

AL-ULA INTERACTIVE HOUSE FOR ARTS AND CRAFTS

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Abstract

Al-Ula is renowned for its unique environment, its cultural and historical value. Al-Ula's individuals are described by their interest in art, craft, and culture. There is a powerful demand from the local community, as well as betting on the town to live in art and culture, but in comparison, there is a lack of places to promote the practice. This resulted to the beginning of the demise of these traditional crafts. Thus, this work present a proposal on developing an interactive house for arts and crafts at Al-Ula, Saudi Arabia. For this work, three case studies related to the architecture of arts and crafts building were analysed. Based on the case studies, for the proposed interactive house for arts and crafts, the estimated net area is 18720 m² and the gross floor area is 22390 m². The interactive house for arts and crafts is comprised of few zones such as cultural zone, business zone, commercial zone, administration and services. In this work, two sites were proposed for the construction of the interactive house. Site evaluation analysis was done to select the most suitable site. Based on the site evaluation analysis, site 2 was selected as it attained the highest score of 141, compared to site 1 with score of 131. This interactive house is expected to contribute to the local community and Saudi Arabia in terms of economic, cultural, and educational sectors.

Keywords-- culture, arts, heritage, complex, architecture, Saudi Arabia

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INTRODUCTION

Attention to any society's cultural and art centers is essential for its progress and development at the local environment level [1]. Accommodating spaces to express the creators' energy will be the real gateway to enhance their community service productivity. Traditional crafts are those created by craftsmen, either entirely by hand or with the help of hand tools or perhaps machinery, as long as the craftsman's direct manual contribution remains the main substantial part of the finished product [2]. These are created without any restriction on the quantity and mistreatment of raw materials from sustainable resources.

Saudi Arabia has a long-standing national heritage of ancient Arab civilization [3]. There are a number of industries and crafts in the Kingdom that are inherited from generation to generation that still offer independent art and are used in tourist activities that are highly visited by locals [4]. The most famous crafts and handicrafts found in Saudi Arabia are pottery industry, wood industry, wicker industry, local jewellery industry, and textile industry [5].

Al-Ula is one of Saudi Arabia's most important tourist destinations due to its archeological, heritage and natural resources with important and attractive tourist characteristics [6]. All this will be an easy to market tourism product and will benefit the Al-Ula local community in achieving economic and development returns [7]. However, at the present moment, the Al-Ula community do not have a designated place to market their products and their artistic culture. Thus, this work proposes the development of an interactive house for arts and crafts at Al-Ula, Saudi Arabia.

CASE STUDIES

Three case studies related to the architecture of the arts centre were evaluated for this work. The details of each case study are stated as follows.

- King Abdul-Aziz Historical Center
- University of Wyoming - Visual Arts Facility
- Museum of Islamic Art, Doha

King Abdul-Aziz Historical Center

King Abdul-Aziz Historical Center is located at Riyadh, Saudi Arabia (Figure 1). This building was designed by several architects such as Albert Speer & Partners, Omrania & Associates, Rasem Badran and Ali Shuaibi. This building has a gross area of 32700 m². The King Abdul-Aziz Historical Center is an urban project that incorporates green cultural and urban infrastructure. The primary element is the museum, intended to create visitors interactive with informative exhibits through multimedia technology. The divisions of the site are the national museum, conference, library, paperwork and study center. In addition, there is a conservation site for a group of mud houses as prototypes of the region's vernacular architecture. The main project concept is to create and develop the social interaction and cultural awareness of people through the public spaces and parks beside the urban context of the project. The project is integration between the landscape and the building area which includes public park, national museum, antiquities and museums agency, Al-Murabba Palace, traditional buildings, Darat Al-Malik Abdul- Aziz, King Abdul-Aziz public library, King Abdul-Aziz mosque, and King Abdul-Aziz auditorium.



