13/1001 20000

### Reutilization as a Conservation Strategy. A Study with Special **Reference to Colonial Buildings in Anuradhapura**

A Thesis submitted to the Faculty of Architecture University of Moratuwa Sri Lanka for the Degree of Master of Science in Architectural Conservation of Monuments and Sites



University of Moratuwa, Sri Lanka. **Electronic Theses & Dissertations** WWUNNERSITY OF INCRATUWA: SEI LANKA MORATUWA

Archt. M.R.S.N.M. Mathota ACOMAS ,Department of Architecture University of Moratuwa December 2008



University of Moratuwa 92942

92042

72 08 72.025(043)

HT

92942

#### DECLARATION

I declare that this Thesis represents my own work and that it has not been previously included in a Report submitted to this University or to another institution for a degree, postgraduate diploma or other qualification.

Vundh



1

University of R.S.N.MuMathota Lanka. Electronic Theses & Dissertations www.lib.mrt.ac.lk

Course Director (ACOMAS) Archt. D.P. Chandrasekara Department of Architecture University of Moratuwa

### ABSTRACT

"Damage to cultural property belonging to any people whatsoever means damage to the cultural heritage of all mankind, since each people makes in contribution to the culture of the world" (Hague Convention 1954)

The environment we live in as human beings is shaped by the nature and the culture. Cultural heritage, which includes all buildings and landscapes etc constructed and cultivated by man throughout different ages and which are considered valuable, since they either stand as tangible witnesses to how earlier generations lived or constitute historical places or have special religious or cultural significance. Caring for the cultural heritage should therefore be given greater attention. The value of the cultural heritage has been recognized intentionally and also the conservation of cultural property had been paid great attention throughout the recent history of the world. The term cultural heritage embraces a huge area and it does not mean a mere building from the past. The physical heritage from the past, i.e. buildings, other manmade structures, cultivated landscapes or sites of symbolic value, are important features of our environment and of our culture. The term conservation means the action taken to prevent the decay of cultural heritage and conservation strategy means the method or the way that followed in conservation. Reutilization is one such method that used as a conservation strategy. The study deals with identifying the reutilization as a value oriented strategy used to preserve the values of a monument in architectural conservation of monuments. It identifies the concept of conservation as a philosophy and its development and it focuses attention on concept of reutilizing in architectural conservation. To discuss this issue colonial buildings in Anuradhapura are chosen as the case study. As such it paid attention on the history, evolution of the city and growth of conservation in Anuradhapura. Finally it can be realized that the quality of life of people depends on the physical conditions and spatial characteristics of society. As such conservation, rehabilitation, restoration and culturally sensitive adoptive reuse of urban, rural and architectural heritage are also in accordance with the sustainable use of natural and human made resources.

i

### ACKNOWLEDGMENTS

I am deeply indebted and thankful to many inspiring individuals who helped me throughout this study in making it a success and to make my dream to a reality.

First and foremost to Archt. Chris de Saram, our former course coordinator and our tutor who with his great patience and advice guided me at all stages of the study providing sources of encouragement. Then I should express my heartfelt gratitude to Archt. D.P. Chandrasekra who is our present course coordinator and my internal tutor who guided me at the middle stage of the study providing me valuable written materials to fall into the correct track of thinking and giving me the courage and strength to go ahead with the study.

To Archt. Verangen Kulasooriya, my external tutor who encouraged me and guided me. To Archt . P.B.Mandawala, Director Conservation of Mahavihara project and Mr. J.A.D.S. Jayaweera Project Manager of Mahavihara Project giving me the courage and strength to go ahead with the study ic Theses & Dissertations www.lib.mrt.ac.lk

To Archt.Dr .Harsha Munasingha for his valuable guidence, Archt. Prof. Manawadu and Mr. De Mel who have given me their support and giving me every courage. To Architect Do Thi Thu Van at Architectural Institute in Viet Nam and Architect Parzana Mirr in Bangladesh for providing written documents for my thesis. To my friends Jeewantha, Lsantha, Choonai and Ruwani for helping me.

To mother and all the family members who have given me their relentless support and having been a source of strength to me, right throughout this course. At last but not least to my husband, my guiding star who helped me from initial stage to the end of the study by helping me numerous ways giving me every courage to go ahead with the study.

