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Management of Archaeological Sites in Accordance with the Principles of Sustainable Tourism

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Abstract

Archaeological sites represent a fundamental component of cultural heritage and embody the historical identity of societies across different periods. In recent decades, these sites have been increasingly exposed to a range of environmental, economic, social, and managerial challenges, particularly in regions characterized by rapid urban expansion and limited planning frameworks, such as Iraq. This study examines the concept of archaeological site management within the framework of sustainable tourism, emphasizing the necessity of balancing heritage preservation with socio-economic development. The research adopts an analytical–descriptive approach to explore the principles of sustainable tourism and their role in mitigating negative impacts on archaeological sites, including environmental degradation, overtourism, insufficient funding, and weak community awareness. Particular attention is given to the integration of cultural, religious, and archaeological values as a strategy for enhancing site sustainability. The study further highlights the importance of community participation, technological applications, and institutional cooperation in developing effective and long-term management plans. The Nabi Yunus Mosque and Tell Nabi Yunus in Mosul are presented as a case study to illustrate how sustainable tourism practices can contribute to protecting archaeological heritage while simultaneously supporting local communities and fostering cultural continuity. The findings underscore that sustainable tourism, when properly managed, can serve as a viable tool for safeguarding archaeological sites and ensuring their transmission to future generations.

Introduction

Archaeological sites are not merely ancient structures; rather, they constitute a clear reflection of the nature of the human societies that once flourished within them and reveal the cultural identity of those peoples. It is evident that the cultural identity of those societies was at the height of its brilliance, a condition attributed to the development of individual thought and the desire to keep pace with innovation. Moreover, these societies contributed to civilization by offering alternative perspectives on urban and cultural development.

One of the most prominent problems encountered in dealing with archaeological sites is the absence of clear and comprehensive studies concerning the form of the archaeological site itself and its surrounding areas in general. When addressing sites of the value found in Iraq—whose history extends deep into antiquity—it is essential to engage in careful consideration and well-planned strategies before introducing any intervention to the site or its surrounding environment. Herein lies a major challenge facing archaeological sites, as many

have suffered from urban encroachment and unplanned expansion without a carefully studied architectural plan that respects the original form of the site and adapts it to the current nature of the surrounding environment. This has resulted in visual distortion, the loss of archaeological identity, and the failure to present these sites in an appropriate and authentic manner.

Beyond the external architectural form, archaeological sites have, over time, been particularly affected by the surrounding environmental conditions. Iraq's climate has had a clear impact on archaeological buildings, an influence largely considered natural, including rainfall and its uneven distribution over time, floods and flash floods, dust storms, and the prolonged effects of solar radiation. In addition, the impact of wars across different historical periods—and the valuable cultural elements lost as a result—cannot be overlooked. However, the type of impact that can be mitigated and controlled is that caused directly by human activity. Industrial pollution has constituted a major obstacle to the preservation of archaeological buildings, resulting from factories, power-generation stations, and other human-made facilities that generate pollutants. Modern pollution caused by the increasing use of transportation has also had a pronounced effect on the atmosphere, impacting humans and all living organisms first, and built heritage second, through emissions of smoke and chemical substances that negatively affect the durability of structures.

In parallel with the attention given by relevant authorities to promoting archaeological heritage, another problem has emerged: the excessive and poorly planned use of archaeological sites. The heavy pressure resulting from increased tourist visitation, combined with a lack of awareness among some visitors regarding the importance of site preservation, has led to the deterioration of certain sites. This phenomenon is further exacerbated by acts of vandalism, such as graffiti and deliberate damage to archaeological features, practices that require legal accountability to limit and control their spread.

Among the most significant recent developments in dealing with archaeological sites is the adoption of sustainable tourism approaches. These approaches clarify mechanisms for engaging with archaeological sites in ways that preserve the cultural heritage of a place while safeguarding the right of the surrounding environment to develop, without conflict between the two. This creates a balanced environment and enables the formulation of plans for the economic utilization of sites through the preservation of their heritage character and the provision of suitable conditions for visitors in line with contemporary needs, thereby generating sustainable financial returns.

