

**UNIVERSITY OF MORATUWA**

022

**A REVIEW  
OF  
STANDARD METHOD OF MEASUREMENTS OF  
BUILDING WORKS - SRI LANKA  
(Revised Edition SLS 573)**

**BY**



University of Moratuwa, Sri Lanka.  
Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

**SUPERVISED BY DR. G. W. KODIKARA**

**DEPARTMENT OF CIVIL ENGINEERING  
UNIVERSITY OF MORATUWA,  
MORATUWA, SRI LANKA.**



UNIVERSITY OF MORATUWA  
THESES & DISSERTATIONS

# UNIVERSITY OF MORATUWA

පුස්තකාලය  
මොරටුව විශ්ව විද්‍යාලය, ශ්‍රී ලංකාව  
මොරටුව.

## A REVIEW OF STANDARD METHOD OF MEASUREMENTS OF BUILDING WORKS - SRI LANKA (Revised Edition SLS 573)

PERMANENT  
REFERENCE  
NOT TO BE  
REMOVED FROM  
THE LIBRARY.



University of Moratuwa, Sri Lanka.  
Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

SUPERVISED BY DR. G. W. KODIKARA

63053  
69.003.14

DEPARTMENT OF CIVIL ENGINEERING  
UNIVERSITY OF MORATUWA,  
MORATUWA, SRI LANKA.

63053

CONSTRUCTION & STRUCTURAL  
ENGINEERING  
DEPARTMENT OF CIVIL ENGINEERING  
UNIVERSITY OF MORATUWA

**A REVIEW OF STANDARD METHOD OF  
MEASUREMENTS OF BUILDING WORKS - SRI  
LANKA (REVISED EDITION SLS 573)**

**BY**

C. DILKUMAR

**A REPORT SUBMITTED IN PARTIAL FULFILLMENT  
OF  
THE REQUIREMENT FOR THE DEGREE OF**



University of Moratuwa, Sri Lanka.  
Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

**THE FACULTY OF ENGINEERING  
DEPARTMENT OF CIVIL ENGINEERING**

**PERMANENT  
REFERENCE  
NOT TO BE  
REMOVED FROM  
THE LIBRARY.**

**SUPERVISED BY DR. G. W. KODIKARA**

**University of Moratuwa  
November 1994**



## **ABSTRACT**

Sri Lanka did not have a Standard Method of measurement of Building works until 1982. Various organisations have been using different methods. These were modified versions of SMM 4 and SMM 5 of RICS (U.K.), SMM prepared by HAW in 1968 and other methods developed by the organisations to suit the practices of local industry. To achieve the uniformity in the method of measurement of building works in the industry, the standard methods of measurement of Building works, SLS 573, was introduced in 1982.

Now after twelve years ICTAD has revised this document and named it as SLS 573, Revision:1994. This research was to identify the differences between the revision and the first SLS 573 and to get the responses of the industry regarding the major changes. In order to get the responses of the industry, questionnaires were sent to twenty four consultants and contractors. Also some formats of bills of quantities were studied in order to get the good aspects of them.

Based on these responses it can be said that SLS 573; revision:1994 is fairly accepted with some improvements. Due to the limitations of time only the major changes as defined in this study were taken into consideration and it is worthy to undertake a study to observe whether the industry accepts all the differences given in Appendix A.



University of Moratuwa, Sri Lanka.  
Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

## ACKNOWLEDGEMENT

I wish to express my sincere gratitude to Dr. G.W. Kodikara, the project supervisor, for the proper guidance provided throughout the project without which this project would not have been a success.

It is my duty to remember with gratitude the course Director Prof. S.R.De S. Chandrakeerthy and his academic staff for their valuable contributions given to complete Master Degree Program successfully.

I also thank Mr. H.D. Chandrasena, the chief quantity surveyor of the State Engineering Corporation for providing me with valuable information which led to the success of the project.

I wish to extend my gratitude to all the state and private organisations in the construction industry for helping me in the collection of data.

