

## Communication with Architectural Heritage in a Contemporary Style in the Islamic Region of Saudi Arabia

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### Research Article

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### Abstract

Communication with the architectural heritage in the Islamic world at present is mostly limited to be inspired only by the formal or decorative aspects, without identifying the conditions and references that formulated their current forms. The study aims to present a new concept for communicating with the architectural heritage in a contemporary style and employing it as an effective tool in architectural development and creativity. The content of seventeen publications related to heritage values and its visual characteristics that can be revived has been selected and analyzed. This was important to develop solutions of employing these heritage characteristics the contemporary local architecture in Al Baha heritage villages in Saudi Arabia as a heritage model in the Islamic region that served as a case study for this article. In the end it was concluded that the works of the past were not a simply tradition nor randomly occurred but rather were original creative works that have their reasons and came as a natural process in following the developments and requirements that were introduced in the particular era. The research also concluded that the development of the architectural heritage requires renewable continuity that comes to preserve the cultural constants and to employ the heritage in contemporary architecture. Understand also its characteristics and develop it in a way that suits the Contemporary requirements.

**Keywords:** Architectural heritage, decorative aspects, solutions of employing, cultural constants, contemporary architecture

## 1. INTRODUCTION

This work highlights the necessity of performing a dialogue between heritage and contemporary architecture in order to merge elements characterizing the cultural entity of the society. Thus distinguished architectural heritage has continuously kept its uniqueness Rapid development in life.

The widespread world extension of cultural resulted in appearing multiple and various strange buildings not compatible with the ecological conditions. Therefore, the research has looked for a new prospective for preserving the heritage, and link between past and present by a careful realization for the content within the heritage architecture so that the features and particulars of heritage architecture could be successfully employed ensuring its continuity (Abdel Raouf, 2010).

The heritage architecture represents a historical model and experience, through which many moral and formal architectural values are reflected. It includes distinctive visual features of inherent values with spiritual and social dimensions. Commitment to these features is stemming from an emotional and moral commitment with instinctive motives for reaching a state of psychological balance. These architectural characteristics could be embodied without high economic cost or high technology, and in a manner consistent with the general context (El Saleh,2018).

Previous studies were interested only in architectural shape without going into depth studying of the characteristics of these forms. Such study is of "Preserving the continuity of the local architectural heritage in contemporary Egyptian village architecture" (Hilal, 2007), is focused on possibility of preserving the architectural heritage in a form of contemporary rural architecture in Egypt but it has neglected the mechanisms of recruiting elements of heritage architecture in contemporary architecture. Similarly, the study of "Rooting the Mecca architectural character in its modern architecture" (Faqih, 2015), is focused on rooting the traditional architecture through restoration, and preservation, but ignored the mechanisms of employing the characteristics and elements of heritage into contemporary architecture. Another study of "Saudi experience in establishing and preserving urban heritage in Mecca" (Al-Salafi and Albas, 2010), is focused on reviewing of the Saudi experience in rooting heritage, but still there was no results about employing heritage properties into contemporary architecture.

These studies led to a weak contemporary architectural model only concerned with a shape, not content. Hence, this work has focused on the characteristics and particulars of heritage architecture which can be employed within the contemporary architecture as heritage plans, facades, details, and style of construction, maintaining in the same time the cultural identity of the society together with surrounding environmental conditions (Amir, 1998).

## 2. METHODOLOGY AND CONCEPTUAL CONSIDERATIONS

The study adopts analytical and descriptive methodology to study characteristics of heritage architecture focusing on visual features of architecture in the village of Dhafir in Al Baha at Saudi Arabia that has served as a heritage model in the Arab region. It also studies possible solutions of employing such heritage characteristics in contemporary architecture as well as intellectual attitudes and approaches towards integrating heritage and contemporary elements.

### 3. PREVIOUS PUBLICATIONS

Previous studies have focused on how to take inspiration from heritage architectural elements out of sight through their content, material and moral values in order to employ them in contemporary architecture in a way that takes into account the real conditions, modern requirements and culture of society. Therefore, the presented research constitutes a new addition in the field of employing the values and vocabulary of the architectural heritage in the Kingdom of Saudi Arabia are shown at the following Chart 1.

Chart 1. Scientific publications related to heritage values and heritage visual characteristics

N	References	Purpose of study	Results	Focus of interest
1	HILAL, A., 2007. Preserving the continuity of the local architectural heritage in contemporary Egyptian village architecture. Journal of Engineering Sciences, Assiut University.	Study of preserving the possibility of preserving the architectural heritage in contemporary rural architecture in Egypt (Hilal, 2007).	-The traditional architecture of the Egyptian village was distinguished by its compatibility with the conditions of the site.  -It is necessary to revive the heritage elements to solve modern problems.	Heritage villages in Egypt.
2	MOHY ELDEEN, A., 2015. Employing the characteristics and vocabulary of the traditional architecture in the contemporary architecture of Shibam Kawkaban. Unpublished Master Thesis. Islamic University, Gaza.	Study and define vocabulary and visual heritage in order to develop solutions for the possibility of employing these heritage characteristics in the contemporary local architecture (Mohy Eldeen, 2015).	-A set of results that are considered a guide in the process of modern architectural design and re-introduction of contemporary architecture in a way that is compatible with modern requirements.	Shibam, Yemen.
3	SAIDUM, M., 2012. Reviving traditional values in the contemporary local architecture. Unpublished Master Thesis. Islamic University, Gaza.	Defining the heritage values that can be revived in the contemporary local architecture of the city of Gaza to produce local architecture (Saidum, 2012).	-The traditional architecture contains distinctive optical properties.  -Many architectural values are considered to be authentic and fixed.  -Many of these values can be considered as functional criteria such as environmental treatments.	Gaza City.
4	ABDEL RAOUF, T., 2010. Towards a critical vision of the use of heritage elements in contemporary architecture in Riyadh. The First International Conference on Urban Heritage in Islamic Countries. 26-27 May 2010, Riyadh. Saudi Arabia: Ministry of Tourism.	Highlight on the various possibilities for dealing with heritage, in accordance with contemporary changes, especially technology (Abdel Raouf, 2010).	-Heritage forms were solutions to humanitarian problems.  -There are two directions in dealing with the first formality, with a tendency to nostalgia, and the second view is that heritage has solutions to many contemporary problems.	Islamic world.
5	FAQIH, S., 2015. Rooting the Meccan architectural character in its modern architecture. Unpublished Master Thesis. Umm Al-Qura University.	Recovering the personality of the Meccan architectural heritage by preserving the identity of Makkah, it also aims to identify the extent of contrast and compatibility between the traditional and contemporary environment (Faqih, 2015).	The modern urban environment is the result of prior planning that does not fit with the local environment of the city, resulting in a strange urban environment.	Mecca city.

