

**FUNDAMENTAL FACTORS FOR
MARKETABILITY OF WALLING MATERIALS –
A CASE OF RECYCLED MASONRY BLOCK**

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(07/9765)



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Degree of Master of Science

Department of Building Economics

University of Moratuwa

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Thesis submitted in partial fulfilment of the requirements for the degree of
Master of Science

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DECLARATION

I hereby declare that this submission is my own work and that, it contains no materials previously published or written by another person nor material which, to a substantial extent, has been accepted for the award of any other degree or diploma of a University of other institution of higher learning, except where an acknowledgement is made in the text.

.....
V.M.K.G. Siriwardhana

.....
Date

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I hereby acknowledge that Mr. V.M.K.G. Siriwardhana has followed the dissertation process set by the Department of Building Economics.

.....
Mr. Suranga Jayasena
Dissertation Supervisor

.....
Date

ABSTRACT

Construction and demolition (C&D) waste is a serious environment problem. Recycling of C&D waste has been the interest of industry and academia alike. One of the recent developments was the proposed Recycled Masonry Block (RMB) made with recycled C&D waste initiated by University of Ruhuna. Research and development of the Recycled Masonry Block was hindered by the lack of interest of industry, resulted from unawareness of potential market success of the product. Therefore a study was initiated to find the marketability of proposed Recycled Masonry Block.

It was found that there had been a lapse in the New Product Development Process of the proposed product. The Recycled Masonry Block had come to the Product Development stage, bypassing the Concept Development and Testing stage. Thus, the development research work is carried out without knowing the target values of parameters and the priorities of parameters.

The study finds that durability, quality and price are the highest priorities of the market when selecting walling materials. Thus, the environment friendliness is not competitive enough in sorting a market for the proposed product. The study further shows other properties which different market segments consider as significant. It also finds certain other properties such as load bearing capacity and interlocking ability, which are likely find priority of developers, are not critical in finding a market for the product. It recommends to set competitive target for high priority properties and 'only acceptable' targets for least priority properties in Concept Development for the proposed product.

Key words: *Sustainability, Marketability, Recycling, C&D Waste*

DEDICATION

To my loving parents



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For his endless enthusiasm

For her endless encouragement

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ABBREVIATIONS AND VARIABLES

- AEC - Architectural, Engineering and Construction
- C&D - Construction & Demolition
- NPDP - New Product Development Process
- R&D - Research and Development
- RMB - Recycled Masonry Block
- UK - United Kingdom
- USA - United States of America



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