To each and every one mentioned and not mentioned here, thank you again for being there for me, sparing your time; being a valuable part of my effort in making this study a possibility.

## CONTENTS

Ì,

¥

4

ABSTRACT	i
ACKNOWLEDGMENTS	ii
LIST OF ILLUSTRATIONS	viii
INTRODUCTION	xii

### **CHAPTER ONE**

# History and the evolution of the city of Anuradhapura

1.1Anuradhapura in pre-colonial period	01
1.1.1The prehistoric city of Anuradhapura	03
1.1.2The historic city of Anuradhapura	04
1.1.2.1 Establishment of the city of Moratuwa, Sri Lanka.	06
1.1.2.2 Evolution of the tranic Theses & Dissertations www.lib.mrt.ac.lk	07
1.1.2.3 Disintegration of the city	09
1.1.2.4 Anuradhapura in pre colonial period	09
1.2 The colonial city of Anuradhapura	10
1.3 Post colonial city	11
1.3.1 Establishment of the sacred city	11
1.3.2 Declaration of Anuradhapura as a world heritage city	12
1.3.3 The new Town of Anuradhapura.	14
1.4 Monuments in Anuradhapura	15
Discussion	16

n	r	
- HC 6	eferences	
1.//		

17

PAGE

### **CHAPTER TWO**

3

4

# Monuments and their relationship with living communities

2.1 Identification of a monument	18
2.1.1Anciant monuments	20
2.1.2 Colonial monuments	21
2.2 Types of visitors	24
2.2.1 Pilgrims	26
2.2.2 School children	26
2.2.3 Local visitors	26
2.2.4 Foreign visitors	27
2.3 Relationship with the living communities in and around Anuradhapura	28
2.3.1 People in and around the area Electronic Theses & Dissertations	28
2.3.2 People who are working with monuments	28
2.4 Carrying capacity and the access of visitors	29
2.5 Scattered nature of the monuments and sites	30
2.6 Visitor services	31
2.6.1.1 Museums	32
2.6.2 Accommodation facilities	34
2.6.3 Sales activities	35
2.6.4 Guides and artists	36
2.6.4 Ancillary facilities	37
2.7 Factors affecting the monuments	38
2.8 Management and administration of the monuments	39
2.9 Legislative power	41

2.10 Regular monitoring of the monuments	42
Discussion	44
References	46

### **CHAPTER THREE**

-

N

4

¥

÷

# Growth of conservation as a philosophy and its applicability to the monuments in Anuradhapura

3.1 The evolution of the concept of conservation as a philosophy	
3.1.1 The concept of conservation	52
3.1.1.1 Passive Conservation [Deep Conservation]	52
3.1.1.2 Active Conservation	53
3.1.1.3 Surface Conservation Moratuwa, Sri Lanka.	54
3.1.2 Aspects of conservation Electronic Theses & Dissertations www.lib.mrt.ac.lk	54
3.2.1 Technological Aspects	55
3.2.2 Philosophical Aspects	56
3.1.3 Different between Preservation and conservation	57
3.2 Architectural Conservation and the Concept of Reutilizing	59
3.2.1 Architectural Conservation	59
3.2.1.1 Architectural conservation and Archaeological Conservation	65
3.2.1.2Different between Architectural conservation and art Conservation	66
3.2.2 Need for the architectural conservation	68
3.2.3 Aim of the Architectural Conservation	69
3.2.4 Principals of Architectural Conservation	71
3.3 Degree of intervention in Architectural intervention	75
3.3.1 Prevention	76

3.3.2 Preservation	77
3.3.3 Consolidation	77
3.3.4 Restoration	79
3.3.5 Rehabilitation	80
3.3.6 Reproduction	81
3.3.7 Reconstruction	82
3.4 Concept of Reutilizing	85
3.4.1 Reutilizing of Monuments as a value oriented conservation	85
3.4.2. Reutilizing for social benefit	87
3.5 Growth of conservation as a philosophy in Sri Lanka	87
3. 6 Growth of Conservation in Anuradhapura	89
3.7.1 Ancient time University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations	90
3.7.2 Conservation during colonial period	92
3.7.3 Involvement of the Department of Archaeology	93
3.7.4 Central Cultural Fund	93
Discussion	95
References	97