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- |       |   |   |   |                           |
|-------|---|---|---|---------------------------|
| 6     | MAHMOUD, M., 2008. Architectural heritage and its impact on contemporary Egyptian architecture. Unpublished Master Thesis. Al-Azhar University.   | Presenting a new vision for communicating with the architectural heritage in a contemporary way, analyzing the architectural heritage, identifying the forms of its development and extracting the heritage elements that are suitable for today (Mahmoud, 2008). | -The heritage approach that does not negate contemporary times is the best way to communicate with the architectural heritage.<br><br>-The works of the past were not imitations, but rather works that have their reasons.<br><br>-The development of the architectural heritage requires the achievement of renewable continuity. | Mecca city.               |
| <hr/> |   |   |   |                           |
| 7     | KAHLOUT, M. and SAYAD, M., 2002. Relationship between the values of traditional architecture and postmodern conditions. Research presented in Architecture and Urban Magazine. Islamic University. Gaza.  | Attention to the reality of contemporary architecture and urbanism and the direct and indirect effects of postmodern thought on contemporary local production (Kahlout and Sayad, 2002).  | -Heritage architectural standards and values can be combined with contemporary circumstances, taking into account the requirements of society.<br><br>-The rhythm of age and technological and economic changes directly affect contemporary architectural production.  | Contemporary experiences. |
| <hr/> |   |   |   |                           |
| 8     | ABDEL HAFEEZ, A., 2005. The impact of new building technologies and materials on local architecture (Sana'a, Yemen). Unpublished Master Thesis. Al-Azhar University.  | Study the effect of new materials and technologies on the local architecture in (Sanaa City) to see the reasons for the cultural continuity that lasted for thousands of years (Abdel Hafeez, 2005).  | -The appearance of some traditional elements in contemporary buildings is clear evidence for attracted people to their heritage.  | Sanaa city in Yemen.      |
| <hr/> |   |   |   |                           |
| 9     | MUBARAK, S., 2009. Architectural heritage and the problem of architectural identity in the city of Aden. The Second Engineering Conference. 30-31 March 2009, Aden. Yemen: University of Aden.  | Identify the local architectural identity of the city of Aden and the problem of preserving it in the face of contemporary identity (Mubarak, 2009).  | - The presence of a traditional architectural composition rich in its vocabulary.<br><br>-Neglecting and maintaining existing heritage buildings.<br><br>-The lack of specialized cadres in the restoration and maintenance operations.<br><br>-Identification and documentation of heritage buildings.                             | Aden city in Yemen.       |
| <hr/> |   |   |   |                           |
| 10    | MUSLIM, A., 2016. The civilized communication of Islamic architectural styles on the façades of traditional buildings in Makkah and their use in designing the facades of contemporary buildings. Umm Al-Qura University Journal of Engineering and Architecture. | Identify the components that influenced the architectural thought with the façades of traditional buildings in the Makkah region and suggest contemporary facades of a traditional Islamic character derived from the old traditional styles (Muslim, 2016).      | -Failure to fully align with the western dependency that is not compatible with the local culture.<br><br>-Emphasis on the cultural architectural balance and using it in civilized communication.  | Mecca city.               |
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11	ABDEL NAEEM, A. R., 2007. The inspiration of architectural heritage from cloning to detail and the sustainability of local architecture. National Centre for Building and Housing Research.	Reviving the heritage as a necessity for a distinct expression of identity and local character (Abdel Naeem, 2007).	-Architectural heritage is a rich subject for study and research at the symbolic, cultural and plastic levels. -Inspiration from architectural heritage is one of the means of expressing the local character and identity of traditional societies.	Traditional Yemeni architecture.
12	AL SALAFI, J. and ALBAS, A. H., 2010. Saudi experience in establishing and preserving urban heritage in Mecca. Umm Al-Qura University Journal of Engineering and Architecture.	Shed light on the features of the architectural heritage in Makkah and on the experience of rooting architectural heritage in it (Al-Salafi and Albas, 2010).	-Establish architectural values to restore architectural identity. -The emergence of the method of rooting and contemporary.	Traditional architecture in Makkah.
13	HAMAD, M., 2009. Modern architecture in Yemen and its relationship to traditional architecture. The Second Engineering Conference. 30-31 March 2009, Aden. Yemen: University of Aden.	Linking the general character of traditional architecture in Yemen with modern architecture in it (Hamad, 2009).	-Paying attention to traditional buildings and architectural heritage and preserving it. -Integrating and using the components of the traditional into modern architecture.	Traditional architecture in Yemen.
14	TAREK, M., 2012. Strategies of preserving architectural heritage in the Kingdom of Saudi Arabia through rehabilitation experience and development in Aliyn traditional village. Journal of Al Azhar University Engineering Sector.	Highlighting a pioneering experience for the Kingdom in preserving its urban heritage and the strategy to become a reference for conservation method (Tarek, 2012).	-Emphasizing the importance of the development and rehabilitation process and dealing with the environments surrounding the urban heritage with all its cultural, social and environmental levels.	The village of Al Ain Heritage Kingdom of Saudi Arabia.
15	TAREK, M., 2020. Preserving the architectural heritage within an academic framework. IJRTE.	Aims to develop a plan and strategy to preserve the old city in order to improve its visual image and rely on the involvement of restoration experts with local people and municipalities in a scientific academic framework (Tarek, 2020).	-Conclusion would clarify a strategy and a proposal to maintain the mechanism followed by advance planning which helps to Revitalize the village with all its components.	The village of Al-Zafeer at KSA.
16	SAID, A. and TAREK, M., 2020. Rooting the architectural values of heritage in the contemporary architecture. Journal of Al Azhar University Engineering Sector.	Aims to draw out and study values including many systems of environmental treatments that could be rooted in contemporary architectural works (Said and Tarek, 2020).	The research concludes in identifying the architectural values that could be rooted at Al Baha contemporary architecture.	Heritage villages in Saudi Arabia.