Figure 1. King Abdul-Aziz Historical Center

University of Wyoming - Visual Arts Facility

University of Wyoming - Visual Arts Facility is located at Laramie Wyoming, USA (Figure 2). This building was designed by Hacker and Malone Belton Able PC. This building has a gross area of 7198 m². This project consolidates the fine arts program of the University from its scattered region all around the campus, tending to restrict the prior equipment while at the same moment providing recourse to professors and students with encouraging their research in the fine arts. The building is intended to be state-of - the-art, competitive, affordable and flexible enough to acknowledge program and technological evolution. The building is intended to be state-of - the-art, competitive, affordable and sufficiently adaptable to further acknowledge technological development of the program. The Visual Arts facility is a key component of the campus's new arts boundaries. The building is intended to be equally engaging, permitting occupants to experience the outdoor environment from within while the same time duration in creating quality interior experiences. The main building components are educational facilities which include art studios, classrooms, offices, public spaces and services.



Figure 2. University of Wyoming - Visual Arts Facility

Museum of Islamic Art

Museum of Islamic Art is located at Doha, Qatar (Figure 3). This building was designed by architect I. M. Pei. This building has a gross area of 30600 m². The Islamic Art Museum is intended to represent Islamic architecture and preserve Qatar's traditional architecture that has lost its identity through the contemporary revolution. It has a collection of Islamic antiques and works of art, library, places of research, restaurants, and auditorium. The form inspiration came from ' Sabil ' the Ibn Tulun Mosque ablution fountain in Cairo, Egypt in the 9th century. The architect discovered simplicity in the daytime, with the shade and shadow produced from the cubist geometric, the ablution fountain of Ibn Tulun comes to life. The museum has two main zones which are exhibition zone and educational zone that include galleries, offices, library, reading and studying spaces, classrooms and workshops, auditorium, technical and storage facilities, parks, café and restaurant, shops and playgrounds.



Figure 3. Museum of Islamic Art

PROGRAM SPACE DETAILS

For the proposed interactive house for arts and crafts at Al-Ula, Saudi Arabia, the estimated net area is 18720 m² and the gross floor area is 22390 m². The interactive house for arts and crafts has several zones, such as cultural zone, business zone, commercial zone, administration and services. Table 1 shows the details for each zone.

Table 1. Space details

Zone	Net Area (m ²)	Gross Floor Area (m ²)
Cultural zone	12600	15100
Business zone	2250	2700
Commercial zone	2800	3300
Administration	690	830
Service	380	460
Total	18720	22390

PROPOSED SITE

Proposed site: Site 1

For Site 1 (Figure 4), this site is located near the old town of Al Ula and beside the old northern gate of Al Ula. This site has an estimate area of 25000 m².

Proposed site: Site 2

For Site 2 (Figure 5), this site is located near the historical Ikma mountain (Library of Lahyan Kingdom).This site has an estimate area of 25000 m².



