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Sustainable Development of the Old Area of the City of Samara

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Abstract: The current study attempts to design for the development of Samarra's Old District. It is a mirror that reflects the effects of this civilization and the expression of the city's symbols through the integrated development of the examined region and its significance. Which will become a tourist attraction due to its cultural significance. It is also economically significant because it helps to the city's economic development and provides job possibilities for the unemployed. Which instills in the visitor a new perception of Samarra and, at the same time, instills pride in the city's youth when the heritage of their city is revealed to them. The archaeological significance of the project is one of the grounds for its selection. The reasons for choosing the project

1-The archaeological significance of the ancient district, which is a strong point for attracting tourists to the city and aids in the identification of the city's legacy.

2-To attract tourists, the city requires a space and an entertainment facility that welcome their activities and fits their needs.

Project goals and objectives 1. Create communities near the Grand Mosque and give them their unique identity through a panorama that recounts the city's past to visitors and residents, as well as allowing them to see the heritage and glory of their forefathers. 2. Hold creative performances to communicate with other people's civilizations and cultures, as well as global scientific and technological growth. Visitors' definitions of Samarra's extended heritage, as well as the city's residents' definitions of what exists overseas and how it reflects current cultural development. Provide trade centers for various types of heritage goods, which is a lovely souvenir that visitors can preserve, and there can be. The research made a Sustainable development plan for the studied area and recommended some proposals for completion of the project.

Keywords: Sustainable, development, heritage, city's symbols, old city, Samarra.

1. introduction

The ancient capital of Samarra, which was erected between 836 and 892, is a superb example of the Abbasid Caliphate, which was the dominant Islamic state at the time. Samarra has the best preserved plan of an ancient large city, having been abandoned relatively early Samarra was the second capital of the Abbasid Caliphate after Baghdad city, and this research design a sustainability planning of old Samarra city by using modern technologies in their buildings to improve the quality of life of this part of Samarra city. In three steps, the development employs a sustainable idea (data collections,statictical analysis , put a sustainbale design)

2. Problem Statement

The study area suffers from continuous demolition of its buildings due to obsolescence and the presence of clay in its buildings as a basic building material.

3. Aim of study and objectives

a plan must be drawn up that includes preserving important historical buildings, rehabilitating some of the buildings and reusing them to fit the sustainability plan with the design of completely silent neighborhoods on the main street of the study area.

4. Methodology

This study involved a four-stage methodology which included: reviewing the literature, identifying, searching and collecting data through field study By gathering field data from the study region, such as traffic volume, examining climatic conditions and building heights, classifying and analyzing the findings. and adopting a sustainable notion for developing the old part of the urban fabric, the research takes a descriptive analytical method.

5. Sustainability Principles: it is based on four principles:

1-Sustainability The word 'Sustainable' "is often used to characterize a technology with a lower environmental impact on a single environmental problem (e.g., climate change, water resource use, etc.), often quantified in terms of reduced resource use or pollution emissions as a fraction or percentage" (Levin 2015, p. 1). Sustainability should address the complex interactions among socio-ecological systems (Ostrom 2009). The most famous definition of the concept came from World Commission on Environment and Development that defined Sustainable development as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (WCED 1987, p. 41). The field or community in which sustainability is used has a specific scope. Its presence is typically tied to a combination of social, economic, and environmental aspects that, when taken together, provide complete support for the scope of sustainability in all of its components.

2-Resources: All natural and industrial resources that contribute to the scope of sustainability on the Do its part when resources are sufficient and appropriate to prepare living beings to live as long as feasible.

3-Consumption: The rate of utilization of natural substances is a key incentive to keep living organisms alive, and the higher the proportion of consumption, the more life-sustaining organisms are preserved, and vice versa.

4- Technology: Technology is the result of modern scientific effect on the nature of existence. By presenting a group of recent scientific findings, proper use of technology leads to keeping sustainability..[4, 5].

6. sustainable building materials

Building materials utilized are an important component of construction sustainability, and special criteria were created in the selection of sustainable building materials: It is critical to select materials that emit less carbon during or after installation. Work must be done to remove superfluous extraneous materials and finishes; there is no need to cover the interior and exterior surfaces on a regular basis, and this will reduce the usage of chemicals over the building's lifetime. Recycled ingredients must be used in products. Another commodity to consider is building trash, which can be recycled if the materials are recyclable. [3]

7.sustainable concept was in 4 steps

1. data collections:Sustainable design starts with a thorough understanding of the site and what sets it apart from others, allowing the design to emerge from the environment rather than destroying its ecology. Interaction with the site also aids in comprehending natural site data, such as projecting the building on the site according to the sun's direction and fall angles. Keep the

natural environment safe and explain how to get to the place and services. Communication with nature: Whether the structure is located within a city or in the open, communication with nature breathes life into the built environment and determines the degree of connection with nature. Minimizing Environmental Impacts Through Recycling and Reuse (Fig.1)

