

RAHMA CONTEMPORARY ISLAMIC COMPLEX

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Abstract

The local community of Saudi Arabia is engaged in trading in the vicinity of the Islamic Mosque. However, these traders do not have a designated area for carrying out their business. On the other hand, the visitor to the mosque feels that the sanctity of the mosque has not been respected due to the commercial activity around the mosque. There is therefore a need to revive the glory of the original Islamic complexes, which serve as an area of trade and also as a place of worship. Hence, this work was done to propose the development of Rahma Islamic Complex at Jeddah, Saudi Arabia. For this work, two case studies related to the idea of Islamic complexes were analysed. Based on the case studies, for the proposed Rahma Islamic Complex, the estimated gross area is 7712.7 m². The Islamic complex was designed with few zones, which are entrance, administration, mosque, educational zone, cultural section, food court and market. In addition, two sites were proposed to develop the Islamic complex. Based on site evaluation analysis, site 2 which is located at King Abdulaziz Road with an area of 35 000 m² was selected as the proposed development site. The Rahma Islamic Complex is expected to foster Saudi Arabia's Islamic culture and historical heritage between society and tourists and to act as a key area for local business traders.

Keywords-- Islamic complex, design, heritage, Saudi Arabia, culture

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INTRODUCTION

Islamic architecture is an architecture made by Muslims or in Muslim lands by either a Muslim architect or a Muslim patron [1]. It was produced from the mid-8th century to the early 21st century. The lands ruled by Muslims come from North Africa, Andalusia (now Spain and parts of Italy) from the West, and Persia and India from the East [2].

There have been many Islamic periods, but the most popular are the Umayyad, the Abbasid and the Ottoman. Buildings can be religious or secular from the beginning of Islam to the present day [3]. The main Islamic architectural forms are mosques, graves, mansions, forts, colleges and metropolitan structures, and many other less significant forms, such as baths and national structures [3].

The idea of Islamic complexes was very popular in Mameluk period in the 14th century. However, there is a cluster of buildings in one context near the mosque [4]. The first mosque to be built in Islam is the Masjid Qubbah, where the mosque is considered a complex and contains a small market and a residential area [4].

This area of the market is used for the purpose of trading among the local community. According to Muslim cultural values, social cohesion, the spread of awareness of Islamic issues and the improvement of the financial situation of society, whether through trade or donation, are the main cultural values of Muslims [5]. The mosque is one of the main social cohesions of the Islamic region. Since the mosques have the sanctity that people respect, the addition of the square as a public space to the main mosque will therefore improve social cohesion [6].

Business practices exist in Saudi Arabia, where local communities engage in sales and services outside mosques. However, there are many of them doing business without having a specific space for them [7]. In addition, it also created a feeling among the local community that the sanctity of the mosque was not respected [8].

Hence, there is a need to revive the glory of the original Islamic complexes and spread the idea of using specific buildings or spaces for each function. Thus, this work proposes the development of Rahma Islamic Complex at Jeddah, Saudi Arabia.

CASE STUDIES

Two case studies related to the idea of Islamic complexes were analyzed in this work. The details of the case studies are discussed as follow:

- Arched Walkway Wraps Muslim Centre
- Al-Islah Mosque

Arched Walkway Wraps Muslim Centre

Arched Walkway Wraps Muslim Centre is located at east of Beijing in China's Hebei province (Figure 1). This structure was designed by architect He Jingtang. The site has an area of 35 000 m². The building interprets the spirituality of a mosque with new material and new technology. The ground floor plan of the building has an intersecting axis and has four entrances, each of which is connected to the vestibule. The four entrances is focused to the main theater, emphasizing its importance. In addition, the building has fixed empty spaces, as they represent the courtyards in a modern way.

The building's dome is constructed with petaloids, which show the creative conversion of interior space as a semi-exterior roof garden flooded with sunlight, fresh air and vegetation. In addition, the building is situated away from the urban framework, giving it dominance and establishing a buffer zone away from town life.

