

QATAR UNIVERSITY

COLLEGE OF ENGINEERING

TOWARDS A SUSTAINABLE URBAN CONSERVATION STRATEGY: THE CASE OF
HISTORIC DISTRICTS IN DOHA, QATAR

BY

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ABSTRACT

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Title: Towards A Sustainable Urban Conservation Strategy: The Case of Historic Districts in Doha, Qatar

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Historic districts of Doha, the capital of Qatar, have been deteriorating due to the city's recent uncontrolled rapid urban growth. Consequently, heritage value inherit in their urban fabric is under threat. Recent conservation attempts have helped revive several districts; nevertheless, many other still continue to deteriorate.

This thesis develops a set of principles for sustainable urban conservation projects in Qatar's historic districts. The principles are derived from the study of the relevant literature and critical analysis of a sample of urban conservation projects. They can be classified in six main aspects: conservation, project governance, environmental sustainability, social sustainability, type of use, and building and open spaces rehabilitation. The principles are then applied to propose an urban conservation project design for Fareej Al-Najada, a historic district of Doha. The proposal aims to revive Al-Najada as a commercial and cultural destination by conserving its heritage value. Finally, recommendations are made for Qatar to develop a national urban conservation strategy.

Keywords: Urban Conservation, Sustainability, Urban Heritage, Historic Doha

DEDICATION

I dedicate this work to my daughter and my husband for their patience and support.

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TABLE OF CONTENTS

DEDICATION	iii
ACKNOWLEDGMENTS	iv
LIST OF FIGURES	x
LIST OF TABLES	xv
CHAPTER 1. INTRODUCTION.....	1
1.1. Background	3
1.2. Significance of the Research	4
1.3. Aim of the Thesis	5
1.3.1. Research Questions.....	5
1.3.2. Specific Objectives	6
1.4. Research Methodology.....	7
1.5. Organization of the Thesis	8
CHAPTER 2. METHODOLOGY	9
2.1. Literature Review	11
2.2. Case Studies: Regional and Local Urban Conservation Projects.....	11
2.3. Guidelines for Urban Conservation Projects in the Historic Parts of Qatar.....	13
2.4. An Urban Conservation Proposal for Fareej Al Najada.....	14
2.5. Summary	15
CHAPTER 3. LITERATURE REVIEW.....	16

3.1.	Concepts and Definitions of Heritage	16
3.2.	Definitions of Conservation	17
3.3.	Urban Conservation and Sustainability	19
3.4.	International Organizations for Heritage Conservation	20
3.4.1.	UNESCO	20
3.4.2.	ICOM.....	21
3.4.3.	ICCROM	21
3.4.4.	ICOMOS.....	22
3.5.	Key International Charters for Heritage Conservation	23
3.5.1.	Qatar Law On the Antiquities.....	26
3.6.	Summary	27
CHAPTER 4. ANALYSIS OF FOUR URBAN CONSERVATION PROJECTS		28
4.1.	Case Studies Structure.....	28
4.1.1.	Selection Criteria	29
4.1.2.	Case Studies Outline.....	30
4.2.	Darb Al Ahmar in Cairo, Egypt	31
4.2.1.	Location.....	31
4.2.2.	Historical Background.....	32
4.2.3.	Analytical Description of the Area	35
4.2.4.	Conservation Project.....	37
4.3.	Al Balad in Jeddah, Saudi Arabia	52

4.3.1.	Location	52
4.3.2.	Historical Background.....	56
4.3.3.	Analytical Description of the Area	58
4.3.4.	Conservation Project.....	63
4.4.	Souq Waqif.....	87
4.4.1.	Location	87
4.4.2.	Historical Background of Doha	90
4.4.3.	Analytical Description of the Area	94
4.4.4.	The Conservation Project	96
4.5.	Msheireb Heritage Quarter	106
4.5.1.	Location	106
4.5.2.	Historical Background.....	109
4.5.3.	Analytical Description of the Area	111
4.5.4.	The Msheireb Conservation Project	115
4.6.	Comparative Analysis of the Selected Conservation Projects	138
4.6.1.	Project Context	139
4.6.2.	Types of Use.....	140
4.6.3.	Conservation Project Approach.....	142
4.6.4.	Project Governance.....	146
4.6.5.	Socio-Cultural Impact.....	150
4.6.6.	Summary of the Comparative Analysis.....	151

4.7.	Summary	153
CHAPTER 5. PRINCIPLES FOR SUSTAINABLE URBAN CONSERVATION PROJECTS IN HISTORIC DISTRICTS OF QATAR.....		
		154
5.1.1.	Conservation Approach	154
5.1.2.	Project Governance.....	155
5.1.3.	Environmental Aspects of Sustainability	157
5.1.4.	Social Aspects of Sustainability	158
5.1.5.	Type of Use	159
5.1.6.	Building and Open Spaces Rehabilitation	160
5.2.	Summary	162
CHAPTER 6. AN URBAN CONSERVATION PROJECT PROPOSAL FOR FAREEJ AL NAJADA		
		165
6.1.1.	Location.....	165
6.1.2.	Historical Background of Area.....	167
6.1.3.	Description of the Area.....	170
6.2.	Methodology for Preparing the Urban Conservation Project for Fareej Al Najada.....	181
6.2.1.	On-Site Interviews.....	181
6.2.2.	Survey Study.....	182
6.2.3.	Insights from the Visits, Interviews, and the Survey.....	188
6.3.	An Urban Conservation Project Proposal for Fareej Al Najada	189
6.3.1.	Physical Aspects	192
6.3.2.	Non Physical Aspects	208

CHAPTER 7. Conclusions and Recommendations	210
7.1. Challenges and Limitations of Research	210
7.2. Recommendations	211
7.3. Suggestions for Future Work	213
REFERENCES	214
APPENDIX A: FAREEJ AL NAJADA SURVEY	220
APPENDIX B: INTERVIEW QUESTIONS	221

LIST OF FIGURES

Figure 1-1: Population Estimate Qatar 2005-2015 (Statistics, 2016).....	2
<i>Figure 2-1: Methodological Framework of the Thesis</i>	10
Figure 3-1: Burra Charter Flow Chart (Australia ICOMOS, 2013)	25
<i>Figure 4-1: Location of Darb Al Ahmar</i>	31
<i>Figure 4-2: Cairo Citadel in 19th century from Ayyubid Period</i> (Library of Congress, 2016)	33
<i>Figure 4-3: Three Main Action Area in Darb Al Ahmar</i> (AKTC, 2007, p. 5)	36
<i>Figure 4-4: Houses in Afet Al Asaad Alley in Burg Al Zafaar Action Area – Before and After Rehabilitation</i> (Source AKTC, 2007, pp.19).....	40
<i>Figure 4-5: Before and After Rehabilitation</i> (Khasaba, 2011, p. 2)	41
<i>Figure 4-6: Um Al Sultan Shaban Mosque Before and After Restoration</i> (AKTC, 2007, p. 42).....	43
<i>Figure 4-7: Proposed Khayer Bek Complex</i> (AKTC, 2007, p. 37).....	44
<i>Figure 4-8: Rehabilitation of Darb Shoughlan School and Proposed Interventions</i> (AKTC, 2007, p. 31)	45
<i>Figure 4-9: Aslam Square Improvement</i> (AKTC, 2007, p. 29).....	47
<i>Figure 4-10: Proposed open air theatre</i> (AKTC, 2007, p. 34)	48
<i>Figure 4-11: Map of Modern Jeddah</i> (History&Maps, 2016)	53
<i>Figure 4-12: Map of Modern Jeddah</i> (Source: Adapted from Google Maps by Author).....	54
<i>Figure 4-13: Location of Historic Jeddah within Greater Jeddah</i> (Saudi Commussion for Tourism and Antiquities, 2013)	55
<i>Figure 4-14: Location of Al Balad and Proposed Buffer Zone</i> (Saudi Commussion for Tourism and Antiquities, 2013)	56
<i>Figure 4-15: Streets of Al Balad</i> (Source: Author)	59
<i>Figure 4-16: A View of a Typical Square in Al Balad</i> (Source: Author)	60

<i>Figure 4-17: The Four Parts of Al Balad and Regions of the Nominated Property (Saudi Commussion for Tourism and Antiquities, 2013)</i>	61
<i>Figure 4-18: A Freestanding Roshan Tower in the North Zone (Source: Author)</i>	62
<i>Figure 4-19: Deserted Buildings Currently Used by Laborers (Source: Author)</i>	63
<i>Figure 4-20: Historical Houses of Al Balad (Saudi Commussion for Tourism and Antiquities, 2013)</i>	69
<i>Figure 4-21: Before and After Rehabilitation of Naseef House (Source: Author)</i>	71
<i>Figure 4-22: Restoration of Noorwali House (Source: Author)</i>	72
<i>Figure 4-23: Nawar House (Source: Author)</i>	73
<i>Figure 4-24: Bayt Sharbatli House and Its Blueprint (Jeddah Municipality, 2014)</i>	74
<i>Figure 4-25: Jokhdar House (Source: Author)</i>	75
<i>Figure 4-26: A Private House Restoration Project (Source: Author)</i>	76
<i>Figure 4-27: Al Shafi Mosque (Source: Author)</i>	77
<i>Figure 4-28: Repaved Streets in the Old City</i>	78
<i>Figure 4-29: Gathering and Rest Areas in Small Squares of the District (Source: Author)</i>	79
<i>Figure 4-30: Lights in Pedestrian Walks (Source: Author)</i>	80
<i>Figure 4-31: A Street Fire Pump (Source: Author)</i>	81
<i>Figure 4-32: Location of Doha in Qatar (Source: Adapted from Google Maps by Author)</i>	88
<i>Figure 4-33: Location of Souq Waqif (Source: Adapted from Google Maps by Author)</i>	89
<i>Figure 4-34 Historical Development of Souq between 1947 and 1959 (Source: MMUP)</i>	91
<i>Figure 4-35 Restoration of Building in Souq Waqif (Radoine, 2010)</i>	93
<i>Figure 4-36 Parts of Souq Waqif (Source: Adapted from Google Maps by Author)</i>	95
<i>Figure 4-37: Bamboo Wood Roof System (Source: Author)</i>	101
<i>Figure 4-38: Restoration of Houses with Natural Stones Source: (Radoine, 2010)</i>	102
<i>Figure 4-39 Open Space in Souq Wakif (Source: Author)</i>	103
<i>Figure 4-40 Restaurant and Galeria Street (Source: Radoine 2010)</i>	105

<i>Figure 4-41: Location of Msheireb Heritage Quarter in Doha (Source: Adapted from Google Maps by Author).....</i>	<i>107</i>
<i>Figure 4-42: Msheireb Heritage Quarter and Surroundings (Source: Adapted from Google Maps by Author).....</i>	<i>108</i>
<i>Figure 4-43: Msheireb Heritage Quarter in Msheireb Development - The enclosed area (Msheireb Properties, 2011).....</i>	<i>109</i>
<i>Figure 4-44: Development of the Msheireb Area Between 1947 and 2004 (Msheireb, 2010).....</i>	<i>110</i>
<i>Figure 4-45: A view of a Sikkat (Source: (Msheireb: Heritage Quarter Houses Schematic Design Report, 2011).....</i>	<i>112</i>
<i>Figure 4-46: A typical Courtyard in Msheireb Heritage Quarter (Source: Author)</i>	<i>113</i>
<i>Figure 4-47: Interior Wall Decoration of Qatari House (Source: Author)</i>	<i>113</i>
<i>Figure 4-48: Roof structure (Source: Author).....</i>	<i>114</i>
<i>Figure 4-49: Cultural Center in Msheireb (Source: Msheireb: Heritage Quarter Houses Schematic Design Report, 2011).....</i>	<i>117</i>
<i>Figure 4-50: A Schematic Representation of the Thematic Chapters that the Historic Houses represent (Msheireb Properties, 2011)</i>	<i>118</i>
<i>Figure 4-51: Location of Bayt Radwani in Msheireb Heritage Quarter (Msheireb Properties, 2011)</i>	<i>119</i>
<i>Figure 4-52: Bayt Radwani Proposed Ground Floor Plan (Source: Msheireb: Heritage Quarter Houses Schematic Design Report, 2011)</i>	<i>120</i>
<i>Figure 4-53: Location of Bayt Jassim in Heritage Quarter (Source: Msheireb: Heritage Quarter Houses Schematic Design Report, 2011)</i>	<i>122</i>
<i>Figure 4-54: Model of Bayt Jassim (Source: Author)</i>	<i>123</i>
<i>Figure 4-55: Bayt Jassim Proposed Basement and Ground Floor Plans (Msheireb Properties, 2011)...</i>	<i>124</i>
<i>Figure 4-56: Bayt Jelmoood in Msheireb Heritage Quarter (Msheireb Properties, 2011)</i>	<i>126</i>
<i>Figure 4-57: Entrance Courtyard reuses as a welcoming area for museum visitors (Source: Author) ...</i>	<i>127</i>
<i>Figure 4-58: Bayt Jelmoood Proposed Basement and Ground Floor Plans (Msheireb Properties, 2011)</i>	<i>128</i>

<i>Figure 4-59: Location of Company House in Msheireb Heritage Quarter (Msheireb Properties, 2011)</i>	129
<i>Figure 4-60: Company House (Msheireb Properties, 2011)</i>	130
<i>Figure 4-61: Bayt Company Proposed Ground Floor Plan (Msheireb Properties, 2011)</i>	132
<i>Figure 4-62: proposed Bayt Company House (Msheireb Properties, 2011)</i>	132
<i>Figure 4-63: Location of Eid Prayer Ground (Msheireb Properties, 2011)</i>	134
<i>Figure 4-64: Proposed Heritage Quarter Juma'a Mosque (Msheireb Properties, 2011)</i>	135
<i>Figure 4-65: Open Space Hierarchy (Msheireb Properties, 2011)</i>	136
<i>Figure 6-1: Location of Fareej Al Najada (Source: Adapted from Google Maps by Author)</i>	166
<i>Figure 6-2: Fareej Al Najada (Source: Adapted from Google Maps by Author)</i>	167
<i>Figure 6-3: Evolution of Fareej Al Najada between 1947 and 1973 (Source: MMUP)</i>	168
<i>Figure 6-4: Evolution of Fareej Al Najada between 1987 and 2012 (Source: MMUP)</i>	169
<i>Figure 6-5: Future urban Plan of Fareej Al Najada (Source MMUP)</i>	170
<i>Figure 6-6: Ages of Buildings in Fareej Al Najada (Source: QMA 2014)</i>	171
<i>Figure 6-7: Building Conditions in Fareej Al Najada (Source: QMA)</i>	172
<i>Figure 6-8: Building Types of Use (Source: QMA)</i>	173
<i>Figure 6-9: Decorated arcades and parapet (Source: Author)</i>	174
<i>Figure 6-10: Decoration Style of Buildings (Source: Author)</i>	175
<i>Figure 6-11: Mohammed Said Naserallah House (Source: QMA)</i>	176
<i>Figure 6-12: Building Numbering Map (MMUP)</i>	177
<i>Figure 6-13: Building Number 10 During Restoration Work (Source QM)</i>	177
<i>Figure 6-14: Marked Building (Source: QM)</i>	178
<i>Figure 6-15: A Courtyard House Rented by Workers (Source: Author)</i>	179
<i>Figure 6-16: Shading Element Intervention by Inhabitants (Source: Author)</i>	179
<i>Figure 6-17: A Partly Demolished Wall (Source: Author)</i>	180
<i>Figure 6-18: Age Distribution of Survey Respondents</i>	183
<i>Figure 6-19: Gender Distribution of Survey Respondents</i>	183

<i>Figure 6-20: Nationalities of Survey Respondents</i>	184
<i>Figure 6-21: Do People Know Fareej Al Najada?</i>	185
<i>Figure 6-22: Do People Know Al Najada's Location?</i>	186
<i>Figure 6-23: Have people been to Al Najada?</i>	186
<i>Figure 6-24: Desired Type of Use for Fareej Al Najada</i>	187
<i>Figure 6-25: Type of Use - Weighted Scores</i>	188
<i>Figure 6-26: Proposed Design of Fareej Al Najada</i>	191
<i>Figure 6-27: New Mixed Use Complex</i>	192
<i>Figure 6-28: Traditional fabric, cloths and furniture shops on the street</i>	194
<i>Figure 6-29: Shops Through the Al Asmakh Street</i>	195
<i>Figure 6-30: Proposed Heritage Quarters</i>	197
<i>Figure 6-31: A View from Existing Traditional Buildings</i>	198
<i>Figure 6-32: Proposed Traditional Houses for Lectures and Workshops</i>	198
<i>Figure 6-33: Proposed Green Area</i>	199
<i>Figure 6-34: Proposed Open Area for Multiple Use</i>	200
<i>Figure 6-35: Al Bukhari Mosque</i>	201
<i>Figure 6-36: Amna Al Camel House Before Intervention</i>	202
<i>Figure 6-37: Amna Al Camel House After Intervention</i>	203
<i>Figure 6-38: Man Majlis</i>	204
<i>Figure 6-39: Main Access to Al Najada from Souq Wakif, Msheireb and Al Asmakh</i>	205
<i>Figure 6-40: Access to The Area</i>	206
<i>Figure 6-41: An Existing Street View</i>	207
<i>Figure 6-42: A Proposed Street View</i>	207

LIST OF TABLES

Table 1-1: Mapping of Research Objectives (ROs) to Research Questions (RQ(s)).....	6
Table 4-1: Summary of Comparative Analysis of Projects	152

CHAPTER 1. INTRODUCTION

Heritage is defined as the traditions, achievements, beliefs, etc., that are part of the history of a group or nation by Merriam-Webster Dictionary. (Merriam-Webster, n.d.) A more specific term *cultural heritage* relates to the legacy of physical artifacts and intangible attributes, which societies inherit from past generations. (Rodwell, 2007)

Urbanization is a distinct element of heritage, which represents both tangible and intangible evidences of the legacy of earlier generations. While the tangible evidences are built structures and the urban fabric of the city; the intangible evidences are cultural, social, and religious values and traditions.

The urban heritage is inherited from past generations; but it should be maintained and bestowed for the future generations. The term *sustainability* refers to meeting the needs of today without compromising the ability of future generations to meet their needs. In this sense, sustainability and conservation of urban heritage are closely related.

Dramatic changes in the urban fabric of cities due to economic growth, the resulting urban sprawl lead, globalization, and technological advances in construction pose a big threat for urban heritage. City centers shift, modern buildings without unique architectural identity replace the traditional buildings, shopping malls and modern plazas replace the traditional market places and commercial districts, and people tend move to newly built suburban districts of the city. These changes have resulted in dilapidation of the old buildings over time, thus leading to loss of urban heritage.

Conservation of urban heritage has become a major challenge, especially for fast growing countries. Qatar is one of the most prominent examples, as the country's population and GDP have sharply risen in the last decade. (See Figure *I-1*)



تقدير عدد السكان
في منتصف الأعوام ٢٠١٥ - ١٩٨٦
POPULATION ESTIMATE
2004-2015

جدول رقم (٥)

Gender	المجموع Total	إناث Females	ذكور Males	النوع السنوات
2004*	744,029	247,647	496,382	*٢٠٠٤
2004	798,059	251,943	546,116	٢٠٠٤
2005	906,123	269,053	637,070	٢٠٠٥
2006	1,042,947	288,649	754,298	٢٠٠٦
2007	1,218,250	312,503	905,747	٢٠٠٧
2008	1,448,479	337,303	1,111,176	٢٠٠٨
2009	1,638,626	373,480	1,265,146	٢٠٠٩
2010*	1,699,435	414,696	1,284,739	*٢٠١٠
2010	1,715,098	418,988	1,296,110	٢٠١٠
2011	1,732,717	444,127	1,288,590	٢٠١١
2012	1,832,903	477,704	1,355,199	٢٠١٢
2013	2,003,700	526,068	1,477,632	٢٠١٣
2014	2,216,180	564,143	1,652,037	٢٠١٤
2015*	2,404,776	587,795	1,816,981	*٢٠١٥
2015	2,437,790	597,147	1,840,643	٢٠١٥

Figure 1-1. Population Estimate Qatar 2005-2015 (Statistics, 2016)

It is no exaggeration to say that the entire capital city, Doha, is like a giant construction site. In result, the Old City of Doha, which contains the urban heritage, has lost its popularity, abandoned, and started to dilapidate. In recent years, significant efforts have been done in the Old City in order to conserving its urban heritage. This thesis aims to contribute the sustainable conservation of unique Qatari urban heritage by developing a set of guidelines for conservation projects in the old districts of Doha. The thesis also develops a design proposal for conservation of Fareej Al Najada, one of the districts of the Old City, with the aim of conserving its urban heritage.

1.1. Background

Doha is the capital and the largest city of the State of Qatar. Until the middle of the 20th century, Doha was merely a remote Gulf city with very small population. Pearl hunting and fishing were the major economic activities of the city before 1939 (Boussaa, 2014). The city expanded dramatically following the discovery of oil in 1939 and its exports in 1949. Several governmental buildings administrative offices, ministries, and governmental authorities were designed and built during early 1970's in Qatar (Khalil & Shaaban, 2012). During the last two decades, Qatar has become one of the wealthiest countries of the world. The exponential economic growth due to increasing oil and gas exports led to the booming of the construction sector. In result, the city has started to witness an uncontrolled rapid urban growth (Khalil & Shaaban, 2012). An urban sprawl occurred all over the urban boundaries of the city. Modern high-rise and glass towers have started to appear one after another. Today, Doha has a completely different image and urban identity compared to fifty years ago.

Old districts and historic buildings of Doha were also affected by globalization and uncontrolled modernization. Several structures were demolished, damaged or disappeared due to this rapid unplanned urban growth. The owners of residential buildings in the old districts have moved to the newly built ones and deserted buildings were rented by labors and low income workers. This has led to the transformation of demographics in those districts. Addition to lack of exact conservation rules, due to either negligence or non-regulated maintenance, many historical districts started to lose their character and values. Some of old districts were abandoned and completely dilapidated in Doha. Fortunately, few districts have survived this disaster and still exist such as Fareej Al Najada.

1.2. Significance of the Research

There are economic, social, and environmental incentives to encourage the conservation of historic districts and the heritage:

- If historic districts are conserved and reused properly, the districts will stay alive. Through careful conservation programs, these districts could be center of many economic and social activities. They will also be major touristic attractions. All of these will contribute to the city's economy.
- Conservation of historic districts is one of the ways to convey the heritage identity to new generations. Historic buildings give some trace about cultural and social structure and common history. So conserving those helps provide the conscience of national identity.
- Urban conservation and sustainability have parallel meanings and they achieve more quality and livable cities.

In Qatar, heritage conservation attempts were not planned strategically. This was due to lack of, regulating institutions and regulating legislations codifying and organizing the conservation strategies and approaches. The recent conservation projects in the historic districts of Doha, Souq Waqif and Msheireb Heritage Quarter Projects, present examples of different types of interventions to protect central heritage of old Doha. The lessons that can be derived from these projects, as well as the lessons that can be derived from international case studies will contribute to the development of a set of principles for urban conservation projects.

According to Rodwell (Rodwell, 2007, p. 8) “conservation means all the process of looking after a place so as to retain its cultural significance”. There are several types of conservation strategies but this study focuses on historic conservation, which is an approach to protect the characteristic value of heritage towards deteriorations. It aims to increase value of buildings, architectural elements and historic districts of the city. Urban regeneration is an important component of conservation. Sustainable urban

conservation is a comprehensive process which deals with social, economic and environmental revitalization at the same time for a long term urban vibrancy.

1.3. Aim of the Thesis

The aim of this thesis is to develop a set of principles to develop an urban conservation strategy for the dilapidated old districts of Doha in order to economically and socially revive these districts and sustainably protect their cultural, architectural, and urban heritage values.

1.3.1. Research Questions

Towards this aim, the following research questions (RQ) are articulated:

- RQ 1. What are the significant cultural, urban, and architectural heritage values of the historic districts of Doha?
- RQ 2. What is the content of the useful conservation policy for preserving heritage value?
- RQ 3. How successful are the already complete conservation projects that took place in historic districts of Doha in terms of preserving the unique cultural identity of Qatar and the heritage value? What are the lessons learnt from these projects that can be utilized when developing a set of guidelines and policies that can be used for future conservation projects for the historic districts of Doha?
- RQ 4. What are the lessons from the experiences of other significant conservation projects in the Middle East and North Africa (MENA) region that can be utilized for future conservation projects in the historic districts of Doha?
- RQ 5. How can a comprehensive urban conservation project strategy be developed in order to ensure the sustainable preservation of the cultural, architectural, and urban heritage?

1.3.2. Specific Objectives

The specific objectives of the research are:

- RO 1. To identify the significant cultural, urban, and architectural heritage values of the historic districts of Doha.
- RO 2. To identify the content of useful conservation policy for conserving heritage value.
- RO 3. To derive lessons from the experiences of regional and local urban conservation projects that can be utilized when developing a set of guidelines and policies that can be used for future conservation projects for the historic districts of Doha.
- RO 4. To develop a set of guidelines for preparing urban conservation projects for the historic districts of Doha that can sustainably conserve the urban heritage.
- RO 5. To develop a urban conservation project proposal for the Fareej Al Najada Area in historic Doha using the developed guidelines.

The mapping of the research objectives to the research questions is given in Table 1-1.

Table 1-1

Mapping of Research Objectives (ROs) to Research Questions (RQ(s))

RQ 1	RQ 2	RQ 3	RQ 4	RQ 5
RO 1	RO 2	RO 3	RO 3	RO 4 – RO 5

1.4. Research Methodology

This thesis develops a set of guidelines and recommendations for future urban conservation projects in the historic districts of Doha in order to sustainably conserve the cultural, architectural, and urban heritage value. The overall methodology can be outlined in four steps:

STEP 1. By elaborating an extensive literature review, relevant terminology is carefully defined, arguments on urban conservation and its relation with sustainability is studied, and the principles outlined by international charters for heritage conservation are presented.

STEP 2. Four urban conservation projects, two regional and two local, are studied and a comparative analysis is done.

STEP 3. Based on the study of the literature and the lessons learnt from the studied projects are utilized to develop a set of guidelines for an urban conservation project strategy for the historic districts of Doha

STEP 4. Based on the developed guidelines, a sample urban conservation project proposal is prepared as a case study for the Fareej Al Najada in Historic Doha. The following tools are also used for developing the proposal:

- a. Field observations:
 - i. Walk through assessments
 - ii. Photographic Surveys
 - iii. Site interviews
- b. Literature review:
 - i. History of the area
 - ii. Identification of the buildings with significant heritage value
- c. An survey with the residents of Doha

The steps of the methodology concurrently contribute to the achievement of the research objectives. A more specific mapping of the methodology steps to the research objectives is as follows:

STEP 1	STEP 2	STEP 3	STEP 4
RO 1, RO 2, RO 4	RO 1, RO 2	RO 3, RO 4	RO 5

1.5. Organization of the Thesis

The rest of the thesis report is organized as follows. The research methodology outlined in the preceding section is explained in detail in CHAPTER 2. . A review of the literature along with definitions of urban renewal, regeneration, conservation, and heritage is given in 0. CHAPTER 4. contains the analysis of selected conservation projects. A set of principles that can be applied for urban conservation projects in Qatar is listed in CHAPTER 5. . A conservation project proposal for Fareej Al Najada built on these guidelines is presented in CHAPTER 6. . The thesis concludes with general recommendations and suggestions for future work in CHAPTER 7. .

CHAPTER 2. METHODOLOGY

This thesis develops a set of guidelines and recommendations for future urban conservation projects in the historic districts of Qatar in order to sustainably conserve the cultural, architectural, and urban heritage values. Then it applies these guidelines and recommendations to develop an urban conservation project proposal for Fareej Al Najada, one of the important historic districts of Doha, Qatar, and proposes an urban conservation project design.

The overall methodology can be outlined in four steps:

STEP 1. Review of the relevant literature:

- Terminology and definitions
- Research on the conservation of urban heritage
- International institutions and charters for heritage conservation

STEP 2. Analysis of regional and local urban conservation projects in the historic districts of Qatar:

- Selection of projects
- Study of each project
- Comparative analysis of the projects

STEP 3. Development of a set of guidelines for urban conservation projects for historic districts of Qatar based on the literature review and the study of the urban conservation projects.

STEP 4. Preparation of an urban conservation project proposal for Fareej Al Najada

The methodologic framework of the thesis, explaining how the aforementioned steps are related to each other, is outlined in Figure *2-1*.

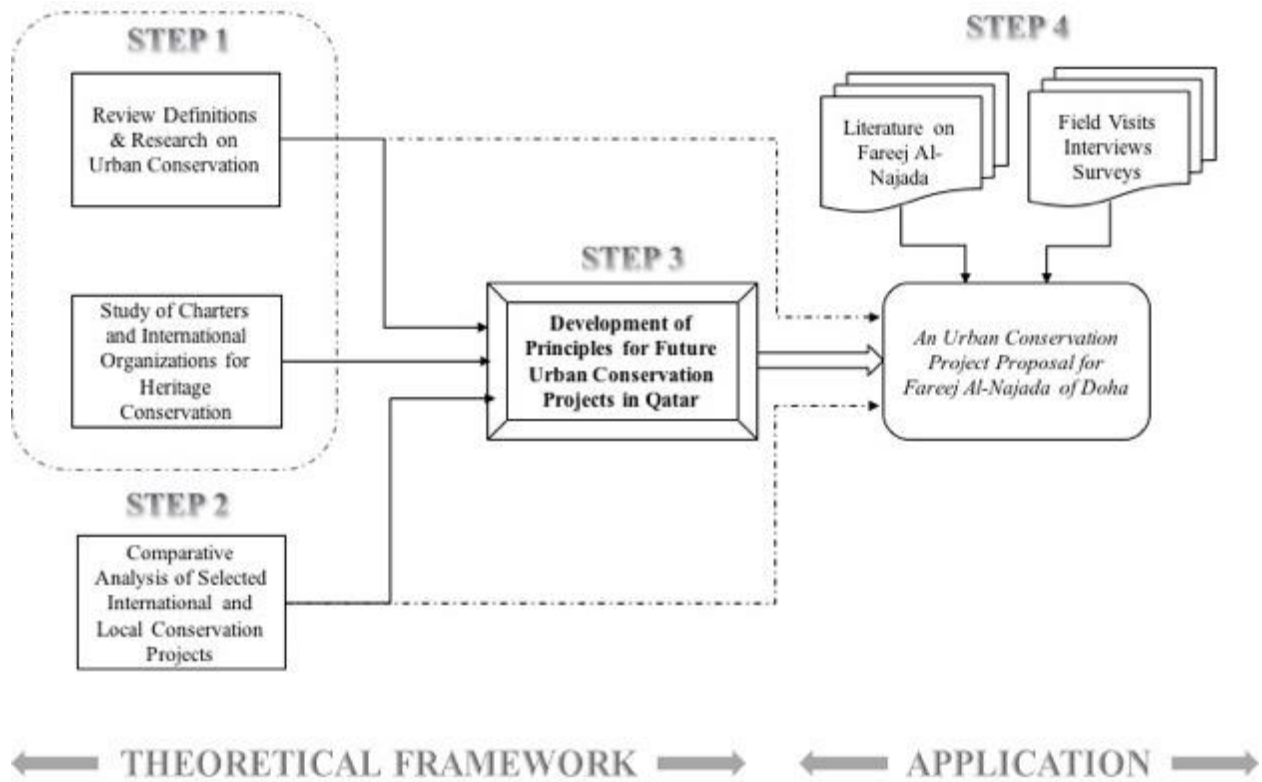


Figure 2-1. Methodological Framework of the Thesis

The mapping of each step to the thesis chapters is presented below. The subsequent sections explain each step in detail.

STEP 1	STEP 2	STEP 3	STEP 4
0	CHAPTER 4.	CHAPTER 5.	CHAPTER 6.

2.1. Literature Review

The literature review consists of the following three parts. First part is the definitions of the relevant terminology and concepts are derived. The research topic spans a number of concepts, which are carelessly used interchangeably by many despite the differences between them. Therefore, all of the relevant concepts should be carefully defined.

The second part aims at reviewing the research studies on urban conservation. The reasons for the need for conserving urban heritage are classified, the history and main approaches for urban heritage conservation are presented, and principles for sustainable urban conservation of historic districts are discussed.

The third part introduced the major international institutions promoting, advocating, facilitating, monitoring, and supporting urban heritage conservation and the major international charters for heritage conservation. The institutions play a central role in outlining the standards and principles for the conservation of heritage values and facilitating conservation projects. The “charters” on heritage conservation are declarations that sets certain principles and guidelines for the conservation of heritage values. In addition to these international charters, many countries have developed their own national charters or laws for heritage conservation. The thesis also studied the Law of Antiquities, which was established in 1980 in Qatar.

2.2. Case Studies: Regional and Local Urban Conservation Projects

In this step four completed or ongoing urban conservation projects are carefully studied. The main objective of this study is to identify general strategies and principles for sustainable conservation of the cultural and urban heritage that can be implemented for the future urban conservation projects in Qatar. The projects studied differ in scale, scope, timeline, and governance structure. Another objective is how differences in scale, scope, timeline, and governance structure impact the conservation strategies.

The methodology for the analysis of the projects starts with the selection process. The first criterion is that the selected projects should have conservation of urban, architectural, and cultural heritage values as their main theme. As a second criterion, both international and local projects are selected to have diversity. Finally, the international projects are selected from the countries in the same region as Qatar, because those countries share similar culture, history, demographics, and governance structure.

The study of each project looked at two aspects; the physical and non-physical. Physical aspects refer to the rehabilitation, restoration, and/or reconstruction works for buildings and open spaces. Non-physical aspects are the project governance approaches and socio-cultural activities and strategies. Before presenting the projects with its physical and non-physical aspects, the area, where the project took place, is thoroughly introduced and its urban heritage value is presented.

Information was gathered by different methods for each project. Therefore, the level of detail and emphasis on the aspects of the project rely heavily on the available information sources. In general, the main sources of information are project documentations, typically, prepared by the institution which execute the project, and research articles about these projects. The author had a chance to visit Al Balad, the venue for one of the selected regional projects, and she used her observations and photographic surveys as a source of information. Similarly, the author had visited the locations for the two local projects and had the opportunity to meet several employees that are working in the Msheireb Project and Qatar Museums (QM).