2. Research Problem

1. Weaknesses in traditional management approaches applied to archaeological sites.
2. Lack of tourism awareness among some visitors.
3. Economic pressures that encourage the excessive exploitation of archaeological sites.
4. The need for an administrative model that balances heritage conservation with economic and social benefits.

3. Research Objectives

1. To introduce the principles of sustainable tourism and their relationship to the management of archaeological heritage.
2. To highlight the positive impacts of sustainable tourism on the conservation of archaeological sites.

3. To present practical proposals for managing archaeological sites according to sustainability principles.
4. To examine the limitations of traditional management approaches applied to archaeological sites.

First: Sustainable Tourism and Its Dimensions

(Economic, Social, Environmental, and Cultural)

Sustainable tourism is defined as "the link between the needs of tourists and the intended tourist destination, whereby existing resources are managed in a manner that ensures the fulfillment of tourists' economic, social, cultural, and environmental needs. Accordingly, sustainable tourism emphasizes the value of the tourism experience by fostering an understanding of the natural and built environment, protecting it, preserving archaeological sites and historic buildings, and contributing to the costs of their conservation" (Abdulhamid & Al-Tamimi, 2019, p. 95).

Most specialists and researchers in the sociology of participatory development have long viewed tourism primarily from an economic and commercial perspective, without adequate attention to the importance of social, cultural, and environmental dimensions and their role in rationalizing tourism practices and achieving sustainable development, which emphasizes economic growth without neglecting the needs of future generations.

In this sense, tourism is a cultural and human phenomenon as well as an activity. Sociologists have defined it not merely as movement or temporary residence outside one's place of origin, nor as travel for work, but rather as a social phenomenon connected to social relationships and social interaction. Tourism encompasses forms of travel related to profession, medical treatment, professional tourism, wellness tourism, and all types of leisure travel aimed at recreation and relaxation in the general sense. Accordingly, tourism serves the purposes of enjoyment, appreciation of natural, cultural, and archaeological attractions, and learning about the cultures of different peoples; it may also fulfill therapeutic, professional, or educational needs (Al-Wiza, 2020, p. 75).

The overall impact of tourism extends to several aspects, particularly the cultural dimension. Increased demand for sites as a result of tourism-related activities and events contributes to the preservation of cultural traditions and societal values and their transmission to future generations. Tourism is also considered a primary factor in improving the conditions of local communities in heritage areas (Abdulhamid & Al-Tamimi, 2019, p. 95).

Tourism benefits also include a religious dimension, reflecting its importance in highlighting such sites and strengthening religious awareness among individuals, particularly in archaeological sites designated for worship (Hamdan, 2015, p. 453). In Iraq, this dimension has been regarded as a major economic resource due to the notable increase in religious tourism in recent years, the significant investment directed toward it, and the state's particular focus on this sector—an emphasis rooted in the central importance of religion within Iraqi society (Hamdan, 2015, p. 454).

Moreover, tourism contributes to individuals' sense of happiness and enables them to overcome pressures associated with work, family problems, and daily life. It offers opportunities for relaxation, exploration of new places, interaction with diverse people, and relief from monotony resulting from repetitive routines, customs, and traditions. Tourism thus

serves as a means of learning about different cultures, acquiring new languages, and gaining new ideas (Ahmed & Ibrahim, 2020, p. 202).

Second: The Concept of Archaeological Site Management and Its Importance

Any institution, regardless of its size, requires an administrative system based on scientific principles that are compatible with its surrounding environment, while also taking into account modern methods of development in order to keep pace with contemporary changes. From this perspective emerged the concept known as *archaeological site management* or *cultural heritage site management*, which forms part of what is referred to as *heritage resource management*. This field focuses on the study of all aspects related to movable and immovable heritage; however, site management specifically concerns immovable heritage, namely archaeological cities, buildings, and architectural structures.