The building shows the perfect use and function of the Islamic building. The space distribution of the building is comprised of theater (25 %), art center (10%), administration (12%), screening (10%), services (4%) and exhibition hall (39%). The facilities of the building include auditoriums, exhibition area, reception, conference room, theater, offices, children exhibition and store rooms.



Figure 1. Arched Walkway Wraps Muslim Centre

Al-Islah Mosque

Al-Islah Mosque is located at Singapore (Figure 2). This building was designed by Formwerkz architects. This building has an area of 3700 m². The peak capacity of this building is 4500 people. The building structure has been designed to meet the separate demands of the Muslim community in Singapore. The notion of 'open mosque' was used to tackle the function of the mosque in promoting religious knowledge. As an integral part of the Punggol community, the mosque is a model of openness, reflecting contemporary Islamic aspirations. The mosque is located close to the nearby apartments. The idea of openness of this mosque extends beyond visual porosity, accessibility and climate openings to the needs of different Muslim communities. The physical porosity allows visual connections to the context of the mosque. Pores offers good ventilation and sunlight within the mosque. The architect designed the mosque as an open plan that could be visually and physically accessible from all sides. The sides without walls were treated with a canopy. The elevated public square linked to the landscape of the street. The zoning of the mosque includes prayer halls (31%), seminar zone (18%), services (6%), auditorium (25%), playground (7%), administration (3%) and screening zone (10%).



Figure 2. Al-Islah Mosque

PROGRAM ASSUMPTION AND SPACE DETAILS

In this work, for the proposed Rahma Islamic Complex, the estimated gross area is 7712.7 m². Based on Table 1, the zone of the complex is comprised of entrance, administration, mosque, educational zone, cultural section, food court and market. The dimension for each zone is shown in Table 1.

Table 1. Space details

Zone	Gross area (m ²)
Entrance	313.5
Administration	244.2
Mosque	1146
Educational	2129.5
Cultural section	2886.5
Food court and market	993
Total	7712.7

PROPOSED SITE

Proposed site: Site 1

For site 1 (Figure 3), this site is located at Prince Sultan street. This site has an area of 18500 m². There are commercial buildings along the street.

Proposed site: Site 2

For site 2 (Figure 4), it is located at King Abdulaziz Road. This site has an area of 35500 m². There are commercial buildings along the street, facing the red sea mall.



Figure 3. Site 1

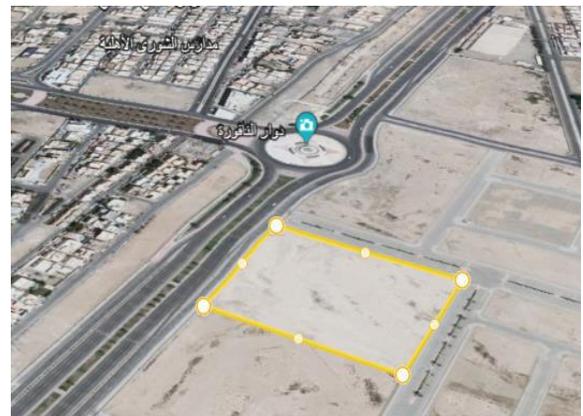


Figure 4. Site 2

SITE EVALUATION AND ANALYSIS

Two potential sites for the development of the Rahma Islamic Complex have been proposed in this work. Site evaluation was done to select the most suitable site. Few criteria have been used to evaluate the sites, which are site capacity, shape and proportionality, topography, access and traffic, noise levels, utilities, security and safety, visual quality, visibility, future development plans, demographic patterns, surrounding, views, and cost. In this work, weighting factors (WF) were used for each criteria where 1 = not very important, 2 = somewhat important, 3 = important. Table 2 shows the site evaluation results. Based on Table 2, site 1 showed a total assessment score of 129 and site 2 showed an assessment score of 134. Thus, site 2 was selected as the proposed site for development.

