

The Miqat of al-Juhfa
A Historical and Archaeological Study

by

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Ph.D. University of Victoria, 2018

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Abstract

“The Miqat of al-Juhfa, A Historical and Archaeological Study”

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The *Mīqāt* of al-Juhfa is located in the west of Saudi Arabia about 187 km northwest of the Holy City of Mecca. Al-Juhfa is one of the five fixed places called *Mawāqīt*, or entry stations to the pilgrimage (Hajj). These *Mawāqīt* were designated during the early Islamic period for any pilgrim comes through them with the intention of Hajj. During the early Abbasid period, al-Juhfa was the largest occupied *Mīqāt* in the Islamic world.

This study focuses primarily on historical and archaeological aspects of the *Mīqāt* of al-Juhfa during the early Islamic period. To illustrate these aspects, the study analyzed many primary sources that mention al-Juhfa in order to reconstruct the historical and cultural development of the site and to establish the extent to which it functions as an urban center. The study benefited from important information provided by these sources in this respect, such as the chronology of the site, its strategic location, topographical features, the nature of the landscape at different times, the function of specific objects, human activities that took place at the site, and factors that led to its prosperity and decline.

The study also undertook a fieldwork at al-Juhfa site—primarily archaeological survey and excavation. This fieldwork enabled us to test the results of the textual analysis and to reveal other characteristics of the site (such as its cultural role, urban elements, planning and defences, architectural functions, building technique, building material, and other features). Moreover, the study analyzed both the formal and technical qualities of all archaeological discoveries on the site, comparing them with their analogues at other early Islamic sites in the Middle East.

The study derived many results that clearly indicate the great importance of al-Juhfa as an urban center characterized by several urban functions during the early Abbasid period in the late of 8th century until its importance began to decline gradually between the second half of 11th century and the first half of 12th century. This chronology is supported by both written sources and the archaeological evidence. Several architectural elements and a collection of archaeological finds of different pieces of pottery, ceramic, glass, worked stone, and metal were discovered at al-Juhfa. These discoveries provide us with more information about the extent of mutual influence and active interaction between various cultures during pre-Islamic period as well as the high cultural and commercial level achieved by al-Juhfa and the relationship it had with other Islamic sites in the Middle East.

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Dedication

To my Mother and my Father

Chapter 1

Introduction

1. Topic of the Research and its Importance
2. References to al-Juhfa in the Primary Sources
3. The Problem of Research and its Questions
4. Methodology
5. Literature Review
6. Structure of the Thesis

1. Topic of the Research and its Importance

Recent years have witnessed great advances in the discovery, study, and publishing about Islamic monuments on Saudi Arabia, the birthplace of Islam and the cradle of Islamic architecture. Numerous archaeological buildings and sites have been identified in this area. One of the most important archaeological sites that has been identified is the *Mīqāt* of al-Juhfa (the main subject of this study).

The *Mīqāt* of al-Juhfa is located in the west of Saudi Arabia about 187 km northwest of the Holy City of Mecca. It is one of five fixed places called *Mawāqīt*, or entry stations to the pilgrimage (Ḥajj). These *Mawāqīt* (as will be seen shortly) were generally fixed during the early Islamic period for any pilgrim comes through them with the intention of Hajj. Muslim pilgrims are forbidden from passing these *Mawāqīt* without stopping there. Thus, all Muslim pilgrims consider *Mawāqīt* of Hajj including the *Mīqāt* of al-Juhfa as very important. Moreover, the *Mīqāt* of al-Juhfa is particularly valuable, as it came to be associated with some significant historical events and religious narratives during the time of the Prophet Muhammad and after his death. This will, in turn, give the study of al-Juhfa a wider relevance.

In addition, the *Mīqāt* of al-Juhfa was one of the largest and most important pilgrimage stations during the first centuries of Islam, and it is the best-preserved example of early Islamic *Mawāqīt*. Although most architectural features are buried underground and covered with sand and rocks, the most important things that can be seen today are traces of the fort, the foundations of the old city, the city wall, different architectural units, the water canal with its wells, and various types of early Islamic pottery. Indeed, the mass of architectural and relevant textual material will make the *Mīqāt* of al-Juhfa a site of unlimited scholarly possibilities and the task of discussing al-Juhfa's architecture a momentous one.

