

Overview of the old city of ghadames environmental sciences essay



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INTRODUCTION

Heritage conservation is important for identifying, recording, analysing and protecting heritage and cultural resources. Conservation of heritage buildings is an important tool in city development that can be highlighted in some cities in the world. It plays an important role to define the landmark within the heritage area as well as to generate economic return and to support the tourism industry. Conservation of heritage buildings is very important because it provides an identity and continuity sense in a rapid changing world for next generations. Heritage buildings basically represent the past history and culture of a nation. They constitute together the architectural heritage of an area. Heritage buildings possess historical values resulting from their beautiful architecture and their correlation with important events that occurred in the heritage area such as religious, social and political events. Heritage buildings are subjected to processes of degradation with time, which leads to a situation in which they became not able to fulfil the purpose for which they were built. For example, in Canada about 20 percent of pre-1920 heritage buildings to demolition over the last 30 years has been lost (Heritage Canada Foundation, 20 December 2012). Lausche, (2011) mentioned that growth in protected heritage areas has continued to trend upward since the 1960s from about 1.5 percent of the earth's surface covered to more than 12 percent of the earth's surface. Although the growth in protected heritage areas has gone up; however, the same researcher " Lausche" confirmed that scientific assessments indicate that ecosystem integrity are continuing to decline at an accelerating rate. Heritage buildings need an important tool to protect them. No protected

heritage area will be secured over time without a supportive legal and policy framework (Lausche, 2011). Accordingly, conservation guidelines of heritage buildings are one of the proposed resolutions for protecting heritage buildings. Appropriate conservation guidelines usually serve as an important tool for the building conservators and building contractors. The absence of these guidelines leads inevitably to deterioration of heritage buildings. They must be created and developed to ensure that any important changes in conservation work are undertaken in the most ways possible to conserve the heritage structure's, historic features and character. Conservation guidelines prevent the random works that have spread in the conservation projects of heritage buildings. On this basis, conservation guidelines for developing and utilising these properties must be established. Libya is a treasure chest of heritage and ancient cultures. Great civilisations flourished in the country, including Phoenician, Greek, Roman, Byzantine, and Islamic. They all left lasting imprints of their cultures. Libya has five official UNESCO cultural heritage sites (See Table 4. 1 in Chapter Four of this Research). The five sites inscribed to the World Heritage List between 1982 and 1986 supply an obvious illustration that Libya has a heritage whose incalculable value belongs to all humanity. The old city of Ghadames (OCG) is one of the official UNESCO cultural heritage sites that Libya has. The OCG is a major desert city and played an important role as a cultural and trade centre between the Mediterranean and Africa for over 1400 years. It was declared a world heritage site by UNESCO in 1986 in recognition of its rich cultural heritage. An important role is played by tourism in the old city of Ghadames with many visitors coming from all over the world for attending the Dates Annual Festival that is held in October. The conservation of residential heritage

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buildings in the old city of Ghadames preserves and restores a valuable piece of Libya's heritage and also contribute to the development of the city as an important tourist destination. This research attempts to determine the structural integrity of the residential heritage buildings in the old city of Ghadames as well as to provide and develop conservation guidelines for repairing and conserving those heritage buildings.

Problem Statements

Defects of heritage buildings can result from the degradation of the construction materials or from the damage of the heritage building elements due to mechanical actions. Heritage buildings are subject to process of degradation with time. In other words, the degradation of the construction materials is a process that develops naturally with time, and can be accelerated by chemical, physical or biological actions (CIB Commission, 2010). For this reason, several researches were conducted all over the world to study the existing conditions of heritage buildings. For instance, A Ghafar Ahmad et. al. (2008) assessed the existing conditions of heritage buildings in Malaysia with the main focus on the conditions of building defects and conservation approach used for these buildings. Their research found that most of the defects that occurred in heritage buildings in Malaysia were at external walls followed by internal walls. Other research by Hashimah & Shuhana (2005) where the two researchers assessed the strength of the old shophouses and the impending factors that threaten the continuous presence of these heritage buildings Malaysian town. The findings indicated that the practice of conserving the old shophouses is still not effective. A more effective measure in preserving the old shophouses needs to be