The distinctive nature of heritage site management arises from the urgent need to identify solutions to the numerous threats facing archaeological sites. Its primary objective is to establish mechanisms and approaches that mitigate the negative impacts of these threats, whether through the formulation and implementation of laws and policies that contribute to the protection, preservation, and proper use of archaeological resources at national, regional, and global levels, or through surveying, data collection and management, rescue archaeology in the face of modern development projects, as well as education and training programs directed at both the general public and professionals (Al-Dabain, 2012, p. 14).

Despite advances in the field of archaeology, some archaeological sites in Iraq continue to suffer from a lack of organized management, resulting in clear negative consequences. Among the most prominent of these are overlapping institutional responsibilities, the absence of a unified conservation policy, and a shortage of technical expertise. These issues have led to uncoordinated restoration activities, including the use of inappropriate materials and unauthorized architectural modifications, which have altered site levels and adversely affected their symbolic integrity. Furthermore, the deteriorating condition of surrounding elements indicates systematic neglect and a lack of strategic vision in heritage management (Adel H. Jassim et al., 2025, p. 1526).

As tourist numbers increase, the shortcomings of inadequate management become more apparent. Large-scale tourist influxes often reveal multiple problems, including the accumulation of waste left by visitors, improper interaction with archaeological sites, and the disposal of litter. Many sites are characterized by significant quantities of plastic containers, beverage bottles, and other refuse, in addition to visitors occupying green areas for eating. This situation is largely attributable to the absence of effective guidance and supervision by site personnel, resulting in clear violations that cause damage to the site (Al-Masri & Ababneh, Heritage Management, p. 2456).

Third: The Relationship Between Sustainable Tourism and the Preservation of Heritage Assets

As previously discussed, archaeological sites represent valuable resources from multiple perspectives, highlighting the need to achieve sustainable tourism development that preserves archaeological areas while also taking into account the social conditions and livelihood requirements of local populations. The objective is to benefit from these areas while safeguarding them from deterioration and loss.

Sustainability in tourism development encourages the optimal investment of natural, urban, environmental, and cultural resources. The unique characteristics of heritage areas must be respected in order to achieve the intended goals of sustainable tourism, through balancing the needs of residents and visitors, considering the types and volumes of tourism acceptable to local communities, involving them in tourism programs and activities, and managing tourism initiatives that attract visitors while showcasing the cultural heritage of communities.

Within this framework, responsibility lies in preserving heritage and archaeological buildings and sites by enhancing their functional value and addressing each according to its condition. It also entails protecting these sites from factors that negatively affect both tourists and the sites themselves, such as overcrowding, visual pollution, air pollution, and noise (Al-Wiza, 2020, pp. 61–62).

Fourth: Challenges Facing the Management of Archaeological Sites
1. Environmental Challenges (Pollution and Climate Change)

In the present era, human activities have contributed significantly to environmental problems that adversely affect archaeological buildings. These include the establishment of various types of factories—such as power generation plants, mining industries, construction materials factories, chemical, animal, food-processing industries, and nuclear energy facilities—which generate considerable environmental pollution. Additionally, pollution resulting from transportation systems in all their forms (cars, aircraft, and ships) has intensified environmental pressures.

In recent years, residential areas have also become sources of pollution through domestic heating systems, solid household waste and its incineration, as well as liquid waste. Even the agricultural sector has been identified as a contributor to pollution, due to forest fires aimed at land clearance and the extensive use of fertilizers and pesticides. Moreover, waste accumulation near archaeological sites and their surrounding areas—often consisting of construction debris, food waste, agricultural and industrial residues—generates bacteria, microbes, and toxic gases (Al-Abadi & Mahmoud, 2023, pp. 16–17).

These factors have led to air pollution, which in turn increases the deposition of carbonic acids with rainfall. Such acids react with buildings containing calcium carbonate, a material characterized by its solubility in water, resulting in gradual disintegration, cracking, collapse, or the loss of significant architectural elements (Al-Manshaz, 2012, pp. 86–87).