After studying each conservation project individually, their comparative analysis is made. In this analysis, the projects are compared for the following aspects:

1. Characteristics of the Project Location: The size of area, the location, and the historical evolution of the area plays a significant role in the conservation project.

2. **Types of Use of the Project Location:** The original types of use of the area, i.e., whether it was a residential or a commercial district or mixed, is a determinant of the nature of the conservation project.
3. **Conservation Approach:** While heritage conservation is the main theme of all of the selected projects, their scopes, focuses, and timelines differ.
4. **Project Governance:** The administrative structure, involvement of public and private sectors and residents differ for each project. These differences affect the success of the project.
5. **Socio-Cultural Impact:** The projects also aimed to revive their areas both economically and socially. However, they adopt various approaches in social aspects and this affects the socio-cultural impact of the projects.

2.3. Guidelines for Urban Conservation Projects in the Historic Parts of Qatar

The principles are articulated based on the study of the seminal international charters and the conservation projects were analyzed. The guidelines are classified into four major categories.

1. **Social Dynamics:** These principles help the planners ensure participation of the society to the conservation project and help the conservation project revitalize the region socially and economically;
2. **Project Scope:** These principles outline how the project scope should be selected considering the project area, its demographic structure and historical evolution.
3. **Type of Use:** These principles help the planners at the design stage of the project. Considering the original type of use, the location of the area, and the current conditions of the buildings, they outline whether the area should be used as a residential, cultural, or commercial center or a mix of those.

4. Project Governance: These principles outline which governance structure is more appropriate for the project, based on the project scope, current condition of the project venue, and the political system.

2.4. An Urban Conservation Proposal for Fareej Al Najada

This step starts with gathering information about Fareej Al Najada and identifying its heritage values.

Two classes of information methods were used:

1. Field Observations: Primary data is gathered by visiting Al Najada several times during the thesis work. Field observations include the following:
 - a. Walk through assessments;
 - b. Photographic surveys;
 - c. On-site interviews;
 - d. Interviews with authorities from QM
2. Secondary Data: Information is collected from:
 - a. Research articles;
 - b. Books about Doha;
 - c. Documents provided by QM;

Based on the information gathered, historical evolution and current status of Fareej Al Najada are thoroughly described. This knowledge is utilized in preparing the conservation project proposal. In addition, a survey was conducted in order to learn (i) people's level of awareness about Fareej Al Najada, and (ii) their opinion about a possible conservation project in this area. The survey is conducted online through the author's social network. Survey questions are provided in APPENDIX A. Similarly, a set of interview questions are prepared and sent to authorities in QM and Msheireb Properties, the company undertook the Msheireb Conservation Project. The interview questions are provided in APPENDIX B.

By integrating the principles derived in step 3, the information gathered about the area, and results of the survey, a conservation plan was prepared. The design consists of an overall project theme, physical and non-physical aspects.

2.5. Summary

This chapter outlined the research methodology followed in the thesis. The main research outcome of the thesis is the set of principles for sustainable urban conservation projects, which is developed based on the study of the relevant literature and a thorough study and comparative analysis of urban conservation project examples. The literature study is three-fold: First, the conceptual framework is outlined. This includes definitions of relevant concepts and their relation with each other. Second, research papers related to heritage conservation and urban conservation are studied. Third, major international institutions and charters for heritage conservations are studied. The chapter also describes the methodology for the study of the urban conservation projects, including selection criteria, data collection process, and framework.

The theoretical work of the research is complemented with an application. The last step of the methodology describes how an urban conservation project design is prepared based on the principles developed in the thesis.

Next chapter presents the first step of the methodology, the study of the literature.

CHAPTER 3. LITERATURE REVIEW

In today's world, many cities, especially the metropolis of emerging countries, face the pressure of urban growth in order to accommodate the demands of increasing population, economic, and social activity. Propagated by globalization, the traditional images of the cities change rapidly with the construction of modern buildings. Unfortunately, this change hatches a potential threat to the city's urban heritage.

This chapter discusses the concept of *urban heritage*. First, various definitions of heritage and urban heritage are provided. This is followed by a through discussion of the arguments for the conservation of urban heritage. Third, urban conservation concept processes are explained. The last part of chapter introduces the concept of urban conservation, with an emphasis on sustainable urban conservation, and its links to conservation of urban heritage.

3.1. Concepts and Definitions of Heritage

The United Nations Educational, Scientific and Cultural Organization (UNESCO) describes “heritage is our legacy from the past, what we live with today, and what we pass on to future generations” (Rodwell, 2007). According to this definition heritage cannot be limited by time and by materials. Heritage is the inherited values that provide a link between past and present. Heritage represents to us important knowledge about the past, human lifestyle and behavior, capacity of buildings, physical and geographical features. Conserving heritage is the best way to transfer belongings from the past to new generations. The term heritage includes different types such as natural and cultural heritage. Natural heritage includes physical, geological and biological features, different kind of animal and plant species. Cultural heritage contains both tangible heritage such as buildings, historic places, monuments, and artifacts and intangible heritage such as customs, way of life, and traditional crafts. Urban heritage is a part of tangible heritage; and it indicates us the evolution of man with his surroundings through the history. Urban heritage cannot be limited to historic buildings or monuments. It includes groups of buildings with their surroundings,

public spaces and urban morphology (Orbasli, 2000). Historic residential areas and historic city centers are other important elements of a city's urban heritage.

3.2. Definitions of Conservation

Conservation is a long-term process to protect the essence of area or building from damage. It is a conscious process to keep heritage with minimum changes over a long period of time. Burra Charter defines “*Conservation means all the process of looking after a place so as to retain its cultural significance.*” (Australia ICOMOS, 2013) Conservation of heritage does not preserve only past, but also enhances the quality of heritage and integrates it into contemporary life. The concept of urban conservation emerged in the 1960s (Rodwell, 2007) and it has three dimensions.

First one is the physical dimension, which is related to building conservation. It covers old buildings with their surroundings in historic districts. Physical dimension aims to integrate the old environment to the urban growth of the city.

The second one is the spatial dimension, which is defined as the relationship between spaces and their use. Spatial dimension is also involved with circulation within the city.

Local community, users, and urban population constitute the third dimension: the social dimension. The local authority, decision makers, and the users are responsible to provide to continuity of heritage (Orbasli, 2000).

Heritage conservation can help visualize the diversity of urban form and to explore the cultural, political and historical character of the urban areas. Heritage conservation can also support to dig out some crucial incidents and events that might have brought major changes in the development trends, urban fabric of the city and the townscape. In a way the conservation of heritage is a crucial factor in the long-term prosperity of a city (Chohan & Ki, 2005).

Historic districts are significant parts of urban heritage and they maintain the physical continuity with the past by reflecting cultural and architectural identity. The style of buildings and materials, the street patterns, and the links between neighbors are important components of historic districts that help to maintain this continuity. Therefore, the conservation of these areas has significant contribution to developing the city as a socially, economical and environmentally.

Conservation is a concept that includes terms of preservation with all kinds of interventions such as restructuring, revitalization, restoration and regeneration. The circumstances of heritage and the decision maker determine the types of intervention (Rodwell, 2007). Burra Charter defines these methods as follow (Australia ICOMOS, 2013).

Restoration requires sufficient evidence to return existing and original state of heritage. This approach does not allow to add new materials and new functions.

Reconstruction differs from restoration allowing new material additions according to evidence that a known earlier state.

Adaptation is maintaining a place for a new use. Adaptation allows for changes and additions of the physical futures if they are necessary for existing use or proposed use.

Rehabilitation targets the heritage for same old use or new modern use with minimum physical interventions. Old houses became upper class residence by rehabilitation approaches in historic districts.

Revitalization is based on redevelopment of urban slums. This concept aims to facilitate economic, social, environmental, cultural and historical problems of declined and deprived urban areas.

Regeneration is a comprehensive conservation process and it aims to improve quality of the area as a socially, economical, environmentally.

Using above all these definitions, we conclude that urban regeneration on targets to improving urban areas through various actions such as redevelopment and rehabilitation. Basically it is a process of

enhancing and integrating the old deprived area into modern developed city (Rodwell, 2007). Another aim of urban regeneration is to integrate the old areas to modern and new cities in forms physical, economic and social attractions. According to Said (Said, Aksah, & Ismail, 2013, p. 7) “*a good planning method is required to ensure that the historic components will stay intact within the modern environment.*”

The two terms “urban conservation” and “urban regeneration” are often used interchangeably in the literature. However, as noted before, conservation is a more general concept that includes regeneration. This view is also supported in (Said, Aksah, & Ismail, 2013, p. 7) , which says “*One of the best way to conserve urban heritage is by regeneration.*” Harmonizing those views, this thesis defines *urban conservation projects* as “urban regeneration projects, whose main consideration is the conservation of urban heritage.” This definition, in one sense, integrates the two concepts: conservation of urban heritage and regeneration. According to this definition, urban conservation projects form a subset of urban regeneration projects in the sense that one can do an urban regeneration project without focusing on conservation; but an urban conservation project should aim to regenerate by conserving urban heritage.

In the following section, arguments for urban conservation are reviewed within the scope of the above definition: First, the reasons for the conservation of urban heritage are explained. Second, urban regeneration literature is reviewed. Finally, the relation between sustainability and urban regeneration is discussed.

3.3. Urban Conservation and Sustainability

A sustainable urban conservation is a long term comprehensive process which includes social, economic and environmental revitalization at the same time. It does not focus on only improving economy or enhance diversity in culture, social equity and justice issues are other significant aims of a sustainable conservation process. Moreover, sustainable urban rconservation process aims to create a high quality

livable district by helping reconstruct or rehabilitate the urban fabric, revitalizing community-based economy and building social capital.

In addition to the environmental aspects, the importance of social aspects of urban environments on sustainability has been emphasized in recent studies. Hassan and Lee (2015) have reviewed the most highly relevant topics to sustainable urban development, including socio-cultural awareness and economic urban development.

3.4. International Organizations for Heritage Conservation

3.4.1. UNESCO

The United Nations Organization for Education, Science and Culture, UNESCO, was established in 1945. UNESCO Convention introduced the concept of cultural heritage in 1972 for the first time. Convention recognized the importance of balance between the nature and cultural conservation. UNESCO supported the conservation actions that aimed to protect natural and cultural values of historic towns. By signing the convention, a country agrees to conserve the heritage sites located on its territory. It started to list world heritage sites in 1977, and as of now, 1052 properties are listed in World Heritage List by World Heritage Committee. The first mission of UNESCO is to encourage the countries to sign the World Heritage Convention in order to ensure to protect their cultural and natural heritage (UNESCO, 2016). It also supports participating countries to nominate sites to be included in the World Heritage List. In addition, UNESCO encourages the countries to prepare management plans and reporting systems for their heritage sites. It provides technical assistance, professional training, and emergency assistance in order to safeguard heritage properties. UNESCO aims to raise public awareness and encourages local population to get a role in heritage conservation activities. Lastly, UNESCO encourages international cooperation to conserve cultural and natural heritage of the world.

3.4.2. ICOM

The International Council of Museums, known as ICOM, was established in 1946. It is a non-governmental organization who maintains a formal relation with UNESCO. ICOM represents museums and museum professionals and assist them in their missions to preserve and sustain cultural heritage. Currently, the organization has more than 35.000 members from around the world. The mission of ICOM is to ensure conservation and protection of cultural goods. It aims to do this through the following (ICOM, 2016):

- Setting excellent standards for design museum,
- Bringing together museum experts and develops a professional network,
- Disseminating knowledge in order to raise public awareness and promotion,
- Conducting advance research to discuss museum and heritage related issues,
- Protecting tangible and intangible heritage in company with other international associations such as UNESCO and combating illicit traffic in cultural goods.

3.4.3. ICCROM

International Study for the Preservation and Restoration of Cultural Property, ICCROM was established in 1959 in Rome as an intergovernmental organization. ICCROM supports raising people awareness in order to contribute to the fields of conservation-restoration and cultural heritage. ICCROM is a unique organization considering both movable and immovable heritage. ICCROM indicates that it has five main activities for the preservation of cultural heritage (ICCROM, 2016): training, information dissemination, research, cooperation, and advocacy. The activities are explained below:

Training: ICCROM develops a new educational tools and materials and organizes professional training programs in order to contribute conservation trainings.

Disseminating Information: Along with more than 115 000 books, reports and journals in over 60 languages, ICCROM has one of the leading conservation libraries around the world. It has an archive more than 17,000 images and the website has a comprehensive events and training opportunities related conservation-restoration works.

Research: ICCROM tries to find out a common approaches and methodologies by organizing and coordinating meetings in order to agree ethics, criteria and technical standards. Also ICCROM Laboratory is an important resource for conservation experts.

Cooperation: Institutional and professional partners of ICCROM have an important role in the conservation of cultural heritage in the form of technical advice, collaborative visits and education and training.

Advocacy: ICCROM tries to raise public awareness by organizing workshops and activities and disseminating teaching materials to contribute heritage conservation.

3.4.4. ICOMOS

The International Council on Monuments and Sites, known as ICOMOS is the only global non-governmental organization that aims to promote the conservation and protection of heritage places around the world. ICOMOS now the headquartered in Paris and it was founded in 1965, based on the principles indicated by the 1964 International Charter on the Conservation and Restoration of Monuments and Sites (the Venice Charter). ICOMOS is a groups of over 9500 professionals from various field, including architects, historians, archeologists, geographers, urban planners, and engineers. ICOMOS is an Advisory Body of the World Heritage Committee for the implementation of the World Heritage Convention of UNESCO. As such, it reviews the nominations of cultural world heritage and ensures the conservation status of properties. (ICOMOS, 2016)

3.5. Key International Charters for Heritage Conservation

Charters for conservation are written guidelines that aim to provide national or international frameworks for the conservation of historic buildings, monuments, and districts. The General Assembly of ICOMOS adopted a number of charters, resolutions and declarations, and international standards. In addition, various national committees of ICOMOS have developed and/or adopted national charters. A complete list of these chapters and other doctrinal texts is available at ICOMOS website (ICOMOS, 2016). This thesis reports main principles of several commonly adopted charters.

1877 SPAB Manifesto is the first example attempt of the care of cultural heritage around the world focusing on “ancient monuments” of art. According to Rodwell, (Rodwell, 2007, p. 12) “*The SPAB Manifesto laid down two principles: first that of minimum intervention; second, where a monument is no longer considered suitable for use without being altered or enlarged it should be taken out of use and preserved as it stands.*” He promoted the importance of keeping historic structures alive and preserving them based on their architectural and historic value.

1931 Athens Charter is the first document that supported the use of modern materials, planning, and the construction techniques in for restoration of historic buildings. It aims to follow scientific principles for preservation of historic monuments at the international level. It also considers considered the surroundings of historic monuments including new modern buildings.

1964 Venice Charter is the most seminal charter for the preservation of historic buildings with international standards. It sets standardized principles for protecting and conserving historic buildings and their environments. It aims to preserve not only the authenticity, but also the historical and physical values of buildings and sites. For this purpose, it refers to different kinds of intervention works, when the need arises. Venice Charter cares about a conservation of monument not only as a great art work but also as a heritage value. It supports the importance of using scientific and modern techniques, which can contribute to protecting and sustaining the historical and architectural value of monuments. According to the Venice Charter, restoration works should be done by using the original materials and traditional

techniques wherever possible; but modern technology and new materials can also be used when original materials and techniques cannot ensure the consolidation of the monument. It says that permanent conservation solutions should target to keep monument alive within its site. The function of historic buildings can be changed according to demand, but it is not allowed to demolish any historic structure and build a new one. Venice Charter cares about conservation of monuments and conveying them to next generations. For this, it recommends to document and publish every stage of conservation works through drawings, photographs and analytical and critical reports.

1979 Burra Charter, was adopted in 1979 firstly and last one was adopted in 2013 by Australian ICOMOS. It wrote the concept and philosophy of Venice Charter in a useful and more practical way. Burra Charter focuses on conservation process of cultural significance. It sets a standard of practice for decision makers, provide advice, owners, managers and custodians. It consists of four parts which are preamble, articles, explanatory notes and the flow chart. Articles part includes (ICOMOS, 2016) definitions, conservation principles, conservation process and conservation practice. It provides the definitions related to conservation and cultural significance in definition part. According to Burra Charter principles, first aim of conservation is to retain the cultural significance of a place within a good management. It focuses on cautious approach which means changing as much as necessary but as little as possible. Burra Charter supports to all knowledge, skills and disciplines to contribute care of the place. It prefers to use traditional material and techniques for the conservation of fabric. Understanding of significance of place is the main approach of Burra Charter process. Then it develops a policy and lastly managements according to developed policy. Conservation process is determined based on circumstances of place in appropriate intervention. Applying Burra Charter Process the statement of significance and the policy, which is incorporated into a management plan should be prepared, justified and accompanied by supporting evidence. The statements and policy should be reviewed periodically and actions should be monitored to ensure continuity of effectiveness (see Figure 3-1. Burra Charter Flow Chart (Australia ICOMOS, 2013))



Figure 3-1. Burra Charter Flow Chart (Australia ICOMOS, 2013)

1987 Washington Charter, considers historic urban areas, cities, towns, centers and quarters with their natural and man-made environments. The Charter attempts to offer a comprehensive conservation framework by including residents, and by integrating principles related to traffic, education, and planning for natural disasters. It argues that conservation can be achieved more effectively when preservation principles and objectives are integrated into the planning. Washington Charter aims to complete the gap in

the Venice Charter by promoting the composition of both private and community lives of historic areas. In order to do this, it focuses on preserving the historic character of a district such as lots and streets, the relationship between buildings and their surroundings such as open and green spaces, and the interior and exterior appearances of the buildings. The improvement of housing is the most important objective of conservation. Participation of the residents is also emphasized in the charter; they should be encouraged to be involved in conservation activities for the success of the process. To promote their participation, general educational programs should be set up for all residents, and training programs for certain professions should be provided. According to Washington Charter methods, conservation of historic towns and urban areas needs multidisciplinary study and it should be supported by scientific methods and techniques. The complete documentation of the initial conditions of the historic district, each stage of the conservation program, and the post-conservation conditions of the district should be done. Contemporary materials and construction techniques can be applied when required; granted that they are appropriate with character of historic area. After completion of conservation process, the maintenance of historic town or urban area should be under regular control. Accessibility and connectivity of the historic areas is considered to be very important for their integration with other areas in the city. Traffic in historic areas should be under control, and parking areas, motorways, pedestrian ways should ensure easy access. Conservation projects should make provisions for natural disasters and their potential consequences.

3.5.1. Qatar Law On the Antiquities

In 1980, The State of Qatar adopted the Law on the Antiquities, which sets the rules for identifying, owning, and protecting the antiquities. In In this law an antiquity is defined as “anything left of civilizations, or left by previous generations”, which “dates back to forty years and more when it had artistic or historical value.” The Tourism and Antiquities Department will identify and maintain inventories of the antiquities. The ownership of all antiquities belongs to The State of Qatar. Ownership of a land does not give the right to own the antiquities on the land.

The law divides antiquities as movable and non-movable. The movable antiquities are those manufactured to be inherently separate from the earth and whose place can be changed without damage. The non-movable antiquities refer to any ancient monuments, related residuals of cities and buildings, archeological sites, castles, walls, forts, religious buildings, schools, other buildings.

The part of the law on non-movable antiquities is relevant for heritage conservation. Article 12 of the law states that restoration and renovation of non-movable antiquities should be sanctioned and approved by the Tourism and Antiquities Department and done under its supervision. Article 17 governs that development projects of expansion, planning towns, conservation of areas and monuments are subject to the approval of the Tourism and Antiquities Department.

The law was amended in 2010 and regulations concerning construction work in heritage areas were tighten up. While the law ensures the protection of antiquities, it lacks streamlining the principles that should be followed during the conservation projects of immovable antiquities. Therefore, The State of Qatar needs to adhere to either the international charters, some of which were summarized in this section, or adopt its national urban heritage charter. The outcome of the thesis may help prepare such a national charter.

3.6. Summary

This chapter presented the framework for study of the relevant literature and discussed the main points. Study of the literature started with identifying the concepts and their definitions related to heritage, conservation, and sustainability. This is followed by the review of research in heritage conservation and sustainable urban conservation. Finally, major international organizations and charters for heritage conservation are presented. The principles outlined in these charters are helpful in the study of selected urban conservation projects, which is presented in the following chapter.

CHAPTER 4. ANALYSIS OF FOUR URBAN CONSERVATION PROJECTS

This chapter presents the analysis of four conservation projects, which were chosen as case studies in the thesis. The four projects are (i) Darb Al Ahmar Project in Cairo, Egypt (ii) Historic Jeddah Project from Saudi Arabia, (iii) Souq Waqif Project, and (iv) Msheireb Heritage Quarter from Doha, Qatar.

The objective in studying those urban conservation projects is twofold: First, lessons learnt and insights gained from the study of the selected projects are synthesized to derive a set of principles for sustainable urban conservation projects in historic districts of Qatar. The four projects differ in scale, scope, timeline, and governance structure. Second objective is to investigate how differences in scale, scope, timeline, and project governance impact conservation strategies. In order to reach these objectives, a comparative analysis of the four projects is done at the end of the chapter.

The chapter is organized as follows: The first section outlines the general structure of the case studies, including criteria for selecting the projects and the methodology followed for studying them. Subsequently, the analyses of four projects are presented. The chapter ends with a comprehensive discussion on comparative analysis of the projects.

4.1. Case Studies Structure

For the case studies, four conservation projects are carefully selected, and these projects are studied in detail in terms of the area/district where the project took place, the heritage value of those areas, conservation efforts, and their socio-cultural impacts.

4.1.1. Selection Criteria

Within the scope of the thesis, four projects are chosen in the case studies chapter. The very main criterion for selecting the projects is that the major objective of the project should be to regenerate and sustain the urban, architectural, and cultural heritage value, as this is the major theme of the thesis.

One of the selection criteria is to diversify the study by selecting projects from inside and outside Qatar. The reason for selecting projects in Qatar is prevalent because the focus of the thesis is to develop a set of guidelines, for future conservation project in Qatar. Lessons learnt from all the four projects would be very useful for this.

The selected local urban conservation projects are The Souq Waqif Rehabilitation Project and the Msheireb Heritage Quarter Project. These projects are the most significant conservation projects in Qatar.

In addition to the local projects, two projects from outside Qatar are selected for the case studies. Two criteria are used for the selection: First criterion is that the venues where the projects took place should have significant heritage value. The regional projects cities were selected from a world heritage site.

The second criterion for the international projects is that the projects are chosen from the countries in the same region as Qatar so that they share similar culture, history, demographics, and governance structure. This would help that the lessons learnt from these projects can be more easily adapted for a heritage conservation project in Qatar.

Darb Al Ahmar and Historic Jeddah projects are two recent projects, which satisfy the two criteria described above. Darb Al Ahmar, also known as Historic Cairo, was listed in the World Heritage List in 1979, and Al Balad, also known as Historic Jeddah, in 2014. (UNESCO, 2016)

4.1.2. Case Studies Outline

A unified structure is adapted to study each project; consisting of two major components. The first component is information about the area, where the project took place. It starts with the description of its location, and followed by the historical background. Finally, the description of the area is presented, where the cultural heritage value is explained.

The second component is the presentation of the conservation project itself. First, the physical aspects of the project are considered. This includes the rehabilitation of the civic buildings, i.e., houses, mosques, shops, etc., and the reconstruction of streets and other open public spaces such as parks and pedestrian walkways. Then, the non-physical aspects of the project are analyzed. The analysis starts with the governance structure of the project, which includes managerial aspects such as how the project was executed, who executed the project, and how various stakeholders were involved in the project. Socio-cultural impacts of the project are also studied under non-physical aspects. It includes how the project influenced socially, local community, and whether it was successful in reviving the area and whether, it can be sustainable to further generations.

The case studies chapter concludes with a comparative analysis of the four projects. The projects are compared and contrasted to each other in terms of their scale, scope, governance structure, and how successful they were in preserving the heritage value and regenerating the regions.

4.2. Darb Al Ahmar in Cairo, Egypt

4.2.1. Location

Darb Al Ahmar is located in Cairo (*Figure 4-1*) and it lies south of the prestigious Al-Azhar Mosque and the popular Khan al-Khalili, Cairo's principal tourist bazaar. It is bound by Al-Azhar Street to the north, the Ayyubid Wall to the east, and Darb al-Ahmar Street to the west (AKTC, 2007).

Darb Al Ahmar district is an important component of historic Cairo, which was inscribed on UNESCO World Heritage List in 1979. It is a central district having strategic importance with rich historic architectural value. Even it is one of the poorest and populated areas of the city, many historic buildings such as houses, schools, mosques are located there. (AKTC, 2007)



Figure 4-1. Location of Darb Al Ahmar

4.2.2. Historical Background

Cairo is one of the richest historic architectural monuments cities around the world. The capital city is affected by different periods such as Fatimids, Ayyubids, Mamluks and Ottoman through the history. In the Fatimid era, Cairo has expanded towards the Darb Al Ahmar Region. Located just outside the southern walls of the Fatimid palace-city, Darb Al Ahmar was originally a cemetery ground for the residents of the palace-city. With the rise of Ayyubids in 1171, Salah al Din constructed a citadel south of the walled city to separate its royal status from the Fatimids. This move has emerged Darb Al Ahmar as a strategic area between the Fatimid Cairo and Ayyubid citadel (see Figure 4-2. Cairo Citadel in 19th century from Ayyubid Period). During the Mamluk period 1250-1517, Darb Al Ahmar was a prestigious area and the center of economic and political activity. (Rashidi, 2004)



Figure 4-2. Cairo Citadel in 19th century from Ayyubid Period (Library of Congress, 2016)

The most significant structures are mosques and historic houses. The construction of important architectural complexes often included the building of multifamily residential units, usually for the poorer classes. This ensured that while Darb Al-Ahmar remained a prestigious area, it nevertheless housed a very mixed community. It was also an area where quiet residential cul-de-sacs existed alongside vibrant commercial streets and markets. Some of the latter, especially those catering to the military establishment, such as the weaponry and horse markets, had been transferred from the center of the Fatimid City to Darb Al-Ahmar for the sake of proximity to the citadel. Following the conquest of Egypt by the Ottomans in 1517, the architectural style of the buildings has started to change. Rather than building new ones, Ottomans have decorated existing

mosques with blue tiles, a typical Ottoman style ornamenting for mosques, which symbolically represented Ottoman architectural identities (Rashidi, 2004).

The first few decades of the twentieth century saw al-Darb al-Ahmar attempting to emulate the new quarters of Cairo. Sporadic urban development schemes involved the subdivision of large estates, into regular grid-like blocks, totally alien to the area's traditional urban fabric. Yet, fortunately, urban projects of this type remained rare. The rise of large-scale industrialization meant that areas such as al-Darb al-Ahmar in 1950s and 1960s, whose commercial activity was based on small-scale enterprises and workshops, were no longer seen as the basis of the city's economy.

While many local industries did, in fact, continue to function, the new trend was for mass production in huge factories located in newly developed industrial areas. New construction techniques, using reinforced concrete, began to replace traditional building materials, and 'modernist' urban design policies came into effect. While innovation had always been an important factor in al-Darb Al-Ahmar's development, earlier modernization attempts had still maintained strong links to the past. The new mindset, however, saw little value in tradition, and the impact of this was profound. (Rashidi, 2004).

Over the past few decades, Darb Al Ahmar district living conditions were getting worse because of shifting population to new settlements since the early twentieth century. Drug trading and earthquake were two reasons that made Darb Al Ahmar poor. Firstly, the 1980s with prevalent of drug trading increased crime rate so Darb Al Ahmar became insecure area. Secondly, the earthquake in 1972 destroyed and damaged many houses and historical buildings. It was not allowed to use these damaged houses. Many residents were forced to move and others continued

to live in their neglected houses. Due to a lack of maintenance and regulations many houses, monuments and open spaces were under threat in the area.

Following 1994, Aga Khan Trust For Culture started a comprehensive urban conservation project in the area and until now several mosques, historic houses, and open spaces have been and are being rehabilitated to gain back area's historic values and upgrades people living conditions. (Jodidio, 2011)

4.2.3. Analytical Description of the Area

Darb Al Ahmar is a mixed-use district with a strong social cohesion among its many artisans and small enterprises. Additionally, 65 registered monuments and more than 140 historic buildings are located in the district (Al Gammal, 2007). Despite its great historical value and central location, pedestrian scale, and active community of artisans, Darb Al Ahmar suffers from poverty, a lack of community services, infrastructure and maintenance, and the development of the area has lagged behind other parts of Cairo and living conditions have actually worsened over the past few decades (AKTC, 2007).

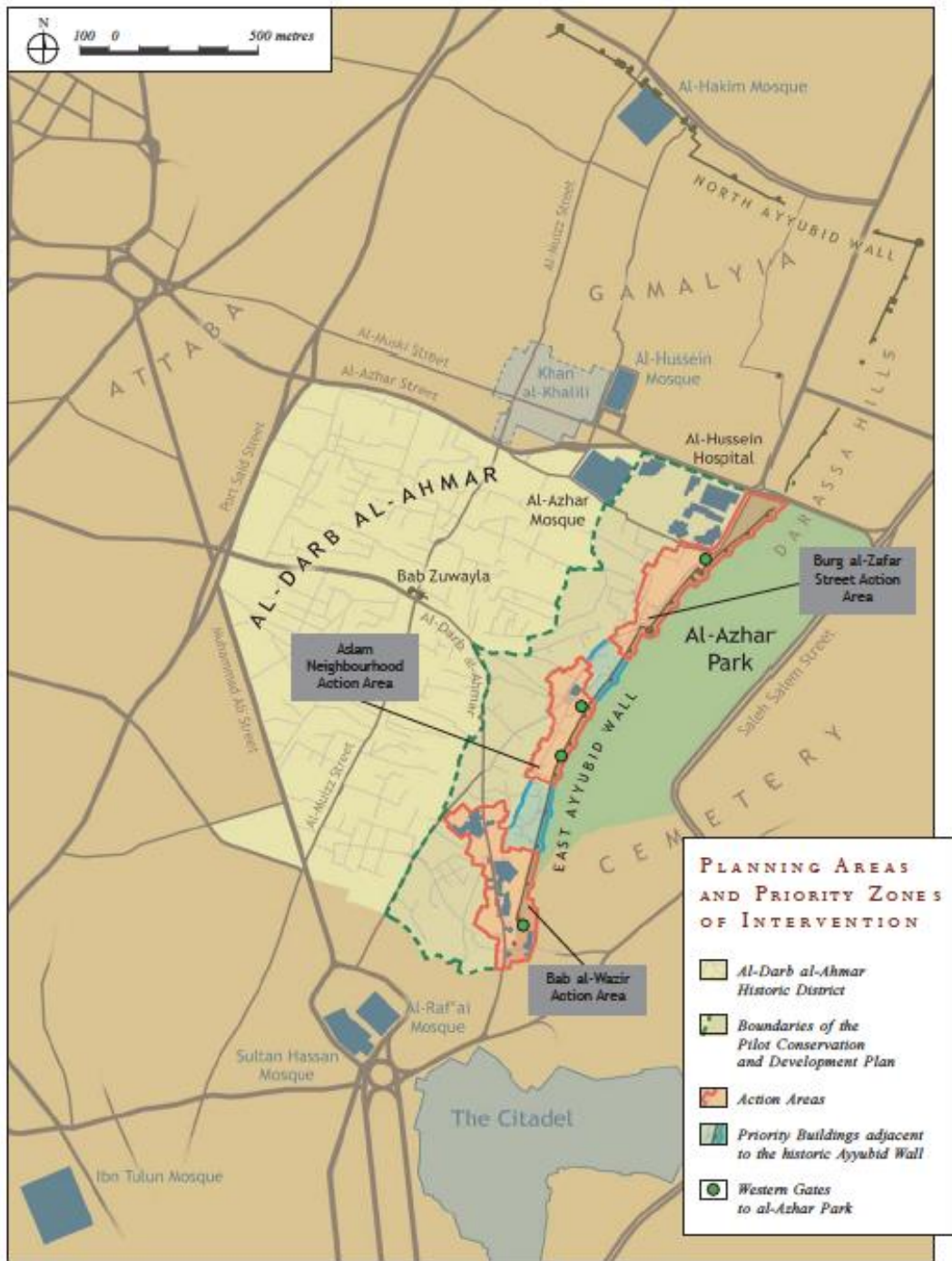


Figure 4-3. Three Main Action Area in Darb Al Ahmar (AKTC, 2007, p. 5)

Darb Al Ahmar is bordered with the Al Azhar Park on the east (*Figure 4-3.*) Before the project, the area was a debris dump for centuries. It also included three water reservoirs, each 80-meter-wide. The removal of the rubble revealed a section of the Ayyubid Wall establishing the south of the borderline between Darb Al Ahmar and Al Azhar Park. The other parts of Darb Al Ahmar, which have significant heritage values are:

Burg al-Zafar Street and Surroundings: It is located in the northeast corner of the district and consists of a mix of commercial and residential buildings.

Aslam Neighborhood: It houses the intimate and densely built-up residential houses. Many of the buildings in this area have been dilapidated with missing sections or collapsed completely.

Bab al-Wazir Area: It is home to outstanding monuments, which can serve as catalysts in attracting an increased visitor presence and stimulating the economic development of the area. Umm Al Sultan Shaban Mosque is the most important architectural monument in Bab Al Wazir. The top of the minaret and roof were damaged by the earthquake in 1992. Bab al-Wazir Area extends on the north to include the Alin Aq Palace, the Khayer Bek Mosque, and Sabil Kuttab Ottoman House. The total area is within an open space of approximately 8,000 square meters. The Khayer Bek Complex was proposed as a tourist attraction.