Consequently, this research will treat the *Mīqāt* of al-Juhfa from several aspects: historical, geographical, cultural, archaeological, and architectural. Hopefully this research fills a serious gap in our knowledge of the *Mīqāt* of al-Juhfa, and particularly with regard to early Islamic architecture in western Arabia.

2. References to al-Juhfa in the Primary Sources

There are numerous references to al-Juhfa in the primary written sources. These are divided into two kinds: religious sources and historical geographical works. As they differ in character, we will provide general information for both in order to examine the epistemic foundations in which they were produced.

Religious Sources

The Islamic heritage is richly endowed with diverse religious texts. These religious sources include collections of *Ḥadīth* (prophetic traditions) that focus on religious practices established by the Prophet Muhammad among his companions, including the Qur'anic sciences, which aim to explain the meaning of words in the Qur'an, the contexts of revelation (*asbāb al-nuzūl*), and other fields pertaining to the study of *sharī'a* (Islamic law) and the Prophet biographies. Some of these sources clearly indicate that al-Juhfa existed as an Islamic *Mīqāt* during the time of the Prophet Muhammad. Also, they have hardly been tapped for their geographical potential as they state that the Prophet visited al-Juhfa several times and that it was associated with certain significant religious and historical events during the early Islamic period.

The *Ḥadīth* has passed down to us by means of chains of oral testimony (*isnād*, pl. *isānīd*). Each *isnād* comprises a saying (or statement) referring to narrations attributed to companions of the Prophet who narrated a statement or story about, or related to, the Prophet. The collections of *Ḥadīth* have reached us through a few narrators of the early Islamic period.

The *Ḥadīths* have received much attention throughout the ages as among the most important sources of Islamic legislation for Muslims.¹

However, certain chains being deemed more trustworthy than others, where there was a formidable increase in the number of books written about the *Ḥadīth* and many contained weak and forged *Ḥadīths*. There is a debate between scholars about the authenticity of these *Ḥadīths* and their attribution to the Prophet. Thus, it would be useful to give an overview of the historiography of *Ḥadīths* as follows.

Much historical evidence confirms that the Prophet Muhammad allowed many companions to write *Ḥadīths*. Among the most famous companions was Abdullah b. ‘Amr b. al-‘As (d. 681), a writer of the revelation. The companions wrote many *Ḥadīths* from the Prophet directly. These *Ḥadīths* were scattered and not combined in any one book.² After the death of the Prophet, the Umayyad Caliph ‘Umar b. ‘Abdul ‘Aziz (r. 717-720) ordered scholars to collect all the scattered *Ḥadīths* from many books, and those retained in the minds of some companions, then combine them in a single book in order to preserve these *Ḥadīths* and encourage people to follow their admonitions.³

During the era of Caliph Harun al-Rashid (r. 786-809) and the reign of his son Caliph al-Ma’mun (r. 813-833) encyclopedias of *Ḥadīths* varied in topic greatly flourished. Moreover, the volume of scholarship in all Islamic and Arabic sciences, including Qur’anic exegesis, Islamic law, literature, rhetoric, and grammar increased greatly. Scholars of the period also relied on books that appeared during the previous stages. Because of the great number of narrators,

¹ For more detail, see Begg, Rashid, “Hadith as a Means of Routinizing Charisma”. *Religion & Theology*, 19, 2012, pp. 112-113.

² Al-Darimi, ‘Abdullah b. Abd al-Rahman, *Sunan al-Dārimī*. Ed. Hussein Salim Aldarani, (Riyadh: Dar al-Mughni, 2000), *Ḥadīth* no. 496, p. 138; Al-Bukhari, Muhammad b. Isma‘il, *Ṣaḥīḥ al-Bukhārī*. (Damascus: Dar Ibn Kathir, 2002), *Ḥadīth* no. 113, p. 41.