In addition to the direct impact of pollution on archaeological structures, human activities have contributed to climate change, including desertification, which indirectly raises temperatures and intensifies weathering processes. Increased wind speeds—caused by pressure differences between barren land surfaces and water bodies—exert stronger mechanical forces

on stone and rock materials, accelerating their erosion. Climate change has also led to prolonged rainfall periods, which further weaken areas already affected by weathering and acidic reactions, creating deeper zones susceptible to disintegration. Heavy rainfall can fragment stone particles, particularly protruding elements of archaeological buildings, while severe rainfall events can trigger destructive floods that undermine foundations, displace structures, transport remains to other locations, or bury them entirely.

Rising temperatures disrupt atmospheric pressure systems and contribute to the formation of storms and cyclones that were previously uncommon. Moreover, higher temperatures increase humidity levels through evaporation from water bodies, leading to corrosion and cracking of buildings and creating favorable conditions for the growth of fungi, bacteria, and algae on building surfaces and within cracks, thereby accelerating structural deterioration (Al-Manshaz, 2012, pp. 91–93).

2. Economic Challenges (Funding)

The tourism sector is one of the most important economic sectors contributing to the formation of gross domestic product (GDP). Many countries rely on this sector as a major source of revenue generation and foreign currency inflows (Ahmed, Younis Ali & Ibrahim, Lava Aras, previous source, p. 199).

Tourism generates substantial economic returns for countries, as tourists visit destinations for leisure and spend significant amounts of money on accommodation, tourism activities, and related services. A large number of individuals are employed in the tourism sector, benefiting financially from occupations such as tour guiding and labor in various tourism-related activities. Tourism also fosters cooperation among individuals in fields such as employment and education, as professional opportunities may arise through relationships established during travel and tourism. Moreover, tourism enables the establishment of large-scale projects with agents operating in more than one country.

Tourism demand is highly sensitive to prevailing financial, economic, social, and political conditions in host countries, such as financial and economic crises, natural disasters, and social and political problems. These circumstances often lead to a significant decline in tourism demand, regardless of the availability of tourism assets. This demonstrates the strong correlation between security, financial, economic, and political stability in tourist destinations and the level of tourism demand.

A financial crisis is defined as a situation in which the demand for money exceeds its supply, leading to a noticeable contraction in liquidity due to withdrawals from banks. This results in the sale of other investments to compensate for financial shortages. The world has experienced global financial crises during specific periods, causing markets and consumers to face economic downturns. Consequently, the likelihood of business success across various sectors declined due to reduced sales and consumers postponing expenditures until their economic conditions improved. The tourism sector is particularly sensitive to crises of all kinds, especially economic and political crises (Ahmed, Younis Ali & Ibrahim, Lava Aras, previous source, pp. 202–203).

Weak funding does not only refer to limited government allocations but also includes insufficient private investment or the inability to attract such investment due to perceived risks

or weak infrastructure. Essential infrastructure—such as roads, electricity, water supply, sanitation facilities, and transportation services—often constitutes a critical weakness affecting archaeological and heritage tourism. Additionally, seasonal financing, whereby funding is allocated only during peak seasons, leads to reduced operational capacity during off-peak periods. Marketing and institutional support are equally vital; even when tourism assets are well-developed, insufficient funding for promotion and services significantly diminishes site attractiveness.

The most significant economic impact of sustainable tourism funding lies in job creation, community development, and revenue enhancement. However, achieving these outcomes requires continuous funding, along with legislative and administrative support (Saleh, Bahrm Mahmoud & Al-Saffar, Ahmed Suleiman Yasin, 2021, p. 625).