4.2.4. Conservation Project

In 1992, Historic Cities Support Program was established by the Aga Khan Trust for Culture to implement urban rehabilitation projects in different parts of the Islamic World and Cairo was selected with a comprehensive rehabilitation and restoration project. Al Azhar Park restoration program is the main project and it includes socioeconomic rehabilitation of Darb Al Ahmar with

its historic monuments and restoration of Ayyubid Wall. The activities of Aga Khan Trust for Culture (AKTC) started the conservation program in Old Cairo, Darb Al Ahmar in 1994. The official name of the project is Al Darb Al Ahmar Revitalization Project (ADAARP). The project's intervention area is shown in *Figure 4-3*. Darb Al Ahmar Project was far beyond a typical conservation project; it was rather long term process that aimed to improve the area physically, socially and economically (AKTC, 2005).

ADAARP also aimed to upgrade the building conditions and living conditions of residents. This comprehensive project included long-term economic development, protecting and supporting social equality, and bringing about a general improvement in living conditions, regardless of the background or religion of the people affected or involved. All projects were implemented with the help of local groups, and efforts were continually made to involve other organizations in order to form a critical mass of actors that could guarantee long-term involvement with the project.

AKTC's main focus was the regenerate the area's physical and non-physical aspects. Physical aspects encompassed the preservation and restoration of residences, historically important buildings, and further development of infrastructure and open spaces. Non-physical aspects includes generating employment, granting microcredit for self-help projects and to preserve and restore buildings belonging to the applicants, and the establishment of medical and social services. These projects and other measures were dedicated to strengthening the social benefits available to the community, such as childcare and cultural programs, education, literacy programs and programs for learning how to construct a community center (Amedi, 2010).

Central to this program was the preservation of the historic fabric of the area – but not in order to create a tourist attraction. Rather, the old buildings and traditional social ties were seen as a resource for positive change, as they embodied the essence of the place with its complex stratification of spaces and uses. While Darb Al Ahmar was in need of intervention, its historic fabric could not be separated from its inhabitant. Therefore, the monuments, old buildings and traditional open spaces were re-integrated into the residents' everyday life, reconnecting them to the complex social and cultural character of the area. In the way, Darb Al Ahmar's rehabilitated physical assets became the building blocks for a realistic and harmonious development. (AKTC, 2007)

4.2.4.1. Physical Aspects

4.2.4.1.1. House Rehabilitation

The Housing Rehabilitation Program was established in 1997 to improve the quality and quantity of housing while maintaining original architectural features by providing fair and secured tenure. It included restoration works and the rehabilitation of historic, residential and public buildings (AKTC, 2007)

In 1999, a survey was conducted in the Aslam Mosque neighborhood, an important node of Darb Al Ahmar. The area is connected to Al Azhar Park, the rest of Darb Al Ahmar and downtown of Cairo. The survey aimed to identify planning policies and housing strategies for the preservation and appropriate development of the entire area. According to the survey, 22% of the residential units lacked a private lavatory, with many families subsequently sharing public toilets under very poor conditions. Moreover, 51% of the households were deprived of drinking water in their

kitchens, while 32% of the dwellings lacked ventilated rooms. Findings also showed that 86% of residents wished to continue residing in Darb Al Ahmar despite the declining living conditions due economic reasons (Morbidani, 2010).

With the implementation of the rehabilitation program, those buildings missing sections or that had completely collapsed were rebuilt and returned to their original form. Facades were rehabilitated and full interior refurbishments were carried out. Those additions, materials, and paint considered unsuitable for the area's character were removed; and necessary yet lacking elements, such as bathrooms, were added, (see Figure 4-4) (Khasaba, 2011).



Figure 4-4: Houses in Afet Al Asaad Alley in Burg Al Zafaar Action Area – Before and After Rehabilitation (Source AKTC, 2007, pp.19)



Figure 4-5. Before and After Rehabilitation (Khasaba, 2011, p. 2)

According to Darb Al Ahmar Annual Reports in 2004, 2006 and 2008, the intervention project had a positive effect on the area, as three new commercial buildings were added to the area, while at the end of 2004, 10% of commercial spaces and 17% of residential spaces were rehabilitated. As a result, nine local families moved back to their rehabilitated homes. According to the 2006 annual report, a total of 22 spaces became livable with the addition of natural lighting and/or ventilation. Eighteen interventions were completed and 12 families moved to newly reclaimed or added residential spaces. At the end of 2008, 13 buildings were fully rehabilitated. As a result, the rental values of rehabilitated houses increased (Nour, 2010)

4.2.4.1.2. *Mosque and Other Historic Monuments Restorations*

In Darb Al Ahmar, there are more than a hundred historic monuments but only 65 were registered by the Supreme Council of Antiquities in Cairo. The most important monument in the area is the 1.5-kilometer Ayyubid Wall. As part of the Revitalization of Al Azhar Park project by the AKTC, restoration of the Ayyubid Wall began in 1997 and continued until the end of 2007.

AKTC selected three representative conservation projects in the area. The first was the Umm Al Sultan Shaban Mosque, the most important architectural monument in the area, located in Bab Al Wazir for 14 centuries. The top of the minaret and roof were damaged by the earthquake in 1992. In the project's first phase, the upper portion of the minaret was reconstructed to preserve it as a visual landmark. Restoration of the madrasa was finalized in the second phase. In the final phase, interior restoration of the mosque was completed. During these conservation works the mosque was not closed to daily use (AKCT 2005, AKTC 2007). *Figure 4-6* shows the photos of the mosque before and after the restoration.

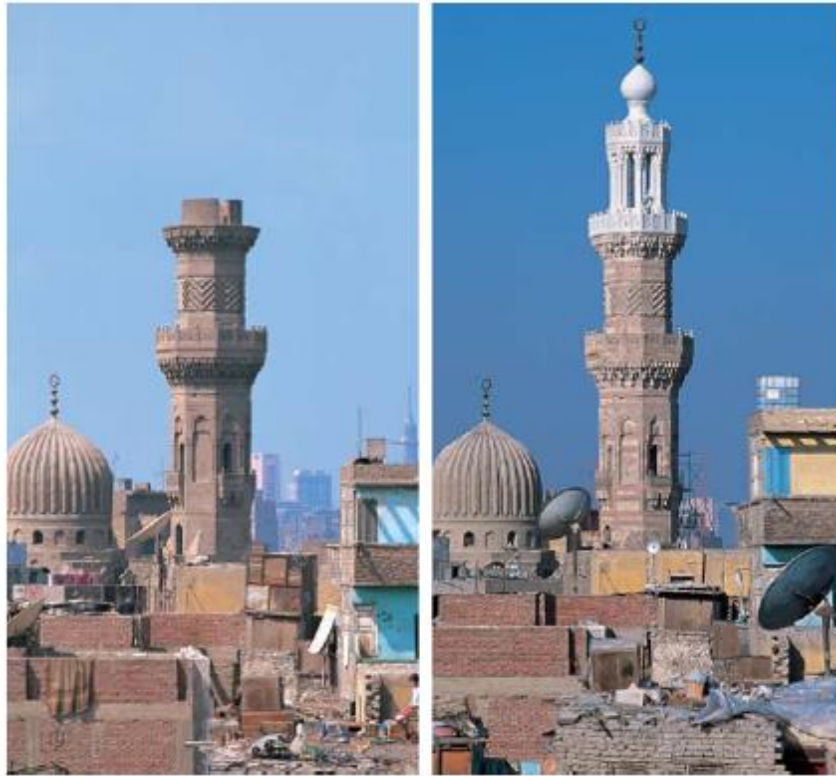


Figure 4-6. Um Al Sultan Shaban Mosque Before and After Restoration (AKTC, 2007, p. 42)

The second monument conservation project was the Khayer Bek Complex, which includes the palace of Alin Aq, the Khayer Bek Mosque and Sabil Kuttab Ottoman House. The total area is within an open space of approximately 8,000 square meters. The Khayer Bek Complex was proposed as a tourist attraction. The boundary of the complex was extended to the Ayyubid Wall, and included a large open space which was used for storage and a community sports club. This open space was then planned as an open-air theatre for locals and tourists. It was suggested that the sports club keep its existing function. Historic buildings through the streets, which are conjunct to the open space, were proposed for community services. The rehabilitated Mamluk Palace, which is Alin Aq, would be used as an exhibition center for arts and crafts. Other levels of

the palace would be reused as archaeological ruins and for musical events. The Ottoman houses were also developed for community as service offices. (AKTC 2005, AKTC 2007). When all the rehabilitation work was finished this area will become an important node for locals and global tourists. Figure 4-7 shows an illustration of the proposed plan for Khayer Bek Complex.

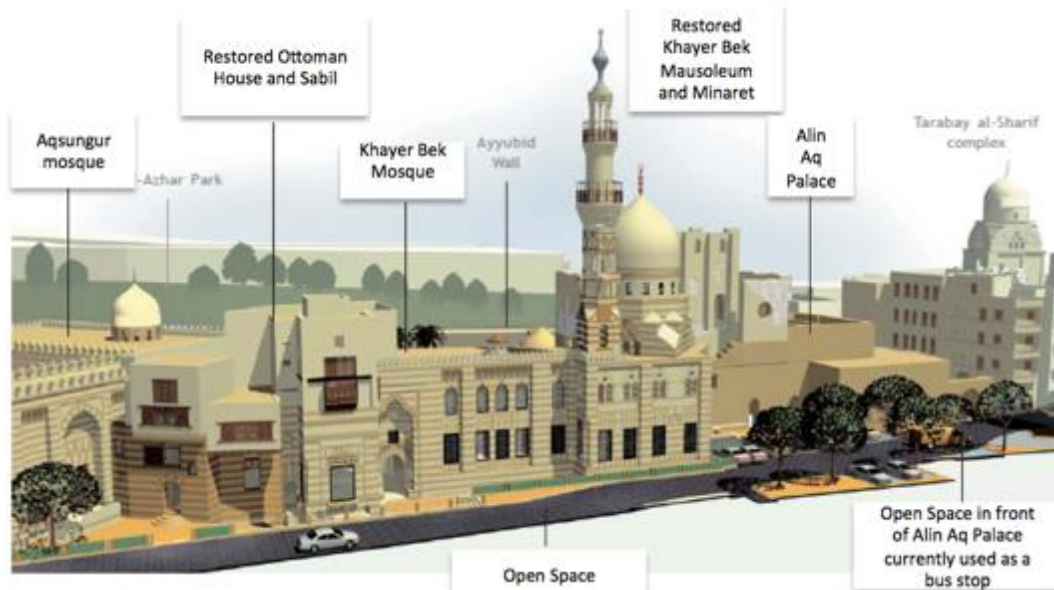


Figure 4-7. Proposed Khayer Bek Complex (AKTC, 2007, p. 37)

The third significant rehabilitation work was the Darb Shoughlan School and its surroundings. AKTC converted the school into a community center with a guesthouse, based on the findings of a pre-investment feasibility study, while approximately ten private houses were also rehabilitated by 2005. Commercial facilities were proposed by AKTC, and small commercial outlets and rooftop cafes were created. Proposals for future consideration included the development of a semi-ruined plot occupied by poor residents into mixed-use residential and community services buildings. The upper two stories of these buildings would be used as duplex units for existing

residents and a kindergarten has been proposed for the ground floor. There would additionally be a primary school and open area for children. Other proposed facilities for children included a library and computer facilities in the Darb Shoughlan Community Center (AKTC 2007). *Figure 4-8* is an illustration of the proposed rehabilitation plan.



Figure 4-8. Rehabilitation of Darb Shoughlan School and Proposed Interventions (AKTC, 2007, p. 31)

To conclude, before rehabilitation, these monuments had only historical and architectural values, now they also have economic value. Before the rehabilitation of the Umm Al Sultan Shaban Mosque, it was used for locals, and tourists now it is opened to visit. The Khayer Bek Complex is a tourist attraction with its open-air theatre, exhibition center and sports club, while the rehabilitation of Darb Shoughlan School and its surroundings has created children-friendly facilities.

4.2.4.1.3. *Open Public Spaces Rehabilitation*

Improving open spaces was another aim of the AKTC for Darb Al Ahmar area. Buildings were rehabilitated along with their surroundings and streets. Some of the open spaces had new functions, like the Khayer Bek Complex's open-air theatre. Open space action areas for rehabilitation include the following:

In the Bab Al Zafer Action Area, the western edge of the Ayyubid Wall was protected as an archaeological point of interest for visitors. Many streets and infrastructural elements were also improved. In the Darb Shoughlan Action Area, Aslam Square is important in that it connects Al Azhar Park to central Cairo. An Aslam Square improvement included the restoration of the Aslam Mosque, as well as creating a useful connection between the commercial spaces of Aslam Square and resting areas for people (See *Figure 4-9.*) (AKTC 2007)

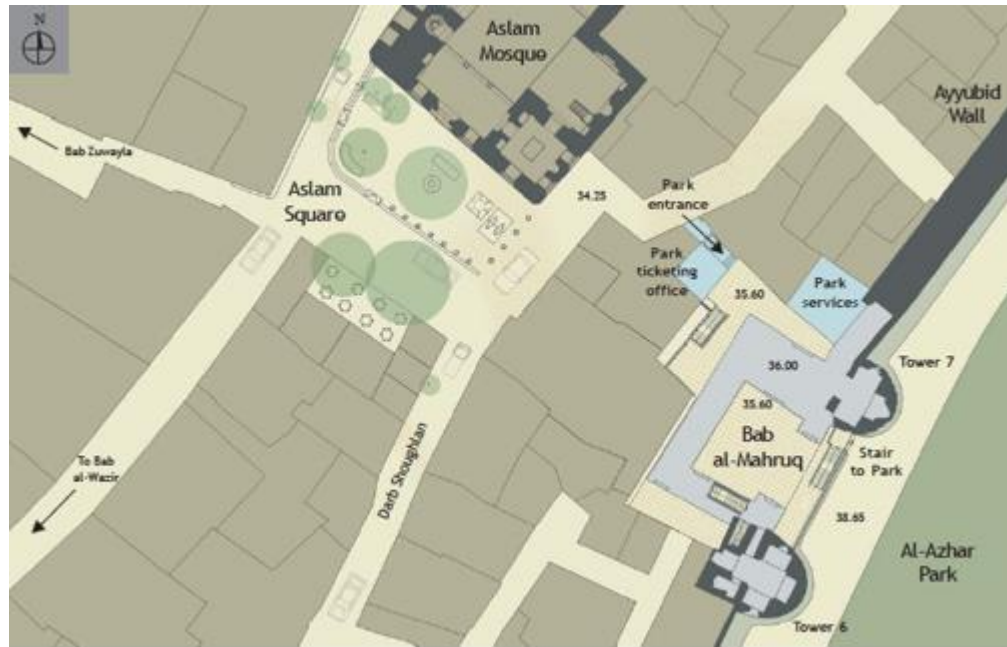


Figure 4-9. Aslam Square Improvement (AKTC, 2007, p. 29)

Another important open space is the Khayer Bek Complex surroundings in Al Wazir Action Area. The total area of the complex is 8,000 square meters; it includes a large open area used as a community sports club and an open-air theatre for cultural events to attract local and tourists (Figure 4-10) The Khayer Bek Complex and its surroundings have created a tourist space in Darb Al Ahmar (AKTC 2007).

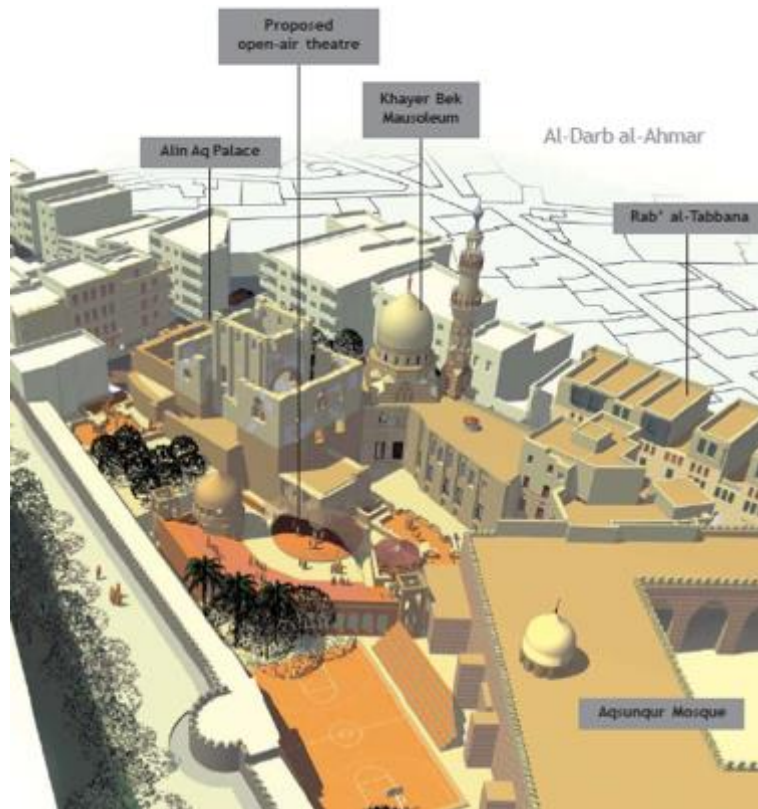


Figure 4-10. Proposed open air theatre (AKTC, 2007, p. 34)

4.2.4.2. *Non Physical Aspects*

4.2.4.2.1. *Project Governance*

The roots of the conservation efforts for Darb Al Ahmar date back to a seminars in 1980s about the expansion of city of Cairo, organized by the Aga Khan Trust for Culture (AKTC), a family of institutions created by Aga Khan IV with distinct but complementary mandates to improve the welfare and prospects of people in the developing world, particularly in Asia and Africa. In that seminar the idea of building a park on the Al Darassa Hills has emerged. Al Darassa Hills was the name of the uninhabited land on the eastern edge of Darb al-Ahmar, which served as a boundary

between Darb Al Ahmar and new elite districts of Cairo and the landfill grounds of the city. The AKTC built the Al Azhar Park in this area and unveiled the historic Ayyubid Walls, which were buried over the time by the landfills. The construction of the Azhar Park in 1997, has led to a greater project, named as the Al Radb Al Ahmar Revitalization Project (ADAARP). Phase I of ADAARP, started in 2000, is the restoration and rehabilitation of the historic monuments, mainly lined up in the border between the Azhar Park and Darb Al Ahmar. In 2004, the project expanded to be a complete urban conservation and social development program with the signing of the “Public Private Partnership Agreement,” which marks the start of Phase II of ADAARP. (AKTC, 2011)

All phases of the project are administered through partnership between AKTC, Government of Egypt, and Municipality of Cairo. Phase I, restoration of historic monuments, was administered by the The Supreme Council of Antiquities of Egypt and AKTC, and Phase II was administered by AKTC, Cairo Governorate and the Egyptian Social Fund for Development. However, AKTC provided the participation and contribution of the private sector and international NGOs. "A fundamental lesson, which reinforced our experience in other countries, is that public-private partnerships can be effective mechanisms for enhancing the value of underused, unappreciated or even unknown social, cultural and economic assets," said the Aga Khan in his address at the inauguration ceremony (ARCHNET, 2016). Swiss Egyptian Development Fund, the Ford Foundation, the World Monuments Fund, the French Institute of Archaeology, the city of Stuttgart and the newest donor, the Social Development Fund are among the international NGOs who donated to the project.

Another important aspect of the ADAARP is the microfinancing provided to the residents of the area. These grants and loans were used to generate new businesses, which contributed to the reconstruction projects. For example, the carpentry shops opened with these grants have been

employed in reconstructing the wood panels reused in the historic monuments. In addition, a housing credit helped homeowners to restore their own houses. On the other hand, the apprenticeship programs and vocational trainings have helped many of the young people of the region to find jobs in the restoration projects.

4.2.4.2.2. Social

One of the most distinct features of ADAARP is its being a holistic conservation project, whose scope also included social regeneration. The project aimed to generate alternative means of income and employment, and to provide proper education and health services to the local inhabitants.

Generating Employment and Alternative Means of Income

Generating employment is the first aspect of one phase of the program, with the aim of “Creating and facilitating access to sustainable employment opportunities for unemployed young people. According to AKTC’s experience, it is not necessary to create a new job in order to generate employment. A more efficient strategy is to connect people with existing employment opportunities” (Francesco Sivaro, 2006). In order to succeed at this, a job placement and counselling service was established within the scope of project. Unemployed young people were trained by local craftsmen, carpenters, construction workers and external trainers in existing workshops in the area. After training, most of the young laborers worked on the area’s restoration projects. Training also helped the unemployed people to find jobs. As a result of training, as many as 1,300 people found a job during the first phase of the project and the aim for the second phase was to double this figure.

The efforts for creating alternative means of income for the residents are consolidated under the Micro-Credit Program, which is run by a local entity. The loans were not only given to support handicrafts and retail operations, but also given to new business such as construction, tourism, and services which boomed parallel to the housing rehabilitation program. It is estimated that a 1.5 million USD was loaned between 2004 and 2008 and more than 2000 entrepreneurs benefited from this (AKTC, 2007).

Education

Increasing the education levels was one of the social project's strategies. According to the survey, which was conducted by the AKTC in December 2003, only 17% of families spent on education each monthly (AKTC, 2007). A 2009 illiteracy study report indicated a decrease in illiteracy levels among men and women in the area. Increasing access to education for all residents was the second phase of the ADAARP. It is clear that education level is directly related to economic status. So increasing the education levels of the people in the area contributed positively to the economy of the area. To achieve this, courses were organized for people of all ages, beginning with Early Childhood Development (ECD), which provided educational opportunities for young children. The Aga Khan Foundation planned to establish Early Childhood Development centers in three action areas by 2008. Another type of course that was introduced to the area was for schoolchildren to contribute to their education. Many schoolchildren were at risk of leaving school because of economic reasons and their academic failure. After these classes were introduced, drop-out rates decreased from 16% in 2003 to 13% in 2009, especially among girls. Other courses included literacy classes, which were especially useful for women and continued during the rehabilitation process.

Health

Another social service was healthcare activities in Darb Al Ahmar. It aimed to provide good quality healthcare to the residents of the area. According to the survey, which was conducted by AKTC in December 2003, only 8% of families spent on health monthly (AKTC, 2007). An alarming percentage of residents also suffered health problems such as poor eyesight, rheumatism, and chest disease (Morbidani, 2010).

A Family Health Development Center (FHDC) was established to provide three main health services. First was to improve access to and upgrade existing healthcare facilities. Second, to provide physical examinations, and finally to offer limited clinic care. During the project, the FHDC also conducted two outreach programs, one on reproductive and sexual health, and the other focused on handicapped people. (AKTC, 2007)

4.3. Al Balad in Jeddah, Saudi Arabia

4.3.1. Location

Al Balad is located in the heart of the historic city of Jeddah, the second largest city of the Kingdom of Saudi Arabia (KSA) (*Figure 4-11*). Jeddah is a governorate of Makkah Al Mukarramah Region, one of the thirteen administrative regions in KSA, stretching approximately 160-kilometre along the eastern shore of the Red Sea (See *Figure 4-12*.) Modern Jeddah, with a population of almost 4 million, has grown towards the south and southeast. The city hosts one of the most important ports accompanied by heavy industry. Jeddah also serves as a gateway to millions of Muslim pilgrims who visit the holy cities of Makkah and Madina. Within this context, Jeddah is considered the business and tourism capital of KSA.



Figure 4-11. Map of Modern Jeddah (History&Maps, 2016)



Figure 4-12: Map of Modern Jeddah (Source: Adapted from Google Maps by Author)

City of Jeddah is divided into four administrative regions, one of which is the central districts. Al Balad, is one of the 22 central districts located in the nucleus of Jeddah as marked in *Figure 4-12*. Al Balad District is located within the Historic Jeddah. It is the circled region shaded in pink in *Figure 4-13*, the detailed map of Greater Jeddah.



Figure 4-13. Location of Historic Jeddah within Greater Jeddah (Saudi Commission for Tourism and Antiquities, 2013)

A detailed map of Al Balad is shown in *Figure 4-14*. It is approximately one square kilometer and has a population of nearly 25,000. The area originally surrounded by city walls, is called the core of Historic Jeddah and it is one of the oldest urban areas in the Kingdom of Saudi Arabia. The enclosed shaded region called Proposed Buffer Zone, approximately 0.18 square kilometers, highlights the “Nominated Property” for the UNESCO World Heritage List. The historic core is famous for its Roshan Houses, which are also known as Al Balad Houses.

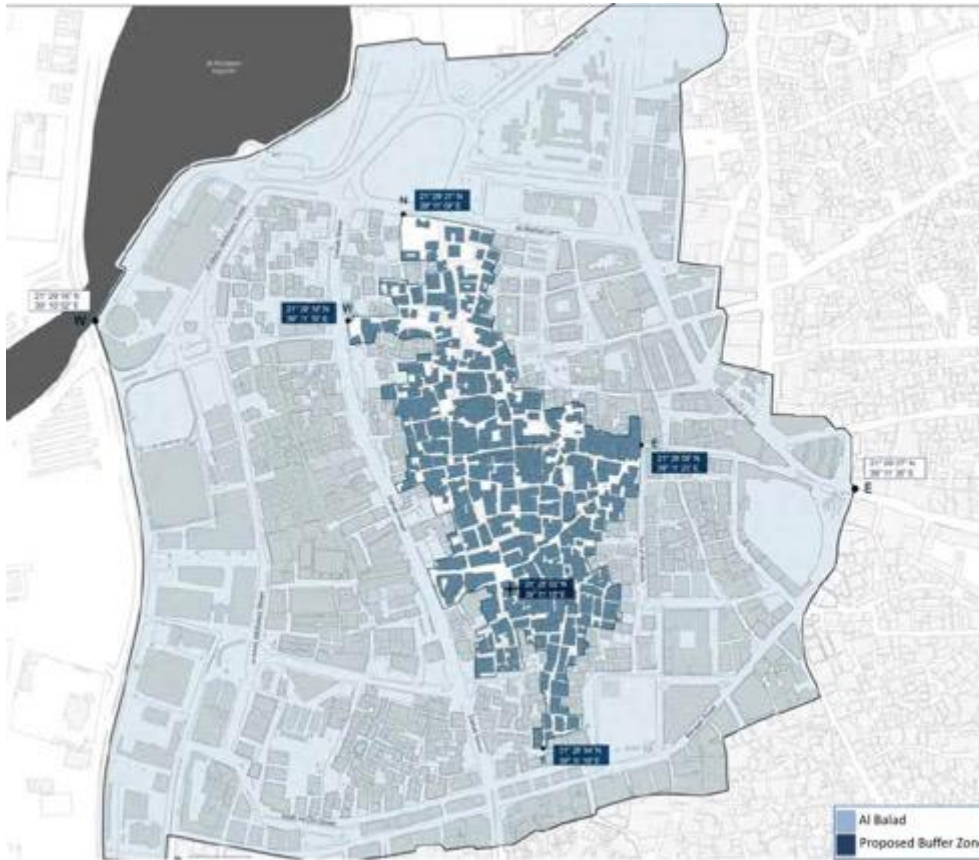


Figure 4-14. Location of Al Balad and Proposed Buffer Zone (Saudi Commission for Tourism and Antiquities, 2013)

4.3.2. Historical Background

The first human settlements in the area of Jeddah date back to the 2nd century BC, when the “Qudha” tribe from Yemen moved to the area. About four centuries later, the Persians moved in and built the first city walls. They developed the city into a major trading hub by building the harbour as a trading port (Saudi Commission for Tourism and Antiquities, 2013). Uthman Bin Affan, the third Caliph of Islam, ordered the rebuilding of the port and helped Jeddah to become the region’s commercial hub. Throughout its history, the city was threatened by attacks from the Dutch, British and Portuguese and its walls were rebuilt twice. After the discovery of oil in the

1930s along with the city's emerging status as a welcoming port for pilgrims, Jeddah soon became one of Saudi Arabia's largest cities. The city walls were demolished in 1947 to facilitate its urban expansion (Soliman, 2010).

With the extension of the city, locals began to move to regions alongside the Mecca road and north along the seashore in 1950s. The economic boom resulted in an increase in the population, and rapid urban growth changed the physical environment of the city. Later, Jeddah started to build multi-story apartments and towers made of reinforced concrete, steel, and glass. With the new materials and architecture, the construction of traditional buildings ceased. As a result, the modest trading town transformed into a sprawling metropolitan city in less than thirty years. This urban development changed the city's identity in a short time and the traditional districts of the city were left to deteriorate. (Soliman, 2010)

The size of the city grew by 800 times in five decades following the demolition of the city walls. The condition of old buildings worsened and the traditional identity of Al Balad was under threat. In order to end this, Jeddah Municipality began to save historic developments at the beginning of the 1970s. Following this attempt, the Historical Preservation Society was founded in 1990 by the Municipality of Jeddah to preserve the cultural heritage of Al Balad. Another significant attempt was the application to inscribe Al Balad on the UNESCO World Heritage List. Following this, the Saudi Commission for Tourism and Antiquities nominated Al Balad on UNESCO's list and it was accepted in 2014 by UNESCO at its 28th meeting in Doha, Qatar (UNESCO, 2016).

4.3.3. Analytical Description of the Area

The historic core consists of densely located tall buildings, Jeddah houses, and narrow pedestrian streets, occasionally opening to small squares *Figure 4-15*. Such narrow streets squeezed between tall buildings create a microclimate with shade and winds, which together ensure a mild temperature even in the hot summer months (ICOMOS, 2013). Open spaces are sites where residents and visitors gather for different social activities.

Major mosques in Al Balad are typically placed in marketplaces, more specifically, adjacent to the squares, where the souq-streets open. The relative location, and orientation of souqs and mosques represent a typical combination of commercial and religious life in the Arab city. However, unlike houses secluded by high surrounding walls in the typical Arab-Islamic urban structure, the houses have direct contact with the road in front of it, allowing for a compact urban pattern. The lack of the houses' private outer space is compensated for with their secluded high roofs. The compact interaction of houses, souqs, mosques, and open spaces enables rich social interaction. (ICOMOS, 2013)



Figure 4-15. Streets of Al Balad (Source: Author)



Figure 4-16. A View of a Typical Square in Al Balad (Source: Author)

The Nominated Property, representing the best-preserved part of the old city, showcases an ensemble of the urban and architectural specificities of historic Jeddah. It extends over three of the four traditional quarters of Al Balad, in which the city was divided to include district of Al Sham, Mazloun, Yemen, and the Al-Bahr, having been more altered by the evolution of the area after the demolition of the city wall in 1947 (ICOMOS, 2013). The Nominated Property can be divided into three zones, North, Center, and South, according to different urban characteristics.

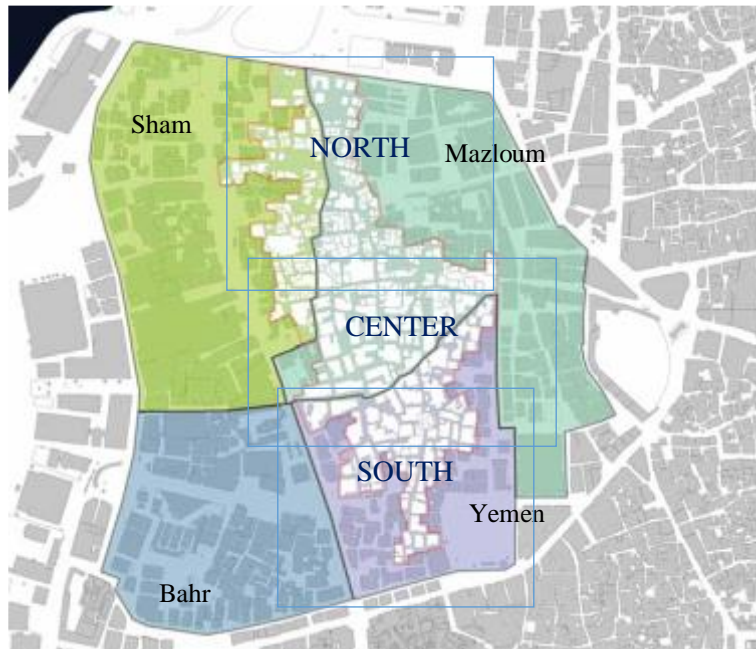


Figure 4-17. The Four Parts of Al Balad and Regions of the Nominated Property (Saudi Commission for Tourism and Antiquities, 2013)

The North Zone begins at the northern limits of the old city and extends to Souq Al Juma'a. It is mainly residential containing the “roshan tower houses”, which are unique to Al Balad. *Roshan* is the name given to the bay windows with internal seating, which are covered with wooden grills known as *mashbariyah*.



Figure 4-18. A Freestanding Roshan Tower in the North Zone (Source: Author)

These houses are much higher than the three- to four-story houses of the southern sector of the city. A typical freestanding Roshan tower house is shown in Figure *4-18*. This zone consists of compact blocks entirely surrounded by public pathways, accommodating large, isolated, freestanding buildings (ICOMOS, 2013).

The central zone lies between Souq Al Juma'a and Souq Al Alawi, and is densely occupied with historic houses and mosques. Unlike the isolated houses owned by the high-income elites, the ancient middle-class houses in the central zone represent the typical compact urban structure of Al Balad. Mosques appear along the axes of the two major souqs. The major mosque of the city, Masjeed ash-Shafe'i, is located in the central zone, and is currently under restoration.

The southern part of Al Balad has received growing attention in the last 40 years with the opening of many shops on the ground floors of previously residential houses. The houses here are lower in height and simpler. This zone is connected to the modern commercial and residential quarters south-west of the old city and has emerged as an important commercial axis.

4.3.4. Conservation Project

Parallel to the urban growth of Jeddah, residents of Al Balad moved out to the new suburbs of growing Jeddah. Residential buildings were either deserted or left to laborers working in nearby districts (*Figure 4-19.*) The district is also beginning to be surrounded by new high-rise buildings.



Figure 4-19. Deserted Buildings Currently Used by Laborers (Source: Author)

In order to avoid the extinction of Al Balad, Jeddah Municipality initiated a conservation campaign in the beginning of 1970s (Soliman, 2010). The campaign aimed to increase awareness about Al Balad's heritage values and revive the district both as a residential and tourist area. First, a consulting firm appointed by the government made a detailed plan. A British architect, Robert Matthew, established the first inventory of more than a thousand old houses that had survived to date. About half of them were designated as "buildings of architectural and historical significance" and were recommended for preservation and protection (Saudi Commission for Tourism and Antiquities, 2013). During the 1980s and 1990s, a number of Jeddah houses were completely restored with the active involvement of a group of Jeddawi architects and historians.