Table 2. Site evaluation

Site criteria	Weighting factors (WF)	Site 1	Site 2
Site capacity	3	12	15
Shape and proportionality	3	15	12
Topography	3	9	15
Access and traffic	2	12	15
Noise levels	1	3	5
Utilities	1	5	2
Security and safety	1	5	3
Visual quality	1	5	3
Visibility	3	12	15
Future development plan	3	12	12
Demographic patterns	2	10	8
Surrounding	3	15	9
Views	2	6	10
Cost	2	8	10
Total	-	129	134

Site 2 is located at King Abdulaziz Road, which is close to the sea science roundabout. The site is near to the main commercial road and it provides easy access for the users. The site is set up along the main commercial roads and used for commercial, residential and both. The site can be accesses by the main road, normal road and sub road as shown in Figure 5. This site is exposed to sunlight throughout the year .

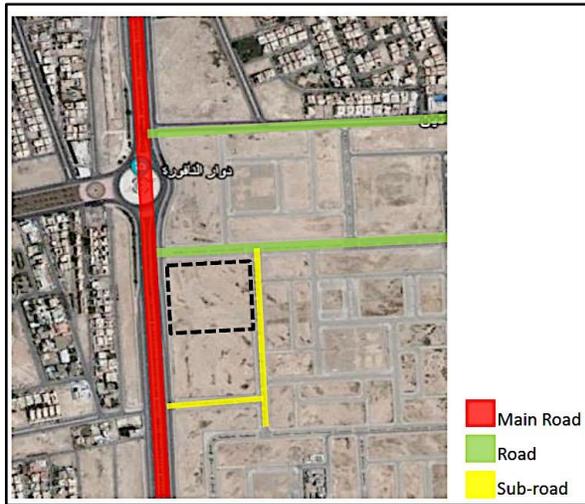


Figure 5. Accessibility

PROJECT DESIGN

The main design concept of the Rahma Islamic Complex is based on bringing back the traditionalglory of the Islamic complex with a modern touch. For the proposed complex, the design concept represents the traditional Islamic cities, where each section represents a unique function and the building structure are contemporarily overlapped. In this complex, the prayer hall is designed with rectangular to square structures, with a central dome and a Qibla direction. The space specified for each person is 0.85 square meter.In addition, the mosque consists of a skeleton structure with a flat roof supported by columns.The finishing materials were painted with plaster, the floor was covered with heavy carpets. The ceiling was constructed of hard solid material. In addition, a simple, elaborate decoration has been added.The complex was fitted with a natural opening and a

solid transparent glass to allow the use of daylight. Figure 6 to Figure 8 shows the proposed design of the Rahma Islamic Complex.



Figure 6. Rahma Islamic Complex

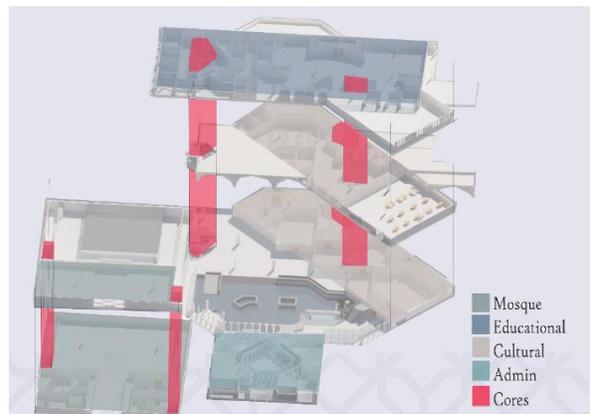


Figure 7. Zoning of the complex



Figure 8. Outdoor area



Figure 9. West elevation



Figure 10. North elevation

CONCLUSION

The study presented the development of the Rahma Islamic Complex in Jeddah, Saudi Arabia. For the proposed Islamic complex, the estimated gross area was 7712.7 m². The Islamic complex was designed with several zone such as entrance, administration, mosque, educational zone, cultural section, food court and market. The Rahma Islamic Complex is expected to foster Saudi Arabia's Islamic culture and historical identity among the community and tourists. It will also serve as the main trading area for local vendors, which will contribute to the economic development of Saudi Arabia.

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