#### 4. THEORETICAL HERITAGE DISCUSSIONS

In this chapter, the discussion about reviving heritage and the possibility of rooting it in contemporary architecture will be presented. It will also discuss the concept of heritage architecture between form and content, in order to extract the values and principles that support heritage architecture. Also, there must be communication and cultural continuity between the past and contemporary, as well as there is importance of integration between

heritage and contemporarity, which can create architectural formations that express the culture of society.

#### **4.1. Employing Heritage in Contemporary Architecture**

Architectural concept is always associated with the spirit of the place and the variable data of time. Architectural design is affected by many external influences and interacts with it during the design process. Its purpose is always to produce an architectural work that has a local identity and a traditional expression. It defines the value of heritage, customs, traditions and religion. A flat work that transmits and imitates the traditional vocabulary (Mahmoud, 2008), and the process of reviving is not intended to produce an architectural work or thought without being influenced by the people's experiences and to take advantage of their architectural ideas and values and integrate them into contemporary works compatible with modern requirements (Ismail, 1989).

The idea of reviving heritage and rooting it in contemporary works is a global civilized idea in which all civilizations participate as one of the directions of modern architecture, and its aim is to produce contemporary architecture mixed with the heritage of society (El Naiem, 2001).

Contemporary is the ability to coexist with the times and its potentials where a cultural exchange can occur between civilizations. At the same time, the identity of peoples is preserved, and there is also technological progress and production as well as the presence of advanced technologies and a strong economy (Abdel Hafeez, 2005).

It could be said that architecture is the creative works that express the spirit of society. The heritage experiences provide it with spiritual value, it is also the source of continuous and renewed society inspiration (Abdelfattah, 2000).

#### **4.2. Heritage Architecture between Form and Content**

The form and the content in the heritage architecture are complementary elements to each other. They are essential components of the architectural heritage, as the form is considered a tangible physical component and is expressed with the structural component as building materials and construction method. On the other hand the aesthetic dimension is expressed in aesthetic configurations such as the use of proportions in design and also use of motifs in their various forms. As for the content, it is a caliber of a set of values and principles that underpinned the heritage architecture. These values can be either religious, emotional, or social etc., and these values can be employed either using architectural elements and vocabulary that are inspired. It starts from the heritage architecture, so these elements appear as an economic burden that needs to convince viewers of its visual necessity, which is contrary to the content and values of the heritage architecture, or it can be used by building materials and contemporary technology, so that architecture does not become a reproduction of heritage architecture, but rather it takes advantage of contemporary capabilities to produce an architecture that reflects civilization and heritage history (Amir, 1998).

#### **4.3. Communication and Cultural Continuity**

In order to achieve a civilized continuity, there must be a continuation of the achievements of the civilized past with contemporary reality, as well as the prevailing environmental conditions and the spirit of the times. Civilization continuity means continuous

succession and civilized production in all areas of human activity, and this continuation requires to take into consideration spirit and capabilities of the current times not to ignore cultural, social, economic and technological changes (Al Jadraji, 1996).

Therefore, it is necessary and for the purposes of respecting the cultural architectural values and its content such as religious, social, cultural, functional and other values, to know ways and possibilities of reconciling contemporary conditions and analyzing heritage architectural models and employing them in contemporary local architecture to ensure the continuity of civilization and architectural production expressing local identity (Fathi, 1977).

For the concept of employing the capabilities of the era, progress and scientific development should not be like modern methods of construction, except for a positive, contributing and united element with those heritage values. Architect Abdel Wahid Al-Wakeel says "Architecture reflects the local personality and thus gives a continuity of civilization, making the human being able to build a stable future " (Mohy Eldeen,2015).

#### **4.4. Integration between Heritage and Contemporary**

The link between heritage and contemporary would reflect the viability of culture over time. In the architectural context, the philosophical ideas of the architect including the concept of linking and integration between the heritage and contemporary can be translated to architectural formations that express the community culture and originality, which could form different formations depending on the thought and culture of the architect, besides his way of treatment and understanding of the principles and basics of designing such formations (Alaa Eldeen,1985).

### **5. CONTEMPORARY HERITAGE ARCHITECTURAL MODELS IN THE MIDDLE EAST**

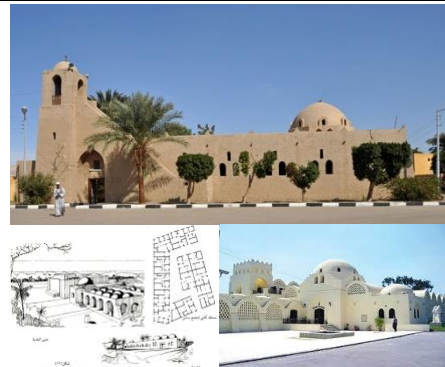
This chapter will be focused as shown in Chart 2, on works and models of pioneering architects such as Hassan Fathi, Abd Al Wahed Wakeel etc., who have been able to produce contemporary heritage in societies full of ancient heritage, and have created new architectural solutions to contemporary problems by taking advantage of old experiences, and they have been able to achieve an architecture that is consistent with the reality today, meaning an architecture that respects its users. It is one of the most important axes of the production of architectural heritage, that results in a state of belonging and a sense of identity of the place.

Chart 2. Contemporary heritage architectural models

**Al-Qurna Village project in Egypt**

Designer/ Hassan Fathi

The project Located at the west of Luxor, Egypt, started in 1946. The village was established to accommodate the immigrants from the areas of the Pharaonic cemeteries in the West Bank. The site was chosen to be close to agricultural lands. The building started by 70 houses, each house being distinctive for avoiding confuse. The constructions used the local materials, influenced by Islamic architecture concept. The domes had their own unique design. Three schools were built in the village, and a large mosque was carried the most beautiful architectural inscriptions in its design, it was influenced by Islamic art in the Fatimid era.