The endorsement of the process of nomination for inscription on the World Heritage List provided fresh impetus for the conservation campaign. In this process, the successful revival of the old city was only possible through effective cooperation between public and private sectors. Jeddah Municipality, jointly with the private sector, put forth a series of initiatives. The nomination is considered to be the key element in the success of the overall plan that was included in a larger national vision that opened Saudi Arabia to the world, both culturally and for tourism. (ICOMOS, 2013)

In order to institutionalize the conservation campaign into a program, a special branch office of the municipality, called al-Balad, was established during 2007/08. This office enabled the central government's role in the project. In 2010, the Municipality of Historic Jeddah was established to coordinate with the central government. The program aimed to revive the old city as a residential and commercial area, as it was in the past, rather than as an open-air museum. In addition to the

rehabilitation of the buildings, great emphasis was placed on enhancing public spaces and the landscape.

The conservation program evolved to its result in the nomination of Historic Jeddah for UNESCO's World Heritage List in 2014, and a comprehensive master conservation project was put in place. There are certain requirements in order to inscribe a district in this list; and thus the city administration had to prepare a "nomination file" and an "action plan," outlining the strategies and conservation plans for Al Balad. The action plan is substantiated through two plans: the Historic Jeddah Management Plan and the Historic Jeddah Conservation Plan (Saudi Commission for Tourism and Antiquities, 2013).

The Historic Jeddah Management Plan pertained to the management of the historic area. It included important points such as increasing the awareness of the importance and value of the human heritage in the area, a comprehensive plan for integrating Al Balad with Jeddah, the support and approval of governmental authorities, the involvement of stakeholders in the city's historic core at different levels, and the application of local and international standards (Jeddah Municipality Building Regulations). The specific objectives of the plan were to:

1. Enrich the economic, social and cultural aspects of the community through the activation of the area and re-use of its buildings, including the provision of opportunities for all parties, which encourages everyone to participate in the development processes and growth.
2. Maintain the distinctive identity of Historic Jeddah, by ensuring that all development works are in line with its historic, architectural and urban values.

3. Improve the quality of pedestrian footpaths and vehicular movement inside the Historic Jeddah area in a manner that facilitates the movement of users and the practice of their activities.
4. Encourage citizens to live in Jeddah Historic District by improving the standard of living in order to maintain the social and cultural characteristics of Saudi society in that area (Jeddah Building Regulations, May 2014).

The Historic Jeddah Management Plan was prepared to increase the area's social, economic, cultural and environmental value. Community participation was the main achievement of the plan and government especially encouraged the new generation to live in the area. The area had a significant commercial history and was an important strategic location. The proposed plans showed that, when conservation work completed, Al Balad would be a commercial hub and landmark for the tourists and locals of Makkah. Open areas and street plans were created based on pedestrian needs and movements. Al Balad's management plan was not only to preserve the area's architectural value but also its urban fabric. According to the management plan, a conservation plan was prepared for Al Balad.

The Conservation Plan outlines the strategies and activities for the restoration of architectural and urban elements. It has two facets: buildings and urban fabric. According to the plan, the strategy for the high-value buildings is based on the following (Jeddah Municipality, 2014):

1. Buildings must be evaluated in a comprehensive manner that includes the history of the building, its design and relationship with the surrounding area.
2. Preservation of as many of the area's historic buildings as possible.

3. Assess the current status of historic buildings and determine the extent of their soundness and the soundness of their components due to their historical abuse and poor maintenance.
4. The need to inform and educate the general population about the value and importance of historic buildings and to emphasize the commitment to strategies of conservation and reconstruction to further prevent damage to such buildings.
5. Roshans are considered the most important architectural element of historic buildings, serving as icons of the community; therefore, special care and attention should be given to preserving them.
6. Use original building materials.

The strategy for the urban fabric is based on the following (Jeddah Municipality, 2014):

1. Cultural elements should be treated based on a broader perspective that takes into account their relationship with the surrounding areas and their role in urban heritage form.
2. Take advantage of all buildings, even those abandoned, and make the best use of their condition and value. This is because unused or abandoned buildings deteriorate faster than used buildings, and they have a consequent negative impact on the surrounding urban areas.
3. The existing buildings in the historic Jeddah area are an important source of community education and awareness of the city and country. One should take advantage to develop a sense of belonging and community among those living in this area (Jeddah Municipality, 2014).

Al Balad Conservation Project presented here is within the context of the strategies presented in the Historic Jeddah Management Plan and Historic Jeddah Conservation Plan, which constitute the fundamental strategies in the nomination file and the action plan.

With all these dimensions, Al Balad Conservation Project stands as a cumulative effort, which aims to revive the historic district. Its first objective was to increase the community's social, economic and cultural aspects through the activation of the area and re-use of buildings with better functionality, providing more job opportunities all people, and encouraging the community to participate in the development process. The second objective was to increase residential settlement in the district by providing tenants with the social and cultural life standards of Saudi society. The third objective was to maintain the architecture and urban identity of Al Balad. The final objective was to improve pedestrian footpaths through vehicular movement and facilities in the area (Jeddah Municipality, 2014).

4.3.4.1. Physical Aspects

4.3.4.1.1. House Rehabilitation

As part of the conservation project, the municipality prepared a demonstration work to increase awareness among people. First, three selected houses were restored and rehabilitated, which was highly significant for the area's historic value and in support of the next conservation projects. Around 30 houses were rehabilitated and 200 houses were repaired in 1986 and they are being used as public buildings to serve local inhabitants and visitors. Other significant houses such as Jukhdar, Nasseef, Ba Haroon and Sharbatly were rehabilitated later (ICOMOS, 2013).

Before the housing rehabilitation projects started, a British architect, Robert Matthew classified the houses into three categories: Class A buildings were deemed of national significance, Class B of Regional significance, and Class C of local significance. Among the many 19th century houses of the wealthy mercantile families of Jeddah, six are being presented in more detail due to their

significance. These houses are Bayt Naseef House, Bayt Noorwali House, Bayt Nawar House, Bayt Sharbatli House, Bayt Baishan House, Bayt ash Shafei (Saudi Commussion for Tourism and Antiquities, 2013). Their locations are marked in Figure 4-20.

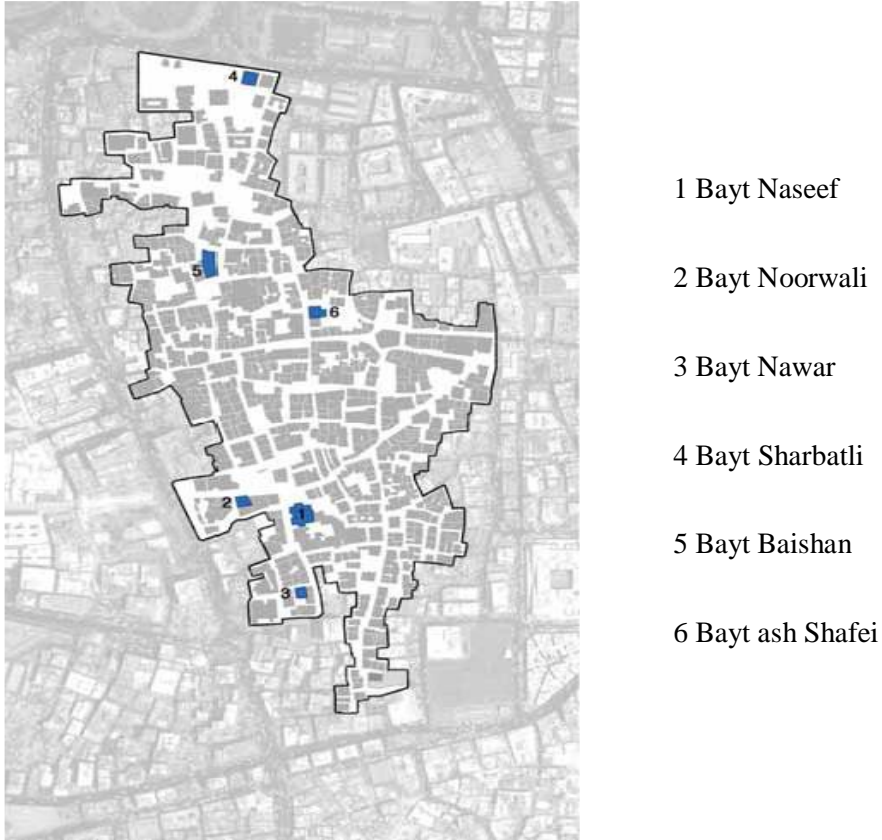


Figure 4-20. Historical Houses of Al Balad (Saudi Commussion for Tourism and Antiquities, 2013)

Bayt Naseef was built between 1872 and 1881 by a Jeddah landowner, Sheikh Umar Effendi al-Naseef, wakil of Jeddah for the Sharif of Makkah. The architect was probably Turkish and the house is unique in Jeddah for its scale, ground plan and design. In December 1925, when Sultan Abdulaziz Al-Saud (later King Abdulaziz) entered Jeddah, he stayed in Bayt Naseef as the house

was thought of as the most distinguished and appropriate residence for the Sultan. The house belonged to the Naseef family until 1975 (Saudi Commussion for Tourism and Antiquities, 2013).

On behalf of the Al-Turath Foundation, and in cooperation with the Historic Jeddah Municipality, the architectural survey of the Naseef House has been executed following a scientifically coherent methodology and a strict working program, using a successfully integrated laser scanner and Total Station. This technique offers the possibility of building a 3D data bank, an excellent basis for any further conservation or restoration project (Saudi Commussion for Tourism and Antiquities, 2013).

The Naseef House was transformed into a public library in 1987, hosting a total of 16,000 books. The second rehabilitation work of Naseef House was completed in 1996; and the house was reopened as a public museum displaying the main artifacts of old Jeddah. This work was considered the first major rehabilitation work for Al Balad (Soliman, 2010). Figure **4-21** displays the pre- and post-restoration photos of the Naseef House.



Figure 4-21. Before and After Rehabilitation of Naseef House (Source: Author)

Bayt Noorwali House is located in the very heart of the city close to Bayt Naseef, with its main facade on Souk al-Alawi, the main commercial East-West axis of the old city. Bayt Noorwali was built in the 19th century for the rich Ashour family. It was later bought by a well-known Indian merchant, Mr. Noorwali, who ran a successful fabric trade in Jeddah. The imposing mass of Bayt Noorwali is visible from Dahab Street. The Turkish-style hammams placed in the house are unique in the old city of Jeddah. The house boasts also precious wooden roshans, green in, covering the largest part of the main facades, remarkable for their size and for the polygonal roshan at the center of the first floor facade. A survey of the house was published in 1981; in 2012, a joint King Abdulaziz University and Vienna Technical University project carried out a 3D scan of the exterior of the building (Saudi Commission for Tourism and Antiquities, 2013). Now the house is under restoration and rehabilitation work (Figure 4-22). As can be seen from the

photos, the restoration is respecting the house's architectural authenticity. The ground floor is being restructured for commercial use.



Figure 4-22. Restoration of Noorwali House (Source: Author)

Al Nawar House is situated in the heart of the Nominated Property behind the Baladiya building and represents a typical residential building with some outstanding features. The building has three upper floors and consists of two main parts of vertically stacked apartments or larger rooms, and a main staircase connection, all arranged around a courtyard. At present, the building is mostly empty. In former times it was occupied by an extended family consisting of up to 50 people. Bayt Nawar (Figure 4-23) is currently in a poor state of conservation and is in need of urgent consolidation intervention (Saudi Commission for Tourism and Antiquities, 2013).



Figure 4-23. Nawar House (Source: Author)

Bayt Sharbatli House, situated in the al-Mazloun neighborhood, was built about 150 years ago, and was originally owned by Sharif Abdulelah Muhanna al Abdali, a renowned merchant of Jeddah. Bayt Sharbatli is characterized by its wooden balconies and its wooden carved doors (Figure 4-24.) The house used to host a famous diwan (reception gathering hall) regularly attended by the notables of the city, where issues relating to the administration of the city were discussed. The Sharif of Makkah used to be hosted in this house during his visits to Jeddah, and the house later became the Embassy of Egypt. It was bought by Mr. Abdullah al-Sharbatli and Mr. Hassan al-Sharbatli, from one of the town's most prestigious merchant families specializing in the import of cereals. The plans for the restoration of Bayt Sharbatli are still in a preliminary phase. The review of the existing architectural documentation and diagnostics of its current state is under process (Saudi Commussion for Tourism and Antiquities, 2013).

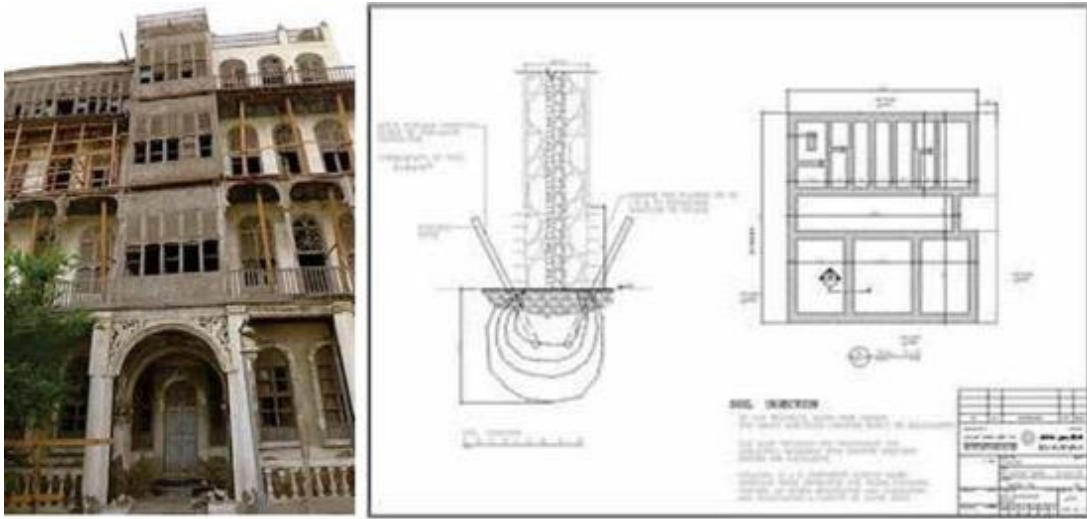


Figure 4-24. Bayt Sharbatli House and Its Blueprint ((Jeddah Municipality, 2014)

Bayt Jokhdar House (Figure 4-25) is another important historic house in Al Balad. The Association Friends of Jeddah Heritage, one of the two main NGOs actively involved in the preservation and revitalisation of the old city, have recently signed an agreement with the heirs of the Jokhdar family to rent it for a 12-year period. The Association will restore the building and transform it into a social center for the old city's residents.



Figure 4-25. Jokhdar House (Source: Author)

The Historical Jeddah Municipality has also carried out the restoration of several historic buildings outside the Nominated Property but within other parts of Al Balad (Saudi Commission for Tourism and Antiquities, 2013). The first project is the restoration and re-use of four historic buildings in the immediate vicinity of Bayt Naseef, in the Nominated Property. After restoration, these buildings have been designated as offices for the Jeddah Historic Municipality and the Saudi Commission for Tourism Antiquities branch in the old city (Saudi Commission for Tourism and Antiquities, 2013).

In addition to the aforementioned public sector-funded restoration projects, several private sector projects were also implemented. A renowned Jeddah intellectual recently bought an imposing traditional house in the northern sector of the Nominated Property (al-Mazloum) and restored it as a cultural place. This was the first private conservation project carried out in the old city and could constitute an important milestone and a model for the revitalization of the Nominated

Property (Saudi Commission for Tourism and Antiquities, 2013). Since then, several other private restoration projects were executed. A photo of an ongoing project is displayed in Figure 4-26.



Figure 4-26. A Private House Restoration Project (Source: Author)

4.3.4.1.2. Mosque Restorations

The restoration of Masjid ash-Shafe`i, which counts among the oldest buildings in the old city of Jeddah, has been entrusted to the Turath Foundation. Following a thorough survey of the building, work started in 2011 and still ongoing (Figure 4-27.) Some parts of mosque opened to public for pray. The project led to the discovery of a vast underground cistern below the mosque's

courtyard. Carried out according to international conservation standards, the restoration of the ash-Shafe`i mosque is the first comprehensive conservation project carried out in Jeddah. The next mosque restoration project will be carried out for Masjid al-Mi`mar.



Figure 4-27. Al Shafi Mosque (Source: Author)

4.3.4.1.3. Open Public Spaces Rehabilitation

Historic Jeddah is also characterized by a unique urban fabric, which distinguishes from the traditional Arab city. It is characterized by narrow pedestrian streets and open tracks and intimate spaces, which created shadows and allow the passage of air. This fabric creates a cool microclimate during the hot summers of Jeddah. The streets occasionally open to small squares, those especially in existing markets and adjacent to mosques. These open spaces were and continue to play an important social role as they are considered as gathering sites for the residents and the population of the city to practice various social activities (Jeddah Municipality, 2014).

Rehabilitation work for open public spaces aim to preserve Al Balad's unique urban fabric. One of the most significant projects for open spaces is the street repaving project that started in 2009, which aimed to rehabilitate the major streets that compose the main tourist corridors. The repaving initially concerned the North-South axis, the East-West axis of Souq Al-`Alawi and the North-South axis of Souq An-Nada in the buffer zone. Figure 4-28 shows the repaved streets in this project. The paving was done using suitable and modular blocks with decoration and partitions inspired by Islamic traditional patterns (Saudi Commussion for Tourism and Antiquities, 2013).



Figure 4-28. Repaved Streets in the Old City

Open public space rehabilitation also aims to create more comfortable spaces for pedestrians. Rest areas are prepared by installing seats or wide steps on the streets (Figure 4-29.) Palm trees were planned in the squares to provide more shade. Certain streets are closed to vehicle traffic. The densely located high buildings cause the streets to be darker at night, and to overcome this, decorative lights were installed (Figure 4-30). Because the buildings in the Old City are of wooden structures, the risk of rapidly spreading fire is very high. To enable a faster response in case of fire, fire pumps were installed at frequent intervals on the streets (Figure 4-31).



Figure 4-29. Gathering and Rest Areas in Small Squares of the District (Source: Author)



Figure 4-30. Lights in Pedestrian Walks (Source: Author)



Figure 4-31. A Street Fire Pump (Source: Author)

4.3.4.2. Non Physical Aspects

4.3.4.2.1. Project Governance

In order to administer the conservation project effectively and to attain the project's objectives, several changes in both central and local government took place. These changes included the formation of new administrative units, the restructuring of several existing administrative units, the development of policies and bylaws to govern the cooperation of various stakeholders, and the introduction of new rules and regulations. The following list, derived from the 2015 Report on the State of Conservation of the Property (Historic Jeddah, the Gate to Makkah), presents the important changes.

The “Antiquities, Museums and Urban Heritage Law” was approved by the Council of Ministers to replace the 1972 Antiquities Law. The law includes a specific section to deal with urban and architectural heritage.

The Saudi Commission for Tourism (SCT) was restructured and empowered under the Saudi Commission for Tourism and Antiquities (SCTA) in 2008. Later, in 2015, the name was changed to the Saudi Commission for Tourism and National Heritage (SCTH). The Saudi government is involved in the project via the SCTH.

The Municipality of Historic Jeddah was created in 2010 as part of the Jeddah Municipality. The SCTA and Municipality of Historic Jeddah cooperate in the management of the old city and of the Nominated Property.

The internal structure of the Historic Jeddah Municipality has been entirely re-organised to improve project management. The municipality was divided into eight subzones, with each to a “supervisor” in charge of the ensemble of projects and maintenance (lighting, paving, water, shops, electricity and cleaning). This new method is meant to give local municipal staff more responsibilities and a comprehensive understanding of the historic city’s social and built fabric. Various stakeholders including the Awqaf Administration, the religious Islamic endowments, the Jeddah Chamber of Commerce, owners’ associations and local NGOs have been involved in the project.

The new Municipal Building Regulations were approved. The Historic Jeddah Building Regulation and Bylaws were prepared based on a preliminary English-language document, “Guidelines for Building Regulations,” which was prepared for the Jeddah Municipality by a

team of foreign consultants in February 2014. This has become the official tool for the management of restoration and construction within the World Heritage Site and its Buffer Zone.

The tender procedures followed by the Jeddah Municipality were rewritten. The formerly used Governmental Procurement Procedures, which only allowed for the cheaper offer to be selected, have been among the major obstacles facing the Historic Jeddah Municipality in increasing the quality of work conducted. New bidding regulations have been recently approved permitting a more balanced analysis of the bids. This new system permits contracting qualified companies to implement conservation and rehabilitation of architectural and urban projects in Old Jeddah, and is instrumental for the success of the regeneration of the historic city.

Administrative structures, stakeholders, regulations and laws have a key role to achieve in the successful conservation work for a city, and Jeddah Municipality considered this a key factor. To improve the historic area's value, new laws and regulations were approved to enhance the quality of the project.

Presentation of the Property

The conservation plan also aims to ensure effective presentation of the property to provide a high quality visitor experience. The following actions, derived from the 2015 Report on the State of Conservation of the Property were taken in this regard (Saudi Commission for Tourism and Antiquities, 2013):

1. A booklet on the Historic City, prepared by the SCTH in 2014, available to visitors in Beit Naseef information panels, and presenting the houses and the Historic City, have been designed and positioned in the Historic City.

2. The Historic Jeddah Municipality has fenced off and secured a series of lanes next to the recently collapsed buildings to guarantee the safety of the inhabitants and visitors.
3. The SCTH and Jeddah Municipality launched the restoration of one of the historic houses to create a Visitors' Center, presenting the property to the public.
4. The SCTH is supporting the publication of a scientific book focusing on Historic Jeddah, which aims to increase visitors' and residents' awareness of Jeddah's history and heritage.

Visual materials were included in the conservation plan to leave a lasting impression on visitors. Booklets, information panels and presentations were prepared to reach more people and to represent value of area successfully.

Conservation of Authenticity

The conservation project aims to preserve the unique and extraordinary heritage of the Historic City within a comprehensive strategy. In the nomination file and the Historic Jeddah Conservation Plan, control mechanisms are designed to preserve its authenticity.

To maintain the architectural and urban values of the historic area, a master plan ensures the safety of the area and of the urban and architectural elements. The plan is based on the empowerment of owners and residents to play key roles in the conservation works. The scope of this plan has been expanded to include both the restoration of architectural and urban elements moreover it aims to raise the awareness of the area's distinctive importance and characteristics to ensure the establishment of their roles in the conservation work. The architectural conservation strategy consists of three main aspects, which include the historic urban fabric, buildings of value and archaeological items (Jeddah Municipality, 2014).

The following list, derived from the 2015 Report on the State of Conservation of the Property presents several activities that took place towards preserving of authenticity within the conservation project (Saudi Commission for Tourism and Antiquities, 2013):

1. A specific program for Historic Jeddah was designed to train local artisans to recreate traditional architectural elements in plaster and wood. The revival of these skills support restoration activities in the Old City. A plan for the restoration of one of the most important houses in Historic Jeddah, Beit Jamjoom, as a heritage hotel provided a platform to link “handicrafts” with building restoration and contribute to the economic revitalization of the historic city.
2. The restoration of the major historic mosque of Historic Jeddah Ash-Shafe’i Mosque was completed in June 2015. The Egyptian expert, Professor Saleh Lamae, designed the restoration plans for the Al-Turath Foundation in the framework of the “National Historic Mosques Care Program.” The restoration followed international standards and respected the authenticity of the oldest and most prestigious mosque in Historic Jeddah.
3. Council of Ministers in 2004 approved the “Custodian of the Two Holy Mosques Kingdom’s Cultural Care Program” that takes into account sites relating to Islamic History.

One aspect of conservation is to ensure that construction methods and materials used for rehabilitation projects respect the authenticity of the property being rehabilitated. The legal framework for this is provided by the new Antiquities, Museums and Urban Heritage Law, and the new Urban Regulation. The SCTH and Historic Jeddah Municipality review, approve, and monitor the rehabilitation projects in this regard (Saudi Commission for Tourism and Antiquities, 2013).

4.3.4.2.2. *Social*

Community awareness and participation is one of the main pillars of the Al Balad Conservation Project. The inscription of Jeddah on the World Heritage List has played a great role in increasing community awareness and participation. Since the UNESCO inscription, many private sector initiatives are being implemented in the area. The renovation of Banaj House Beit al-Matbouli and Beit Salloum are examples of restoration projects run by the private sector with direct involvement of the original owners' families. The SCTH and Historic Jeddah Municipality monitor the renovation projects and provide technical advice to owners who intend to restore their houses or open new commercial activities in the area (Saudi Commission for Tourism and Antiquities, 2013).

Both the central government and municipality took several actions to increase awareness and ensure and sustain community participation in this program. The First Heritage Festival was held in Historic Jeddah in 2014, the second festival was held in the month of Ramadan in 2015. This festival soon emerged as one of the most important events on the Saudi tourism calendar. The festival attracted more than 800,000 people to Historic Jeddah, including both Jeddawi families and expatriates. A sample of other activities includes:

- Cleaning campaigns in the quadrants
- Street lighting
- Plantation and gardening campaigns
- Establishment of a library on Old Jeddah (re-using a historic building)
- Sport programs and tournaments (football, volleyball)
- Studies on Historic Jeddah in coordination with King Abdul-Aziz University, and preparation of a Memorandum of Understanding for the establishment of a Chair on Historic Jeddah.

- Handicrafts training
- “Friday Souq”, Cultural Heritage Nights (monthly)
- School visits to the property (Source: Historic City, the Gate to Makkah)

The different activities enliven the historic area, making it more popular. These should continue on a monthly or weekly basis to attract more people.

4.4. Souq Waqif

4.4.1. Location

Souq Waqif is a market place located on the east coast of Qatar’s capital Doha, nearby the city’s waterfront. The area is also known as the center of Old Doha.



Figure 4-32. Location of Doha in Qatar (Source: Adapted from Google Maps by Author)

There are two major arteries surrounding Souq Waqif. One is the Al Corniche Street on the north, which is the main street that crosses the entire Doha bay and connects the north and south of the city. The other one on the east is the Grand Hamad Street, which is also known as the Banks Street. On the west of Souq Waqif, Al Rayyan Road, which extends in the east-west direction of the city, starts. Emiri Diwan and Msheireb Area are located on the north and south of Al Rayyan Road.



Figure 4-33. Location of Souq Waqif (Source: Adapted from Google Maps by Author)

Souq Waqif along with its surrounding is one of the oldest and most important landmarks, tourist attractions, and trading centers of Doha. During the last century, Souq Waqif has enjoyed being the center of local trade, where the local fishermen sold their fish and Badouin sold their goats and wool. Over the years, with the urban sprawl of the city, Souq Waqif has dilapidated due to lack of maintenance. The restoration efforts started under the patronage of Emir of Qatar Sheikh Hamad Bin Khalifa Al Thani in 2004. Today, it accommodates restaurants of Qatari and world cuisines, art galleries, cafes, stores for souvenirs, clothing, herbs and spices, perfumes, and pet shops.

4.4.2. Historical Background of Doha

Doha is the largest city and capital of Qatar. Its history dates back to early 19th century. Al-Bida and Ad-Dawha are among the first names of Doha. Doha was established under the name of Al Bida. The name used in Arabic “Ad-Dawha” and it was derived from “dohat”, the Arabic word for bay, referring to the bay area around which the city was formed.

Fishing and pearling were the backbones of Doha’s economy in the 19th century, which lasted until 1930s, when the Japan-originated cultured pearling started phasing out the natural pearl market. The 1930s was the era of poverty, scarceness, and depression for Doha. The discovery of oil in 1939 could have ended this era; but the start of World War II delayed this turning point till the early 1950s. The next two decades witnessed a remarkable transformation for the country. New administrative structures and increased population due to the influx of expatriate working class have catalyzed the city’s urban sprawl. Following the withdrawal of Britain, the State of Qatar declared its independence on September 3, 1971, and Doha was set as the state’s capital. The newly established oil rich country was attracting increasing numbers of white collar and working expatriates, mainly from other Arab states, South-east Asia, and Western countries (Boussaa, 2014).

During early seventies Qatar has witnessed an extreme increase in the construction of its governmental buildings; offices, ministries, governmental authorities, so the built environment has emerged. Between 1978 until 1981, the reclamation of land from the sea started to empty out the down town. The reclamation project formed a symbolic and functional tool for the future of Doha where the Corniche has become a symbol for the new city (Shabaan & Khalil, 2012).

Another major milestone in Qatar's history is Sheikh Hamad Bin Khalifa Al Thani's coming to power in 1995. The country then has become the world's largest liquefied natural gas (LNG) exporter. LNG exports have boosted both Doha's and Qatar's urban growth. The population of the country has tripled in ten years between 2002 and 2012 from 629,745 to 2,015,600 with the influx of expatriate working class.



Figure 4-34. Historical Development of Souq between 1947 and 1959 (Source: MMUP)

The Souq Wakif was founded a century ago, when Doha was a village. The locals and Bedouin gathered on the banks of the Msheireb River nearby the bay area, called Al Kharis, to buy and sell goods (Boussaa, 2014). The mentioning of the souq's name in documents dates back to 1766. The name "Waqif" means "Standing" in Arabic, because the merchants used to sell their goods as the Msheireb River flooded during the winter times. Al Kharis Area, the land filled with water, created a buffer zone between the sea and the souk. During the urban growth of Doha after 1960s, this area transformed into a reclaimed land and separated the souq from the sea (Radoine, 2010).

Souq Waqif space and buildings fall into three categories according to their functionality:

- Storage and large areas, known as ‘amayer’, for wholesale and retail for construction materials, dates and rice.
- Craft shops.
- Ambulant merchants’ open air stalls.

Merchants from other parts of the Arabian Peninsula, Africa, Persia, and South Asia started to bring their goods to sell in the Souq. Some of these merchants permanently settled in Doha forming a diverse ethnicity of shop owners. One of the goods, timber, a construction material, which was imported and sold in Souq Waqif had played a significant role in changing the building typology in the region (Radoine, 2010).

The economic and urban development of Qatar based on the exploitation of natural resources as the major economic driver affected the souq. Modern buildings, new urban settlements, alternative shopping malls and trade venues shifted the city’s economic center away from Souq Waqif and Old Doha area. Another factor that propagated the decline of Souq Waqif as a major assembly point of the city is the dense and crowded urbanization that started to form around the souq parallel to the influx of expatriate worker class. Therefore, due to the decay of the economic activity and the newly formed dense neighborhood with expatriate worker habitants, Souq Waqif eventually became abandoned.

In 2004, a rehabilitation project was lunched by the Emir of Qatar in order to rehabilitate the heritage site and revive it as a shopping, entertainment, and tourist attraction. The project was supervised and executed by the Private Engineering Office of the Emiri Diwan, and a local Qatari art designer, Mohamed Ali Abdullah, as the project manager. The buildings constructed before

1950s were preserved and restored, while the latter ones demolished. The restoration work was completed in 2010. Today, Souq Waqif serves as a market place and social arena both for the tourists and residents, with its wide range of authentic shops, restaurants from all over the world, cafes, and art galleries.



Figure 4-35. Restoration of Building in Souq Waqif (Radoine, 2010)

4.4.3. Analytical Description of the Area

Figure 4-36 shows the current bloc-plan of Souq Waqif Area. There is a greenery on the north of the souq facing Al Corniche street. A recent underground parking just below the greenery, was recently opened for service. The Horses Stable Area and Al Jasrah Area contain a horses stable, a poetry majlis, mosques, and authentic houses such as Jassim Al Meslemani House, and the private engineering office for the Emiri technical staff. These two areas are somewhat separated from the other three, Old Souq Area, Al Ahmed Area, and Al Nagada Area, which constitute the most popular part of Souq Waqif.

The Old Souq Area consists of blocks of various shops located in a labyrinth like grid. There are separate sections of shops for traditional perfumery, clothing, spices and sweets, grains, kitchenware, general hardware, and pet shops. These shops are attractive for tourists for buying local clothes and other souvenirs, as well as for residents to buy various types of grains, sweets, spices, and hardware. The east façade of this component of the souk looks at the main ally of Souq Waqif which separates Old Souq Area and Al Ahmed Area. The alley-side of Al Ahmed houses cafes and restaurants. In several restaurants serve traditional Qatari food, in addition to a mosque, souvenir shops, and several small souqs such as the Gold Souq exist in Al Ahmed Area. At the south end of Old Souq and Al Ahmed Areas, the main alley twists to the east-east direction by passing thorough Al Nagada Area. Both sides of the alley are occupied with restaurants of cafes of various cuisines, mainly from Mediterranean. The parking area between Old Souq and Al Nagada is now being converted to an underground parking lot.



Figure 4-36. Parts of Souq Waqif (Source: Adapted from Google Maps by Author)

The architecture of Souk Waqif is influenced by Iranian architecture. Radoine describes the building system as follows: “The building system consists of walls formed with series of bearing incorporated columns. The gaps between the columns are filled with seashore stone creating alternatively windows and blind arched plastered latticed panels for decorative purpose. The main joint used in these structures was a mortar obtained from mixing mud and gypsum. The roofs were often flat composed of mangrove poles and covered with woven bamboo fixed with ropes. The facades were and are rich though their architectural simplicity. The apparent structural

skeleton with rough coating is a key feature of all the facades around the souk. The buildings mostly have two floors and the urban pattern is merely spontaneous as the souk is a collection of various blocks of shops that were gradually built” (Radoine, 2010, pp. 4-5).

4.4.4. The Conservation Project

With the construction of new shopping outlets and modern malls, Souq Waqif has started to lose its popularity and has been abandoned by the end of 1990s. However, Sheikh Hamad Bin Khalifa Al-Thani, then Qatar’s Emir, and his wife recognized its cultural heritage and decided to renovate the Souq. He wanted to “resurrect the 1930’s era in its corridors and galleries” of the Souq Waqif. In 2004, Mohamed Ali Abdullah, a local Qatari artist, was appointed for the renovation project and the Private Engineering Office of the Emiri Diwan supervised the technical process and execution. Mohamed Ali Abdullah, tells the process of his appointment in Radoine (2010). According to this, the Emir had invited reputed experts to propose a design to renovate the souq; but none of them pleased him. One day, he was affected by the local architectural style of a private Qatari villa that he saw passing by. Once he found out that the villa belonged to Mohamed Ali Abdullah, he met with Mr. Abdullah and asked him about his vision for the renovation of Souq Waqif. The Emir was impressed with the designs and ideas that Mohamed Ali Abdullah proposed and asked him to start the work immediately.

