

## AI-MAZLOUM HERITAGE PROJECT IN AI-BALAD CONSERVATION AND BUILDINGS REUSE

Badia Masoud<sup>1</sup>, Abdelmoniem Mahdy El-Shorbagy<sup>2</sup>, Zaki Mallisi<sup>3</sup>

<sup>1,2,3</sup>College of Architecture and Design, Effat University, Qasr Khuzam St., Kilo. 2, Old Mecca Road. P.O. BOX 34689, Jeddah 21478, Saudi Arabia

E-mail: <sup>1</sup>[bmasoud@effatuniversity.edu.sa](mailto:bmasoud@effatuniversity.edu.sa), <sup>2</sup>[aeshorbagy@effatuniversity.edu.sa](mailto:aeshorbagy@effatuniversity.edu.sa), <sup>3</sup>[zmallasi@effatuniversity.edu.sa](mailto:zmallasi@effatuniversity.edu.sa)

Received: 25.04.2020

Revised: 30.05.2020

Accepted: 20.06.2020

### Abstract

Each country has its own history and its own heritage. Saudi Arabia has many cities. One of the important cities is Jeddah, which is the main port of KSA. Jeddah has a very famous and unique architectural heritage. It has been there for 2500 years. Jeddah now is developed as a city and modernised. The old area has been neglected from the people who used to live in. It became an area for poor people and not taking care of it as an important area part of this important city. This project is focussing on the old Jeddah part (Albalad). For that considering it as a problem that has to be solved and studied. So studying the history of Albalad, the urban pattern and the architectural buildings was a must. Therefore the aim is to choose an area in Albalad, renovate the old buildings and reuse them for different activities that people can visit and not forgetting their history. Also, this project make that developed area a focal point for Jeddah citizen.

**Keywords** -- Heritage, Conservation, Old Buildings, Buildings Reuse, Modernised, Renovate

© 2020 by Advance Scientific Research. This is an open-access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>)  
DOI: <http://dx.doi.org/10.31838/jcr.07.08.132>

### INTRODUCTION

The active port of Jeddah's old town, busy road system, modern shopping malls and residential areas are among the most secrets of Saudi Arabia [1]. About 2,500 years ago, the site was a small fishing village, which became very important as the port of the two holy cities of Mecca and Medina [2]. The 1.5-square-kilometer area was originally a high wall to resist attackers, and it has become the largest urban structure in the history of the entire Arabian Peninsula [2].

The AI-BALAD area is Warren in the alleyway, and its name reflects its function, for example in the perfume market (The Alley of Perfumers), where traditional asphalt and perfume are sold [3]. Unfortunately, one of the alleys is no longer available, "Hug My Alley" [4]. The passage is meandering and very narrow, and only one person can pass at a time. If two people are going to walk over, they will have to walk very close, as if holding each other. The buildings in the historic area have merchant houses from the 19th century. The traditional high-rise buildings in the old town of Jeddah are tall and elegant, built of coral and limestone, and decorated with exquisite Indian or Java teak exterior walls to ventilate the house and cover narrow streets.

In 1990, the historic District Conservation Bureau launched a large-scale renovation plan aimed at protecting the city's buildings and heritage [5]. The department has more than fifty employees and organizes excavations, excursions and local research.

### CASE STUDIES

There are three similar case studies were analysed and explained in a way that shows examples around the world about heritage complex and buildings. The chosen case studies are:

- Clarke quay, Singapore
- Islamic Cairo project, Cairo, Egypt
- Newtown Wellesley hospital, Washington Street, USA

### Clarke quay, Singapore

Clarke Quay (Clarke Quay) is Singapore's historic riverside pier, located in the Singapore River Planning District. The terminal is located upstream of the Singapore River and the barge terminal.

Clarke Quay was named after Sir Andrew Clark, the second Governor of Singapore and Governor of the Straits Colony from 1873 to 1875. He positioned Singapore as the main port of Malay in Perak, Selangor and Sungai Ujong. Clarke Quay is also the name of the road along the pier, and since then, some sections have been transformed into pedestrian streets. Clarke Street is adjacent to Clarke Quay. Clarke Quay was officially named in 1896. It was originally two streets, located on East Street and West Street in the north of Kampong Malacca. Similar to Clarke Quay, Clarke Street has since been converted into a pedestrian street [6].