Fig.1 data collections of development area

2. Data analysis :The second step is to collect data on the percentage of buildings that require rehabilitation, structures that are demolished and residential complexes that are redesigned, and the percentages of building heights that improve their functions for urban sustainability. (Fig.2)

Fig.(**2**) data analysis of development area

5-The Mental map1 of the development area study

According to Kevin Lynch's theory, there are axes represented in Al Malwiya Street and Mariam Market The main intersection is represented by the intersection of Souk Maryam Street with Al-Mutawakkil Street. As for the most important element,(landmark) it is the shrine of the two imams, and the area surrounding the mosque is the compact urban fabric.Fig(3)

[1] A mental map is a person's perception of their interaction area from their point of view. Although this type of subject matter would appear to be most likely to be examined by social science departments, they investigate it to discover subjective aspects from the public, such as personal preference and practical uses of geography, such as driving instructions..

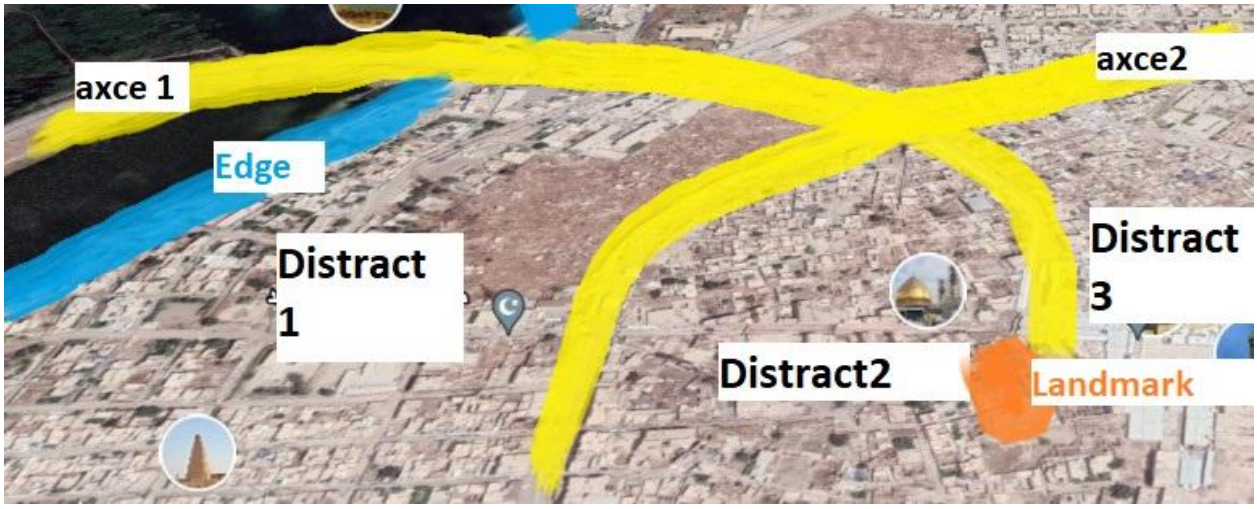

Fig. 3: The Mental map2 of the development area study

4-3 put a sustainbale design

The environmental impacts of a building are studied by evaluating the site and energy involved, the degree of pollution caused by the materials, the energy efficiency, building materials and techniques. There are several factors that deserve to be changed from the building strategies currently used to the strategies that achieve sustainable housing. Sustainable homes are energy-saving homes and thus will save their residents during their life cycle a lot of money in terms of electricity and water. Where engineers are keen to use recyclable materials in addition to materials that can be repaired, during the construction phase and all this may make the construction cost more than the cost of building a traditional housing. The house and the careful selection of building materials to be repairable, recyclable, and The cost of creating environmentally friendly housing is more than traditional housing, but the principle of the house is sustainability, or the effectiveness over the life cycle of the house, so the extra cost in the setup will be recovered after a year or longer. Fig.(3)depicts the progression of the case study.