3. Excessive Commercial Exploitation

The World Tourism Organization (UNWTO) defines overtourism as "the impact of tourism on a destination, or parts thereof, that excessively and negatively affects the quality of life of citizens or visitors," and it has become a major concern for stakeholders in the tourism sector. Several factors have contributed to this phenomenon, including the development of mass tourism following the widespread adoption of paid holidays in many industrialized countries, which increased purchasing power from the 1960s onward and enabled large segments of the global population to travel. This initial wave of tourists was followed by a second wave in the early 2000s. Concurrently, travel costs declined significantly due to the economic growth of the tourism industry and the emergence of new business models, such as low-cost airlines.

Mass tourism development often occurred without adequate consideration for the protection and sustainable use of natural and cultural resources. These developments gave rise to overtourism, where destinations receive tourist numbers exceeding their actual carrying capacity. Overtourism differs from mass tourism in that mass tourism simply denotes an increase in visitor numbers to a destination; while this may constitute the origin of overtourism in some locations, other destinations may be capable of accommodating such growth. Overtourism serves as an umbrella term encompassing all negative impacts associated with tourism, including the overuse of natural environmental goods and the degradation of cultural landmarks (Chaney & Seraphin, 2023, p. 2).

Tourism development represents a vital economic activity and dynamic movement in countries with tourism destinations. Activating this sector requires the provision of financial, cultural, and political resources to stimulate tourism growth. Strategic planning is considered one of the most important tools of sustainable development. The absence of any of these elements generates significant negative consequences that conflict with tourism growth and ultimately lead to excessive tourism exploitation, resulting in environmental imbalance and evident damage to archaeological sites (Issa, Moujan Shaalan, 2022, p. 392).

4. Social and Cultural Challenges (Weak Community Awareness and Population Pressure)

The tourism sector in Iraq is relatively newly established; therefore, community awareness regarding the importance of archaeological heritage cannot be regarded as entirely negative. Sustainable tourism is fundamentally based on integrating local communities into sustainable tourism planning and development processes, which contributes to preserving the social characteristics of local communities and safeguarding the integrity of their social fabric rooted in traditions, customs, lifestyles, crafts, and handicrafts. Tourism organizations have recognized the importance of focusing on the positive social and cultural dimensions of tourism (Al-Wiza, previous source, p. 63).

Regarding population encroachment, Iraq witnessed rapid urban expansion during the 1970s and 1980s, as well as in recent years. Due to the absence of effective plans for preserving heritage areas and protecting them from deterioration and modern urban encroachment, these areas have suffered severe damage, including the degradation of significant heritage buildings and encroachments on archaeological and heritage sites through the construction of modern structures (Al-Turki & Abdulqader, 2022, p. 58).

Many archaeological areas across Iraq have experienced nearly catastrophic encroachments, such as the conversion of land for agricultural use, the excavation of irrigation canals, and the establishment of residential structures. This highlights the extent of challenges facing archaeological sites in limiting such phenomena, which hinder tourism development and progress (Al-Turki & Abdulqader, previous source, p. 65).

Fifth: Sustainable Tourism Practices in the Management of Archaeological Sites
Rational Use of Natural and Human Resources

Sustainable tourism emphasizes environmental protection, the conservation of natural resources, and the preservation of cultural heritage, while ensuring equity within a single generation and across different generations by guaranteeing fair distribution of environmental resources and income. It also contributes to creating new investment opportunities, employment prospects, diversified income sources, and economic diversification, alongside improving recreational facilities and tourism services such as hotels and restaurants for both tourists and local residents.

Sustainable tourism stimulates local economic activity through taxation of tourism-related activities, encourages external exchange, and leads to increased local income. It promotes environmentally friendly transportation systems and the development of essential infrastructure, thereby enhancing environmental conditions and raising awareness among tourists, workers, and local residents (Abdulhamid & Al-Tamimi, previous source, p. 96).

Tourism also establishes recreational facilities accessible to local communities as well as tourists, encourages the preservation of archaeological sites, historical buildings, and heritage areas, and contributes to the costs of their conservation. Furthermore, it promotes optimal land use and spatial planning in harmony with the surrounding environment.