The dramatic redevelopment of Clarke Quay's riverfront district in Singapore successfully attracted tourists and locals to return to the historic waterfront, which is a powerful economic, social and cultural regenerative effect typical of Clarke Quay (Figure 1). The project was developed by CapitaLand, cost about £ 30.6 million. The mixed-use plan aims to increase business and leisure activities, give the riverfront a new identity, and reposition Clarke Quay as a vibrant and attractive destination. The key to the success of the project is that the architects / engineers controlled the microclimate of the site ingeniously through the design of unique and exquisite shading / cooling system, which brought huge visual appeal and environmental benefits to the dock area. The challenge is to provide a new life, not only through attractive redesigns of streetscapes and waterfronts, but also to solve long-standing climate problems and find battles without resorting to Singapore's ambient temperature and rain Way to create a traditional scene of an internal air-conditioned shopping mall [6, 7].

### Islamic Cairo project, Cairo, Egypt

In the city of Cairo, numerous buildings indicated great significance to the history of Islamic architecture, especially the area known as "Historical Cairo" or "Fatimi". Cairo Al-Muizz Street in Islamic Cairo, Egypt is one of the oldest streets in Cairo, about one kilometer long. A United Nations study found that it is the largest concentration of medieval architectural treasures in the Islamic world. This street is named after Al-Musizz li-Deenllah, the fourth caliphate of the Fatimid dynasty. It extends from Bab Al-Futuh in the north to Bab Zuweila in the south. Since

1997, the central government has extensively renovated historical buildings, modern buildings, paving and sewers, turning the street into an "open-air museum". The project is scheduled to be completed in October 2008. [8, 9].

One of the purposes of decoration is to approximate the original appearance of the street. The buildings above the monument were lowered in height and painted in appropriate colors, while the streets were re-paved in the original style. On the other hand, by installing the most advanced and advanced external lighting on the building, the street's night appearance has been modernized (Figure 2). The main threat to Islamic Cairo is that advanced drainage systems have been installed to prevent groundwater accumulation [8-10].

**Newtown Wellesley hospital, Washington Street, USA**

Institutions and commercial organizations cherish their historical buildings for many reasons as the buildings can educate people about history, help organizations shape their image in the community, and often have exquisite architectural features [11]. Perhaps the biggest challenge is to take energy-saving measures while maintaining the integrity of historical buildings and meeting the requirements of accessibility and fire codes. Before renovating such facilities, the renovation team must determine the characteristics of the building to be retained or restored. The finish may return to the state it was in when the building was built. The architects restored them to this state by trying to find the same types of finishes and paint colours that were popular at the time, or the same types of wall decorations they saw in older photos of buildings. [12].

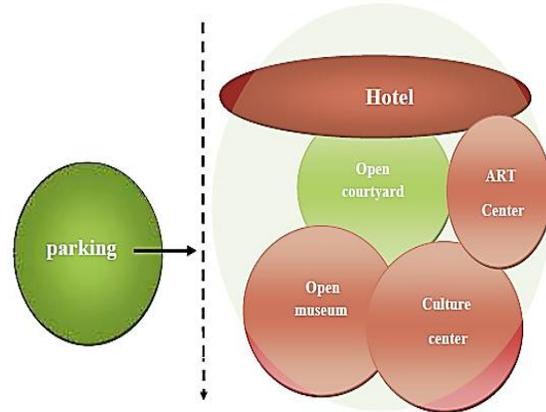
Some organizations make every effort to preserve their historical buildings such as Newton-Wellesley Hospital in Newton, Massachusetts (Figure 3). The hospital did not demolish a 100-year-old building to make room for the new emergency room, but moved the building about 220 feet from the Ellison Hall. Now, it is closer to the three other buildings in the historic district of Newton Lodge Hospital listed in the National Register of Historic Places. In the early planning stage, the hospital's facilities and engineering departments have been involved in ensuring the success of the project. Ellison Hall's major move took place in September 2005. The contractor instructed to lift the 890-ton building with 28 hydraulic jacks. In addition, the hospital also decided to renovate the interior of the building [12, 13].



**Figure 3.** Newtown Wellesley hospital, Washington Street, USA [13]

**SPACE PROGRAM**

The proposed buildings consist of several functions such as culture center, hotel, art and crafts center, an open architectural building museum, shops, restaurants and cafes. Besides that, the project also consists of landscaping and parking area. The design criterion of the project is considered in designing the empty site the heritage building sounded. Next, take care in renovation that each building has its own value. Also, added the old buildings together but taking care not to demolish the elevation of the building. Treating the old buildings in a very sensitive way and healing its old wounds. The bubble diagram of the project is shown in Figure 4. The space program of the project is tabulated in Table 1.