Mohamed Ali Abdullah had long been interested in cultural history of Doha. He had earlier written an imaginary story about this and illustrated it with his own drawings picturing the daily lives of people of Doha and their interaction with the sea. This story and illustrations there have set the background for the design concept of the renovation project (Radoine, 2010). Therefore, Mohamed Ali Abdullah had the following objectives in his design:

- Reconstruct the lost image of historic Doha through the rehabilitation of its authentic Souk Waqif.
- Protect the area of the souk and its surrounding from real estate development.
- Create an open air public area totally pedestrianized.
- Establish a vibrant souk with its original layout and goods (Radoine, 2010).

This urban rehabilitation project had to resolve the following issues:

- Augment the human dimension and users' experience.
- Conserve the activities of the souk and distribution of its specialized areas.
- Activate the social memory.
- Update and modernize its services.
- Maintain an authentic environment.
- Restore the dilapidated buildings.
- Remove alterations and random additions.
- Reconstruct the lost parts.
- Create organic pathways and alleys.
- Provide maximum shaded area (Radoine, 2010).

The project started by researching the history and architecture of Old Doha. The artist collected the old aerial photos of Souq Waqif and identified the landmark buildings and architectural

structure. Based on the old photographs and remnants of the dilapidated parts, and using his imagination, he regenerated the lost spaces and missing parts.

Souq Waqif renovation project spanned six years from 2004 to 2010. It successfully restituted the urban pattern and the architectural structure and revived the legacy of the Souq Waqif as a center of attraction for both residents and tourists.

4.4.4.1. Physical Aspects

Souq Waqif project is a complete rehabilitation of an entire traditional market place and its surrounding. A large area is regenerated through restoration of buildings with historical value, recreation of dilapidated buildings, demolition of the younger buildings, which did not have any heritage value, and replacing them with new buildings so as to comply with the urban fabric and architecture structure.

The rehabilitation work covered the following six parts in the souq area as described in (Radoine, 2010):

Old Souq: This is the most authentic part of souk in terms of architectural structure and building forms. However, not all buildings are authentic; some were added later. Significant buildings are Bo Sieda hotel, souk al Tamween, and al Nesaa Majlis. Authentic buildings are preserved, dilapidated one were restituted.

Al Ahmed Area: Al Ahmed Area was separated from the souq by the Kharees. The buildings here are new and have no authenticity, but this newly constructed part of the souq formed the main walkway. Significant buildings are souk Al Ahmed, souk al Toyour, al Ahmed Plaza, al

Ahmed mosque, souk al Baker, and Bism Allah Hotel. This area is located around Al Ahmed Street

Al Nagada Area: It forms the continuum of the Old Souq Area and extends the main walkway in the east-west direction. Not all buildings have historical value. Significant buildings are Qaisariah, restaurants, souk al Mahra, Fakhro House, and al Quot Fort.

Al Jassrah Area: The significant buildings here are souk al Mane', Jasem al Meslemani House, al Jassrah souk, poetry majlis, al Jassrah mosque, and al Abd al Wahab mosque. Among these, the historic house of Meslemani and the mosques are the most authentic ones.

Horses Stable Area: This area includes a second Meslemani house, horses stable, and al Owegan house. The Private Engineering Office of the Emiri Diwan is also located here.

4.4.4.1.1. Building Rehabilitation

The building rehabilitation strategy was rather straightforward: to protect the authentic architecture style of the souq, which was most remarkably reflected in the Old Souq Area, and revive the memory of the place. To achieve this, several buildings, which were additional interventions by shop owners did not match the authenticity of the original buildings, were demolished. Moreover, prior repair works, alterations, and additions, which did not comply with the original architecture were removed.

Before the rehabilitation, until 2003, the owners sued to repair their shops by themselves without considering the architectural values of the buildings. They used metal elements and glasses mostly. Some parts of the walls were demolished to set air conditioner without thinking of damaging building heritage of the souq. As the first step, elements, which were added to the

authentic buildings later on, and the buildings constructed after 1930s were completely demolished. The entire souq was restored according to the original architectural structure. Old Souq Area buildings carry the most remarkable and distinct architectural patterns in Souq Waqif.

A very important aspect of preserving the authenticity is the construction techniques and materials used in restoration and reconstruction. The construction techniques employed in historic Souq Waqif buildings were not advanced as in other Islamic cities. As described in (Radoine, 2010), the skeletons of the buildings were formed by a series of pillars; these pillars support the roofs made of covering “danjall” and bamboo wood by clay and straw. Thus, modern buildings were demolished; rickety metal roof sheets gave way to traditionally built mangrove roofs, bamboo poles bound by matting of clay and straw; and traditional tried and true methods of insulating the buildings against the desert heat were re-introduced.



Figure 4-37. Bamboo Wood Roof System (Source: Author)

Back in the day, natural stones and clay were used for wall construction and wooden lintels and panels supported the stone walls. Today's natural color stone structures cause visitors to doubt that they are not the originals. No cement or steel was reportedly used in the renovation of the old buildings.



Figure 4-38. Restoration of Houses with Natural Stones Source: (Radoine, 2010)

Not all parts of souk Waqif are made out of traditional materials. In some extensions, concrete and cement were used heavily to speed up the construction. Because of continuous critics among professionals outside and inside about the use of concrete, the Emir intervened personally to stop its use and made sudden visits to ensure that the renovation is carried out with traditional materials (Radoine, 2010).

4.4.4.1.2. Open Public Spaces Rehabilitation

The exterior streets, the main streets, are made with polished stone; on the contrary, narrow shaded walkways in the Old Souk Area are made of concrete. Before the rehabilitation, these narrow walkways were roofed with metallic sheets, which caused even more heat through solar absorption and did not complement the authenticity of the buildings. In the reconstruction phase,

such cheap roofs have been replaced with traditional roofs of *danjal and* bamboo with a binding layer of clay and straw. Moreover, heat insulation is achieved by using traditional strategies (Boussaa, 2014).



Figure 4-39. Open Space in Souq Wakif (Source: Author)

Besides revitalizing the souq as close as possible to its original authentic architecture, state of the art technology is also used in the rehabilitation process. As an example, a sophisticated lighting system is installed on the souq's streets along with smoke detectors and sprinklers. The entire Souq Waqif area is within a walking distance, and free of vehicle traffic, except for the parking area on the west of Old Souk Area. This parking lot area is now under construction and being converted to an underground parking lot, which will also serve for visitors of the newly

reconstructed Msheireb Area. Once completed it will have a capacity of 800 cars. Recently, in 2014, a two story underground parking having a capacity of 200 cars was constructed just under the greenery on the north of Old Souq Area.

4.4.4.2. Non Physical Aspects

4.4.4.2.1. Project Governance

The management of Souq Waqif conservation project is also unique and exemplary. The project was initiated by the Emir of Qatar and his wife, and overseen by the Private Engineering Bureau of the Amiri Diwan. The area consisted of privately held shops. The government bought all of the shops from the original owner, which made the government the sole owner of the Souq Waqif. This has eliminated many potential problems and expedited the completion of the project.

4.4.4.2.2. Social

The main objective of the Souq Waqif conservation project is to establish a vibrant souq with its original layout and goods. The project revived a living heritage in the middle of a global environment. Unlike the fake heritage theme parks, Souk Waqif has both regained its status as a major trade hub for citizens of Doha, and emerged as the city's most significant landmark as a tourist attraction. Moreover, Souk Waqif has become a major hub for art galleries and workshops (Boussaa, 2014).



Figure 4-40. Restaurant and Galeria Street (Source: Radoine 2010)

With its restaurants, cafes, art galleries, and a variety of shops, Souq Waqif has become Doha's one of the most popular destinations. Thousands of people, both residents and tourists, visit the souq every day and they enjoy the authentic Qatari architectural and urban fabric. In addition, the shopping experience here helps convey the cultural heritage value of traditional Qatari shopping traditions to future generations and people from all over the world.

4.5. Msheireb Heritage Quarter

4.5.1. Location

Msheireb area is located on the coastal line of Old City of Doha. Currently, it sits on the south the Amir-I Diwan, the main administration building of the State of Qatar, and on the north of Souq Waqif, the newly renovated historic market place of Doha (See *Figure 4-41*). Msheireb area is surrounded by four streets: Al Rayyan from the North, Msheireb Street from the South, Jassim Bin Mohammed Street from the East and Al Diwan Street from the West. Jassim Bin Mohammed Street and Al Diwan Street are the important connection to Corniche for the area.



Figure 4-41. Location of Msheireb Heritage Quarter in Doha (Source: Adapted from Google Maps by Author)

Msheireb Area has a central location in the Old City as it is just adjacent to the city's main trading market. In contemporary Doha, the area still sits at a strategically important location, surrounded by the city's main tourist attraction, Souq Waqif, and the main administrative building, the Amiri Diwan.



Figure 4-42. Msheireb Heritage Quarter and Surroundings (Source: Adapted from Google Maps by Author)

The Msheireb Heritage Quarter is the historic core of the Msheireb Area. As shown in Figure 4-42, the quarter is towards the northeast of Msheireb and close to the original Doha coastline and historic Koot Fort (Musheireb, 2010).

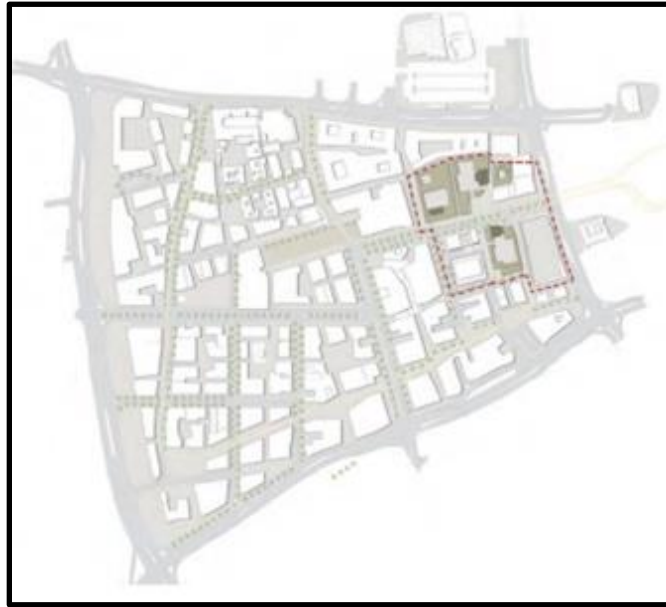


Figure 4-43. Msheireb Heritage Quarter in Msheireb Development - The enclosed area (Msheireb Properties, 2011)

4.5.2. Historical Background

The evolution of Gulf's small fishing and pearling town of 1940s into a cosmopolitan in less than seven decades (see *Figure 4-44*). The nucleus of the Msheireb Area, the Mohamed Heritage Quarter, was just to the west of the Souq Waqif. The area was connected to the waterfront before the construction of the cornice, the street that stretches through the modern Doha's coastal line. The area took its name from the 'wadi' – river- that runs between the Souq and the area. The word 'msheireb' means 'a place to drink water', in Arabic (Msheireb Downtown Doha, 2016).

Msheireb Area has grown after 1950s towards the west in the upcoming years. The yellow outline shows today's Msheireb Heritage Quarter and its surroundings. On the southwest of the area, there is the Al Kahraba Street, which has the first place in Doha to have electricity connection.

The word 'kahrabaa' means electricity in Arabic. This street became a major commercial hub of the Old City.

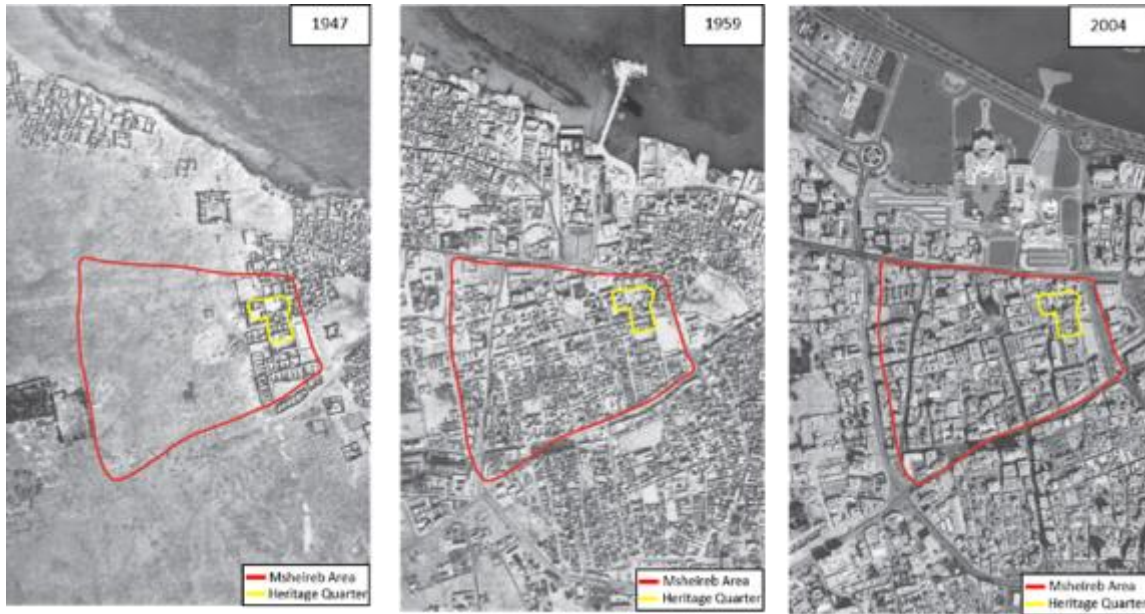


Figure 4-44. Development of the Msheireb Area Between 1947 and 2004 (Msheireb, 2010)

Msheireb area was a mixed-use area, home to both residential and commercial buildings. It had been inhabited by local for a long time. Single story courtyard houses were the main building character of this area. Mohamed bin Jassim Heritage Quarter is the home to the architectural heritage of the area. The oldest historic house is Radwani House, which was built by Faraj Hashim Al-Ansari in 1920. Sheikh Mohammed Bin Jassim House is the second oldest house and it is constructed in 1913. The manager of Doha Port built the Company House in 1920 and the Jelmoood House was built in 1924 by a trader known as Jelmoood. These houses have an important role to convey Qatari built architecture features to new generation.

With the rapid economical and urban growth of the city following the oil and gas exports becoming the backbone of Qatar's economy, Old Doha was crowded with the influx of expatriate workers. Similar to the case of Souq Waqif, Msheireb Area started to lose its central role as a major trade hub. Residents moved from small houses to larger and multistory private houses in new settlements. Over time, some of the abandoned houses started to dilapidate due to negligence and lack of maintenance. Other houses that survived were rented by expatriate workers. In result, the urban fabric and demographics of the area had changed.

4.5.3. Analytical Description of the Area

Msheireb Heritage Quarter and the surrounding areas, known as the Msheireb Area, used to be the center of cultural, religious and political power. The four landmark historic houses in the quarter represent the typical Qatari and Gulf architecture in form and layout, which is a combined result of social values, climate and available materials, and the interaction with the merchants who were coming to Doha via the trade routes. These houses provide a testimony of the way of traditional daily life for Qatari residents. (Msheireb Properties, 2011)

The houses in the Arab city are gathered in clusters, sharing courtyard walls, and accessible via 'sikkats', the narrow shaded alleyways, as shown in Figure 4-45. They have open courtyards surrounded by colonnades and rooms, in front of which, verandas provide shade (Figure 4-46). The courtyard design provides comfort and privacy for family activities and, by providing an oblique route to the courtyard, ensure effective screening for the women and children within. Because the inner facades of the rooms open to courtyards, the outer facades of Qatari houses do not have windows and surrounded by high walls. This provides protection from sun and ensures privacy for women and children.

The main entrances give access to the majlis or visitor rooms. While the exterior decoration is very limited, the internal spaces have extensive decorations and ornaments. Decoration was largely confined to structural elements, the rukniats (molded gypsum) at the junction with verandah columns, the ceilings and the shaped rawashin (recesses) in the thick walls providing simple yet effective adornment. Walls were sometimes embellished with geometric gypsum panels (Figure 4-47). These distinctive features of Arab houses and Qatari architecture are represented in the historic houses of the Msheireb Heritage Quarter (Msheireb Properties, 2011).



Figure 4-45. A view of a Sikkat (Source: (Msheireb: Heritage Quarter Houses Schematic Design Report, 2011)



Figure 4-46. A typical Courtyard in Msheireb Heritage Quarter (Source: Author)



Figure 4-47. Interior Wall Decoration of Qatari House (Source: Author)

The houses in the Mohamed Heritage Quarter have grown horizontally and vertically, over the years as the families owned these houses grew in wealth and population. While Company and Jalmoed Houses grew horizontally by adding more courtyards connected to the main one, Mohammed Bin Jassim grew vertically by adding more floors.

The materials and techniques used in the construction of the houses represent a combination of local resources and materials brought by merchants from overseas. For example, gypsum, the main building material for walls and roofs, is a local mineral. On the contrary, the roof structure and the joinery illustrate the continued significance of ancient trading routes (See Figure 4-48), (Msheireb Properties, 2011).



Figure 4-48. Roof structure (Source: Author)

4.5.4. The Msheireb Conservation Project

As a result of the rapid economic growth of Qatar, Doha has sprawled and the city center has moved to the north of the Corniche, the West Bay Area. This caused the Old Doha to lose its central role as a major trade hub. Residents moved from small houses to larger and multistory private houses in new settlements. Over time, some of the abandoned houses started to dilapidate due to negligent and lack of maintenance. Other houses that survived were rented by expatriate workers. In result, the urban fabric and demographics of the old city had changed. Msheireb Area was one of the most important parts of the Old City, a center of cultural, religious and political power. In the early years of 2000s, Qatar government realized the need to reintegrate the Old City to the modern Doha by preserving its architectural and cultural heritage, and started to develop reconstruction projects. Msheireb Area is the social,

In 2006, the Msheireb Properties developed the Msheireb Downtown Project to revive the Msheireb Area by completely rebuilding it while preserving the heritage quarter. The Msheireb project spans over a thirty-five-hectare site on the south of Amiri Diwan and west of Souq Waqif (Msheireb Properties, 2011). The entire area was demolished, except four buildings, which make up the Msheireb Heritage Quarter.

Msheireb Downtown Project is a sustainable regeneration project. It utilizes the latest sustainable construction technologies and the buildings will adhere to the highest green building standards. In contrast to the typical development pattern in Doha, which promotes isolated land use, relying on car transportation, and energy hungry buildings, the area, which will be names as the Msheireb Downtown Doha, will provide a communal and pedestrian friendly environment with its energy efficient buildings. It will provide a composition of residential, commercial, and entertainment hub (Msheireb Downtown Doha, 2016)

The Msheireb Downtown Project aims to create a modern cultural center while using the heritage of existing Qatari buildings by integrating them to the rebuilt new development. This chapter studies the Msheireb Heritage Quarter Restoration Project in detail. Other parts of the Msheireb Downtown Project are not within the scope of the analysis.

Msheireb Heritage Quarter Project is nearly complete. The houses in the Msheireb Heritage Quarter were reopened as museums and exhibition halls to display their roots, history, and daily life of Qatar. The project is carried out to comply with the international principles of conservation and mainly Venice Charter principles were followed.

4.5.4.1. Physical Aspects

The layout of the Msheireb Heritage Quarter is shown in Figure **4-49**. The orange shaded buildings, shown with number 1, are the four historic houses. Number 4 is the Jum'a Mosque and 5 is the open air Eid Prayer Ground. These constitute the authentic built structures of the Heritage Quarter. Number 2, Cultural Forum, and Number 3, National Archive Building, are the new buildings in the quarter. Their designs were inspired from Qatari tradition and heritage.



Figure 4-49. Cultural Center in Msheireb (Source: Msheireb: Heritage Quarter Houses Schematic Design Report, 2011)

4.5.4.1.1. *Housing Rehabilitation*

The rehabilitation of houses is undertaken as a connected story. The idea is that when visitors walk through each house, they should feel reading a different chapter of a story; the story that tells the architectural and cultural heritage of Qatar. Figure 4-50 summarizes this story and shows the associated chapter for each house. On the other hand, as each house represent a different time period, each restoration should be unique and reveal the architectural identity of its time through form, geometry, space, light and materials. (Msheireb Properties, 2011)

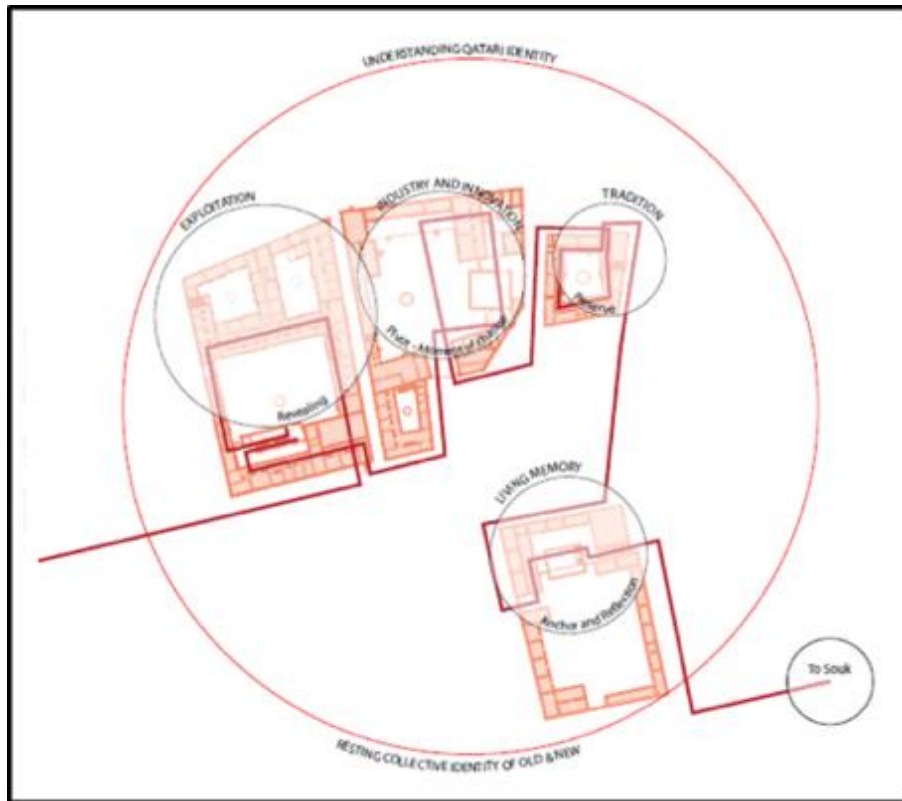


Figure 4-50. A Schematic Representation of the Thematic Chapters that the Historic Houses represent (Msheireb Properties, 2011)

In what follows, the characteristics of each house and details of restoration are presented.

Bayt Radwani

Bayt Radwani is the oldest of the four houses in the quarter and the most authentic example of a traditional Qatari house both in its scale, courtyard configuration, and external facades. Figure 4-51 pinpoints the location and layout of Bayt Radwani. The entrance is in the north, and one can reach to the main courtyard through a labyrinth-like walkway, which ensures privacy for the courtyard. On the contrary, the men Majilis and guest rooms are directly accessed from the

entrance. No other rooms of the house have windows on the external façade (Msheireb Properties, 2011).

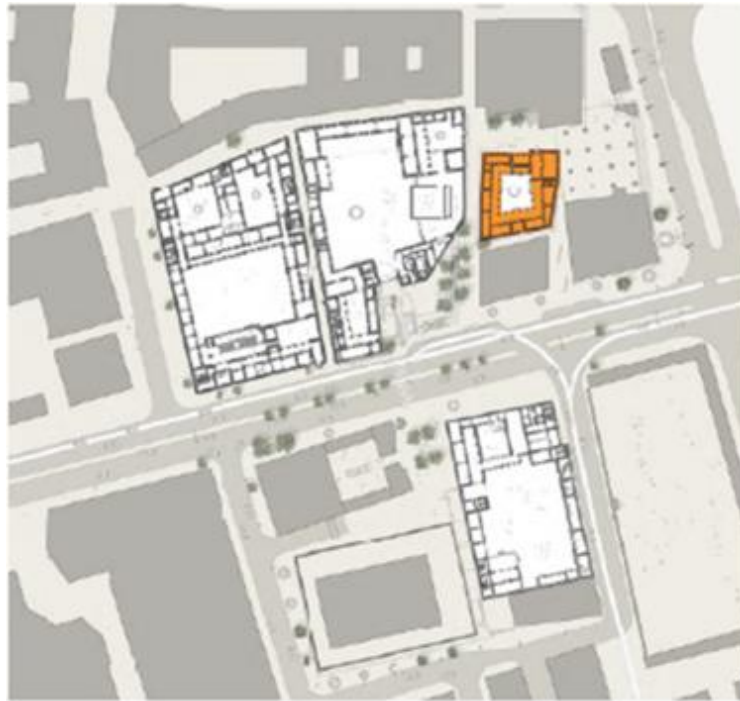


Figure 4-51. Location of Bayt Radwani in Msheireb Heritage Quarter (Msheireb Properties, 2011)

In the thematic context of the project, the renovated Bayt Radwani represents the traditional family house, revealing the heritage and cultural identity of Qatar. Family life is the most important element of life in Qatari Society (Msheireb Properties, 2011). The story is told through the exhibition of how the Radwani family used the house and lived here. It brings the story up to date, by illustrating how the house communicates social issues and traditions, and how the effects of the rapid changes in Qatari society are reflected in its form and social relationships (Msheireb Properties, 2011)

The reconstruction of the house is done by preserving the original architectural fabric and scale. The outer walls are rebuilt on the same plan by using the earlier walls as foundations. Similar materials are used to the originals, except for some necessary concrete reinforcements for the walls. As can be seen from Figure 4-52, the reconstructed Bayt Radwani has the same form as its original. (Carter & Eddisford, 2013)

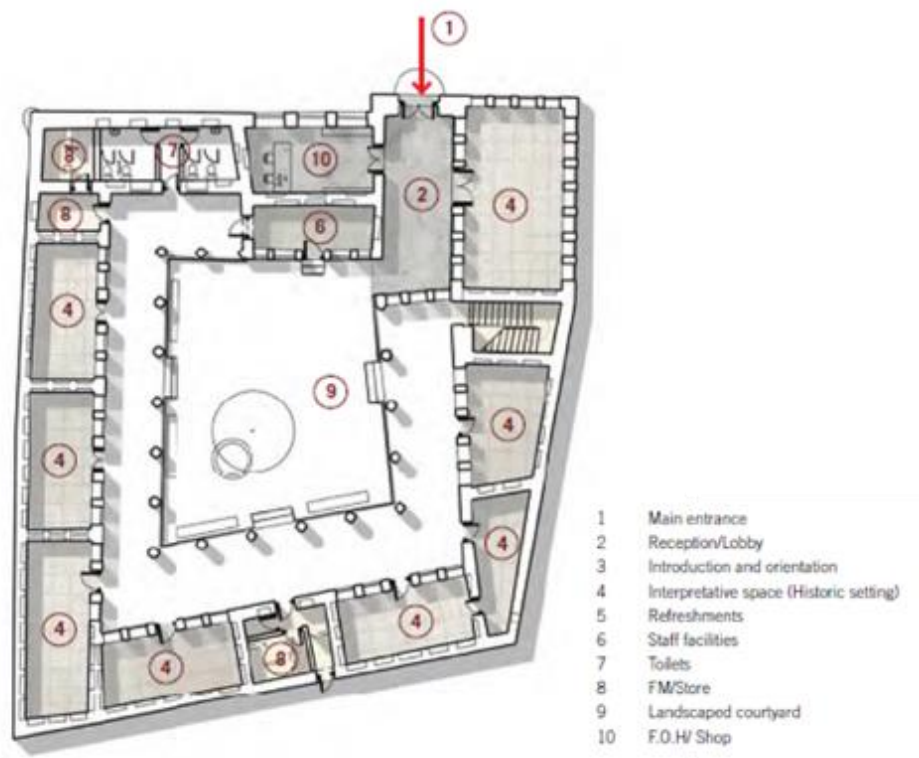


Figure 4-52. Bayt Radwani Proposed Ground Floor Plan (Source: Msheireb: Heritage Quarter Houses Schematic Design Report, 2011)

The key environmental principles for Radwani House are as follows:

1. Maintain the historic functionality of the Courtyard house to incorporate as many of the traditional techniques for keeping cool as possible.
2. Roofs to be insulated to keep out heat / retain coolth within the building.
3. Natural Ventilation within courtyard rooms.
4. Thermal mass of existing fabric retained to keep internal rooms cooler.
5. Cooling effect of wind maintained
6. Planting within the courtyard encouraged for shade. (Source: Msheireb: Heritage Quarter Houses Schematic Design Report, 2011)

Mohammed Bin Jassim House

Mohammed Bin Jassim House, Bayt Jassim, is the second oldest house, built in 1913; and it belongs to Mohammed Bin Jassim Al-Thani, who is the son of the founder of modern Qatar. He lived in this house with his family for a short time then it was used as a clinic. Bayt Jassim has a significant architectural and cultural role for district life in Doha. It is located on the South of the other three houses as shown in Figure 4-53.



Figure 4-53. Location of Bayt Jassim in Heritage Quarter (Source: Msheireb: Heritage Quarter Houses Schematic Design Report, 2011)

As shown in Figure **4-54**, the house is two towers one in the north-east and the other in the south-west corners of the building, served as men's and women's Majilises, respectively. There would have been prominent views of these towers when approaching the building. There are two main entrances of the house, one through the Men's majilis tower and the other from the West directly to the courtyard (Msheireb Properties, 2011).



Figure 4-54. Model of Bayt Jassim (Source: Author)

In the thematic concept of the project, Bayt Jassim is projected as the living memory chapter of the story, linking old and modern Doha. Inside the house, there is an area where a movie narrating this linkage through traditional values of Qatari society. Bayt Jassim also serves as the main gate to the houses area, physically and thematically welcoming the visitors. It engages people with stories of Msheireb, and its future. It also contains a dramatic map installation that physically orientates people to the area and also explores new ways to map the city through food, music and other art forms (Msheireb Properties, 2011).

The house is renovated according to its original form and architectural fabric. The plan of the house is presented in Figure 4-55. Major visitor attractions are concentrated in the courtyard and the north side. A new pavilion is built within the natural framing. The new pavilion touches the existing historic house lightly. A new colonnade to the south of this intervention connects the new space to the courtyard as the original house would have done. The new colonnade and

intervention have been carefully modelled to step back away from the prominent Majilis, allowing unobstructed views to the tower from the courtyard, external public realm and main entrance to the house (Msheireb Properties, 2011).

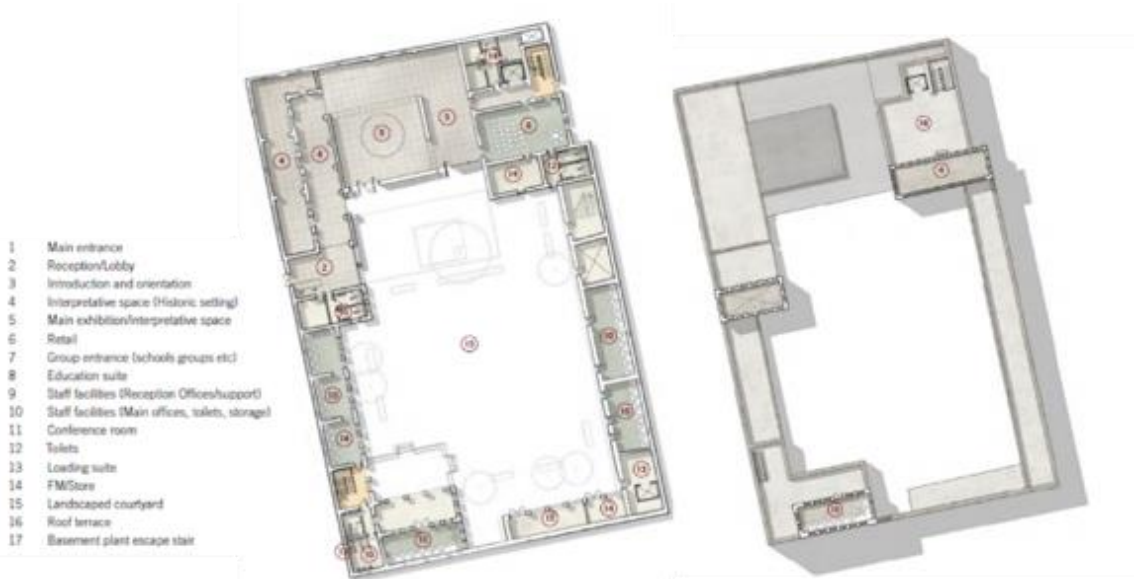


Figure 4-55. Bayt Jassim Proposed Basement and Ground Floor Plans (Msheireb Properties, 2011)

The key environmental principles for Mohammed Bin Jassim House are as follows:

1. Heritage roofs to be insulated to keep out heat / retain cold within the building.
2. Services voids to be created within floor zones to reduce the impact of services within the building and enable a heat recovery system to be used.
3. Existing basement structure is utilized to accommodate large scale duct runs and plant zones.
4. The new intervention offers potential for discrete servicing.

5. Potential for localized cooling effect from extract air from Bayt Jelmoood.
6. The new intervention above ground will be highly thermally efficient and solar gain is reduced through controlled openings within the intervention (Msheireb Proporties, 2011).

Bayt Jelmoood

Bayt Jelmoood was built in 1924 by Mohammed Bin Saleh Bin Zwaid Al Zwaid, who was an ‘Al Makareen’, naval traders in dates and slaves, and who also carried pilgrims from Qatar and Oman. (Msheireb Proporties, 2011) The house is on the west of the houses area, as shown in Figure 4-56.

