three factors namely, psychographic, product-specific and demographic, and found most critical barriers to implementation the Eco-Friendly wall materials in the Government construction projects in Sri Lanka.

Strategies were recommended to increase and promote the Eco-Friendly wall materials (Compressed Stabilized Earth Blocks and Eco-Friendly Wall Panels) in the Government construction sector in Sri Lanka. This thesis provides a critical evaluation on the preferences of EWM and strategies to encourage the adoption for the EWM in Sri Lanka.

This study gives insights on ways to motivate Sri Lankan to use environmental friendly concepts.

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LIST OF ABBREVIATIONS

Abbreviation	Description
PFA	Pulverized fly ash
LOC	Lower oxford clay
CSEB	Compressed Stabilized Earth Block
EC	Embodied Carbon
GB	Green Building
HCB	Hollow Cement Block
MCB	Mud Concrete Block
PCB	Printed Circuit Boards
EWM	Eco-Friendly Wall Materials
EFWP	Eco-Friendly Wall Panels