**Figure 4.** Project bubble diagram



**Figure 1.** Clarke quay, Singapore [7]



**Figure 2.** Khan Al-Khalili is Al-Azhar Mosque [10]

**Table 1.** Space Program

Zones	Components	Percentage (%)	Area (m <sup>2</sup> )
Hotel	Lobby Zone	40.25	2885.22
	Service Zone		
	Entertainment Zone		
	Rooms		
Culture Center	Library	24.78	1776.3
	Culture Hall		
	Conference Rooms		
	Cinema		
	Legal Advice Office		
	Social Gathering Area		
	Tourist Guide Office		

Open heritage museum		26.04	1867.04
Art center	Art Halls	8.93	640
	Stationeries		
	Art References		
	Café		
	Lounge		
<b>Total Site Area (m<sup>2</sup>)</b>		<b>100</b>	<b>7168.56</b>

**SITE SELECTION AND ANALYSIS**

The chosen site is shown in Figure 5 with total site area of 9751.38m<sup>2</sup>. The site that will be renovated is shown in Figure 5, which is in front of a famous round about in Jeddah (Al-Bayaáh) roundabout. Every EID the residents will do festivals and activities in this area. The yellow site shown in Figure 5 is the parking area. It will be fixed and there will be rules added for the vehicles. The rules will be applied for people who visit the park with their transport.



Figure 5. Proposed Site [14]

The reason for choosing the site is HaratAl Almazlom is the elite district of old Jeddah. Therefore, it has larger and more beautiful buildings as well as less crowded and a quite area. It also has an easy accessibility, in where the Medina road as an incoming and outgoing access and also the roads to the old airport as an outgoing access. It is also near one of Jeddah old gates (Bab Jaded), and near one of the oldest schools in Jeddah, which was the first school opened that time (Alfalah School). The area has many old and historical buildings that worth to work on and to save it from vanishing and work on redeveloping it to stay forever. The site is on the edge of Albalad, thus people can easy access and less pollution. Figure 6 demonstrates the site accessibility of main and secondary roads. The site is on the boundaries of the old Jeddah and not deep inside. All the main streets that shown in Figure 6 can easily lead people to the site.

Figure 7 shows the climate analysis of the site. Jeddah has a humid climate and solar heat (summer) in the old town. All the buildings are solved in a sustainable way to reduce the heat and the humidity in (winter) it becomes cold like 20 to 18 degrees. They also have a system to save the cool air through the architectural sustainable features on the building. The good prevailing wind is from northwest direction, and the bad prevailing wind is from southeast direction.

Compared with cooling demand, passive solar heating is most suitable for buildings with higher heating demand. (Albalad) old Jeddah town use passive solar heating in their buildings, to

reduce the heat but in certain orientation of the building. In the east side and west particularly because of the direction of the sun, thick walls, small windows with the (Roshan) and cross ventilation system are implemented to reduce the solar heat.



Figure 6. Site Accessibility Analysis

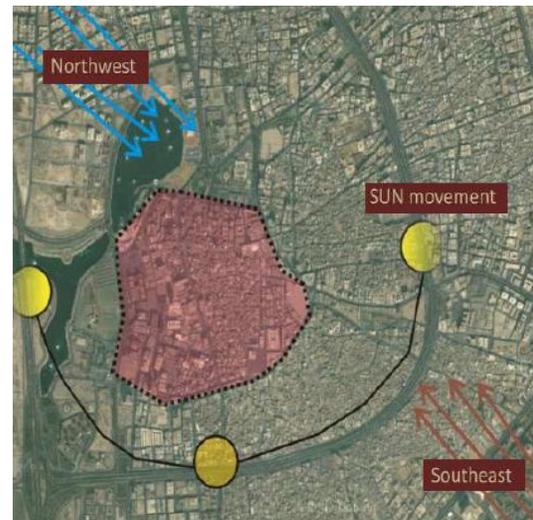


Figure 7. Climate Analysis

Old Jeddah town urban design has narrow streets and high buildings. Each building is in the shadow of another building and when the visitors pass through these streets especially for pedestrian paths, they will experience amazing feelings. They can see the reflection of the (Roshan) on the buildings and the natural light passing through the narrow streets between the buildings. The site in HaratAl Sham (Sham Distract) is away from the noise and environmental pollution.

**ZONING AND PROJECT DESIGN**

Figure 8 demonstrates the site zoning of the project. The landscape is surrounded by all the primary building. Regarding the material of door and windows, Rawashin are the main element that use for covering the openings for three reasons such as privacy (visible for the inside only), shade and shadow, and ventilation. Some openings are not covered with the Roshan. Roshan is made from many kinds of carved wood. For the enclosure of the buildings, thick walls from coral stone taken from the shore, using thick walls for reducing the heat and as a structure for the building (wall bearing system). Figure 9 and Figure 10 show the front and back aerial view of the project respectively.