**(Halawa) house in Egypt – Alexandria-1975**

Designer/ Abdul Wahid Al Wakeel

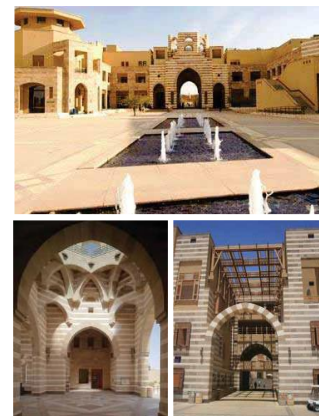
The architect relied on the traditional Islamic concept and Egyptian building models for designing this house. In addition to the patio and its fountain, the house contains a shaded inner space, a windshield, long benches, and a beautiful display balcony. Skilled craftsmen and local Bedouin workers did most of the work. Among the most important architectural aspects that the design has achieved is the provision of interior courtyards to achieve privacy, as well as the use of the broken entrance, the use of (mashrabiah) as an Islamic element that achieves privacy, use of traditional building methods and local materials.



**American University Project - Egypt**

Designer/ Abdel Halim Ibrahim

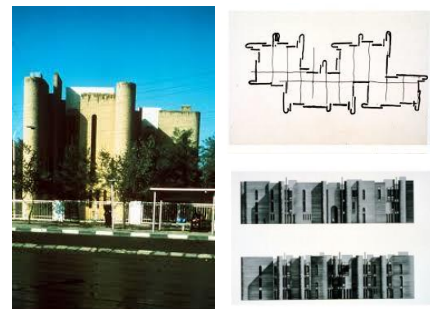
The project inspired from historical heritage of Islamic architecture. The architectural designer was able to achieve the historical communication of the architectural heritage from our traditional architecture in his ideas, limitations, and knowledge without quoting specific forms. The designer relied on traditional environmental inspirations. (Mohy Eldeen, 2015). The design has achieved integration with the human aspects, which is one of the most important principles of Islamic architecture heritage, by creating intimate spaces to contain various activities.



**Tobacco warehouse in Iraq**

Designer/ Rifaat Gadrarij

The project includes seven buildings for management and storage. The heritage was used through the use of gradations in blocks and small longitudinal openings. As for the facades, the shape was inspired by ancient monuments in Iraq, as well as the use of colors in the facades and the different texture in them. (Mohy Eldeen, 2015). The design dealings with heritage depending in inspiration from heritage architectural forms without attaching to traditional proportions, so his works became an artistic sculpture inspired from traditional characteristics, so he was able to transfer heritage monuments by an invisible concept.





**The Grand Mosque –  
Riyadh- KSA**  
Designer/ Rasim Badran

The designer relied on the traditional design of the Arab Mosque, whose beginning was with the Mosque of the Messenger (may God bless him and grant him peace) in Medina, and is well known in the Arabian Peninsula region, where it consists of an open courtyard surrounded by roofed shadows, the largest of which is the qibla.  
 The design take the horizontal rectangular shape, Using the courtyard, and placing two minarets in the back pillars of the mosque inspired from the old Grand Mosque in Riyadh. One of the possibilities of modern technology.



**bank BMCE in Rabat,  
Morocco.**  
Designer/ Norman Foster

The project consist of two headquarters constructed from an reinforced concrete frame surrounded by glossy glass panels, which are covered by barriers made of curved steel sheets with dazzling patterns.  
 - The banks' contemporary interior is wrapped by a traditional, energy efficient envelope and their design is based on a modular system, which utilizes local materials and craftsmanship to create a striking new emblem for BMCE.  
 - The design follows a 'kit-of-parts' approach, with variations in color and scale according to the bank's location. Each building comprises a concrete frame.






**6. TRENDS IN SAUDI ARABIA DEALING WITH HERITAGE**

There are several trends that have emerged in the Kingdom, to deal with heritage and to employ its elements and characteristics (Tarek, 2020). These trends can be identified as shown in the following Chart 3.

Chart 3.Trends in the Kingdom dealing with heritage

**TRENDS IN SAUDI ARABIA DEALING WITH HERITAGE**

First trend: Fascination and Influence by World Architecture	Second trend: Superficial Understanding of Heritage Architecture	Third trend: Blending Between the Heritage Architecture and the International Architecture
		
<p>This trend Emerged after the oil purification and technological developments, where some members of society viewed the new materials and technologies as the most appropriate in use and that the traditional architecture did not correspond to the requirements of the new life. In new buildings, as shown up at image: the style of the new buildings (Al-Baha mail building) and their incompatibility with the environment.</p>	<p>This trend tries to emphasize the local identity through the use of heritage elements, but without going deeper into studying the properties of formation of traditional architecture. This trend depends on the reproduction and spontaneous use of heritage elements, as shown up at image: the direction of a superficial understanding of the heritage in some modern buildings at Al Bahah city.</p>	<p>This trend depends on mixing the previous two directions, and based on formality treatments using the vocabulary of the traditional architecture according to the foundations and orientations of modern architecture as shown up at image: the modern principality structure in Al Baha on the right compared to some heritage structure as a source of inspiration.</p>

## 7. AN ANALYTICAL STUDY IN AL-BAHA HERITAGE ARCHITECTURE

### 7.1. Location

Al Baha Region is located in the southwestern part of the kingdom, and the region was known in ancient decades as the country of Ghamed and Zahran, and its tribal origins extended back to pre-Islamic ages of Sabaa of Yemen (Ministry of Tourism, 2010). The Figure 1 shows the followings:

- Roads of historical importance: Such as El Fiyf Road and some other trade roads.
- Sites relevant to the prophetic biography: Such as the locations related to the prophet's companions (Peace Be Upon Him).
- Heritage villages: The deserted villages spread throughout the region providing a historical overview of its location. Most of them have been abandoned nowadays and became surrounded by modern urban developments.
- Traditional structures: A set of stone buildings built with distinct local style have been the residence of some distinguished historical figures who inhabited the region.