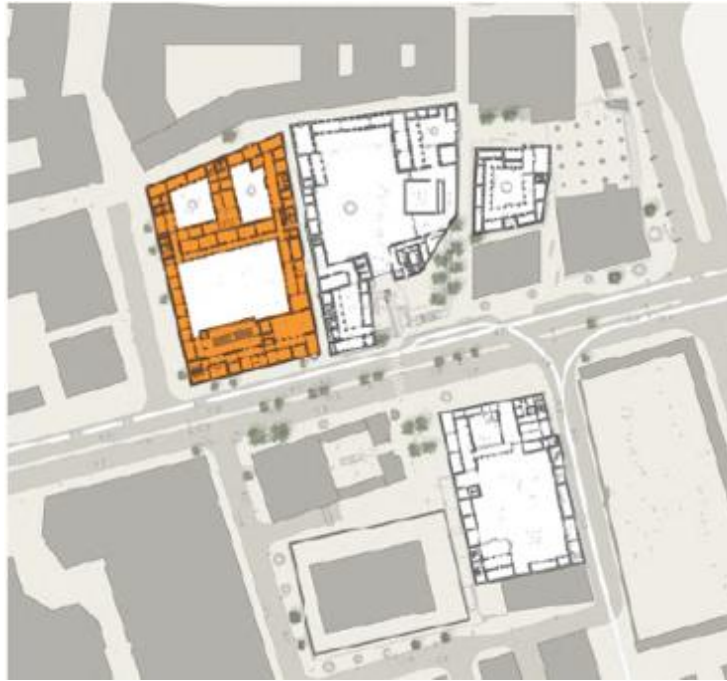


Figure 4-56. Bayt Jelmoed in Msheireb Heritage Quarter (Msheireb Properties, 2011)

Bayt Jelmoed has grown towards north over the years. It has three disconnected courtyards. The main courtyard is located in the center of house and surrounded by colonnades and rooms. It has two protected and harnessed entrances on South elevation and North elevation. Bayt Jalmoed does not have the traditional rectangular circulation of rooms along all sides. There is a clear hierarchy to the circulation zones and to the main courtyard. The south colonnade forms the primary elevation and creating a formality to the courtyard space. The colonnades and recessed panels create particular rhythms of light and shade, setting the main character of the building. (Msheireb: Heritage Quarter Houses Schematic Design Report, 2011)

In the thematic framework, Bayt Jelmoor represents the exploitation and revealing of the cultural heritage. In the reconstructed house, there are three covered courtyards, in addition to the main courtyard. The covering of the courtyards created larger orientation spaces that can be utilized throughout the year. The two small courtyards are visible in Figure 4-56, whereas the other one is just connected to the main courtyard from the southeast and serves as the welcoming area for the visitors (Figure 4-57). Each courtyard is covered in a different style: glass and fabric covering, glass and patterned shading covering, and big cut outs' covering. An underground gallery is also added. (Figure 4-58)



Figure 4-57. Entrance Courtyard reuses as a welcoming area for museum visitors (Source: Author)

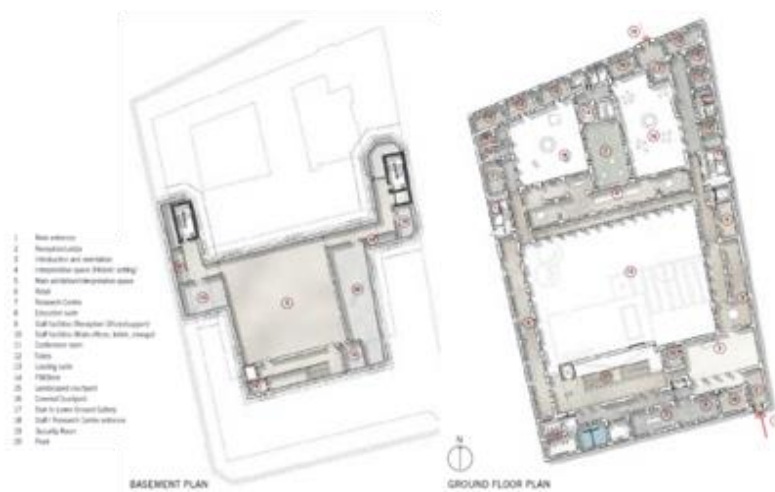


Figure 4-58. Bayt Jelmoed Proposed Basement and Ground Floor Plans (Msheireb Properties, 2011)

The key environmental principles for Bayt Jelmoed are as follows:

1. Roofs to be insulated to keep out heat / retain cold within the building.
2. Services voids to be created within floor zones to reduce the impact of services within the building and enable a heat recovery system to be used.
3. Covered courtyards are designed to minimize solar gain whilst maximizing the benefits of external view.
4. The below ground intervention will be highly thermally efficient and offers potential for high level discrete servicing.
5. Potential for localized cooling effect from extract air from Bayt Jelmoed.
6. The new intervention above ground will be highly thermally efficient and solar gain is reduced through controlled openings within the intervention (Msheireb Properties, 2011).

Bayt Company

The discovery of oil profoundly altered traditional lifestyles, and allowed Qatar to become what it is today. Company House illustrates this transformation of Qatari life, as it played a pivotal role in that change. Bayt Company, the youngest of the four, originally belonged to Doha Port manager Hussien Bin Abdulah Ne'ma, the manager of Doha Port. It was then used by British Petroleum (BP) employees as an assembly point and a place for workers to collect their salaries (Msheireb Properties, 2011). It is located between the Bayt Radwani and Bay Jelmoor (Figure 4-59).



Figure 4-59. Location of Company House in Msheireb Heritage Quarter (Msheireb Properties, 2011)

Bayt Company has three major components, each having its own entrance. These components are connected to each other more closely as opposed to Bay Jalmoood, which forms a natural courtyard shape (Figure 4-60). This organic courtyard shape gives the house its main character (Msheireb Properties, 2011).



Figure 4-60. Company House (Msheireb Properties, 2011)

In the thematic framework, Bayt Company tells the story of industry and innovation age. It welcomes the visitors with life in Qatar in pre-oil era, and displays the changes that oil has made. The historic interiors displays the moment of the discovery of oil, and the excitement and potential that it brought. A new gallery space presents the photos and interviews of Qataris and expatriates in the post-oil era. The house also hosts a kitchen dramatizing the culinary changes that took place in this era, which made Qatar a center for diverse cuisines (Msheireb Properties, 2011).

The reconstructed Bayt Company has a smaller footprint along the east wall revealing the most significant facades, without affecting the character of the courtyard (Msheireb Properties, 2011). A new pavilion is added in the courtyard, shown with number 5 in Figure **4-61**. The evolution of Bayt Company is displayed on TV screens inside this building. Three options were considered for the outer walls of the pavilion. The first option was the use of carved stones, second was cor-ten steel, and third was a media wall (Figure **4-62**). Out of these, the second option, inspired from the industrial materiality of the period of the discovery of oil, is selected. This material also references the tools, equipment and machinery that would have been used by the early pioneers of the oil industry, as well as the setting of the Company House courtyard itself at that time that would have houses workshops and other equipment (Msheireb Properties, 2011).

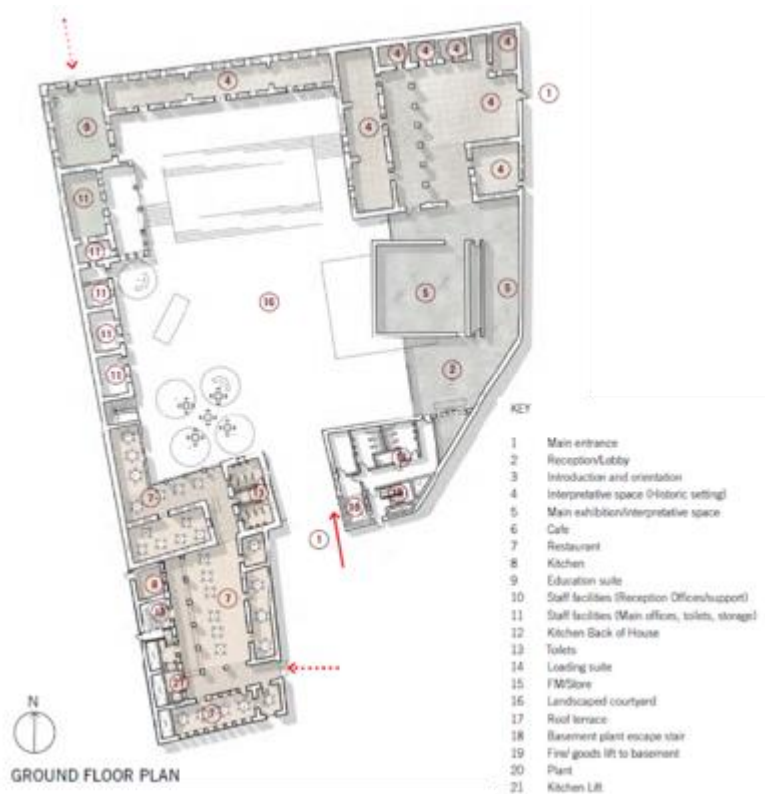


Figure 4-61. Bayt Company Proposed Ground Floor Plan (Msheireb Properties, 2011)



Figure 4-62. Proposed Bayt Company House (Msheireb Properties, 2011)

The key environmental principles for Company House are as follows:

1. Existing roofs to be insulated to keep out heat / retain cold within the building.
2. Services voids to be created within floor zones to reduce the impact of services within the building and enable a heat recovery system to be used.
3. Landscape zone utilized for services runs to centralized plant.
4. The new intervention above ground will be highly thermally efficient and solar gain is reduced through controlled openings within the intervention (Msheireb Properties, 2011).

4.5.4.1.2. *Other Buildings and Areas*

There are two prayer facilities in the Heritage Quarter: an open space for Eid Prayers and the Juma'a Mosque.

The Eid Prayer Ground is on the east of the quarter, facing Souq Waqif and Al Koot Fort on its east and Bayt Jassim on west (Figure 4-63). As the city developed, the space was assigned as the formal Eid Prayer Ground and enclosed with walls. The Qatari artist Mohamed Ali Abdullah, who did the design for Souq Waqif renovation, tells that the construction was pragmatic: serve the purpose at the minimum cost.

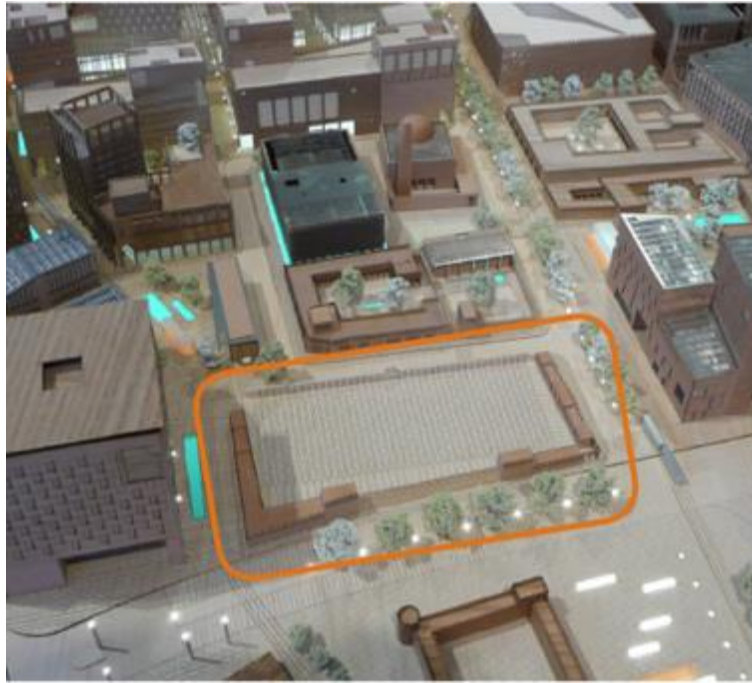


Figure 4-63. Location of Eid Prayer Ground (Msheireb Properties, 2011)

The reconstruction of the area followed the original pragmatic approach: simple yet effective. Like a typical mosque, it has a Qibla or Mihrab Wall, a Minbar, an entrance wall opposite to the Mihrab Wall and the use of Prayer Lines on the floor to facilitate lining up for Prayer. It also has shading structures, drinking water fountains, and ablution facilities (Msheireb Properties, 2011).

The Juma'a Mosque is located to the west of Bayt Jassim and south of Bayt Jamood. The design integrates a modern style with traditional Islamic mosque architecture. It is simple yet functional as the traditional Qatari mosque. Local stones and craft techniques are used. The minaret follows the same principle of integrating the modern style with traditional Qatari minaret (Figure 4-64).



Figure 4-64. Proposed Heritage Quarter Juma'a Mosque (Msheireb Properties, 2011)

4.5.4.2. Open Public Spaces Rehabilitation

The streets and open public spaces within the Heritage Quarter should be considered within the Msheireb Downtown Project. The entire downtown aims to be a passenger friendly area and to allow people comfortably enjoy open-air even during the hot summer days. In order to achieve these aims, the street designs are inspired by the Sikkats, the shaded zigzagged narrow alleyways squeezed in between the high walls of private houses, of the Arab city. This street structure allows a cool atmosphere for the pedestrians even during the hot summer periods. The high buildings protect the people from direct sun light exposure.

On the main street of the Heritage Quarter there is bicycle road, drop off area and bus stop to make the area easy reachable. Figure 4-65 shows the open space hierarchy of the quarter.



Figure 4-65. Open Space Hierarchy (Msheireb Properties, 2011)

4.5.4.3. Non Physical Aspects

4.5.4.3.1. Project Governance

The entire reconstruction project, including the Heritage Quarter, was contracted to a real estate company, which was founded by Her Highness Sheikha Moza bint Nasser, as a subsidiary of Qatar Foundation. The mandate for the establishment of the company is to address a gap in the architectural history of Qatar and rediscover a unique form of Qatari urban development. The company conducted a three-year long intensive research and launched an international

competition to select the best architects for the Msheireb Downtown Project. In this regard, the project is a product of perfect cooperation of public and private sector and scientific innovation.

The Heritage Quarter Reconstruction Project formed around several fundamental principles. Acknowledgement of the Qatari culture and architecture, and recognition of urban development are two of these principles. The main theme of the project is to connect the past with future.

The restoration and transformation of Heritage Houses is based on the following 18 policies:

1. Celebrate the heritage significance of the Heritage Quarter Houses
2. Carefully maintain the physical condition of the Heritage Quarter Houses
3. Ensure that there is a coordinated conservation strategy and that this is applied to the whole site
4. Understand the fabric
5. Control change
6. Ensure design is of the highest quality
7. Consider the most appropriate location for new uses
8. Ensure that new work is readily identifiable
9. Avoid imitation
10. Carry out thorough investigations
11. Record the existing fabric
12. Design for growth
13. Consider sustainability
14. Introduce new services with care
15. Develop strategies to address the change of use
16. Appoint specialist consultants and contractors

17. Create an effective management and maintenance regime

18. Keep the Conservation Management Plan updated

These principles articulate the systematic approach that was put forward in the project.

4.5.4.3.2. Social

Msheireb Heritage Quarter will be used as a non-traditional type of an open-air museum, in which the visitors will experience the traditional Qatari life style and urban development of the country. Even though it is not in full service, it was observed during the site visits that the quarter has already started to attract visitors. However, the socio-cultural impact of the project cannot be properly assessed until the entire Msheireb Downtown Project is completed. The Heritage Quarter will be the major cultural component. The success of the Heritage Quarter Project for sustainably carrying the urban heritage of Qatar depends on the success of the Msheireb Downtown Project and how people will appreciate the newly developed district.

Msheireb Downtown Project is a reconstruction project for an entire district. Most buildings in the area have been demolished and a completely new district is built. The area will have a mix type of use: residential, commercial, social, and cultural. It is expected to offer more jobs and more businesses and better quality living.

4.6. Comparative Analysis of the Selected Conservation Projects

In this section, the projects are critically compared in terms of project venues, types of use, conservation approaches, project governance, and socio-cultural impact. Their success in sustainably conserving the urban heritage values is investigated. The analysis made here are

utilized to prepare a list of learnings from the case study and how these learnings can be utilized to prepare the conservation project design framework are discussed in CHAPTER 5. .

4.6.1. Project Context

The four projects are located the MENA region, and the areas are among the first settlements of their respective cities. Among those, Darb Al Ahmar is located in Cairo of Egypt, and its history dates back to 10th century. Al Balad District, the home to the second project, is located in the heart of Historic in kingdom Saudi Arabia. Jeddah's history dates back to second century BC. Contrary to Darb Al Ahmar, most of the original residents of Al Balad had already abandoned the region and moved out to new districts of Jeddah prior to the conservation project. Expatriate workers started to reside in the abandoned buildings.

Souq Waqif and Msheireb Heritage Quarter share the same location, the heart of Old Doha. They are relatively younger settlements. Similar to Al Balad, many buildings in the Souq and Msheireb Heritage Quarter were abandoned as the original residents moved out to new areas of the growing Doha, and they were surrounded by the settlements of the expatriate workers, who came to the city in large numbers parallel to the economic development of Qatar after the 1940s.

The urban fabric and the architectural structure, materials, and construction technologies of the built structures in Souq and the Heritage Quarter reflects a mix of Qatari architecture and architecture of neighboring countries, from where the merchants used to travel to Doha to sell their goods. A similar observation can be made for Al Balad, as the city of Jeddah is located on the Red Sea coast and it was greatly influenced from the merchants and the pilgrims. Darb Al Ahmar, has been a home for various civilizations and built structures represent architectural

characteristics of those different civilizations, who ruled the city, Fatimids, Ayyubids, Memlouks, and Ottomans. Each civilization tried to concur its own impact in the city.

Among the four places, Darb Al Ahmar is the largest, spanning an area of approximately 500 hectares. The proposed buffer Zone of Al Balad is 113.58 hectares and the nominated property is 17.92 hectares. Souq Waqif and the Msheireb Heritage Quarter are smaller, compared to their counterparts. In fact, Msheireb Heritage Quarter conservation project is part of a bigger reconstruction project called Msheireb Downtown Doha, which is approximately 31 hectares.

4.6.2. Types of Use

Darb Al Ahmar has a mixed type of use. There are residential and commercial buildings, as well as mosques, monuments, and a park in the area. In this regard, the intervention is a conservation project for the entire district. It includes the construction of the park, rehabilitation of built structures including houses, commercial buildings such as hotels, and mosques and other historic monuments. In addition, the project scope included social and economic development of the residents through microcredit loan program, employment services, vocational training, and health services. The region will continue to have mixed use after the project is completed.

Al Balad historic district also has a mixed type of use. Even the buildings in Al Balad have mixed use; the ground floors of apartments are used as stores. In addition to the streets with two-three story houses, there is also a souq in the district. Like Darb Al Ahmar, Al Balad also has several historic mosques. The conservation project aimed to keep the type of use the same for the area. However, noting that most residential buildings have already been deserted; they will not be used with the same purpose after reconstruction. The historic houses of Al Balad are being converted

to museums and galleries for the tourists. Al Balad area will be a major tourist attraction for Jeddah.

Souq Waqif was merely a commercial area. It was the Old Doha's major trading center and residential use was limited. After the conservation project, it was revived as a commercial area with its renovated stores but has mainly become one of the major authentic tourist attraction for both visitors and residents of Doha. It also houses many restaurants from different world cuisines, art galleries, and souvenir shops.

Msheireb Heritage Quarter was a small residential district at the east end of Msheireb Area. In addition to the four historic houses in this region, there was an Eid Prayer Ground, which was used as the major gathering are in the Eid Prayers. The houses were already abandoned before the intervention. This area is utilized as a cultural heritage quarter following the completion of the project. The four houses serve as components of a museum theme and display the visitors the past and present of Doha and Qatari life style. The Heritage Quarter Project is the only one among the four projects, which does not envision a social area that has either residential or commercial type of use. This dull open-air museum feeling is reduced by having a restaurant in the courtyard of Bayt Company. In addition, when considered as part of a greater project, lack of social fabric in the Heritage Quarter is compensated by the commercial and residential activities nearby. The quarter is just in the middle of the city's liveliest places, Souq Waqif, and the reconstructed Msheireb commercial and residential district.

4.6.3. Conservation Project Approach

All of the four projects share a common vision: reviving a landmark historic district of the city thorough carrying the architectural and cultural heritage to the future generations. However, there are significant differences between the scopes of the projects and the adopted approaches.

Darb Al Ahmar Conservation is a long-term project, whose scope is to rehabilitate an entire district, which is diminishing in all aspects, with a holistic view. Among the four areas studies, Darb Al Ahmar is the only one, where a big population of residents still exists. Therefore, the project targets not only rehabilitating the buildings and streets, but also enhance the lives of its residents by creating employment opportunities, preparing a more livable city, giving grants for starting new businesses thorough the micro-credit program, and providing education. This long term ambitious project started in 1997 with the construction of the Al-Azhar Park, which is at the east end of the Darb Al Ahmar Area. The project is officially named as the Al Darb Al Ahmar Revitalization Project (ADAARP). In 2000, Phase I of the project started with monument restoration. This is followed by Phase II in 2005 and Phase III in 2010.

Conservation and rehabilitation of historic buildings was one of the major pillars of Darb Al Ahmar Project. First, the formerly buried 12th century Ayyubid Wall was excavated. It was rehabilitated with its gates, towers, chambers, and interior galleries. Currently, it serves as the gate to Darb Al Ahmar from Al Azhar Park. The project includes the restoration of three historic buildings: the 14th Century Umm Sultan Shaban Mosque, the Khayrbek Complex, which includes the Alin Aq Palace palace, a mosque and an Ottoman house, and Darb Shoughlan Madrasa (school). In addition, the historic monuments in the area are restored. These restorations required an extensive preliminary research. A multidisciplinary team of historians, archeologists, conservators, foreign and local consultants studied Mamluk and other civilizations ruled in the

area. Especially, the minaret structures are studied carefully. Condition surveys and structural stabilizations are done and the learnings are documented. A major feature of the conservation efforts is that the buildings are restored according to their original in order to reuse them with their original functionalities. This helps integrate those historic buildings into their original context, enables local community to use and maintain them. The reuse integrates the ‘monuments’ into their context and offers a variety of possible functions in the building that encourages local groups to use them and also to take care of their maintenance.

Al Balad conservation project, like Darb Al Ahmar, aimed to revive an entire district. In contrast to Darb Al Ahmar, the area was merely abandoned by its original residents before the conservation project. This helped ease the execution of the project. Likewise Darb Al Ahmar, Al Balad project had social aspects, however in a slightly different context. Social aspects concentrated on educating and raising awareness in the general population about the value and importance of Al Balad and to emphasize the commitment to strategies of conservation and reconstruction to further prevent the increase of damage to the buildings. Annual festivals, awareness campaigns were organized for this purpose.

Al Balad region is famous for its Roshan houses. They are evaluated comprehensively with their history, design, and relationship with the surrounding area. The historic houses were carefully restored by paying attention to preserving their historic value and authenticity, and to maintain the authentic urban fabric. Even before the start of the housing rehabilitations, a British architect established the inventory of the surviving historic houses; and nearly half of them were designated “buildings of architectural and historical significance”, classified according their level of significances, and recommended for preservation and protection. One of the unique features of Al Balad Conservation Project is the empowerment of the original owners and the residents of the buildings to take the lead role in restoration activities so as to ensure the authenticity of

restoration. Building owners and residents were provided with incentives that they could convert the ground floors of the buildings for commercial use.

Another aspect of the restoration interventions is ensuring the construction methods and materials respect the authenticity of the buildings. The legal framework for this is provided by the new Antiquities, Museums and Urban Heritage Law along with the new Urban Regulation. In addition, a training program was designed to teach the local artisans how to recreate traditional architectural elements in plaster and wood. Similar programs were also implemented in Darb Al Ahmar Project.

While many historic houses are restored for reuse with their original function, the same is not true for the landmark historic houses. For example, Nasseef House is converted to a public library and a museum to display historic artifacts of Old Jeddah, Jokhdar House will be a social center for the old city residents. Unlike Darb Al Ahmar, Al Balad Region Conservation Project also aims to recreate the region as a lively tourist attraction along with its residential and commercial use.

Both Darb Al Ahmar and Balad projects are executed in districts, where social life actively continued. Therefore, their execution spanned a long-time period. This has both advantages and disadvantages. The main advantage is that residents were involved in the projects. The negative side is the projects' taking very long time and this disrupted the daily life in those areas. On the contrary, Souq Waqif and Msheireb Heritage Quarter Conservation Projects were more compact, short term, and executed after emptying the region. Choosing this approach was feasible for these two projects because the regions were small and almost abandoned.

Like Darb Al Ahmar and Balad, conservation projects in Souq Waqif and Msheireb Heritage Quarter aimed at restoring the buildings by respecting their authenticity and original built architecture. In Souq Waqif, surviving buildings in the Old Souq area were restored respecting

their authentic materials and architectural identity. However, Souq Wakif work for characterizing the buildings merely relied on research of one person rather than a multidisciplinary teamwork. In addition, Souq Waqif project did not only include reconstruction of the diminished and destroyed buildings; it also included the construction of new ones to complement the authentic ones. This was achieved through illustrations of the local Qatari artisan and his vision for reviving the souq in order to carry the unique Qatari heritage to future generations. In this regard, the project went beyond only rehabilitation of the diminished built structures, and achieves a newly created setting that reflects the heritage value by stretching the existing architecture and urban fabric. The newly created Souq Waqif concept successfully harmonizes souq's original role as a trading center with its authentic stores with its new role as a center for social activity and as a tourist attraction with its line of restaurants, souvenir stores, and art galleries.

Mohammed Bin Jassim Quarter Conservation Project in Msheireb follows a similar research methodology to the Darb Al Ahmar Project. Msheireb Properties, the main contractor of the project, conducted a three-year long research work to study Qatari architecture and alternative urban planning approaches from the world. In the Heritage Quarter, the four landmark houses were restored by successfully respecting the original architecture and urban fabric. Like in the Souq Waqif project, new buildings are added in this area in order to complete a cultural heritage museum theme.

Unlike the other projects, Msheireb Heritage Quarter will only be used as a museum and will not include any residential or commercial use. This will not allow the reuse of built structures with their original purposes. However, the Heritage Quarter Project cannot be thought independently from the entire Msheireb Downtown Project. The rest of the Msheireb Downtown project includes residential and commercial districts nearby the heritage quarter. The built structures in the other quarters of the Msheireb Downtown not necessarily comply with the authentic

architectural and urban fabric; instead, they include high-rise modern buildings, which conflict with the original urban fabric of the area. However, despite the high-rise buildings and modern structures, Msheireb Downtown contains several architectural and urban characteristics of the Arab city. For example, the streets were inspired by the Sikkats, the shaded zigzagged narrow alleyways squeezed in between the high walls of private houses, of the Arab city. This street structure allows a cool atmosphere for the pedestrians even during the hot summer periods. The high buildings protect the people from direct sun light exposure. In addition, local stones are used on the exterior walls of some buildings in the area.

One of the important objectives of the conservation projects for heritage areas is to facilitate its integration with the surrounding. Msheireb Heritage Quarter is surrounded on two sides by the Amiri Diwan and Souq Waqif, both of which represent the Qatari architecture and culture. However, the west and south of the Heritage Quarter, the reconstructed Msheireb Downtown will have a more modern look.

Both Souq Waqif and Msheireb Heritage Quarter projects did not include cooperation and collaboration of the residents, as much as the other projects did. While in terms of management, this helped the projects progress in a more coherent way; it also has major drawbacks as the projects rely on the opinion of a small group. Apparently, contribution of local community was more central for the other two projects, which aimed to improve the quality of life of those people who lived there.

4.6.4. Project Governance

Different project governance and execution models are observed in each studied project. All phases of the ADAARP (Darb Al Ahmar) were administered through a partnership public-private

partnership. According the Aga Khan, the president of the AKTC, the non-profit private organization undertook the ADAARP, "public-private partnerships can be effective mechanisms for enhancing the value of underused, unappreciated or even unknown social, cultural and economic assets," (Archnet, 2016). ADAARP also received donations from many international NGOs such as Swiss Egyptian Development Fund, the Ford Foundation, the World Monuments Fund, the French Institute of Archaeology, the city of Stuttgart, and the Social Development Fund.

Another important aspect of the ADAARP is the involvement and contribution of residents. The project also contributed to the welfare of the residents. Microfinancing, the grants and loans provided to the residents were used to generate new businesses and restore their houses, and the apprenticeship programs and vocational trainings were the effective mechanisms that facilitate this involvement and mutual benefit.

Overall, ADAARP is an exemplary project in the aspects of achieving public-private cooperation, securing support of national and NGOs, and ensuring contribution of the residents throughout the project.

The administration of Al Balad Project has some similarities and differences. Conservation efforts in Al Balad region are more than 40 years old. The first attempts were initiated by Jeddah Municipality with the start of an awareness campaign about the region's heritage value. The municipality aimed at reviving the region as both residential and touristic area. The next two decades witnessed the first era of house restorations with the involvement of Jeddawi architects and historians.

The endorsement of the process of nomination of Al Balad for UNESCO's World Heritage List has completely changed the nature of conservation efforts and institutionalized them. The

conservation efforts were coordinated so as to comply with the requirements of World Heritage List nomination. The nomination mainly led to the following changes that governed the administration of the conservation project:

First, the city's administrative structure has been modified; A new branch of the municipality, Al Balad, was established. This office enabled the central government's role in the project. This is followed by the establishment of Municipality of Historic Jeddah, which would coordinate with the central government. Considering the power of central governments in the Middle East countries, this helped boost the conservation project.

Second, the cooperation of public and private sectors has become a major element for the success of the project. Similar to ADAARP, house owners were given incentives to restore their own buildings. This helped participation of all stakeholders in the project. In addition, strategies were devised to encourage citizens to live in Jeddah Historical Area in order to maintain the social and cultural characteristics of the Saudi society.

Contrary to Darb Al Ahmar and Al Balad, the management of Souq Waqif and Mohammed Bin Jassem Heritage Quarter Conservation Projects were more centralized. Both projects had strong support of the government. The Emir of Qatar and His wife personally pioneered the conservation of Souq Wakif and Msheireb Heritage Quarter, especially the souk.

Souq Waqif Project was designed by a Qatari art designer, whose illustrations of the story telling the traditional Qatari society daily life inspired the Emir and the design of the Souq Waqif reconstruction was awarded to him. The Private Office of the Emiri Diwan was the main contractor of the project. Before the start, the stores and buildings were purchased from the original owners by the government. This enabled the government to be the sole authority in the entire project. Such an administrative structure provided significant convenience to the project

execution. The decision-making process was shortened and the project could be completed in a considerable short time. Nevertheless, this administrative structure hindered the involvement of the local community in the design.

Finishing on time was an important goal of the Souq Waqif Project. At certain times, this has led to decisions, which conflicted the original purpose of recreating the buildings with respect to their originals. In some extensions, cement and concrete was used instead of traditional materials because acquiring those original materials was a length process. Fortunately, this has attracted the critics of the professionals and the community. Moving from these critics, the Emir personally intervened and mandated the use of traditional materials. This example also shows that even though there was no direct community involvement as in Darb Al Ahmar and Al Balad, the community was not disconnected totally from the project; they were able to raise their opinions and concerns and these were sincerely taken into consideration.

Msheireb Heritage Quarter Project is also contracted to a single company, Msheireb Properties, which is in fact a subsidiary of a government organization, Qatar Foundation. Thus, it is possible to see the strong dedication and control of the central government in this project. Similar to Darb Al Ahmar, Msheireb Properties conducted a three-year research study prior to the start of the project, about the cultural, architectural, and urban heritage of Qatar. This study gathered together multidisciplinary teams of professionals and researchers.

It is once again noted that Msheireb Heritage Quarter Conservation Project is one part of a bigger project that consists of five distinct quarters. Although it has a cultural heritage conservation theme, the other parts do not. Instead the other parts aim to revive the Msheireb Area as a commercial, residential, and social district with apartments, retail spaces, hotels, restaurants and cafes.

One of the main drivers of the Msheireb Downtown Project is its claim to be a sustainable conservation project. It aims to integrate the Qatari architecture with a sustainable, functional, and modern urban development. All buildings are expected to have the Leadership in Energy and Environmental Design (LEED) certification. LEED is one of the popular green buildings certification programs developed by the United States Green Building Council. It includes a set of criteria and rating system for design, construction, operation and maintenance of buildings. Therefore, the entire Msheireb Downtown Project needed to be structured around this certification program. According to the inhabitat.com report, the developer claimed that the entire area will emit 110,000 tons less greenhouse gases compared to the conventionally built structures of the same scale (Msheireb Downtown Doha, 2016).

4.6.5. Socio-Cultural Impact

Social dynamism is a prerequisite for a successful urban conservation project. If the area remains deserted after the completion of the project, it cannot be maintained properly; and hence the cultural heritage cannot be sustainably conserved. Ensuring social dynamism, the area will remain as a lively district, relates to the scope of the project. On the other hand, the scope of the projects should be appropriate for the project location and demographics of the area. For the case of Darb Al Ahmar, for example, the area was already inhabited before the start of the project. Although many buildings were demolished or damaged, it was still an active district of Cairo. Therefore, the project theme centered on the goal of improving the lives of residents. Alongside of reconstructing the historic monuments and buildings, housing rehabilitations and construction of public spaces to enrich the social life were other aspects of Darb Al Ahmar Project. Participation of the residents was encouraged in the housing rehabilitation processes through housing loans. A

similar approach is observed in Al Balad Project. In Al Balad instead of loans, building owners were given other commercial incentives. All of these incentives aimed at maintaining the residents and even bringing back those who had left these districts.

One of the key lessons here is that if the conservation district contains large sectors of residential use and people are already living in those places, the project should provide sufficient incentives to attract the residents' participation in the conservation efforts and to attract more population. On the other hand, different approaches should be developed if the area has already been abandoned. In the case of Msheireb Heritage Quarter, there were only a handful of historic houses, which were already deserted; it would not have been possible to revive it as a residential district again. In the case of Souq Waqif, the area was essentially a commercial district. Therefore, the scopes of these conservation projects were different from the former two. Souq Waqif aimed at reviving the area as a major social and touristic attraction with shops, souvenir stores, restaurants, cafes, and art galleries; whereas the Msheireb Heritage Quarter Project tried to reach the same aim using a museum theme. As a completed project, it can be argued that Souq Waqif Project was successful with this scope; but it is too early to reach to a conclusion about the success of the Heritage Quarter Project in this regard. The success of Souq Waqif Project suggests that a carefully planned and implemented conservation project with a proper scope would help maintain the social dynamism.