### **CHAPTER FOUR**

>

Monuments built during the colonial period in Anuradhapura and their values

4.1. Colonial monuments	98
4.1.1 Locations	99
4.1.2 Relationship with other buildings	101

4.2 building typologies	102
4.2.1 Residential buildings	103
4.2.2 Private houses	104
4.2.3 Bungalows	105
4.2.4 Wallawas	106
4.2.5 Government Quarters	107
4.2.6 Public and administrative buildings	108
4.2.7 Railway Buildings	109
4.3 Existing condition of the monuments	111
4.4 Colonial buildings within the sacred city	112
<ul> <li>4.5 Reutilizing of colonial buildings in Anuradhapura University of Moratuwa, Sri Lanka.</li> <li>4.6 Examples for Reutilized Monumentsheses &amp; Dissertations</li> </ul>	112
www.lib.mrt.ac.lk	115
4.6.1 Mahapirivena Building	114
4.6.1.1 Location	115
4.6.1.2 Changes done to the monument	116
4.6.1.3 Reutilization and the values of the monument	116
4.6.2 Hospital	118
4.6.2.1 Location	118
4.6.2.2 Changes done to the monument	120
4.6.2.3 Reutilization and the values of the monument	120
4.6.3 Jail building	121
4.6.3.1 Location	122
4.6.3.2 Changes done to the monument	122
4.6.3.3 Reutilization and the values of the monument	123
Discussion	125

۸

y

v

### **CHAPTER FIVE**

4

# Conservation of colonial buildings in Anuradhapura.

5.1 Need for the conservation of colonial buildings	127
5.2 Evaluation of the values of the monuments	129
5.2.1 Cultural value	120
5.2.1 Cultural value	130
5.2.1.1 Historical value	130
5.2.1.2 Architectural value	131
5.3 Problems with the ancient monuments in Anuradhapura	131
5.3.1 Isolation of monuments	132
5.3.2 Security system	133
5.3.3 Lack of ancillary facilities Electronic Theses & Dissertations	133
5.3.4 Financial problems lib.mrt.ac.lk	133
5.3.5 Lack of Functional values	134
5.4 Need for active conservation as living monuments	134
5.5 Problems with the colonial monuments	135
5.6 Importance of the colonial buildings	137
5.7 Conservation Action	138
5.8 Examples	145
5.8.1 Conservation of old hospital within the Heritage site	146
5.8.1.1 Alternative proposal for the present utilization	147

vi

5.8.1.2 Potentials to reutilize the building as a tourist	
facility centre	147
5.8.1.3 Benefits of Reutilization as a Tourist	
Facility Centre	155
5.8.2 Reutilizing the Mahapirivena building as a museum	157
5.8.2.1 Alternative proposal for the present utilization	158
5.8.2.2 Potentials to reutilize the building as a museum	159
5.8.2.3 Benefits of Reutilization as a museum	162

• 9

4

3

Discussion		164
References		166
CONCLUSION	University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations www.lib.mrt.ac.lk	167
BIBLIOGRAPHY	7	172

# LIST OF ILLUSTRATIONS

¥

1. The city of Anuradhapura	3
2. Master Plan of Abegiriya Monastery	4
3. Master Plan of Mahavihara Monastery	5
4. Master Plan of Jetawana Monastery	6
5. Arrangement of the city	7
6. World Heritage City of Anuradhapura	13
7. Ruwanveli Stupa	19
8. Ruwasweli Stupa	20
9. Colonial building in Bangladesh Dhaka university-library building	21
10. Colonial building in Egypt Cairo Egyptian museum	21
11. Colonial building in Anuradhapura	24
12. Ruwanveli stupa	26
13. Conservation Team	29
14. Museum Object Displayed in Jetavana Site Museum	31
15. Sign Board in Jetavaha Monastery of Moratuwa, Sri Lanka.	31
16. Archaeological Museum managed by the Department of Archaeology	32
17. Folk Museum managed by the Department of Archaeology	33
18. Museum at site Jetavana Site Museum	33
19. Audio visual Room in Jetavana Museum	33
20. Tisawewa rest house	34
21. Sleeping under a tree at the premises of Mahavihara	34
22. Mobile Vendor at Mahavihara Premises	35
23. Selling goods within the heritage city	36
24. Stockholm, Sweden - The city as a monument	48
25. Petra, World Heritage site in Jordan	49
26. Petra, World Heritage site in Jordan	49
27. Petra, World Heritage site in Jordan	50
28. Petra, World Heritage site in Jordan	50
29. Petra, World Heritage site in Jordan	51
30. Great Temple Carved in a natural Cliff at Petra in Jordan	51
31. Petra, World Heritage site in Jordan	53
32. Abu Simble- Great temple of Ramsess II	55