undertaken. In addition, Itma, (2007) assessed the situations of conservation projects in Palestine especially in the old city of Nablus. He found that heritage buildings of the old city of Nablus, Palestine, suffer from much random preservation. Although defects of heritage buildings can result from the degradation of the construction materials or from the damage of the heritage building elements due to mechanical actions; however, there is another risk which threatens the sustainability of the heritage buildings. Move of inhabitants of heritage buildings to modern concrete buildings with modern amenities is also a great risk that leads to heritage building's deterioration. When inhabitants live in their heritage buildings, their houses are well maintained; some continue to be in excellent conditions and are properly cared for. If inhabitants stay in their heritage houses, they surely perform maintenance works periodically. In contrast, if they abandon their heritage houses, it will lose its vitality. This occurred in many heritage cities in the world. For example, many people moved away from the neighbourhood of Le Village in Cornwall, Ontario in Canada and sold their houses to investors who rented them out, when the textile mills in the area shut their doors. The layoff of many residents of Le Village marked the beginning of the deterioration of the community's physical conditions. To resolve this problem, Friedman et. al. (2002) developed urban and architectural guidelines for conservation of the neighbourhood of Le Village in Cornwall, Ontario. Another example occurred in China, when many younger and richer residents have moved from the old city of Yangzhou to the new city areas due to the deteriorating physical conditions of the heritage buildings. To make people return to the old city of Yangzhou, Longbin (2007) developed a detailed design guideline for the whole old city <https://assignbuster.com/overview-of-the-old-city-of-ghadames-environmental-sciences-essay/>

Yangzhou in China. Likewise these situations occurred also in the old city of Ghadames. In the early 1980s, the inhabitants moved out of their heritage houses of the old city to modern city. Since then, the United Nations Development Programme (UNDP) has carried out a project for the old city of Ghadames where its objective was to encourage and motivate the inhabitants to come back to the old city. The project was completed in 2004 as part of the Tourism Master Plan (United Nations Development Programme and UNDP Office for Project Services Report, 2007). Even though the project maintained source of water (Ain Al-Faras), restored some heritage buildings and repaired streets; however, until today the inhabitants have not yet come back to the old city. This is also confirmed by UNESCO Report (2010) where the report mentioned that the old city of Ghadames has not yet seen the return of its inhabitants. Furthermore, there is a significant lack of researches conducted on the heritage buildings in the old city of Ghadames in spite of its heritage importance. Although few studies were done in the old city and the modern city of Ghadames; however, none of them determined the structural integrity of the heritage buildings in the old city of Ghadames. Additionally, none of them attempted to develop conservation guidelines to protect the residential heritage buildings in the old city. Some of research studies were carried out by Chojnacki, (2003); Elwefati, (2007); and Nura S. et. al. (2006). Therefore, a study of the structural integrity of the residential heritage buildings in the old city of Ghadames, world heritage site, Libya is very important before developing the conservation guidelines for those buildings in the old city. Besides that there is a lack of expertise and specific conservation guidelines for residential heritage buildings in the old city of Ghadames resulted of dilemma in the management of the municipality to <https://assignbuster.com/overview-of-the-old-city-of-ghadames-environmental-sciences-essay/>

preserve the residential heritage buildings. The level of understanding of the heritage buildings in Libya still remains very low. Without any documentation the beauty of the residential heritage buildings will be lost due to age factor and climate change. Lack of expertise in the maintenance of heritage buildings is also a source of beautiful heritage buildings are damaged or destroyed. There is a lack of technical knowledge to repair and maintain residential heritage buildings in the old city of Ghadames. Since late 1980s, several studies on the conservation of heritage building of the old city of Ghadames have been undertaken with the assistance of the United Nations Development Programme (UNDP) and specialised United Nations Agencies (UNA) and other private or government entities. However, none of these studies have led to any concrete steps or conservation of heritage buildings in the old city in translating the plans into specific actions (United Nations Development Programme and UNDP Office for Project Services, 2007). So far, no conservation guideline for preserving residential heritage buildings in the old city of Ghadames has been developed in spite of its importance to protect heritage buildings (Arrabti, 2011; Al-Hasi, 2011). This was also confirmed by Azzuz (2000) who clarified non-existence of any guidelines to maintain and enhance the character and integrity of the heritage buildings in the old city of Ghadames. Based on the discussion above, the main issue of this research results from the lack of: (1) Studies conducted on conservation of heritage buildings in Libya, (2) expertise and specific guidelines for heritage buildings in the old city of Ghadames, and (3) a fit system in force to discover and record the heritage buildings in Libya. Therefore, the current research aims at identifying problems encountered in the residential

heritage buildings in the old city of Ghadames, and suggests some
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conservation guidelines and references for the conservation of residential heritage buildings in the old city and which are all gazetted as national heritage buildings. Policies and guidelines to be provided are generally based on an analysis of the residential heritage buildings.

Research Questions

Based on the research problem statements, the research questions mainly focus on the following areas: What are the structural damages of the residential heritage buildings in the old city of Ghadames, world heritage site, Libya? What are the causes of structural damages of residential heritage buildings in the old city of Ghadames, world heritage site, Libya and their level? Are there any conservation guidelines for the residential heritage buildings in the old city of Ghadames, world heritage site, Libya?