Figure 8. Site zoning diagram



Figure 9. Front aerial view



Figure 10. Back aerial view

### CONCLUSION

This project outlines the interaction between natural and human and urban factors. Old Jeddah town urban design has narrow streets and all buildings are beside each other, which made the bond between the people stronger as nowadays with the new urban development the bond between people becoming weak. The proposed scape program of the project consists of four main zones namely, hotel, culture center, open heritage museum, and art center. The project considered the site of Al-Balad, old Jeddah based on certain site evaluation criteria such as site accessibility, surrounding, climate and visibility. Furthermore narrow streets direct the wind and ventilate the buildings in a right way. In conclusion people interaction with the urban and surroundings was much better to develop a healthy lifestyle.

### REFERENCES

1. Brown P. Dissa, the Best Kept Secret in Saudi Arabia? [Internet]. Arab News. 2004 [cited 3 July 2019]. Available

from: <http://www.arabnews.com/node/245661>

2. Hauser A. Destination Report: Old Town Jeddah [Internet]. Lifeforthought.blogspot.com. 2008 [cited 3 July 2019]. Available from: <http://lifeforthought.blogspot.com/2008/01/destination-report-old-town-jeddah.html>

3. Old Al-Balad [Internet]. Cargocollective.com. 2010 [cited 3 July 2019]. Available from: <http://cargocollective.com/awaybook/following/awaybook/Old-Al-Balad>

4. Baker R. Jeddah: Prosperous & Diverse [Internet]. Arab News. 2005 [cited 3 July 2019]. Available from: <http://www.arabnews.com/node/271714>

5. Abu-Ghazzeah T. The Future of Jeddah-Al Qademah: Conservation or Redevelopment - Saudi Arabia. Journal of Architectural and Planning Research. 1998;15(3):225-242.

6. Clarke Quay [Internet]. singaporecitypass. 2010 [cited 3 July 2019]. Available from: <https://singaporecitypass.com/clarke-quay.html>

7. Clarke Quay Neighbourhood - Condos, Houses, Rooms & HDB for Sale & for Rent [Internet]. Singapore Property for Sale / Rent - Condo, HDB, Apartment, Room & Houses | 99.co. [cited 3 July 2019]. Available from: <https://www.99.co/singapore/neighbourhoods/clarke-quay>

8. El MOEZZ Street: Cairo's medieval via aurea - Portraits of Egypt [Internet]. Portraitsofegypt.com. 2018 [cited 3 July 2019]. Available from: <http://portraitsofegypt.com/en/english-sharaa-el-muizz-el-muizz-street-the-via-aurea-of-islamic-cairo/>

9. Al-Muizz Al-Deen Allah Street | Old Cairo [Internet]. Memphistours.com. [cited 3 July 2019]. Available from: <https://www.memphistours.com/Egypt/Egypt-Wikis/Cairo-Attractions/wiki/Al-Muizz-Street>

10. "Egyptian Heritage Festival" to kick off at Egyptian Textile Museum on Apr.18 (PHOTOS) [Internet]. Nile International. 2019 [cited 3 July 2019]. Available from: <http://www.nileinternational.net/en/?p=133535>

11. Ribbeck Construction Corporation [Internet]. Ribbeckcompanies.com. [cited 3 July 2019]. Available from: <https://ribbeckcompanies.com/services-detail.asp?service=3>

12. Shroades R. Old Buildings, New Life - Facilities Management Insights [Internet]. Facilitiesnet. 2006 [cited 3 July 2019]. Available from: <https://www.facilitiesnet.com/designconstruction/article/Old-Buildings-New-Life--4680>

13. "Newton-Wellesley Hospital" on Revolv.com [Internet]. Revolv.com. [cited 3 July 2019]. Available from: <https://www.revolv.com/page/Newton%252DWellesley-Hospital>

14. Google Maps [Internet]. Google Maps. 2019 [cited 3 July 2019]. Available from: <https://www.google.com/maps/place/21%C2%B029'20.2%22N+39%C2%B011'12.9%22E/@21.4889546,39.1862354,241m/data=!3m2!1e3!4b1!4m14!1m7!3m6!1s0x15c3d01fb1137e59:0xe059579737b118db!2sJeddah+Saudi+Arabia!3b1!8m2!3d21.485811!4d39.1925048!3m5!1s0x0:0x0!7e2!8m2!3d21.4889529!4d39.1869155>