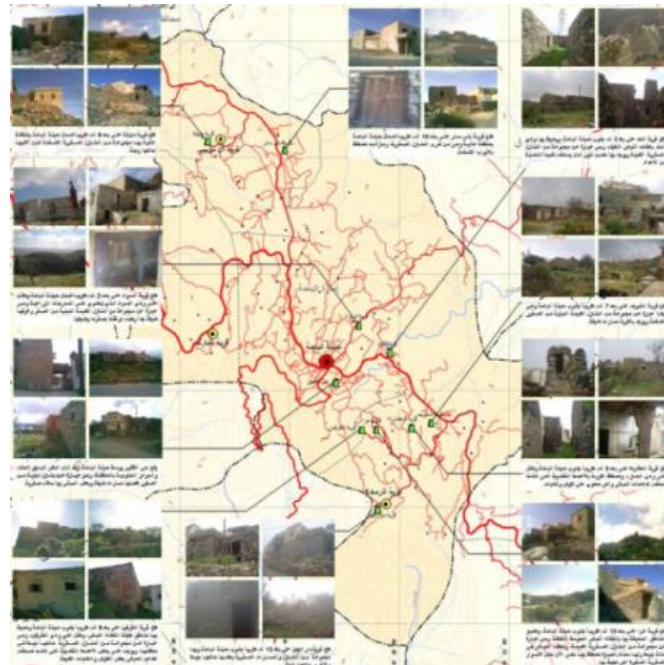


Figure 1. Al Baha location location of Al Baha heritage village with some domestic scenes (Ministry of Tourism, 2010)

### 7.2. Urban Layout in Al Baha

The topographic features of Al Baha Region vary considerably, which have a great effect on the urban layout distribution of cities and villages. In the rugged mountainous areas (Al Sarrah Region), the villages are spread in small patches along the main and secondary roads. In the least rugged areas, they are usually clustered heavily on sites overlooking routes along cultivated valleys. These, are relatively highly populated, where some suitability factors are available.

### 7.3. Architectural Plans

The houses are frequently consisting of three-four floors as Figure 2, rarely of one if the house was to be inhabited by one family. A route leading to the main entrance and linked to the village buildings and cultivated lands is always planned. Building roofs are usually touching the mountain scarps. Consequently, there is another entry above the building.



Figure 2. Plan pattern of heritage building at Al Baha (2018)

#### 7.4. Facades

The facades of heritage buildings were characterized by simplicity accompanied with natural beauty resulting from using structural materials in their natural form, including non-dressing stones or wood of trees. Simple decorations formed of colored stones at the edges of buildings are also noticed. Furthermore, openings that emphasizes the human size and reflects the social circumstances and simple life are presented. Besides, it confirms the rational dealing with the environment as Figure 3.



Figure 3. Style of facades used in Al Baha buildings (2018)

### 7.5. Windows

There are many models of windows; either square or rectangular, but it performs its functional role in providing the natural ventilation required as Figure 4.



Figure 4. style of windows used in Al Baha buildings (2018)

### 7.6. Doors

They are supported by a simple design reflected on façades. There are doors dedicated to men and guests, and others separated for regular family, reflecting the social role and expresses the prevailing traditions as Figure 5 .



Figure 5. style of doors used in Al Baha buildings (2018)

### 7.7. Decorations

These are decorations of colored stones, which are compacted horizontally and in geometrical patterns, regularly used on the walls of the buildings (Parapets). There are also wooden decorations that reflect the indoor structural style usually prominent outside in the upper floors in order to add a unique beauty to the facades as Figure 6.



Figure 6. Styles of decorations used in heritage structures in Al Baha (2018)

### 7.8. Materials and style of construction

Local materials were used as basic building materials such as irregular stones, clay, and wood. Additionally, Constructions with load-bearing walls were used as a construction system.



Figure 7. Logs of trees called "Zafer", are used as pillars to hold the ceilings while the veins of trees were used as beams (2018)




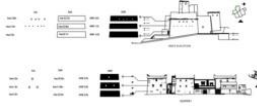

The roofs of houses are ceiled with tree branches, they used also "bases" or "beams", called Alzafer; for raising roofs as extra support as Figure 7. Carpenters were used to install the door, called "Misraa" and windows "Al Bedaia" after decorating and painting them with tar.

### 8. FORMATIVE CHARACTERISTICS OF AL BAHA HERITAGE ARCHITECTURE

The features of the heritage architecture formation in Saudi Arabia are so many, due to its historical depth and its connection with human needs in a basic way. These architectures as shown in Chart 4, contain a rich and unique vocabulary.

Chart 4. Formative characteristics of heritage architecture in Al baha

Formative Characteristics of Heritage Architecture in Al Baha		
	The aesthetic shaping characteristics	Dominant shaping
1	<b>Abstraction</b> This character or feature is demonstrating simplicity and abstraction, by using explicit, simple, and truthful forms.	
2	<b>Infinity</b> It appears in the used items and symbols such as floral, geometric motifs decorations, and the skyline in buildings.	
3	<b>Variety</b> It is shown in various architectural items such as openings in compatible proportions, diversity in shapes and blocks within a single visual unit.	
4	<b>Proportionality</b> Using proportionality gives the architectural items and facades a visual acceptance This characteristic, is in comply with human scale.	
5	<b>Harmony</b> It is the regularity of proportions as appearing in the systematic repetition of architectural particulars of blocks.	
6	<b>Materials and Texture</b> Using natural materials in an explicit way, together with diversity in using construction materials, achieves the visual beauty and confirms the relationship between the building and its surrounding environment.	
7	<b>Lighting &amp; Shadows</b> Use of natural environmental materials outside and inside spaces gives the light a comfortable visual and physiological effects besides, the few openings bring a visual comfort.	