Page

33. Three Pyramids at Giza in Egypt	56
34. Ruwanveli Stupa	56
35. Pyramid and the sculpture of King Ramsess at Giza in Egypt	58
36. Master plan of Duong Lam ancient village at Vietnam	61
37. Entry to the village of Duong Lam at Vietnam	61
38. Water Body	61
39. Path way going through the village	61
40. Religious Building in Duong Lam ancient village	62
41. Temple in Duong Lam ancient village	62
42. Entry to Communal house at the Duong Lam ancient village	62
43. Communal house at the Duong Lam ancient village	62
44. Traditional house at the Duong Lam ancient village at Vietnam	63
45. Private building in Duong Lam ancient village	63
46. Timber Partition	63
47 Decorative Element	63
48. Salt: City of Tradition	64
49. Curzen Hall in Dhaka University of Moratuwa, Sri Lanka.	66
50. Interior & ornament of Baiturrahman Mosque at Indonesia	67
51. Baiturrahman Mosque at Indonesia	68
52. Monument in Jerash at Jordan	69
53. Building at Salt in Jordan	70
54. 19 <sup>th</sup> Guest House Destroyed by the war of Bosnia-Herzegovina	70
55. After Conservation of the Guest House	71
56. Gate tower of a Fortress belong to $17^{\text{th}}-20^{\text{th}}$ century	73
57. After conservation of the Gate tower	74
58. Image of Buddha at Aukana	76
59. Timber Structure	77
60. South Gate of Jerash at Jorden	78
61. Abegiri Stupa	79
62. Conserving the Abegiri stupa	79
63. Monument at Jordan	80
64. Louvre museum in France	80
65. Cross section of the Louvre museum in France	81
66. Monument in Jordan	81

~7

۸

ix

67. Original wall	82
68. Collapsed wall	82
69. Reproduced the wall	82
70. Temple of Abu Simble in its original position	83
71. Giant temples were moved by using machineries	84
72. After Reassembling at Great Sculptures	84
73. Section of the artificial hill	84
74. Temple of Abu Simble After assembling on an artificial hill	84
75. Past through the present	89
76. Outer wall of Ruwanveli stupa.	90
77. The Thuparama stupa	91
78. Conservation Site of Central Cultural Fund at Anuradhapura	93
80. Lahabadge	99
79. Map showing the location of Colonial Buildings	100
81. Residential Building	104
82. View of the original design	105
83. Provincial Judge's Bungalow Electronic Theses & Dissertations	106
84. Jayakodi Wallawa www.lib.mrt.ac.lk	106
85. Railway Quarters	107
86. Kachcheri building	109
87. Town hall	109
88. Deteriorated Building	111
89. Refectory of Mahavihara Monastery	115
90. Building located in a small hillock	115
91. The Hospital	118
92. Entrance of the building	122
93. Building facing the road	122
94. Building in ruined form	123
95. External appearance of the Building	124
96. Railway building	131
97. Railway building	135
98. Deteriorated Building	135
99. Building owned by the Government	136
100. Heritage area	141

4

•7

٨

9

x

101. Front View of the Building	146
102. Master plan of Mahavihara Monastery	149
103. Layout of the Location	150
104. Mahavihara Project Office Building	151
105. Laboratory building	153
106. The Building	157
107.Front verandah	158
108. Master plan - Mahavihara	160
109. Layout of the Location	161



University of Moratuwa, Sri Lanka. Electronic Theses & Dissertations www.lib.mrt.ac.lk