Sustainable tourism enhances the self-esteem of local communities and enables greater understanding and interaction among peoples of diverse backgrounds. Environmentally friendly sustainable tourism highlights the importance of natural and cultural resources in

achieving economic and social well-being for communities, while also contributing to their preservation and encouraging greater attention to the environmental and cultural impacts of tourism (Abdulhamid & Al-Tamimi, previous source, p. 96).

Sixth: Proposed Strategies and Solutions for the Local Management of Archaeological Sites

The Shrine–Mosque of the Prophet Jonah (Peace Be Upon Him) as a Case Study

On the smaller main mound of Nineveh, Tell Nabi Yunus ("Tell of the Prophet Jonah"), the so-called military palace founded by Sennacherib (705–681 BCE) and largely completed by his son and successor Esarhaddon (680–669 BCE) was located during the seventh century BCE. This complex functioned as a royal residence, an arsenal, stables for horses and soldiers, and a parade ground. Little is known about the earlier history of the site; however, inscriptions of Sennacherib and Esarhaddon refer to a previous building, which may also have served as a military palace. It can likewise be assumed that Tell Nabi Yunus, like Kuyunjik, was already inhabited at an earlier period, as indicated by scattered finds dating to the third millennium BCE.

The traveler Carsten Niebuhr, who visited Mosul in 1766, described a village and a mosque believed to contain the tomb of the Prophet Jonah. Early descriptions of the city indicate the presence of a church on Tell Nabi Yunus during the early Christian period, while the mosque is first mentioned in the tenth century CE. For a long time, Tell Nabi Yunus remained largely inaccessible to early excavators of Nineveh, despite textual evidence indicating that Sennacherib had constructed a military palace there. The existence of the Mosque of Jonah, together with the prophet's tomb, the adjacent cemetery, and a small village on the mound, made archaeological access extremely difficult.

Nevertheless, limited investigations were conducted during the nineteenth and twentieth centuries. Layard and Rassam succeeded in excavating several stone-panelled rooms with reliefs during small-scale soundings established between private houses. Later excavations carried out by the Ottoman governor of the city, Hilmi Pasha, revealed the main entrance and parts of the throne room façade. Subsequent construction activities and irregular excavations within the mosque and the residential area yielded additional discoveries. However, the first modern archaeological investigation was conducted in 1954 under the supervision of the Iraqi archaeologist Muhammad Ali Mustafa. During this work, two chambers of an ancient gate were uncovered in the cemetery area on the eastern part of the mound, accessible via a ramp from the lower surrounding area. This entrance appears to have been the main gateway to the military palace. The gate contained numerous fragments of three statues of the Egyptian pharaoh Taharqa, which had been brought to Nineveh as spoils from Esarhaddon's Egyptian campaign in 671 BCE.

Between 1986 and 1990, when the mosque underwent major expansion, further investigations were undertaken on the eastern side of the mosque courtyard by the Iraqi State Board of Antiquities. These excavations uncovered parts of the façade of the throne room within the central courtyard of the palace. Its entrances were decorated with reliefs of winged bulls, a common feature of Neo-Assyrian royal palaces. However, the evidence here was heterogeneous: while some human-headed bull figures were carved from single stone blocks,

others were composed of several individual stone blocks—a phenomenon previously unknown in Neo-Assyrian art.

Following the takeover of Mosul by the terrorist organization known as the "Islamic State" (ISIS) in 2014, many shrines in the city were destroyed, including the Mosque of the Prophet Jonah. The looting of the Neo-Assyrian palace remains that took place during this period was documented after the liberation of the city in 2017, and these events subsequently formed the starting point for renewed archaeological investigations.