4.6.6. Summary of the Comparative Analysis

Table 4-1 shows the summary of similarities and differences between each case study.

Table 4-1

Summary of Comparative Analysis of Projects

Project	Category	Location	Types of Intervention	Current Situation	Types of Use	Project Governance
Darb Al Ahmar	Regional	Cairo/Egypt	Restoration Rehabilitation	Not Completed	Mixed Use	Government and Local
Al Balad	Regional	Jeddah/KSA	Restoration Rehabilitation	Not Completed	Mixed Use	Government and Local
Souq Waqif	Local	Doha/Qatar	Restoration Rehabilitation Rebuilding	Completed/2010	Mixed Use	Government and PEO
Msheireb Heritage Quarter	Local	Doha/Qatar	Restoration	Completed/2016	Cultural	Government And Msheireb Properties

4.7. Summary

In this chapter, first, the case study selection criteria were explained. Then, these four case studies were evaluated based on their location, historical background, significance of area, conservation project and their physical and non-physical aspects. At the end of the chapter, the projects are compared to each other and their prominent project features were assessed. Insights gained from the comparative analysis are utilized to develop the principles for urban conservation projects for historic districts of Qatar. These principles are developed in the subsequent chapter.

CHAPTER 5. PRINCIPLES FOR SUSTAINABLE URBAN CONSERVATION PROJECTS IN HISTORIC DISTRICTS OF QATAR

The international charters and the four projects studied in this thesis provide useful insights for developing a framework for preparing urban conservation projects, which aim to preserve heritage value and revitalize the deteriorating districts. Based on the insights from the studies, a set of principles is proposed in this thesis.

The differences in scopes, conservation approaches, management and execution styles, and social impacts of projects depend on their objectives and sizes, and the project location and its type of use of. Appropriate guidelines can be deduced by considering all of these factors.

5.1.1. Conservation Approach

Burra Chapter focuses on describing and the defining the cultural significance of the area. Parallel to this philosophy, in Al Balad project, a big effort was spent on preparing the inventory of buildings of heritage value. On a similar account, three years of research work has been done before starting the Msheireb Project. These examples show that *it is a preliminary mandate to explore and identify the cultural significance and heritage value of the area and its buildings and monuments before starting a conservation project.*

The main essence of all of the studied charters and conservation projects studied is to conserve the authenticity of the urban structure and heritage. Venice Charter underlines that built structures get their values not only because they are great art work but also they have heritage value. Burra Chapter suggests that utmost care should be given to retain the cultural significance of the area. The examples of how careful attention was given to conserve the authenticity and heritage value are evident in the studied projects. In Darb Al Ahmar, for example, the Ayyubid Walls are unveiled and restored during the construction of the Al Azhar Park. In Al Balad, the most significant authentic element is the Roshan

houses, which were carefully restored. Souq Waqif was reconstructed by preserving the traditional “souqs” of the Arab city. The houses in Msheireb Mohammed Bin Jassim Heritage Quarter are restored according to their originals. The guidelines developed in this thesis also emphasize this important principle that *the projects’ focus should be to conserve the authenticity and the heritage value of the region.*

On the other hand, *it is crucial for a project to follow a scientific and a systematic approach for the conservation of urban heritage. One of the safest ways of ensuring this is to adopt the principles outlined in international charters on heritage conservation, presented in 3.5. . Doing urban conservation projects under programs such as nomination for World Heritage List can also help ensure heritage conservation, because these programs typically require that the projects follow principles outlined in adopted charters.* Moreover, such programs also provide institutional support and an independent monitoring of the entire project execution. However, not every project can be done under those programs. For example, the area should have significant heritage value to be nominated for the World Heritage List.

5.1.2. Project Governance

Projects may have different governance structure, which also depends on the political regime in the countries and the time period the projects were undertaken. Darb Al Ahmar project has started as the rehabilitation of the Al Azhar Park and the project was awarded to Aga Khan Trust for Culture, a private, non-denominational, philanthropic foundation. Al Balad Project was undertaken merely by the government, through the local administration. Souq Waqif Project was administered by the central government through the Private Office of the Emiri Diwan. Msheireb Heritage Quarter Project is part of a bigger project and is undertaken by a private company. *It is observed that an urban conservation project*

can be successfully completed under various governance structures. Appropriate management strategies should be identified and followed thoroughly for the selected governance structure.

Although alternative governance structures can be adopted, *the coordination of various stakeholders for heritage conservation is important for a successful urban conservation project.* In Al Balad Project, a successful coordination between the central government and municipality. A new administrative unit is formed to plan, control, and monitor the project. Burra Charter points to the importance of management of the projects in successfully retaining the cultural significance. The charter also suggests the involvement of various stakeholders within a carefully designed coordination framework. As noted in (Boussaa, 2014), *Qatar Museums can have a central role in such projects in Qatar and be responsible for coordinating other bodies including Ministry of Municipality and Environment, The Private Engineering Bureau, Public Works Authority (Ashgal), Qatar Tourism Authority, various heritage associations, professional societies for engineers and architects, and researchers.*

The design of the Souq Waqif project was awarded to a Qatari artist, who had studied the history of the area and architectural characteristics of the buildings. Msheireb properties, the contractor for the Msheireb Heritage Quarter Project, cooperated with experts from all over the world and made extensive research for three years in order to characterize the buildings with heritage values and ensure that the project represents the true spirit of traditional Qatari Architecture. *It is important for Qatar that the knowhow generated during these projects are consolidated for future projects. Moreover, Qatar does not currently have a national charter for urban heritage conservation. The Law on the Antiquities is not comprehensive enough to establish the necessary standards and principles. Using this knowhow, Qatar should develop its own national charter.*

An important aspect in the governance of urban conservation projects is to facilitate the participation of the residents of the area and local experts. In Darb Al Ahmar, this was achieved through involving the residents in restoration jobs by providing them vocational training. This has also helped improve the economic prosperity of the residents. In Al Balad, the owners of the buildings were given incentives to

renovate their buildings. In Souq Waqif project, a local artist played a central role in the design of the project. *Involving the residents and building owners will help socially and economically revitalize the area.*

5.1.3. Environmental Aspects of Sustainability

As stated in the Venice Charter, the scope of conservation is not limited to only preserving the authenticity but to sustain the heritage value to future generations. As it will be iterated in the next section, this is possible if the conservation project can revive the area and bring social dynamism. However, as sustainability and energy efficiency are becoming more and more important each day, sustainable and energy efficient buildings and urban settlements are replacing those that are not. Therefore, *sustainability should always be in the core of conservation projects in order to ensure that these areas are revitalized and people will prefer to live and/or work there.*

Msheireb Project sets an example of a sustainable urban conservation project. The designs of the buildings, streets, and open spaces, and the types of built materials ensure energy efficiency and are appropriate for Qatar's climate. For each building, a set of key environmental principles was prepared and applied as presented in Section 4.5.4.1.1. . In addition, the street designs were inspired by the Sikkats, the shaded zigzagged narrow alleyways squeezed in between the high walls of private houses, of the Arab city. This street structure allows a cool atmosphere for the pedestrians even during the hot summer periods. Similarly, in Souq Waqif, the roofs of the souqs are built using bamboo poles bound by matting of clay and straw; and traditional insulation methods are used to protect the interior from excessive heat instead. These examples show that, *the traditional elements of Qatari architecture and Old Arab City have proved to be energy efficient and sustainable especially under the harsh climate conditions of the region. Therefore, such elements should be effectively utilized in order to improve sustainability.*

5.1.4. Social Aspects of Sustainability

Social dynamism is a prerequisite for a successful urban conservation project aiming at sustainably conserving the cultural heritage. If the area remains deserted after the completion of the project, it cannot be maintained properly; and hence the cultural heritage cannot be sustainably preserved. Ensuring social dynamism, in other words, ensuring that the area will remain as a lively district, relates to the scope of the project.

On the other hand, *the scope of the project should be appropriate for the project location and demographics of the area.* For the case of Darb Al Ahmar, for example, the area was inhabited before the start of the project. Although many buildings were demolished or damaged, it was still an active district of Cairo. Therefore, the project theme centered on the goal of improving the lives of residents. Alongside of reconstructing the historic monuments and buildings, housing rehabilitations and construction of public spaces to enrich the social life were other aspects of the Darb Al Ahmar Project. Participation of the residents is encouraged in the housing rehabilitation processes through housing loans.

A similar approach is observed in the Al Balad Project. Building owners were given commercial incentives in order to ensure their involvement and to bring them back. This is also emphasized in Washington Charter. Burra Charter indicates that the contribution of all of the stakeholders will contribute to the care of the site. One of the key lessons here is that *if the conservation district contains large sectors of residential use and people are already living in those places, the project should provide sufficient incentives to attract the residents' participation in the conservation efforts and to attract more population.*

If the area has already been abandoned, different approaches should be taken in order to ensure social dynamism. In the case of Mohammed Bin Jassim Heritage Quarter, there were only a handful of historic houses, which were already deserted; it would not have been possible to revive it as a residential district again. On a similar account, in the case of Souq Waqif, the area was essentially a commercial district. Therefore, the scopes of these conservation projects were different from the former two. Souq Waqif

aimed at reviving the area as a major social and tourist attraction with shops, souvenir stores, restaurants, cafes, and art galleries; whereas the Mohammed Bin Jassim Heritage Quarter Project tried to reach the same aim using a mono-functional approach, museums. The success of Souq Waqif Project suggests that *the careful conservation of the authentic urban and architectural fabric with a proper scope would help maintain the social dynamism.*

5.1.5. Type of Use

Darb Al Ahmar was a mixed-use district mainly with residential buildings and ornamented with historic monuments and mosques. The types of use have not changed after the rehabilitation work. The area remained as a residential district. Al Balad had a similar case, as well. It was a mixture of residential and commercial buildings, which remained the same after the rehabilitations. However, a major difference was in the functionality of the rehabilitated historic buildings. Historic buildings of Darb Al Ahmar are reused with the same purpose; but the most famous historic houses in Al Balad were converted for other functions.

An important consideration here is *to decide on what heritage value does the conservation project aim to preserve*. In Darb Al Ahmar, the district itself with its architectural and urban fabric had the heritage value. In Al Balad, the most important heritage element was the Roshan houses. While many Roshan houses are rehabilitated for reuse, the important ones are converted to museums and libraries in order to attract visitors and provide them with information about the history and culture of the city. A similar approach was followed in Mohammed Bin Jassim Heritage Quarter. Rehabilitated houses were converted to museums to display the traditional Qatari architecture and life style and the historical progress of the country.

In Souq Waqif Project, an entire market place is reconstructed; thus, the rehabilitated buildings were reused with the same purpose which is a major social and tourist attraction. In addition, a concept of a

pedestrian street of restaurants, cafes, and art galleries was integrated to the market place. This helped Souq Waqif become a living place, far beyond a dull open-air museum.

Burra Charter emphasizes that change must be as little as possible. Applying this principle to formulating the type of use, an important consideration is that *the original type of use should be retained where possible.*

A key lesson here is that *the decision for how the restored buildings will be reused is a strategic decision, which needs to be planned with a holistic approach by considering the functionality of the entire area and surrounding and what heritage value will be emphasized.*

5.1.6. Building and Open Spaces Rehabilitation

The urban fabric of an area is the combination of the built structures, walkways, streets, and open spaces. In Souq Waqif and Msheireb Heritage Quarter Projects, rehabilitation of built structures and open spaces were designed in a holistic and integrated manner. For example, the four traditional houses in Msheireb are renovated according to a thematic structure. The importance of taking a comprehensive approach is also emphasized in the Washington Charter, which says that the relation of the buildings with the streets, open spaces, and other built structures should be considered concurrently in order to conserve the urban fabric. *Therefore, an important principle that is suggested in this thesis is to plan and design an urban conservation project in a comprehensive manner, not as a combination of building restoration projects.*

Houses, mosques, souqs, and other built structures are the main actors of the heritage value. In Al Balad project, first, the inventory of buildings of significant heritage value is created. Then, 3D models of important buildings are made. In ADAARP, incomplete parts of the partly diminished buildings are characterized by experts. The information about the buildings before and after restoration was documented in both projects. In Msheireb Heritage Quarter Project, a group of experts from all over the world made extensive research for three years. All of these are examples of how scientific methods are

utilized in conservation projects. Athens and Venice Charters also emphasize the use of scientific methods. Washington Charter emphasizes the documentation of all conservation efforts. Based on these, this thesis proposes that *scientific methods should be used during the planning and execution stages of building restorations and information about the buildings should be documented carefully.*

In all of the studied conservation projects, building restorations were done carefully by respecting their original plans, built materials, and construction methods. In Souq Waqif project, cement and steel were used when needed during renovations and the walls are rebuilt using only natural stone and clay. Before the project had started, some early interventions had added air conditioning equipment. These were also taken out and traditional methods for ventilation were utilized. In fact, Venice Charter, Burra Charter, and Washington Charter emphasize this principle that the restoration of buildings and monuments should be done using the original materials and construction methods, whenever possible. SPAB Manifesto takes even a further step and states the “minimum intervention” as the main principle. This thesis emphasizes this important principle for built structures rehabilitation that *the use of original materials and construction methods should be enforced wherever possible. The restorations should be planned so as to ensure minimum intervention on the heritage building.*

On the other hand, as stated in the Venice Charter and Washington Charter, the purpose for restoration is not only to preserve the authenticity; but more importantly, to conserve it so that it can sustain to the next generations. Therefore, *contemporary built materials and construction methods can be used in order to ensure that the built structures can sustainably survive for long time. However, the materials should be appropriate with the character of the building.*

5.2. Summary

This chapter put forward the main research outcome of the thesis: the principles for future urban conservation projects in Qatar's historic districts. The principles are derived from literature study, mainly from the international charters, and the study of the selected urban conservation projects. The principles derived in this chapter section are presented in the following list:

Conservation of Authenticity and Heritage

- P1.1** It is a preliminary mandate to explore and identify the cultural significance and heritage value of the area and its buildings and monuments before starting a conservation project.
-
- P1.2** The focus should be to conserve the authenticity and the heritage value of the area.
-
- P1.3** A scientific and systematic approach should be followed for the conservation of urban heritage. Adopting the principles outlined in international charters on heritage conservation and executing the projects under programs such as nomination for World Heritage List can facilitate following a scientific and systematic approach.
-

Project Governance

- P2.1** An urban conservation project can be successfully completed under various governance structures. The structure of the project governance is not the sole determinant of the project's success. Appropriate management strategies should be identified and followed thoroughly for the selected governance structure.
-
- P2.2** Coordination of various stakeholders for heritage conservation is important for a successful urban conservation project.
-
- P2.3** Qatar Museums should have a central role in such projects in Qatar and be responsible for coordinating other bodies including Ministry of Municipality and Environment, The Private Engineering Bureau, Public Works Authority (Ashgal), Qatar Tourism Authority, various heritage associations, professional societies for engineers and architects, and researchers.
-

P2.4 The knowhow generated during the earlier conservation projects in Qatar is important future projects. This knowhow should be documented and preserved. Qatar does not currently have a national charter for urban heritage conservation. The Law on the Antiquities is not comprehensive enough to establish the necessary standards and principles. Using this knowhow, Qatar should develop its own national charter.

Environmental Sustainability

P3.1 Sustainability should always be in the core of conservation projects in order to ensure that these areas are revitalized and people will prefer to live and/or work there.

P3.2 Traditional elements of Qatari architecture and Old Arab City have proved to be energy efficient and sustainable especially under the harsh climate conditions of the region. Therefore, such elements should be effectively utilized to improve sustainability.

Social Sustainability

P4.1 Social dynamism is a prerequisite for a successful urban conservation project aiming at sustainably conserving the cultural heritage.

P4.2 The scope of the project should be appropriate for the project location and demographics of the area.

P4.3 If the conservation district contains large sectors of residential use and people are already living in those places, the project should provide sufficient incentives to attract the residents' participation in the conservation efforts and to attract more population.

P4.4 Careful conservation of the authentic urban and architectural fabric with a proper scope would help maintain the social dynamism.

Type of Use

P5.1 The heritage value that the conservation project aims to preserve must be identified and decided before the start of the project.

P5.2 The decision for how the reconstructed buildings will be used is a strategic decision, which

needs to be planned with a holistic approach by considering the functionality of the entire area and surrounding and what heritage value will be emphasized.

Building and Open Spaces Rehabilitation

P6.1 Urban conservation projects should be planned and designed in a comprehensive manner, not as a combination of building restoration projects

P6.2 Scientific methods should be used during the planning and execution stages of building restorations and information about the buildings should be documented carefully.

P6.3 The use of original materials and construction methods should be enforced wherever possible. The restorations should be planned to ensure minimum intervention.

P6.4 Contemporary built materials and construction methods can be used in order to ensure that the built structures can sustainably survive for long time. However, the materials should be appropriate with the character of the building.

Principles derived here are utilized for preparing a design proposal for urban conservation of Fareej Al Najada, a historic district of Qatar, in the next chapter.

CHAPTER 6. AN URBAN CONSERVATION PROJECT PROPOSAL FOR FAREEJ AL NAJADA

Fareej refers to the traditional urban settlement in the Arab City. It consists of courtyard-style houses secluded with high walls and entry points, which are surrounded by narrow pedestrian streets. In addition to intimate common areas that strategically connect several houses, the neighborhood also includes large gathering areas.

The historic districts have suffered severely from the economic, social, and urban developments in Qatar during the past four decades. Their historic buildings were abandoned or rented by low income workers without considering architectural and cultural values of them. Fareej Al Najada is one of the historic area that became poor and neglected in Doha.

This section presents detailed information about Fareej Al Najada: its location, historical background, significance and current condition.

6.1.1. Location

Fareej Al Najada is located in the Historic Doha. The area is very close to Souq Waqif and Mohammed Heritage Quarter in Msheireb, home to the two urban conservation projects studied in CHAPTER 4. (Figure 6-1). The area is surrounded by commercial streets and next to the future railway station. As shown in Figure 6-2, Fareej Al Najada is connected with a street to Al Asmakh Area, which is the one of the richest historical site of Doha (Boussaa, 2014).



Figure 6-1. Location of Fareej Al Najada (Source: Adapted from Google Maps by Author)

Fareej Al Najada is surrounded by four streets. From North, Ali Bin Abdullah Street separates fareej from Souq Waqif. This street is the of one main connection street for old Doha. Ahmet Bin Muhammed Bin Thani Street is along the South part of fareej. Banks Street, which is the one of the important commercial streets of Doha, from the East of area and Al Asmakh Street is along the West part of the fareej. Fareej Al Najada is behind of Souq Waqif and next to the Al Asmakh Area, another district in the Historic Doha. Al Najada has a street connection to Mohammed Heritage Quarter in Msheireb area, as well.

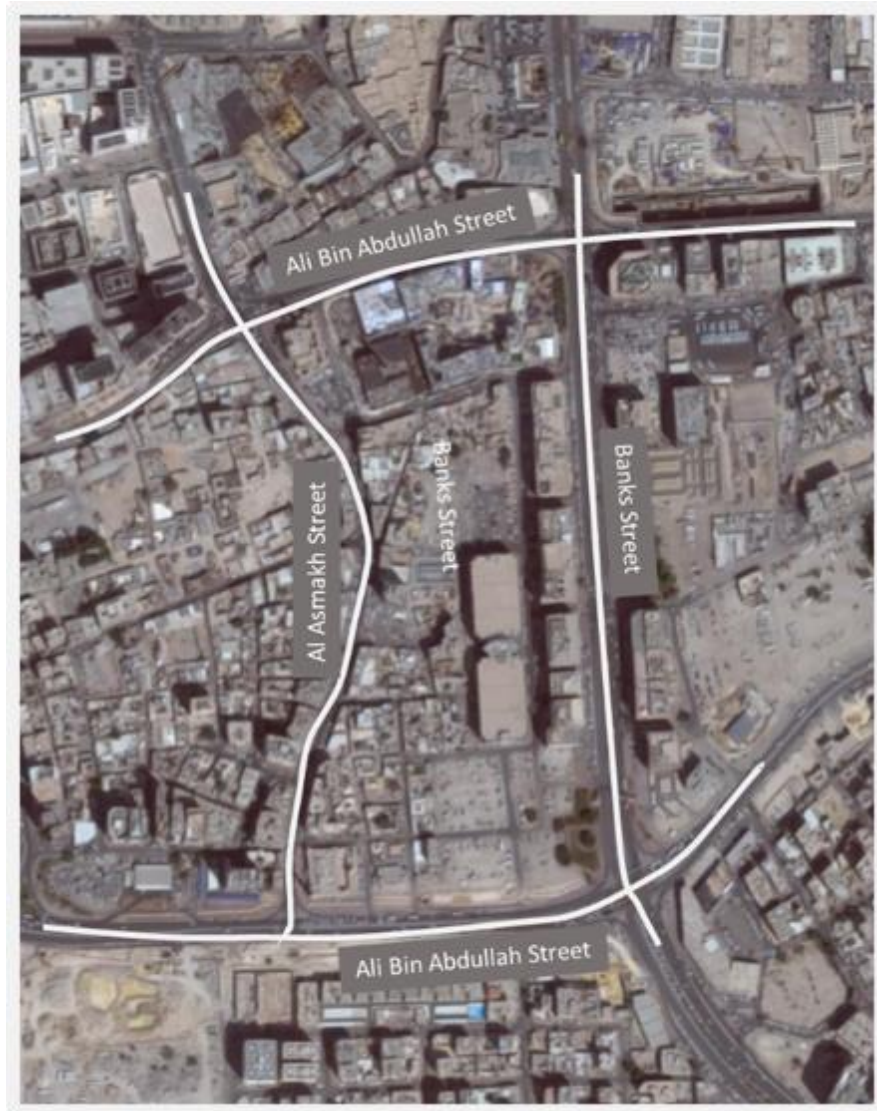


Figure 6-2. Fareej Al Najada (Source: Adapted from Google Maps by Author)

6.1.2. Historical Background of Area

Fareej Al Najada was established by people from originally Saudi Arabia, especially from Al Nejd, central Saudi. In an on-site interview, the owner of one of the old houses said that himself several people coming from Iran settled in this area. He also noted that several members of the Al Emadi family used to live here.

The earliest available maps of Fareej Al Najada date back to 1947 (Figure 6-3). In 1947 map, courtyard houses are shown clearly; but it is difficult to see streets. Probably the connection between buildings was through the alleyways. By 1952, the settlement of Fareej expanded towards south. The number and the density of building increased. Narrow streets became visible in the 1963 map. Roundabouts started to appear in 1970s and the streets and connections between other districts have become clearer in 1970s. Al Najada evolved to its current borders and functionality in 1980s. Red colored areas show existing buildings at that time. In the north, there are a few yellow colored buildings, the first souqs of the area, surrounded by an empty space colored in grey.



Figure 6-3. Evolution of Fareej Al Najada between 1947 and 1973 (Source: MMUP)

Souq in this area expanded in 1990s and more buildings started to fill the empty spaces. New buildings were mostly high rise buildings and they did not carry the architectural character of the other buildings in the area. Fareej Al Najada started to suffer from the negative the effects of rapid urbanization of Doha in 2000s, as the city's main commercial and economic activities have drifted away from Historic Doha to newly built districts. The sons of people who established Al Najada left here and moved to their modern villas in the suburbs of the city. The deserted houses were rented by low-income labors. In 2004, a few houses were restored by Qatar Museums Authority (QMA). During the last 6 years, more historic

buildings were destroyed and demolished due to lack of maintenance, which resulted in the increase of empty areas that are currently being utilized as parking spaces.



Figure 6-4: Evolution of Fareej Al Najada between 1987 and 2012 (Source: MMUP)

A future urban planning map (see Figure 6-5) was prepared by the Ministry of Municipality and Urban Planning (MMUP). According to this map, the pink lines show rail routes, blue colored buildings will remain based on their functions, and green colored areas including the souq will continue to serve their current functions.



Figure 6-5. Future urban Plan of Fareej Al Najada (Source MMUP)

6.1.3. Description of the Area

The size of Fareej Al Najada is approximately 186 thousand square meters. It has multiple types of use with courtyard houses, multi-story apartments, retail stores, mosques, a majlis, a shopping mall, and a parking facility. The area includes old buildings with heritage value as well as newly constructed buildings. In *Figure 6-6* the buildings in dark orange color are the newest ones, and light orange color buildings are slightly older ones. Blue color indicates traditional houses, and purple indicates traditional houses with courtyards.



Figure 6-6. Ages of Buildings in Fareej Al Najada (Source: QMA 2014)

The map in Figure 6-7 shows the building conditions in the area. According to site observations, red colored buildings are new and they do not need any kind of intervention. Pink color indicates the buildings in good condition and light pink indicates decent condition. Light grey colored buildings are in poor condition; whereas the dark grey ones are already collapsed.



Figure 6-7. Building Conditions in Fareej Al Najada (Source: QMA)

The buildings types of use is shown in *Figure 6-8* in the area. The area is surrounded by commercial and mixed use. Inner part is used for residential. Also there is empty spaces and parking inner and the south east part of area.



Figure 6-8. Building Types of Use (Source: QMA)

The area can be divided into two as northern and southern parts. The Souq of Fareej is located in the northern part. Northern part consists of a mix of traditional houses and new buildings, a majlis, and the Al Najada Shopping Mall. Due to collapsing of some traditional buildings, some spaces are empty and they are used now for parking. Southern part is built up more traditional but simple houses, narrow streets, one big mosque and more empty spaces. On the east, Al Aasim Street, which is behind the multi-story parking facility, separates Al Najada from the Bank Street.

The old buildings in the area represent the traditional Qatari architectural fabric. Courtyard houses and sikkats are the main built characters of this fareej. Figure 6-9 shows a view from a courtyard house with arch column. There are two types of courtyards houses, arch column and without arch column. Some of houses have decorated arcades.

Timbers were used on top of roofs, doors, and windows. Decoration style of buildings is another significant element of the area. Detailed decorative parapets are detailed in *Figure 6-9*. Curved gypsum decorations can be seen above the main doors. Windows have rectangular shape and are decorated with colorful glasses.



Figure 6-9. Decorated arcades and parapet (Source: Author)

Decoration style of buildings is another significant element of the area. Curved gypsum decorations can be seen above the main doors and as a window (see *Figure 6-10*). Windows have rectangular shape and are decorated with colorful glasses.



Figure 6-10. Decoration Style of Buildings (Source: Author)

The most famous historic house of area is Mohammed Said Naserallah (see *Figure 6-11*) House which is built in 1920. The house is located north part of Al Najada known as Baharat Al-Juafairy. This house has

the most important Qatari architecture elements which is wind tower. Now it is the center of new mixed used construction.



Figure 6-11. Mohammed Said Naserallah House (Source: QMA)

The first conservation attempts were conducted by Qatar Museums Authority (QMA) in 2004. These actions were limited to restoration of only two selected buildings. *Figure 6-12* building numbering map (*Figure 6-12*) and the restored houses are number 7 and 10. The entrance of another twelve buildings were marked (see *Figure 6-14*) by QMA for future conservation attempts; however, the restoration projects are still waiting for budget allocation.

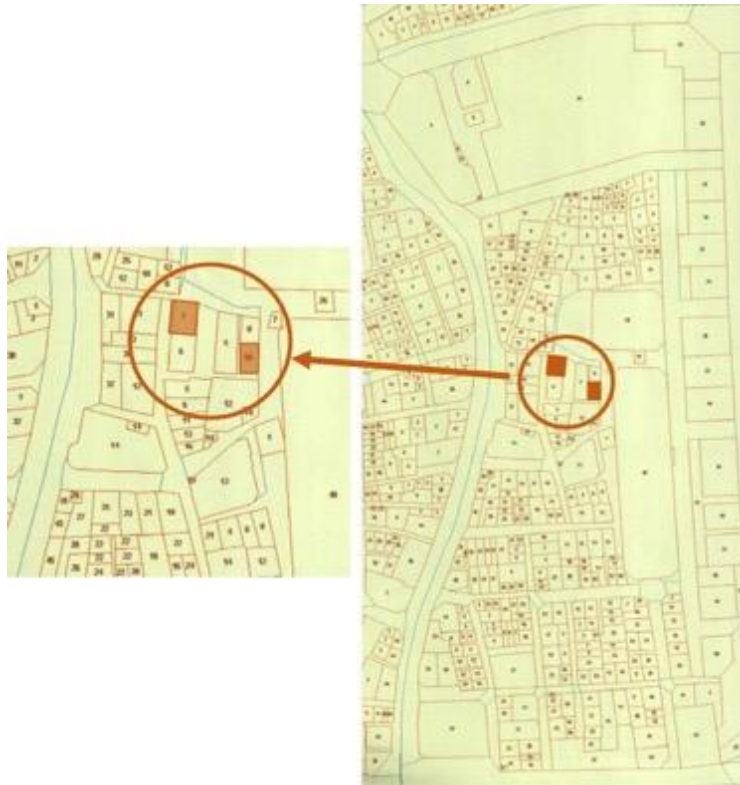


Figure 6-12. Building Numbering Map (MMUP)



Figure 6-13. Building Number 10 During Restoration Work (Source QM)



Figure 6-14. Marked Building (Source: QM)

Today, the area is in a very poor condition due to negligence and lack of maintenance. Houses were rented by low income workers. The houses were divided into multiple residential units by adding extra walls and extra utilities such as toilets and kitchenettes in order to increase the rent revenues, (see *Figure 6-15* for an example.) Additional inconvenient interventions such as shades and balconies (*Figure 6-16*) create a major threat to the original architectural structure of those houses.



Figure 6-15. A Courtyard House Rented by Workers (Source: Author)



Figure 6-16. Shading Element Intervention by Inhabitants (Source: Author)

House doors and windows are mostly damaged, walls are partly or completely collapsed and demolished (Figure 6-17).



Figure 6-17. A Partly Demolished Wall (Source: Author)

Many segments of Al Najada are empty due to collapsing and demolition of the houses and these areas are being used as ad-hoc parking spaces. Pathways between buildings are dirty, broken down and damaged. Due to lack of lighting, street directions and damaged pavements they are not safe for pedestrian. Cars and garbage containers occupied sidewalks instead of planting.

Fareej Al Najada now has become a slum surrounded by the recently rehabilitated Souq Waqif on the north, Msheireb Project on the northeast and the New Al Asmakh under conservation work.

6.2. Methodology for Preparing the Urban Conservation Project for Fareej Al Najada

Based on the principles derived from the review of the charters for heritage conservation, literature about urban conservation, and study of the four urban conservation projects, this thesis proposes an urban conservation project for the Fareej Al Najada of Doha, Qatar.

The methodology for preparing the proposal follows the management framework of Burra Charter as shown in *Figure 3-1*. According to this the project should start with understanding the place and its cultural significance. Then all of the factors should be analyzed as a preliminary work for the design. Following this framework, our methodology starts with a literature search about Fareej Al Najada, to learn its history and to identify its buildings with heritage value. The information gathered is presented in Section 6.1.3. .

Second, in order to identify all the factors a walk-through studies of the area were performed. The observations on the current conditions of the buildings, streets, and open spaces are presented in Section 6.2.3. . During the walk-through studies, on site interviews were conducted with the people living and working there.

Third, a survey was conducted to highlight people's awareness and view about Fareej Al Najada.

6.2.1. On-Site Interviews

During the site visits, interviews were conducted with people who used to live there, the current residents, and shop owners. However, the number of people interviewed was very limited and the interviews were merely ad-hoc conversations with the people the author has met during the site visits. One of the major obstacles against making interviews is the gender of the author and the nature of the residents. During the day time, many parts of Fareej Al Najada is like a deserted place with only a few workers living there. A second obstacle is the language barrier. In order to overcome these barriers, the author visited there with an official from QM.

One person, whom the author met by coincidence during one of the visits, owned a house in Fareej Al Najada and used to live there. He reported that the original owners of the houses would no longer want to live there even if the area is renovated. These people have already adopted the contemporary lifestyle of the Gulf nations, who prefer to live in large secluded villas in the suburbs of the city. In fact, as the person has pointed out, all Qatari home owners have moved to their new residences in other parts of the city. In addition, Fareej Al Najada is now surrounded by commercial activity with bank streets on one side and Souq Al Waqif on the other.

There are several shopping complexes in Fareej Al Najada. The shop owners said that their businesses there are satisfactory and they think a successful conservation project would help uplift their businesses; and thus, they would like to stay and keep their shops.

6.2.2. Survey Study

A survey was prepared and conducted to learn the awareness of residents of Qatar about Fareej Al Najada and to get their opinion about how the area can be revived. The survey questions are given in APPENDIX A. The survey is conducted on surveymonkey.com and 68 people have responded the questions.

The demographics of the respondents presented in Figures *Figure 6-18*, *Figure 6-19*, and *Figure 6-20*. Majority of the respondents are in the young professionals age group, 25-34. This is representative of the Qatar's overall population. 84% of the respondents are women and 16% are men. It should be noted that the survey could have reached out to more men.