Finally my special thanks go to Dr. Asoka Perera for guiding me in the latter stages of the project, particularly in writing the project report.



University of Moratuwa, Sri Lanka.  
Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

## CONTENTS

<u>Description</u>	<u>Page</u>
Abstract	i
Acknowledgement	ii
List of Abbreviations	v
List of Tables	vi
List of Figures	vii
1. Introduction	1
1.1 Background	1
1.2 Objectives	1
1.3 Progra	1
1.3.1	1
1.3.2	2
1.3.3	2
1.3.4 Documentation	2
1.4 Main Findings	2
1.5 Guide to Report	2
1.5.1 Chapter Two - Method of Measurement	2
1.5.2 Chapter Three - Format of the Bill of Quantities	2
1.5.3 Chapter Four - Standard Method of Measurement of Building Works SLS 573	3
1.5.4 Chapter Five - Response for the SLS 573 revision;1994	3
1.5.6 Chapter Six - Conclusions and Recommendations	3
2. Method of measurement	4
2.1 Introduction	4
2.2 Standard method of measurement of Building works in the United Kingdom.	6
2.3 Standard method of measurement of Building works in Sri Lanka.	11

3.	Format of the Bill of Quantities.	14
3.1	Introduction	14
3.2	Elemental Bill	14
3.3	Sectionalised Trades Bills.	15
3.4	Operational Bill	16
3.5	Bill of quantities (operational format)	18
3.6	The BPF system - Shedule of Activities.	18
3.7	Standard method of measurement	20
4.	Standard method of measurement of Building works:SLS 573.	21
4.1	Introduction	21
4.2	The structure of SLS 573:1982 and SLS 573 revision:1994	22
4.3	Comparision between SLS 573:1982 and SLS 573 revision:1994.	24
4.4	Major differences between SLS 573:1982 and SLs 573 revision:1994.	25
5.	Response for the SLS 573 revision:1994	29
5.1	Introduction	29
5.2	Response from grade I contractors.	29
5.3	Respos	34
5.4	Respos	38
5.5	Summar	41
6.	Conclusi	49
7.	Recommendations	50
	References	51
	Appendix A	52
	Appendix B	62



University of Moratuwa, Sri Lanka.  
 Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

## LIST OF ABBREVIATIONS

B.O.Q.	-	Bill of Quantities
ICTAD	-	Institute for Construction Training and Development.
R.I.C.S.	-	Royal Institute of Chartered Surveyors.
C.C.P.I.	-	Coordinating committee for project information.
N.F.B.T.E.	-	National Federation of Building Trade Employers.
B.E.C.	-	The Building Employers Confederation.
S.M.M.	-	Standard Method of Measurement.
S.L.S.	-	Sri Lankan Standard
S.E.C.	-	




University of Moratuwa, Sri Lanka.  
Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

mm	-	milli metre
cm	-	centi metre
m <sup>3</sup>	-	cubic metre
m <sup>2</sup>	-	square metre



## LIST OF TABLES

<u>Table No.</u>	<u>Description</u>	<u>Page No.</u>
4.1	Major work sections in SLS 573;1982 and SLS 573 revision;1994	23
4.2	Major differences in SLS 53;1982 and SLS 573 revision;1994	26
5.1	Response from Grade I Contractors	30
5.2	Views of Grade one Contractors	31
5.3	 University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations	35
5.4	<a href="http://www.lib.mrt.ac.lk">www.lib.mrt.ac.lk</a>	36
5.5	Response from Consultants	39
5.6	Views of Consultants.	40
5.7	Summary of % agreement for change	44

## LIST OF FIGURES

<u>Fig.No.</u>	<u>Description</u>	<u>Page No.</u>
5.1	Response from Grade I Contractors	31
5.2	Response from Grade II Contractors	35
5.3	Response from Consultants	37
5.4	S	42



University of Moratuwa, Sri Lanka.  
Electronic Theses & Dissertations  
[www.lib.mrt.ac.lk](http://www.lib.mrt.ac.lk)