Objectives of Research

The main objective of this research is to determine the structural integrity of the residential heritage buildings in the old city of Ghadames as well as to provide and to develop conservation guidelines for repairing and conserving those heritage buildings. The objectives of this research are as follows. To determine the structural integrity of the residential heritage buildings in the old city of Ghadames, world heritage site, Libya. To investigate the causes of structural damages of residential heritage buildings in the old city of Ghadames, world heritage site, Libya and to classify those buildings according to the level of damages. To develop the conservation guidelines for the improvement and conservation of the residential heritage buildings in the old city of Ghadames, world heritage site, Libya.

Scope of Research

Generally, the conservation of heritage sites includes buildings, artefacts, structures, areas and precincts of historic, aesthetic, architectural, cultural or environmentally significant nature (heritage buildings and heritage precincts), natural feature areas of environmental significance or the sites of scenic beauty. The research does not discuss heritage in general, but mainly focuses on the built environment. The economic and social aspects are discussed, but are not the main emphasis in this research. For instance, when discussing about the impact of conservation on the economy, the built environment is regarded as the main emphasis. The main scope of the research is the conservation of residential heritage buildings in Libya. Residential heritage buildings in the old city of Ghadames were chosen as a representative city for conservation of residential heritage buildings in Libya. This was done so that to address city's past, present and its future possibilities. The old city of Ghadames is one of the most typical tourism cities in Libya. This research does not cover all heritage cities in Libya, but the case of the old city of Ghadames has some characteristics and features with other heritage cities. Namely, the present research covers residential heritage buildings in the old city of Ghadames. Accordingly, Mosques (Masjids), shops, public buildings and the surrounding environment of the heritage area in the old city of Ghadames are not addressed by this research. Therefore, the study only focuses on heritage residential buildings in the old city of Ghadames as one of the famous places in the Ghadames heritage area.

1. 6 Significance of Research

The significance of the research results from the historical importance of the residential heritage buildings in the old city of Ghadames. Residential heritage buildings in the old city of Ghadames are an interesting case for investigation because the old city is considered one of the most prominent tourist destinations, and one of the most beautiful heritage cities in the desert. It has been recognised by several important international organisations such as the UNESCO and the Organisation of World Heritage Cities. The United Nations Educational, Scientific and Cultural Organisation (UNESCO) has classified the old city of Ghadames as a heritage city and protected by the organisation in 1986, and classified it the third oldest city in the world (United Nations Development Programme and the UNDP Office for Project Services Report, 2007). The significance of this research also highlights from the architectural design of the residential heritage buildings in the old city which makes the old city of Ghadames important for studying its residential heritage buildings. The architecture of the residential heritage buildings in the old city is focused on resolving the climate problem and privacy. According to Nura S. et. al., (2006), most of the people leave their houses in the new town of Ghadames and migrate to the old town and other cities during the summer, because the material of building construction and the air-conditioning in modern houses is unable to cope with the torrid heat of the desert and only the clay houses in the old town maintaining a degree of coolness, in summer-time the old town is still comfortable for living because of the good shelter against the extreme desert heat. In addition, the old city of Ghadames is located in desert regions. Therefore, it can be seen that its buildings are designed with flat roofs, small openings, and heavy

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weight materials such as dried mud. The thick exterior roof and walls help to absorb temperature fluctuations and, therefore, keep internal temperatures from rising above the outside surface temperature. An important function of the roof is its colour. A white or light coloured roof will stay approximately the same temperature as the outdoor air during the day, and 6-10 Celsius cooler than the outside air at night. This is an important feature because the cooler night time's air will be channelled down by the slope of the roof and into the rooms in the building. One function of the small openings is to prevent dust from entering buildings. Windows are arranged so that equal areas are open on the windward and leeward sides of the building. The reason for this is very simple; the air stream can be directed into rooms that need constant ventilation such as the bedroom. When one window is positioned higher than another, thermal force will direct the airflow from the high window to the lower window creating good ventilation. Courtyards, patios, and verandas are other common features of heritage buildings in the old city of Ghadames. With high walls, these outside areas provide shade and a relaxing environment for their inhabitants for social gatherings, evening entertainment, food preparation, and domestic work such as laundry. Another way to provide shade in a more aesthetically pleasing way is through greenery. For example, trees, shrubs, and bushes provide natural shade from the sun while giving the courtyard area a pleasing look. Why are these outside areas so important? They are important because essential functions happen outside like cooking and entertaining. The outside environment in hot regions is just as important as the inside because it is a daytime relief from the intense climate. This beautiful architecture is worth to investigate and study. This research is important because it focuses on <https://assignbuster.com/overview-of-the-old-city-of-ghadames-environmental-sciences-essay/>