(Source: https://ninive.uni-heidelberg.de/ny_introduction_en.html)
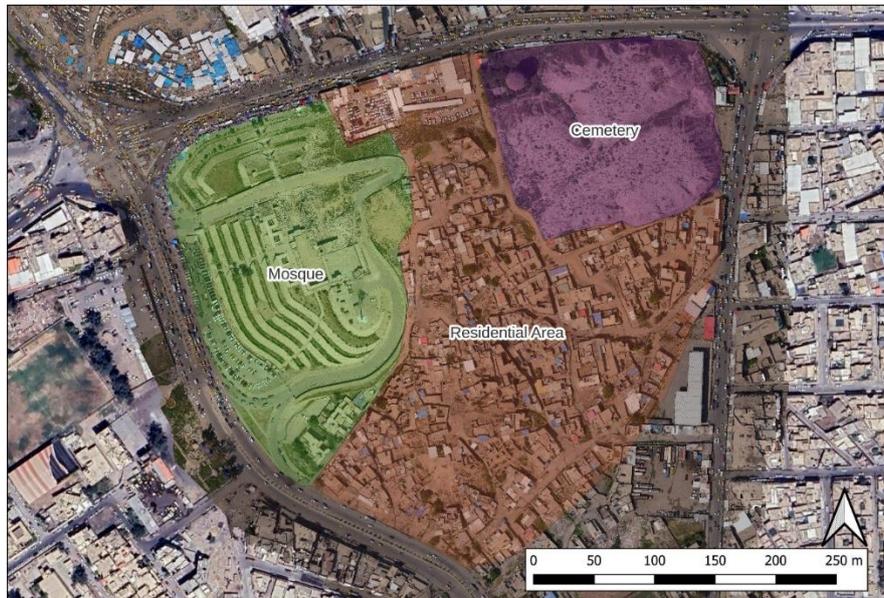
Satellite image of Tell Nabi Yunus illustrating the different spatial zones of the archaeological site and its surrounding urban context (Google Earth, 2025), based on excavation data and archaeological studies published within the Nineveh Project, University of Heidelberg (*Nineveh Project: Excavations at Tell Nabi Yunus*).
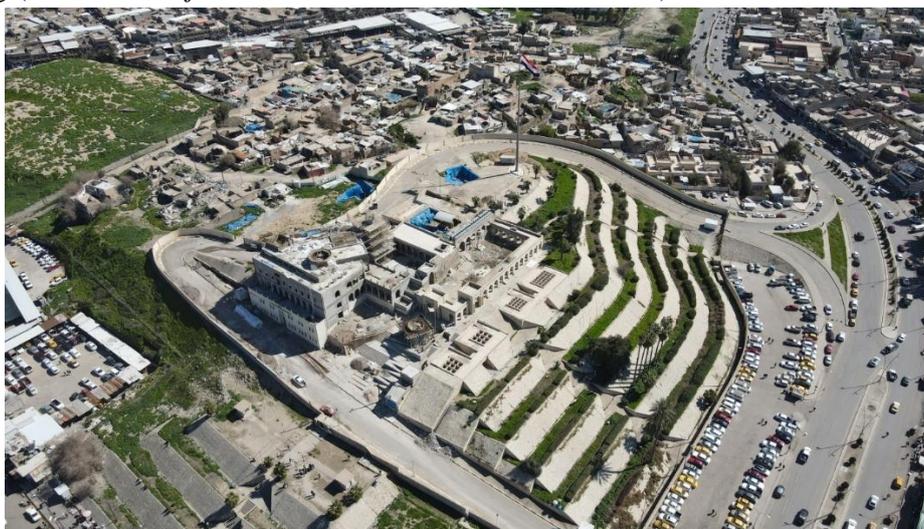
Site Analysis: Streets and Surrounding Areas of the Mosque and Their Role in Supporting a Sustainable, Vibrant Project Serving Both the Archaeological Site and the Local Community Main Street

1. **Nabi Yunus Street**

This is a primary arterial road running along the western side of the tell. It connects

the site directly to the center of Mosul and to the eastern districts of the city, providing essential accessibility and urban linkage.