Figure 4. Site 1

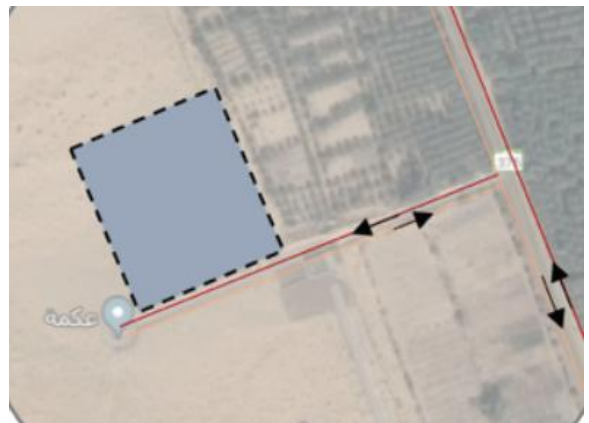


Figure 5. Site 2

SITE EVALUATION AND ANALYSIS

In this work, 2 sites were proposed for the development interactive house for arts and crafts at Al Ula, Saudi Arabia. Thus, to select the most suitable site, site evaluation analysis was performed. For this analysis, weighting factor (WF) was used, where WF=1 is less important, WF=2 is important, and WF=3 is very important. Both sites were evaluated based on several criteria's such as site capacity, shape and proportion, topography, access and traffic, noise level, utilities, security and safety, visual quality, future development plans, demographic patterns and surrounding. Table 2 presents the site assessment score for site 1 and site 2. With reference to Table 2, site 2 attained the highest score of 141 compared to site 1 with 131. Thus, site 2 was selected as the construction site. Overall the strength of the selected site is excellent in terms of capacity, environment and climate. In addition, this site is situated on a monumental site within the tourism development plan and the site. The proposed zoning of the site is shown in Figure 6.

Table 2. Site evaluation

Site Criteria	Weighting Factor (WF)	Site 1	Site 2
Site capacity	3	9	15
Shape and proportion	3	15	15
Topography	1	2	3
Access and traffic	3	15	12
Noise level	2	8	6
Utilities	3	15	12
Security and safety	2	10	8
Visual quality	3	9	15
Visibility	3	15	15
Future development plans	2	6	10
Demographic patterns	3	15	15
Surrounding	3	12	15
Total	-	131	141

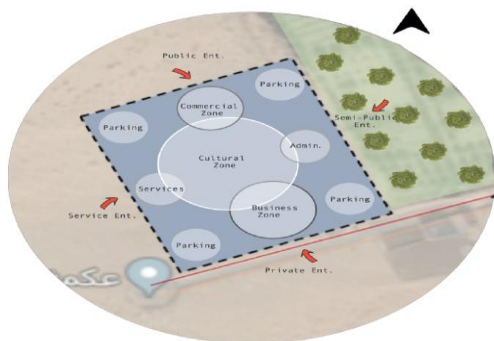


Figure 6. Zoning of the site

PROJECT DESIGN

The interconnectedness of the architectural structures of Al-Ula's ancient town represents the profound link and attachment between its people. It is the adopted concept to initiate the design process of constructing the path that links artists and craftsmen in obtaining and sharing experiences among them in easy forms that symbolize the simplicity of their individuals. The construction idea focuses on establishing an interactive community where citizens and tourists meet the legacy and culture of Al-Ula through their ART. The primary architectural form will be the interactive house for arts and crafts, and since it

is in a strategic town, it needs to overlook a monument to inspire the performers and attract more individuals around the globe. The co-working space will enable local people to improve their startups and improve the city's economy. The amphitheater is where the idea of interaction house started and it will be a social hub for the society.

The design of the interactive house for arts and crafts is based on simple square design unit. These square units were created in masses to produce the required space for each unit. Furthermore, the mass was elevated on the south side to create natural shading.

Likewise, the studio was designed to face the Ikma mountain to create a natural view from the arts house. Moreover, courtyard was created for natural daylight and ventilation as this is a traditional feature in Al- Ula buildings. In addition, horizontal louvre has been developed in the south to avoid perpendicular sun radiation that will generate shading and decrease energy consumption. In terms of sustainability features, the building has incorporated solar panel, green roof, courtyard, double skin layering, daylight usage and shading device. Figure 7 to Figure 10 shows the proposed design of the interactive house for arts and crafts.



Figure 7. Overview of the interactive house for arts and crafts



Figure 8. Top of the interactive house for arts and crafts



Figure 9. Public entrance and exhibition area



Figure 10. Amphitheater for occasions and socializing

CONCLUSION

This work has presented a proposal on developing an interactive house for arts and crafts at Al-Ula, Saudi Arabia. The interactive house for arts and crafts is intended to preserve Al-Ula's traditional art and to collect the artist and community in one room. The main aim is to promote the culture and art in new trends and technologies through competitiveness between business and education. This will improve the economic, cultural, and educational sectors at Saudi Arabia. Furthermore, the interactive house for arts and crafts will be a main point of tourist attraction in Al-Ula and it will contribute to the development of the local community.

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