8	Symmetry	The urban structure and the architectural formation would not achieve symmetry, however, it achieves some stability in the architectural tissue despite asymmetry there is a balance in the architectural elements distributing	
9	Skyline & ends of structures	The skyline appearing in a broken line as a result of uneven heights and the differences in land level creates proper ends of the blocks which is reflected in the visual movement.	
10	Simplicity & spontaneit	Simplicity and spontaneity appear in a clear and explicit manner in the external configuration of facades, where the structural materials appear in their natural colors without any treatments or additions.	
11	Solid & Open	The facades appeared in variable proportions. This variable relationship between solid and open is achieving surrounding functional and social aspects.	
12	Chromatic configurations	The colors used in buildings are harmonious and matching, since their use of available natural building materials made by the hands and expertise of skilled local inhabitants.	

## 9. PROPOSAL TO EMPLOY THE ARCHITECTURAL HERITAGE IN THE CONTEMPORARY ARCHITECTURE OF AL BAHA CITY

### 9.1. Identifying the Zone of Study

Identifying the main linear track, cutting across the middle of Al Zafeer Village, which is one of the most significant heritage villages in Al Baha and extends in length from the northeast to the southwest, as a model to study how to reemploy architectural heritage as explained in Figure 8. This track includes a set of main and secondary spaces, where a group of heritage buildings is overlooking. Thus, the improvement and preparation of this track is the main core for employment processes to satisfy the purpose of maintaining the ancient identity of Al Zafeer Village. This will be accomplished by means of finding appropriate solutions that could rearrange and reemploy the items of heritage structural formations in the new buildings. The reconstruction, reviving, and restoring the ancient and important overlooking buildings, in addition to coordinate the main and secondary spaces, are recommended solutions.

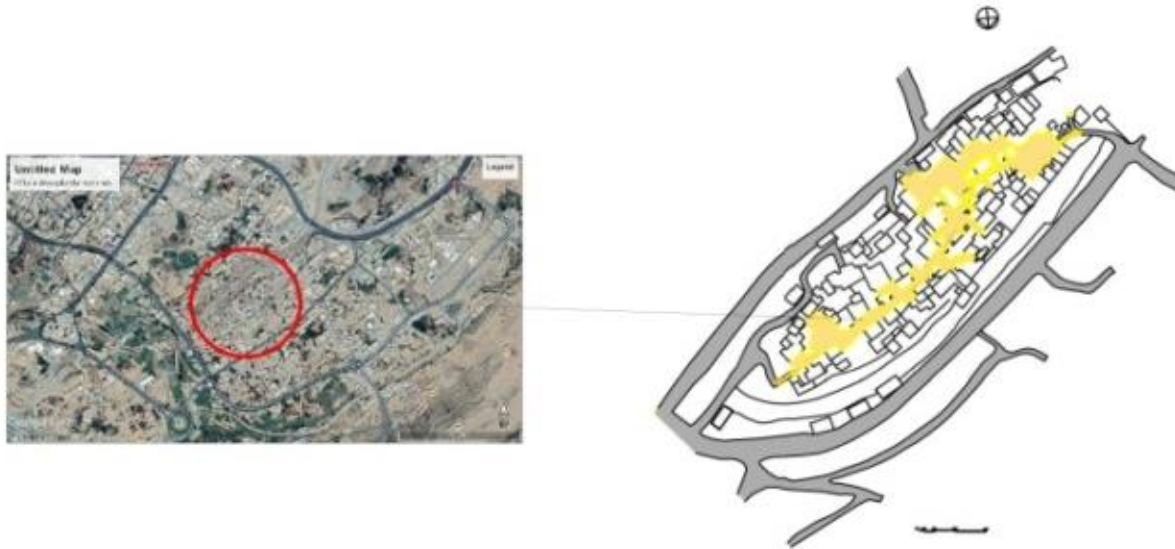


Figure 8. Location of the proposed track at Al Zafeer Village (2018)

## 9.2. The Proposed Design Concept

The researcher presented the proposed design inspired by the design of the old village. Its spaces and the main pedestrian of it are considered an extension of it, thus linking the present with the past and adding unique characteristics to the local environment, which achieve relaxation to the visitors.

The proposed design idea depends mainly on the principle of rooting the local architecture to fit with the natural, social and economic requirements. It is a concept inspired from environment and stems from the heritage of the region and its history. It includes the use of open spaces (courtyards) as an organized functional component around which the rest of the project elements converge around and at the same time achieve ventilation and heat regulation within these elements.

## 9.3. The Proposed Architectural Solutions

In addition of the proposed restoration and re-employment of heritage buildings as in figure 9 and 10, there are a proposed to establish some new works Contributes of flourishing the tourism and the economy and are in line with the environmental and cultural aspects of the region. It also takes inspiration from the traditional formations in its design, which will be concentrated by a design proposal.

The project consists of three parts along the axis of the path within the criteria and principles for preserving the architectural heritage in the village. The first part is a literal commercial center in the northern region at the beginning of the main track in the village and the second part is a group of craft shops in the central square of the village path either. The third part is an update and a link to the trade center, which includes a restaurant and some shops at the end of the path.