Adjacent Areas

- **Nabi Yunus Neighborhood**
  The residential quarter surrounding the tell is densely populated and characterized by a religious and traditional social fabric.
  It includes small local markets, schools, and neighborhood shops that serve daily community needs.

- **Nabi Yunus Cemetery**
  Located at the edge of the tell, directly south of the mosque, the cemetery constitutes one of the most prominent features of the site's immediate surroundings and holds strong religious and social significance.

Nearby Archaeological Landmarks

- **The Ancient Walls of Nineveh**
  Situated to the north of the tell at a short distance, these walls represent one of Mosul's most important archaeological monuments.
  It is widely believed that the Nabi Yunus site lies within the boundaries of ancient Nineveh.

- **Mashqalla Gate**
  One of the historic gates of Nineveh, located approximately 1 km to the northwest of the site.

Spatial Significance

1. **Strategic Location**
   o The tell represents the highest natural point in this part of Mosul, which historically made it an ideal location for religious and symbolic construction.
   o The site overlooks the Tigris River on one side and the modern city on the other, reinforcing its visual and symbolic dominance within the urban landscape.

2. **Urban Function**
   o The site combines multiple functions: religious (mosque and shrine), archaeological (excavation area), and touristic (prior to its destruction, it was a major pilgrimage and visitation site).

Requirements for Integrating the Site into a Sustainable Tourism Framework

- Preserving cultural and natural heritage
- Providing economic and social benefits to the local community
- Reducing negative environmental impacts

The Nabi Yunus Mosque site in Mosul can be developed as a model of sustainable tourism through the integration of its religious and archaeological character, transforming it into a cultural and touristic attraction that preserves its identity while offering economic opportunities for the local community. This can be achieved by developing environmentally sensitive infrastructure, providing alternative digital content, and encouraging community participation in tourism-related activities.

Proposed Solutions for the Site

1. **Preservation of Symbolic Value and Cultural Identity**
   Rehabilitating the site in a manner that safeguards its archaeological and religious character.

2. **Integrating the Archaeological and Religious Dimensions to Attract Diverse Tourism Types**
   o Presenting the site as part of a religious pilgrimage route within Iraq (in conjunction with sites such as the Shrine of Imam Musa al-Kadhim or Abu Hanifa Mosque in Baghdad).
   o Developing heritage trails for visitors interested in ancient remains, such as the ruins of Nineveh and the nearby Assyrian city gates.
   Objective: Diversification of visitor profiles (religious, cultural, and archaeological tourism).

3. **Generating Income and Employment Opportunities for the Local Community**
   o Training local residents to work as:
     ▪ Tour guides
     ▪ Craftspeople producing and selling traditional products (e.g., pottery, embroidery)
     ▪ Owners of small cafés and restaurants
   o Empowering women through site-related small enterprises (souvenirs, hospitality services).
   Objective: Achieving economic benefits from tourism without compromising the integrity of the site.

4. **Use of Technology to Reduce Congestion and Environmental Impact**
   o Implementing an electronic booking system for site visits, similar to systems used in Medina for regulating access to the Prophet's Mosque.
   o Providing virtual 3D tours or augmented reality (AR) experiences, particularly for areas that are inaccessible due to excavation work or conservation requirements.
   Objective: Reducing physical visitor pressure while expanding digital access.

5. **Collaboration with Universities and International Organizations**
   o Supporting ongoing archaeological excavation missions.
   o Involving visitors in "volunteer tourism" programs focused on restoration or documentation activities.
   o Organizing annual cultural conferences and festivals in the vicinity of the site.
   Objective: Sustaining international interest and enhancing funding for site protection.

6. **Developing a Long-Term Sustainable Management Plan**
   o Conducting environmental impact assessments related to tourism activities.
   o Regulating visitor flows to reduce seasonal overcrowding.
   o Establishing local regulations governing land use around the archaeological tell.

The ultimate aim of this plan is to safeguard the site for future generations, raise public awareness, and encourage the adoption of innovative and adaptive approaches that create a contemporary environment capable of embracing and preserving the past.

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