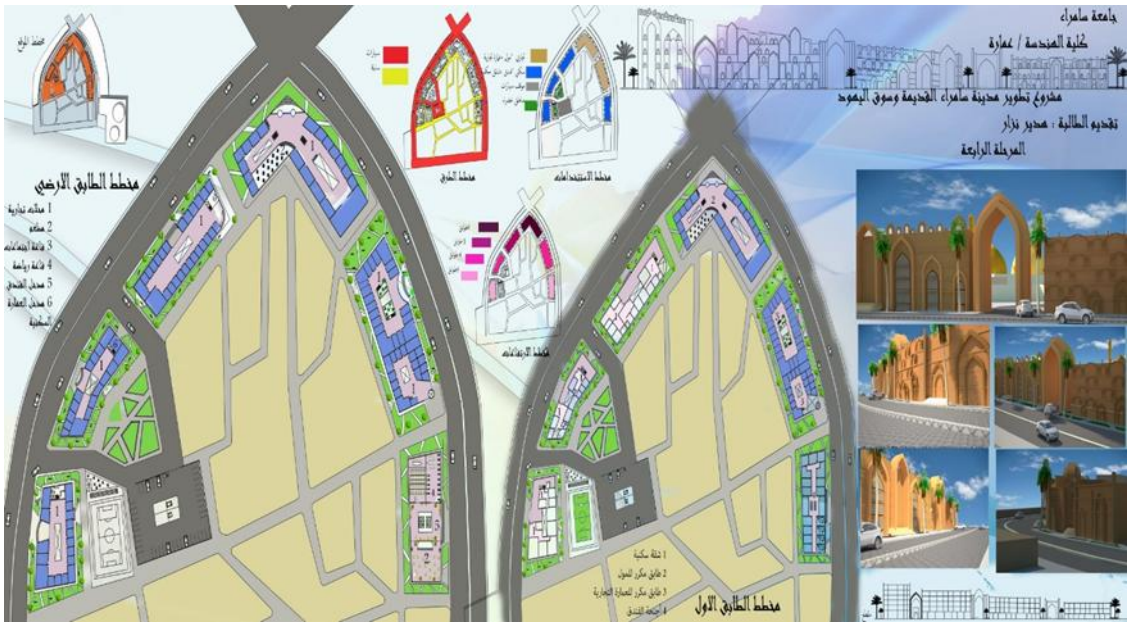

Fig.(3) sustainbale proposal for the development of the Old area

The project's components.

A. residential areas: There are two categories of buildings in residential areas:

1-Residential buildings: The project comprises of 70 residential buildings, each of which has e stories with two apartments each, for a total of (700) apartments in the project.

2-constellations: The project consists of 82 towers, each with 12 storeys and three Residential units on each floor, for a total of (2,988) apartments in the project.

B. Services and facilities provided by the government:

Educational services are provided in nine schools that are evenly spread around the project's territory.

Municipal services and facilities are represented in a municipal building that has a police station, a civil defense center, a commercial center, and two-story commercial buildings (shops and offices, a library). supermarket, a post office, a cultural center (library and theatre), specialized shopping buildings and a bank branch.

Health services: The project contains one health center.

Religious services: the rehabilitation of the mosque and the construction of the Quran memorization center in the middle of the project

Infrastructure: It includes roads, water and sewage networks, electricity, telephones, a water well and a water tank

The green component: the project includes a public garden and semi-public gardens distributed within the building blocks in the city Fig(4)

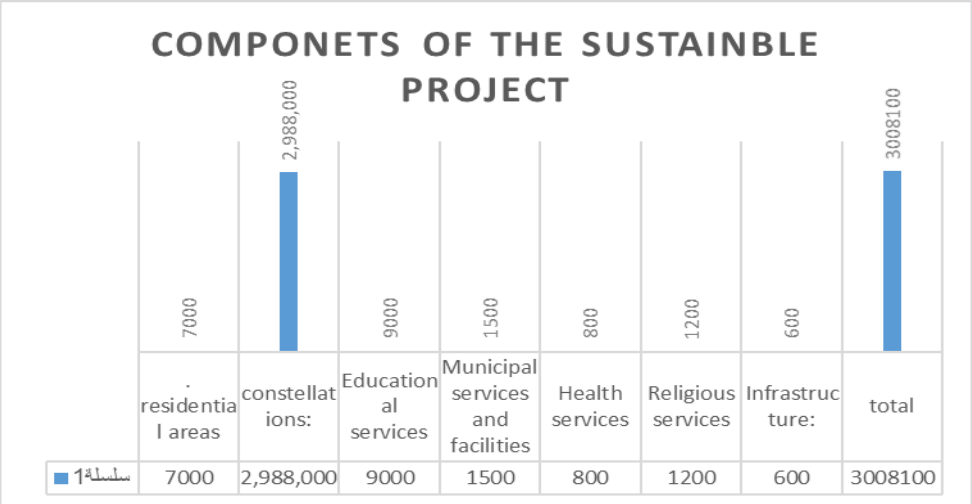

Figure 4: componets of sustainbale proposal project of the Old area

7. CONCLUSION

1- The importance of adopting sustainable urban planning principles as a way out and a solution to the world's acute problems, particularly with regard to housing projects, including them, by arbitrating existing difficulties and then attempting to develop solutions that go along with it.

2-The importance of learning from worldwide experiences in the field of sustainable urban planning and how to apply this knowledge in the development of housing projects, 2-Working on utilizing the most cutting-edge technologies available for urban work

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