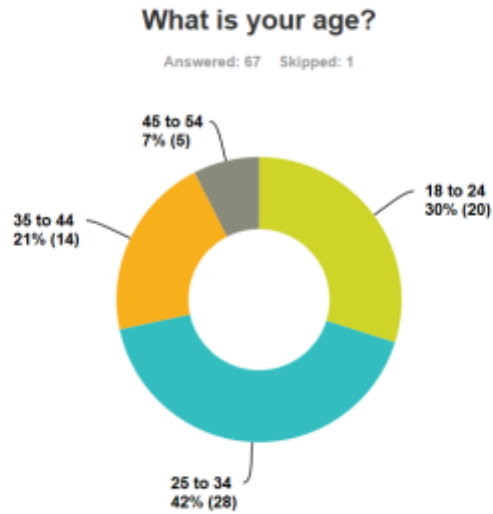


Figure 6-18. Age Distribution of Survey Respondents

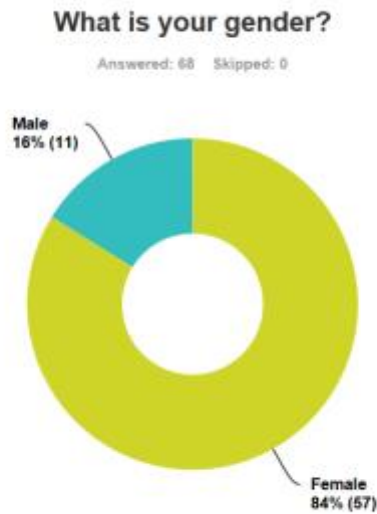


Figure 6-19. Gender Distribution of Survey Respondents

As shown in Figure 6-20, 24% of the respondents are Qatari citizens, and almost two thirds of the rest are Non-Qatari Arabs. This is also representative of the Qatar's overall population distribution.

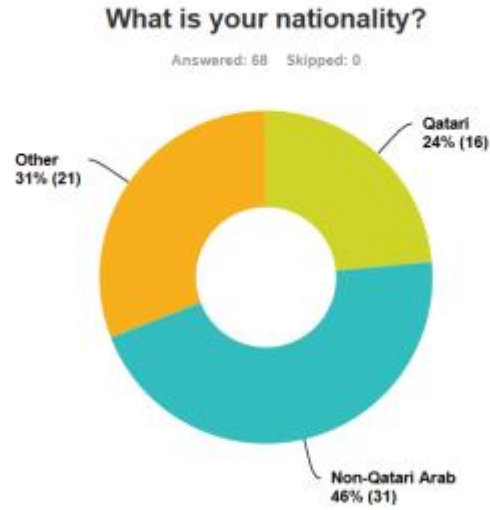


Figure 6-20. Nationalities of Survey Respondents

The first set of questions aimed to explore people’s awareness about Fareej Al Najada. As shown in Figure 6-21, only less than half of the respondents have heard Fareej Al Najada. A further investigation of the survey responses shows that while great majority of Qatari respondents know the area (88%), more than half of the expatriates do not know (57%). Among the expatriates, 71% of the Non-Arabs do not know the area.

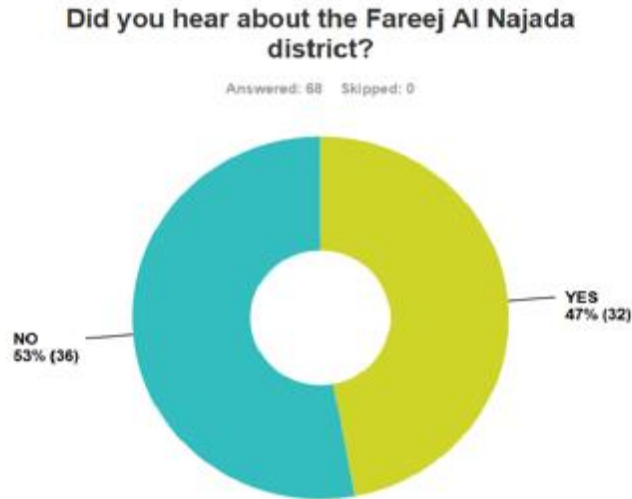


Figure 6-21. Do People Know Fareej Al Najada?

The survey also asked if the people knew the location of Al Najada and the number of times they visited the area. As shown in Figure 6-22, even a greater majority (66%) does not know its location. A surprising result is that about 44% of Qataris do not know the Al Najada's location while most of them heard the name. Even more surprisingly, 80% of the Qatari students responded the survey do not know its location. An overwhelming majority of the Non-Arab expatriates (94%) does not know its location, either. On the same account, 64% of the respondents have never been to Fareej Al Najada. Among Qatari respondents, 38% have never been to the area; and this ratio is 53% and 90% for Arab and Non-Arab expatriates. While only 22% have been to there for more than once, these are mainly architects, engineers, or designers working in the construction industry. This result indicates most people do not go to Fareej Al Najada, except for the ones in construction industry, who probably have been there because of their work.

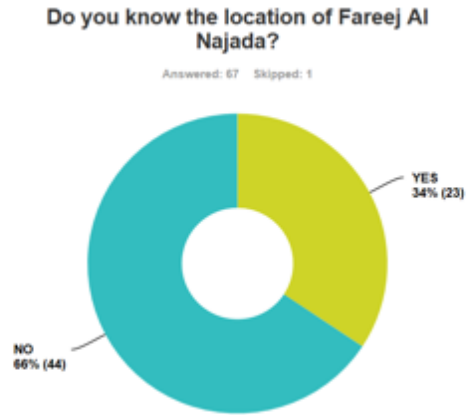


Figure 6-22. Do People Know Al Najada's Location?

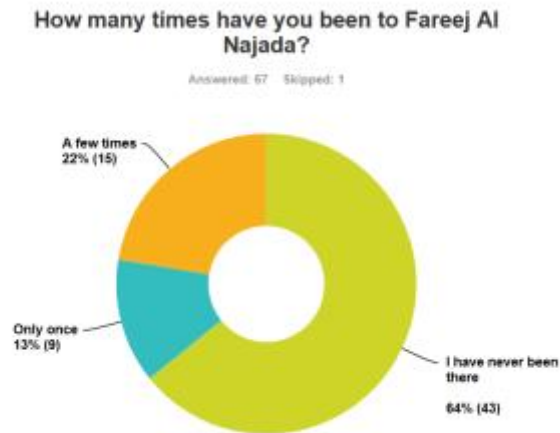


Figure 6-23. Have people been to Al Najada?

The results indicate that, although Fareej Al Najada is in the middle of the city's major attractions such as Souq Waqif and Bank Street, majority of the people do not know about it and have not been to there.

Another question in the survey was if the respondents can name any of the buildings in Fareej Al Najada. The number of responses was significantly low; but the mostly cited building is the Barahat Aljufairi, which was mentioned by three people.

The last part of the survey tries to explore people’s opinion about how the area should be utilized if it goes under a conservation project. The people are asked to rank the four alternatives; residential, commercial, retail, and cultural, in their desired order. The percentage of respondents who preferred it to be a cultural hub as their first choice is 38 (Figure 6-24.) A weighted score is computed based on the ranking preferences; and all four options have similar scores but the preference score for residential and cultural use (2.63 and 2.62) are slightly higher than the commercial and retail (2.43 and 2.42). (Figure 6-25)

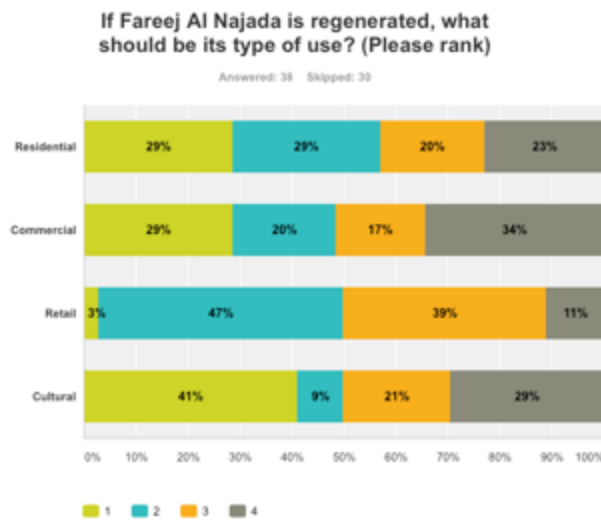


Figure 6-24. Desired Type of Use for Fareej Al Najada

	1	2	3	4	Total	Score
Residential	29% 10	29% 10	20% 7	23% 8	35	2.63
Commercial	29% 10	20% 7	17% 6	34% 12	35	2.43
Retail	3% 1	47% 17	39% 14	11% 4	36	2.42
Cultural	41% 14	9% 3	21% 7	29% 10	34	2.62

Figure 6-25. Type of Use - Weighted Scores

6.2.3. Insights from the Visits, Interviews, and the Survey

It is observed that Fareej Al Najada severely needs a conservation project. It has been dilapidating while many of the nearby areas, e.g., Souq Waqif and Msheireb, have flourished as a result of successful conservation projects. The traditional houses reflecting the Qatari architectural style are under severe threat of being demolished. These houses will not be attractive to the original owners as to become their home as the owners have already moved to their villas in the suburbs; but they can be restored by conserving their heritage values and they can serve with new functions. Other houses and apartments can be either renovated or reconstructed as residential buildings, targeted mainly for expatriates.

With its shopping complexes on the north and the south, Fareej Al Najada is an important retail hub. Obviously, the deterioration of the area affected the businesses there; however, a carefully planned conservation project can help revitalize the economic activity in the area.

The survey results clearly indicate that most residents of Doha do not know about Fareej Al Najada despite its central location. It appears that the area is isolated from the major hubs that surround it, such as Souq Al Waqif, Banks Street, and Msheireb. An urban conservation project can integrate Al Najada with its surrounding; and the area can be an important point of attraction in the Old City.

It is important to note that the number of interviewees and survey respondents is very limited. Moreover, majority of the survey respondents do not know about the area. Thus, relying only on their opinion while proposing a conservation project is not appropriate. Therefore, the conservation project proposed in Section 6.3. is not solely built upon the interviewees' or survey respondents' opinions.

6.3. An Urban Conservation Project Proposal for Fareej Al Najada

Fareej Al Najada has the potential to be a center of attraction in the Historic Doha if it can be regenerated through integrating with its surrounding, Souq Waqif, Msheireb, Al Asmakh Area, and Banks Street. Like other districts of Historic Doha, Al Najada houses historic buildings that reflect the Qatari architectural and urban fabric. Therefore, such a project should also aim at conserving this urban heritage while revitalizing the area.

Currently, Al Najada has a mixed type of use; both residential and commercial. The current residents are mainly the single-living low income male workers. If the project can successfully be completed, the rents in the district will be higher than they could afford. In addition, the original owners of the traditional Qatari houses had long ago moved to their new residential complexes in the suburbs of the city. They prefer living in more secluded suburbs instead of densely populated districts within the city center. Therefore, restoring the old houses with their original types of use is not a viable option. Moreover, Fareej Al Najada is surrounded by dense commercial activity with the Banks Street on the East and Souq Waqif on the North. Residential buildings are mainly located to the east of the area, especially in the Msheireb District. Considering these reasons, the proposed design suggests to convert this area into a commercial and cultural center. This is in line with the principle P4.

As suggested in principle P5.2 the conservation project plan has to have a holistic approach. Therefore, the proposal starts with identifying a vision. The vision of this project is to convert the inner parts of Al Najada, where the traditional buildings are located, into a heritage quarter that interactively presents the

traditional Qatari daily lifestyle, cuisine, and handcrafts, while renovating the buildings on the north and west sides as retail outlets by conserving their authenticity. This vision is in line with principle P1.2 and it will contribute to

- i. Integrate Fareej Al Najada with its surrounding,
- ii. Conserve the area's heritage value,
- iii. Revitalize it as a commercial and cultural hub.

The proposed urban conservation project design aims to contribute to the regeneration of Historic Doha together with the other projects in this district. This coincides with The Washington Charter, which suggests that the area should successfully integrate with other areas of the city.

According to this vision, a sample bloc plan of Fareej Al showing the proposed functions of the buildings and open spaces is prepared by the author and shown in Figure **6-26**.

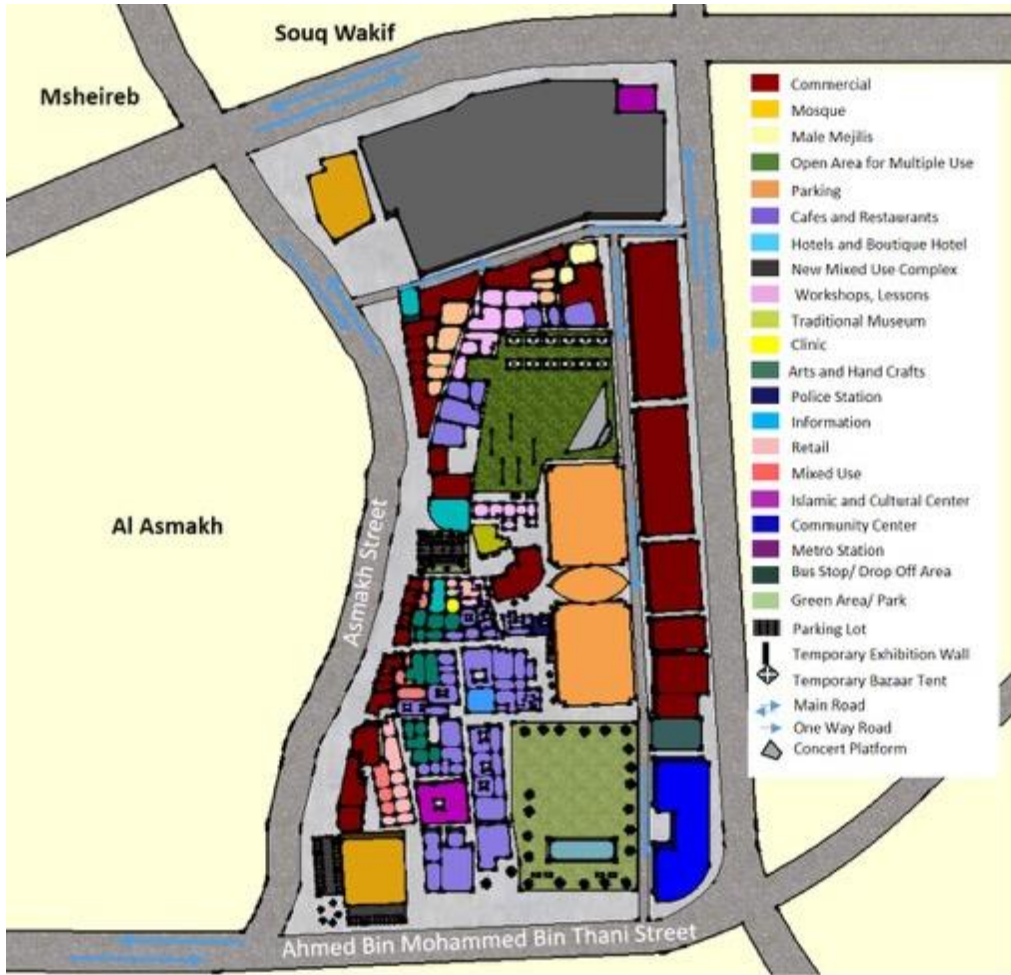


Figure 6-26. Proposed Design of Fareej Al Najada

It is also noted that there are several ongoing restoration projects, especially on the north façade of Fareej Al Najada. A new complex, which includes a hotel, a residence, and a shopping mall, is under construction. This complex is depicted as the large grey block in *Figure 6-26*. As shown in *Figure 6-27*, the new mixed use complex was designed in traditional architectural style. This new complex is kept as is in the proposal. This is in line with principle P6.3, which suggests to retain intervention at minimum.



Figure 6-27. New Mixed Use Complex

In the subsequent sections, the physical and non-physical aspects of the design proposal are presented.

6.3.1. Physical Aspects

The physical aspects of the project have three important elements:

1. Rehabilitation of the retail buildings on the north and west facades.
2. Converting the inner part of Al Najada a cultural heritage quarter through restoration of the traditional courtyard houses with their new functionalities
3. Utilizing the empty areas on the north and south ends as multi purpose open air public areas and car parks. In addition, designating access points for pedestrians.

As suggested in principle P5.2 the type of use for the buildings on the North and West facades is decided according to the functionality of the area and its surrounding. For item 1 it is important to note that the

rehabilitations should be done according to the principles outlined in P6. Converting the inner parts to a heritage quarter by carefully restoring the traditional Qatari houses follow from the principles in P1. Utilizing empty spaces as multi-purpose public areas will contribute to social sustainability. The car parks and designated access points will help Fareej Al Najada integrate with its surrounding as suggested as an important principle in the Washington Charter.

In addition, there are several buildings in need of restoration on the north-east and south-east corners of the area. Design proposals for those buildings are also presented. Finally, a design proposal for traffic and pedestrian walkways is presented.

An important consideration in this proposal is to keep the renovation interventions as low as possible and avoid damaging the existing built structures. The objective here is to conserve the authenticity of the buildings. This is in line with principle P1.2 and P6.3. In section 6.1.3. , the conditions of the buildings are characterized and presented in *Figure 6-7*. The condition of the building will determine the level of intervention. In case a building should be reconstructed, the construction should be in accordance with the building's original plan and built materials, as suggested in principle P6.4.

6.3.1.1. Rehabilitation of Retail Buildings

Retail Stores on the North Facade

The north façade of Fareej Al Najada is the street behind the new shopping complex, and it stretches between Al Asmakh and Bank Streets. The north façade consists of retail stores for fabric, clothes, and furniture (*Figure 6-28*). According to site observations and interviews, the workers are satisfied with the business and they hope that it will improve further after the new complex is opened. Thus, this part of Fareej Al Najada has the potential to attract shoppers. Therefore, it is proposed to renovate the shops on this street and continue using them as retail outlets.



Figure 6-28. Traditional fabric, cloths and furniture shops on the street

Retail Stores on the West Façade

There are several retail stores selling carpets, curtains, and fabrics, furniture repair shops, small restaurants, and grocery stores alongside the Al Asmakh Street (see *Figure 6-29*). In addition, there are two multi story hotels on this façade. As seen from the figure, several traditional buildings are converted to restaurants and stores without respecting the authenticity of the buildings. Moreover, those buildings are not in good condition. Therefore, the proposed plan suggests renovating those buildings according to their original plans and built materials, and keeping them as retail outlets. It is also suggested to move the restaurants on this street to the inner parts of Fareej Al Najada.



Figure 6-29. Shops Through the Al Asmakh Street

Commercial Buildings on the East Façade

The east side of Fareej Al Najada, The Banks Street, is an important commercial hub of Doha. Alongside the street, several bank branches are located. The existing multi stored buildings have modern architectural style and they are in a good condition. They will stay as the same use and they do not need any intervention. Additionally, the multistory parking building located behind the Bank Street is proposed to remain.

6.3.1.2. Fareej Al Najada Heritage Quarter

Figure 6-8 shows locations of traditional courtyard houses in north and south parts of Fareej Al Najada. These areas are proposed to be the center of social and cultural activities under the name Al Najada Heritage Quarter, the red shaded areas in Figure 6-30. While some houses are designed as a cafes and restaurants to attract people others are designed to present the Qatari culture and lifestyle in an interactive manner. The interaction will be achieved through integration of sales of goods and services along with workshops and classes to produce them. For example, a restaurant will both serve traditional Qatari food and offer cooking classes, or a shop will display and sell calligraphic artwork, but also host calligraphy classes by local artists. The activities will include Qatari food, traditional handcrafts, pearling, painting, henna making, abaya design, poetry, music, and calligraphy. A sample illustration of how existing buildings will be converted into shops is presented in Figure 6-31 and Figure 6-32.

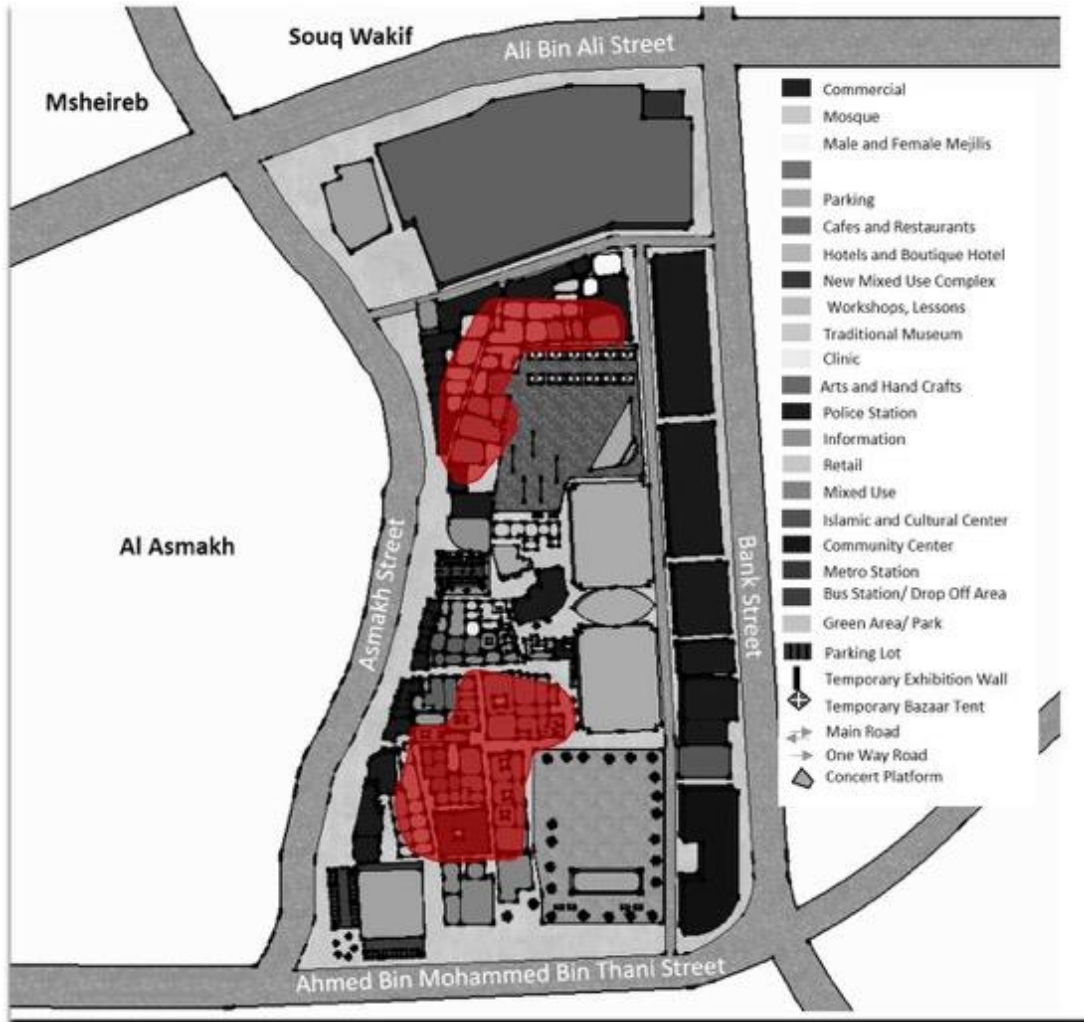


Figure 6-30. Proposed Heritage Quarters



Figure 6-31. A View from Existing Buildings



Figure 6-32. Proposed Buildings for Lectures and Workshops

6.3.1.3. Open Spaces: A Park and An Exhibition Area

There is a large area at the intersection of Ahmed Bin Thani and Bank Streets, the southeast corner of Al Najada, currently being used as a parking lot. This area is proposed to be converted into a park. This park will be an important green space in the heart of Historic Doha. The design of the park includes water features, picnic and resting areas, and a playground for kids. The proposed park is close to mosque and has an easy access from main road.



Figure 6-33. Proposed Green Area

Another proposed open space is in the north. Currently, this space is used as a parking lot. In the proposed design, this space is dedicated as an open-air area, where it can be used as an exhibition or a festival area for cultural events. This area is very close to the rail station and a carpark; yet it is separated from main road, which makes the area easily accessible and secluded from the chaos of the city.



Figure 6-34. Proposed Open Area for Multiple Use

6.3.1.4. Other Building Restoration

Al Bukhari Mosque, the biggest mosque of Fareej Al Najada, is located at the corner of the Ahmed Bin Mohammed Bin Thani Street, the south façade of the area (Figure 6-35). There is one entrance from the main road to the area from this side. This façade has turned into a parking lot due to the empty spaces. A parking lot is necessary in order to accommodate the cars of the visitors and shoppers, as well as the people coming to the mosque for the prayers. Therefore, a parking lot is proposed to the next of the mosque.



Figure 6-35. Al Bukhari Mosque

The building close to the mosque which is named Amna Al Camal House is proposed to be designed as an Islamic Cultural Center. The house dates back 1950s and it is surrounded by walkways on all four sides. The proposed center will be accommodating religious and educational activities such as Islamic

studies, Arabic and Quran lessons, similar to the Al Fanar Islamic Center. The location of the Islamic Center is purposefully selected nearby the mosque in order to make a link between the mosque and the center.



Figure 6-36. Amna Al Camal House Before Intervention



Figure 6-37. Amna Al Camal House After Intervention

Man Majlis

At the corner of North part of area, behind the new shopping complex, there is man majlis, shown in *Figure 6-38*. Despite its poor condition, it is still being used for meetings and prayers. In additions to rehabilitation of man mejilis, the building behind the man mejilis is proposed as a family place, where ladies and children can enjoy.



Figure 6-38. Man Majlis

6.3.1.5. Traffic and Pedestrian Accesses

Fareej Al Najada is easy accessible by car, proposed bus stop and metro station. (See Figure **6-39**)



Figure 6-39. Main Access to Al Najada from Souq Wakif, Msheireb and Al Asmakh

There is only one road for car access in the proposed design, from Al Asmakh Street through Al Aasim Street and it reaches to Ahmed Bin Mohammed Bin Al Thani Street. This is planned as a one-way road. (See Figure 6-40)



Figure 6-40. Access to The Area

The proposed design envisions a pedestrian friendly Al Najada, where motor traffic is highly restricted. Narrow streets, resembling the Sikkats of the old Arab city, will provide shading and air flow during hot weather conditions. For pedestrian safety, streets and open spaces should be lighted and monitored by CCTV cameras. Also sufficient number of street furniture and recycling bins should be located. Figure 6-41 shows a current view of a street in the area and Figure 6-42 displays an illustration of its proposed design.



Figure 6-41. An Existing Street View



Figure 6-42. A Proposed Street View

6.3.2. Non Physical Aspects

6.3.2.1. Project Governance

In the four case studies, non-physical aspects are covered under two titles: project governance and social. As emphasized in principle P2.1, while there can be many different project governance structures, none of them proves to be superior to the others. Therefore, a specific governance structure is not proposed for the Fareej Al Najada Urban Conservation Project. However, as noted in principles P2.2 and P2.3, the coordination of project stakeholders is important and QMA can have the coordinator role.

Moreover, because the design proposal suggests renovating the diminished traditional houses within a cultural heritage theme and converting underutilized areas into park and multi-purpose open air zones, it would be necessary that one entity assumes the right to control the entire area, as in the case of Msheireb Downtown Project. As suggested in principle P2.5, the experiences gained in Msheireb Project can be utilized in determining project governance structure.

The stores on the North and West facades of Al Najada are proposed to be renovated. Similar to the experience in Al Balad Project, the owners of these buildings should be given incentives for renovating them. For the new cafes and restaurants, the owners of the current small restaurants on the West side can be given priority.

Burra Charter places a great importance on the management process throughout the execution of the project. Following the Burra Charter framework, a comprehensive management plan should be developed carefully and the implementation should continuously be documented and reviewed.

6.3.2.2. Social

As iterated in the principles P4, accomplishing a sustainable urban conservation project is possible if the project can socially and economically revive the area. The survey results indicate that many people, especially the expatriates, do not know Fareej Al Najada.

Uplifting the existing retail outlets is expected to draw more consumers to Al Najada. The interactive heritage quarter is expected to attract residents as well as tourists. The heritage quarter will not consist of a series of dull museums, shops, and exhibition halls only; it will rather be an all-day living area with cooking, handcraft, calligraphy, and other craftsmanship classes and workshops. In the evening times, the majlises will be the venues, where Badawin stories are told while the listeners are enjoying traditional Qatari tea, Karak

CHAPTER 7. CONCLUSIONS AND RECOMMENDATIONS

This thesis sets forward a set of principles applicable for future urban conservation projects in historic districts in Qatar. These principles are derived from international heritage conservation charters and lessons learnt from the four conservation projects.

With the aim of applying the principles developed, the thesis also proposes a conservation project design for an important historic district of Doha: Fareej Al Najada. This area is to the south Souq Waqif and Msheireb, both of which recently underwent successful urban conservation projects. The proposed design envisions Al Najada as a commercial and cultural district in the heart of Historic Doha.

In the closure of the thesis, this chapter presents the limitations of the research work, recommendations, and suggestions how to proceed further building upon this work.

7.1. Challenges and Limitations of Research

The topic of the research is highly relevant for Qatar and as an architect living in Doha, I had a great chance to personally observe the urban sprawl of the city, how the historic districts have been deteriorating, and how conservation efforts are taking place. In this regard, I was lucky as I could observe many things on the spot. However, like every research work, my work had many challenges and limitations.

One of the limitations is about the study of the other conservation projects. The main challenge was the lack of a diverse set of resources that I could get information. Most information came from the documentations prepared by the organizations executing and/or overseeing the projects. However, I had a chance to personally visit and make observations in three of the four projects and could add my personal observations and opinion to the analysis.

A second challenge was in the design of Fareej Al Najada. I planned doing interviews with local authorities about the area, potential future projects in Al Najada, and about the principles that I was trying to develop for future urban conservation projects in Qatar. I tried several times to reach to authorities; but none was successful. While studying the Msheireb Heritage Quarter Project, I had a chance to meet people from Msheireb Properties, with whom I was able to discuss my work and receive feedback. In addition, I had a chance to meet with several authorities in the seminars organized by our Architecture and Urban Planning Department.

A third challenge was the social challenge. As part of this research, I made several site visits to Fareej Al Najada, tried to take photographs, and talk to people over there. Especially, the inner parts of Fareej Al Najada is more of a deserted place accommodating a few male laborers, I felt highly uncomfortable being there as a woman; and they also felt uncomfortable that I was walking there and taking photos. Besides, language was another barrier when I tried to interview with them. Beside of these, an engineer from QM accompanied me throughout my first site visit to Fareej Al Najada.

7.2. Recommendations

The recommendations that can be made based on the research work mainly focus on how the principles derived in Chapter 5 can be applied in Qatar. The proposed conservation project design for Fareej Al Najada is used for illustrating how the principles can be applied.

One of the main principles is to have a holistic and scientific approach for conservation. Before starting the project, a thorough study should be done about the heritage value of the area and its cultural significance. The historic buildings and monuments should carefully be identified and their architectural styles should be analyzed. In the Fareej Al Najada Conservation Project Design, a preliminary study is performed in this regard. The buildings carrying heritage value are found in the central parts of the area surrounded mainly by commercial and retail buildings on four sides.

The restoration of built structures should aim at minimum intervention. Moreover, the original built materials and techniques should be adopted whenever possible. Conservation of the architectural fabric should not be perceived as constructing a replica of the building.

The holistic approach requires that the conservation project should not be considered as reconstruction or restoration of the deteriorated buildings independently from each other. Instead, a conservation project for a historic district should have a thematic structure. The first step in developing this theme is to determine the future type or types of use of the area. Once this is set, the physical aspects such as how each building will be restored, how the open areas will be utilized, and how, if necessary, new structures will be built can be planned accordingly. In the proposal for Fareej Al Najada, the thematic structure is designed as utilizing the outer parts of the area for commercial use and the interior parts as an interactive center to represent various aspects of Qatari culture. Proposed building rehabilitations and open space developments comply with this theme.

This thesis emphasizes the relation between urban conservation and sustainability. In this regard, social sustainability is considered as an inalienable pillar of urban conservation. It refers to regenerating the area socially and integrating it with its surrounding. In order to achieve this, an appropriate future type of use should be carefully selected for the area under consideration. The proposed type of use for Fareej Al Najada aims at integrating the area with its neighbors, The Souq Waqif and Msheireb Downtown.

Another important pillar for social sustainability is the participation of the people of the area in the conservation efforts. The building owners and current residents should be provided with sufficient incentives to ensure their participation. As an example in Fareej Al Najada project, we propose that the current store owners should be given priority for new stores to be opened.

Elements of traditional Qatari architecture and the Arab city have proven efficiency for environmental sustainability, especially energy efficient cooling for very hot weather conditions. These elements should be carefully utilized for building insulation, air ventilation, and shading for streets.

7.3. Suggestions for Future Work

This thesis should be considered as a milestone for developing a comprehensive strategy for urban conservation in Qatar. The knowhow accumulated during the two conservation projects, Souq Waqif and Msheireb Heritage Quarter, would significantly contribute to this process. Moreover, there are several institutions and many academics and practitioners in Qatar with significant experience and background in urban conservation. The State of Qatar should utilize these resources and develop its national urban conservation strategy.

Developing the national strategy should not only rely on expert knowledge and knowhow generated from research work such as this thesis and earlier projects, but also require the involvement of all potential stakeholders. Public Works Authority, Qatar Tourism Authority, and Ministry of Municipality and Environment are examples of potential stakeholders in Qatar. Qatar Museums can assume the central role to coordinate the participation of all stakeholders in the development process.

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APPENDIX A: FAREEJ AL NAJADA SURVEY

1. What is your age?
 - a. 18-24
 - b. 25-34
 - c. 35-44
 - d. 45-54
 - e. 54 and above
2. What is your gender?
 - a. Male
 - b. Female
3. What is your occupation?

Please write _____
4. What is your nationality?
 - a. Qatari
 - b. Non-Qatari Arab
 - c. Other
5. Did you hear about Fareej Al Najada district?
 - a. Yes
 - b. No
6. Do you know the location of Fareej Al Najada?
 - a. Yes
 - b. No
7. How many times have you been to Fareej Al Najada?
 - a. I have never been there
 - b. Only once
 - c. A few times
 - d. I frequently go there
8. Can you name any historic buildings you know from Fareej Al Najada?
 - a. Building 1: _____
 - b. Building 2: _____
 - c. Building 3: _____
9. If Fareej Al Najada is regenerated, what should be its type of use? (Please rank)

Residential [___] – Commercial [___] – Retail [___] – Cultural [___]

APPENDIX B: INTERVIEW QUESTIONS

INTERVIEWEE INFORMATION

Interview Date:

Name :

Institution :

Position :

QUESTIONS

Q1. What is the specific significant of Fareej Al Najada?

Q2. What are the mistakes that should be avoided during regeneration process for Fareej Al Najada?

Q3. How can we make Al Najada district alive?

Q4. When Fareej Al Najada is regenerated what should its type of use be?