heritage conservation which generates significant benefits to the economy. Based on the literature, benefits of the conservation of the heritage buildings are many. Economical benefits are considered one of them. Several studies confirmed that historic conservation yields significant benefits to the economy. In other words, these studies revealed that historic conservation is considered as an economic development tool. For example, Rypkema (1991) compared the relative costs of building conservation versus new construction, and found that building conservation makes more economic sense than new construction. Another study by Wolf et. al. (1999) reached the same conclusion by Rypkema (1991). They found that in many cases; it is more efficient and profitable to preserve historic buildings than to construct a new building. In addition, A Colorado Historical Society report, based on an economic study conducted by Clarion Associates, et. al. (2002), mentioned that, " Studies across the country have shown that historic preservation acts as a powerful economic engine, creating tens of thousands of jobs and generating significant household income". On this basis, this research is deemed very important because it helps to develop tourism resources and exploitation of the architectural patrimony through re-using them and creating jobs. The significance of the research appears also from its main objective. As mentioned previously, this research attempts to develop conservation guidelines for the residential heritage buildings in the old city of Ghadames. According to the literature, conservation guidelines should be developed to control changes done by conservation works on heritage buildings and to prevent random conservation works that lead to deterioration of the heritage building. A research by Itma, (2007) confirmed that issuance of guidelines for maintaining heritage buildings such as <https://assignbuster.com/overview-of-the-old-city-of-ghadames-environmental-sciences-essay/>

obtaining the official demobilisation to change, demolition, or addition of a supplement of a heritage building is very important. Therefore, conservation guidelines ensure a better way to preserve heritage buildings. It is also a good tool for protecting heritage areas.

Research Contributions

The following contributions can be highlighted from this research: The research is expected to give a contribution in providing policy and guidelines that become the future reference for other residential heritage buildings located in the desert region. In addition, the appropriate conservation guidelines provided by this research can be used by the building conservators and building contractors in the conservation works. The investigation into this area increases the understanding of the role of conservation guidelines to protect residential heritage buildings and contribute to the literature by extending the current body of knowledge on this issue. The research can be benefited by policy maker, urban planners, architects, and historians. In addition, this research also contributes some benefits to the building owners, developers, designers of projects, consultants, different government agencies, heritage body and by all those who interested in the conservation and care of heritage buildings in Libya.

1. 8 Organisation of the Research

The research is organised and divided into seven chapters as follows.

Chapter One: Introduction

It provides background to the research and delineates the structure of the thesis. It presents research issues including the research problem and

outlines research questions. The Chapter exhibits the research objectives which establish the purpose of the study, considers potential limitations, discusses significance of the research and outlines the contributions of the research findings.

Chapter Two: Literature Review

It reviews the relevant literature regarding conservation of heritage buildings. It discusses international organisations that have an interest with heritage buildings, approach of architectural conservation and heritage buildings. In addition, the Chapter outlines conservation theory related to this research.

Chapter Three: Research Methodology

It explains the way, which is selected for this independent study to show the applied research method in this part. It gives an understanding of how the practical work and data collection has been conducted, as well as how the results have been analysed. It describes the research methodology base on the literature review in Chapter Two.

Chapter Four: The Overview of the Old City of Ghadames

It outlines the case study of the old city of Ghadames. It provides background information on the residential heritage buildings in the old city of Ghadames. The Chapter discusses also the Outstanding Universal Value (OUV) of the World Heritage Site of Ghadames and shows the heritage sites added to the World Heritage List in Libya.

Chapter Five: Case Studies

It discusses selected case studies concerning conservation guidelines for residential heritage buildings in four countries. It presents guidelines for conservation areas and heritage buildings in George Town, Penang, Malaysia; conservation guidelines implemented in the residential heritage buildings in Springfield, USA; conservation guidelines adopted in the residential heritage buildings in the city of Richmond, USA; conservation guidelines for residential heritage buildings in the city of Binbrook, Canada; and conservation guidelines for residential heritage buildings in the city of Maitland, Australia.

Chapter Six: Analysis and Findings

It offers an in-depth analysis and discussion on the assessment of the structural integrity of the residential heritage buildings in the old city of Ghadames and the development of the conservation guidelines for the residential heritage buildings in the old city of Ghadames.

Chapter Seven: Conclusions

It discusses the outcome of the research (i. e. design guidelines). It also provides a discussion of the implication of the policy including legislative instrument, conservation policy, the outstanding universal value of the old city of Ghadames and stakeholders in conservation of residential heritage buildings. Recommendations for further research based on the topic area are also included.