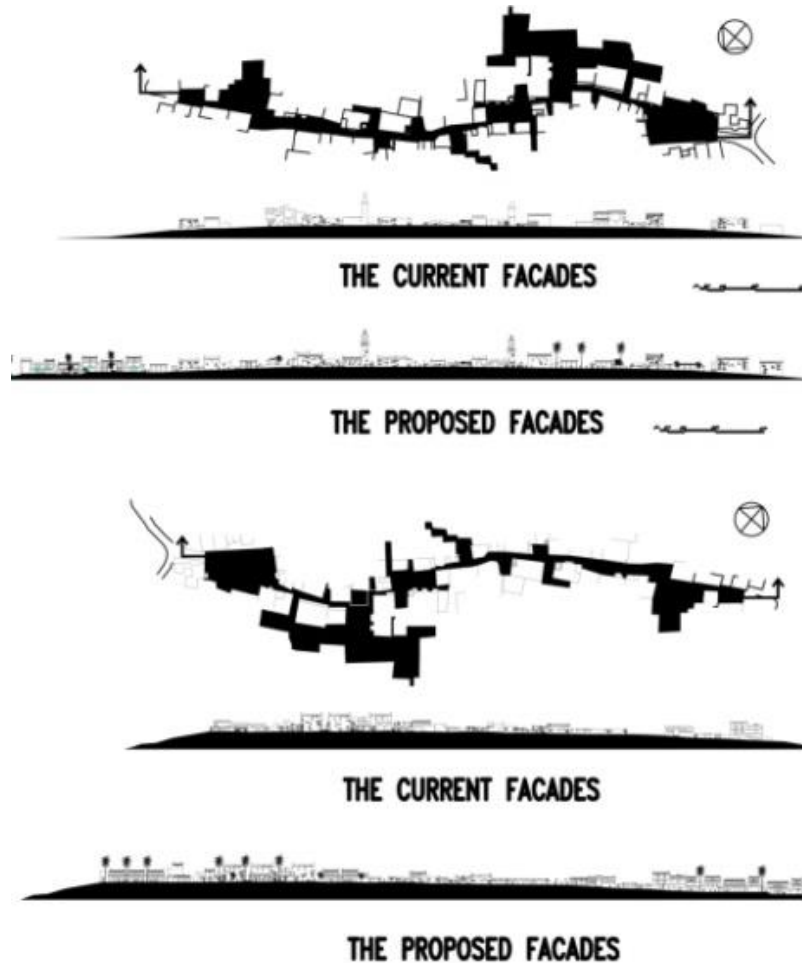


Figure 9. The proposed study of the track before and after reemployment and reviving overlooking facades of the proposed track at Al Zafeer Village in Al Baha region (2019)



Figure 10. Employment of heritage formations particulars in the new buildings in front of the old principality building after the proposed (2019)

#### 9.4. The Craft Centre Design Elements

It includes a production part and a sale part within the workshops, and it will include all heritage crafts in the courtyard, where craftsmen would have the pleasant climate and place necessary for their work, practicing the craft in front of visitors and selling their craft product directly or through the center's sales.

It will become an important production, cultural and educational center that serves national tourism and becomes a destination for visitors. In addition to that it contributes to providing an opportunity for future generations to view their heritage.

It will also include an institute for training within workshops and theoretical lessons within the classroom and includes work such as pottery, glass, fabric, ceramics and other traditional crafts.

### **9.5. Design Criteria of the Project**

Since the project is multifunctional, there are several directions in its design, including:

- Considering the project as a single architectural block in which there are several main or sub entrances that can be accessed from a group of internal voids around which the project elements converge and these voids are related to each other through a movement path that works on the flow of movement and its ease between these voids as shown at figure 11. It is a continuation of the main path in the village that links the voids of the village together. This served as a design concept in designing the elements of the old village.

- Dividing the project into parts according to the functions, with the interconnection, and the possibility of providing green spaces as open areas, taking into account the relationship of the constituent elements of the project and its formation with the surrounding environment.

- Distribution of project components into flowing wings or voids and branching from a major distribution center.

- Commitment to the foundations and standards for the design and planning of newly constructed buildings that preserve the general character of the old heritage buildings.

- Taking into account the design, spaces and dimensions of the artisan commercial center in a manner that facilitates the movement of the public to and from the center and the movement of cars not in conflict with the movement of pedestrians.

- Classifying specialized workshops and stores together, and not confusing stores.

- In the context of mixing tradition and modernity, the design of the exhibition hall for festivals and folklore came to suit modern requirements in terms of providing them with modern techniques of sound processing

- Concerning the formation of facades: The project is closely related to the human component through the various human activities it provides, and therefore the interfaces must respect the human measurement in its dimensions in addition to expressly having the expression of the elements it contains.

- Taking into account the characters of the ancient heritage buildings so that they are not alien to the surrounding environment as shown in Figures 12. and 13., also they must be in line with the structural method and materials used in the old buildings with work to develop them to be easy to maintain and withstand the various weather conditions

- Taking into account the visual composition characteristics inspired by the Saudi heritage to impart the identity and authentic architectural character as shown in Chart 5.

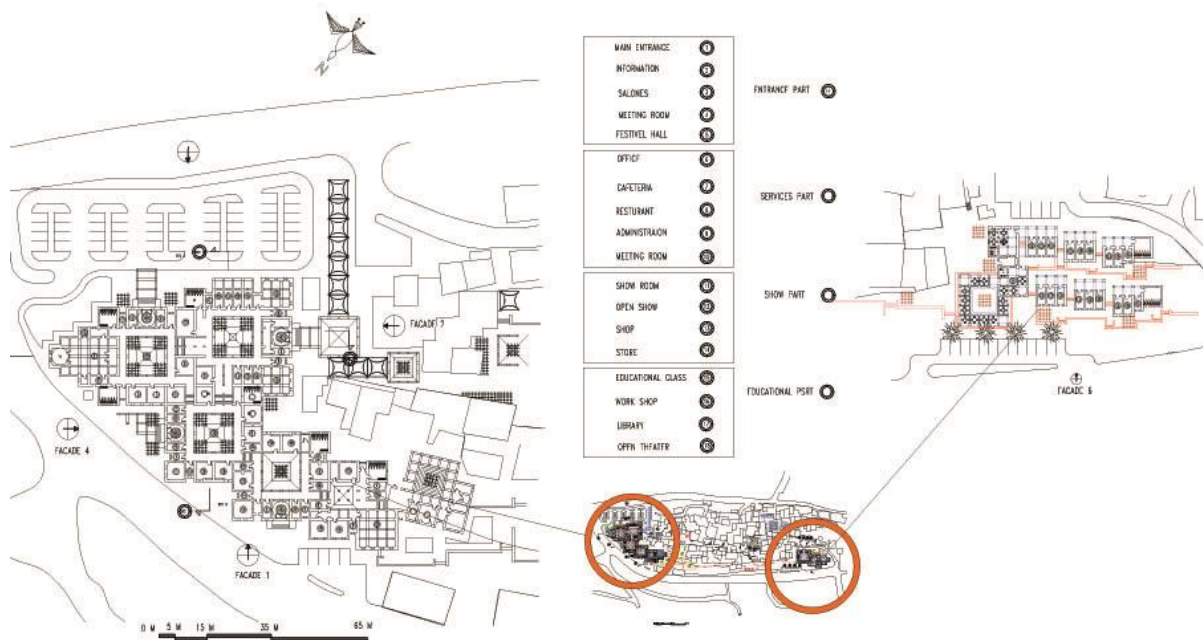


Figure 11. The proposed project (Craft center and commercial market) in the first and last course of study in Al Dhafir Heritage Village, 2019)



Figure 12. The image on the right is heritage principality building in the village of Al Dhafir, and the image on the left is the proposed craft project and it shows the inspired characteristics and architectural elements (2019)

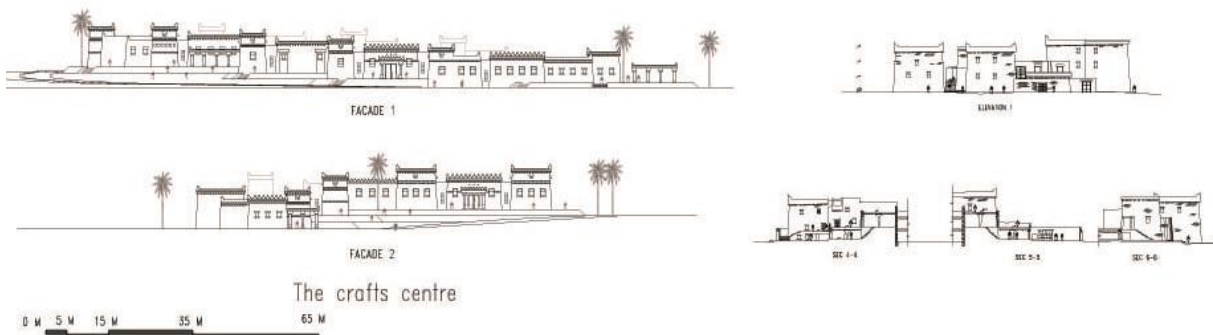
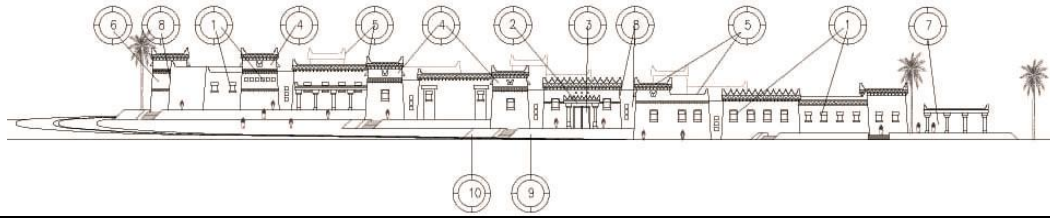


Figure 13. Shows the re-employment of the heritage facades characters in right image to the new crafts centre in the left image (2019)

Chart 5. The characteristics and heritage items proposed for use in the project

Analysis of the characteristics and heritage items proposed for use in the project



1	Openings	Square and rectangular openings were used in different proportions and were inspired by the Saudi architectural heritage, with different proportions.
2	Entrances	Use of prominent blocks above the entrances is inspired from the heritage architecture and also using of the arch element in originality style.
3	Entrances	Several entrances were designed with multiple sizes, and the element appeared in its old form, with different proportions.
4	Forts horoscope	The designer used some elements of Saudi forts and employed them in the project, which gives the building balance and strength.
5	Sky line	The sky line is graduated due to the varying heights between the blocks and the end of some blocks take the same style of castles in the old heritage village.
6	Colors and color combinations	Local stone and light color finishes were used in the building. The color of the dark glass surfaces led to a chromatic contrast work and gained a beauty facade.
7	The human scale	The internal voids performed the required functions, taking into account the human scale and movement within the voids and their needs.
8	Shadow and light	The design of the blocks and their visibility from the structure of the building, aim to cast a shadow on the surface formation.
9	Symmetry	Realizing the feature of non- symmetry through the distribution of forming elements, gave the building a dynamic impression, breaking boredom.
10	Truthfulness of expression	Sincerity of expression is appeared by the building expressing its environment and using the elements and employing them in their right places.

## 10. SUMMARY AND CONCLUSIONS

Integration between heritage and contemporary appears to be of cultural significance. There is a strong correlation between heritage and contemporary in the context of their cultural importance. Therefore, it is clear from the foregoing relationship between heritage and modernity, which is expressed by choice and creativity. It is necessary not to abandon the old heritage under the pretext of aging Advantage of the concepts and principles of this heritage should be reconsidered and focusing on the architectural solutions that achieve considerable comfort requirements for society, then selecting concepts and principles they could be adapted with the current time circumstances. That could be achieved by adding modern technical elements in order to create an ideal architecture that has the values and originality of the past (Bassiouny, 1983).

The attitudes of architectural schools and their intellectual principles towards the heritage and its relation to the contemporary have been determined in three directions. The first trend deals and connect the urban heritage with a definite time while the second trend believes that heritage is part of the modern structure of the city and its contemporary culture. Both trends contribute to reflecting the fixed dimension of the time; past or present, and in considering the old heritage as a physical entity only. On the other hand, the third trend deals with urban heritage as a part of the past, present, and future. In this regard, it reflects the changing dimension of time, which is regarded as a cultural heritage, however, it does not

neglect the necessity of working to adapt its components with the recent updates and developments (Hilal, 2007).

With respect to the projects that attempt to integrate the heritage in the contemporary architecture of Al Baha, they are restricted to employ certain architectural items directly without realizing the formative features of these elements. Moreover, some projects have been able to employ heritage elements in a conscious way of understanding the formative characteristics of these elements and integrating them truthfully with the development of time to create modern structural elements.

Furthermore, superficial and not in-depth attempts appeared in understanding the content of formative characteristics of heritage architecture, and therefore the modern buildings are found with deformed and distorted identity, as it is limited to employ some formative characteristics such as the glazed parapets in most of the projects and forms of castles with slanting walls.

The formative elements of heritage architecture in Al Baha brought a common language in harmony with each other and reflects explicitly their function.

#### **Information / Acknowledgments**

All figures and charts in the article are produced by the author in declared year, unless stated otherwise.

#### **Conflict of Interest Statement**

This article complies with research and publication ethics and there is no potential conflict of interest.

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