³ Al-Darimi, *Sunan al-Dārimī*, *Ḥadīth* no. 487-488, p. 184; Al-Bukhari, *Ṣaḥīḥ al-Bukhārī*, Chapter of Knowledge, p. 38; Ibn Ḥajar al-‘Asqalānī, Aḥmad b. ‘Alī, *Fath al-Bārī fī Sharḥ Ṣaḥīḥ al-Bukhārī*. Ed. Abdul Aziz b. Baz, Muhammed Abdel Baqī, and Muhib al-Din al-Khatib, (Cairo: Dar al-Kutub al-Salafia, 1960), *Ḥadīth* no. 113, pp. 206-208.

scholars adopted a critical pioneered approach writing a number of biographical dictionaries of all the narrators in order to assess their sincerity and honesty. Some of the most important scholars of this period are Ahmad b. Hanbal (d. 855), ‘Abdullah al-Darimi (869), Muhammad b. Isma‘il al-Bukhari (d. 870), Abu al-Husayn b. al-Hajjaj Muslim (d. 875).⁴

After about the 10th century, a number of books written about the *Ḥadīth* and many contained weak *Ḥadīths*. Therefore, numerous specialized books emerged to clarify the fundamental bases for the *Ḥadīth*. These books applied accurate standards and legal methodology to connect the *isnād* to the prophet and became widely known as the books of *muṣṭalaḥ al-Ḥadīth* (the term of *Ḥadīth*). They focused on those who narrated *Ḥadīths* in order to distinguish the authentic from the weak ones. Among the famous scholars who wrote in this field were al-Hakim al-Nisaburi (d. 1012) and al-Khatib al-Baghdadi (d. 1071).⁵

Ḥadīths were divided into two general categories: first category is a *mutawātir* (successive) *Ḥadīth*, which is narrated by a large number of people that they cannot be expected to agree upon an untruth. Second category is an *aḥad* (singular) *Ḥadīth*, which is narrated by people whose number does not reach that of the *mutawātir* case. *Aḥad Ḥadīths* contain many different classifications depending on the *isnād*'s accuracy, such as sound, good, supported, suspended, weak, broken, denounced, shaky *Ḥadīths*, and others.⁶

However, some scholars who have dealt with many aspects of Islam's formative years indicate that the *Ḥadīths* do not truly reflect events in the time of the Prophet. They conclude that there is no a reliable collection of *Ḥadīths* dated before the mid of 8th century; thus, it is difficult

⁴ For more information see Al-Kattani, Muhammad b. Ja‘far, *Al-Risālah al-Mustaṭrafah*. (Beirut: Dar al-Kutub al-‘Ilmiyah, 2005), pp. 5-20.

⁵ Al-Hakim al-Nisaburi, Muhammad b. ‘Abdullah, *Ma‘rifat ‘Ulum al-Ḥadīth*. Ed. Ahmed b. Fares al-Salloum, (Beirut: Dar Ibn Hezim, 2003); Al-Khatib al-Baghdadi, Ahmad b. ‘Ali, *Al-Kifāyah fi Ma‘rifat Usul ‘Ilm al-Riwāyah*; Ed. Maher al-Fahal, (Dammam: Dar Ibn al-Jawzi, 2011).

⁶ For more information about the methods used for evaluating *Ḥadīths* see Hallaq, Wael, “The Authenticity of Prophetic Hadith: A Pseudo-Problem”. *Studia Islamica* 99, 1999, pp. 78-90.

to judge any of them as authentic. In the 8th century, *isnād* attributed to prominent figures and placed in many *Hadīths* to increase their credibility among the people.⁷

In addition, although the Caliph ‘Umar b. ‘Abdul ‘Aziz ordered all extant traditions collected, there is no reliable collection of *Hadīths* or biographies of the Prophet dated before the mid of 8th century. The traditions we now possess remained generally unrecorded until about a hundred years after the Prophet’s death and were based on memories imparted by many witnesses, which led to errors and exaggerations. It is uncertain which traditions were written down in the Prophet’s lifetime, then copied and propagated.⁸

Moreover, due to the Prophet’s character, his charismatic authority, and the belief that he had been granted knowledge of the unseen, *Hadīths* gained majesty in the minds of the Prophet’s followers and greatly flourished. As time passed, this influence increased, especially among those who were young when the Prophet died and lived long into the next generation during the 8th century. Also, it is important to establish that these *Hadīths* were not affected by worldly interests such as political agendas, sectarian agendas, and historical agendas. For example, political discord in the empire of Islam, especially when the written traditions commenced, may have stimulated the emergence of distorted and fabricated traditions. The Umayyads faced many challenges by Abbasids who repeatedly attempted to exercise independent authority. This Abbasid threat weakened the central power of the Umayyad state. In the mid of 8th century the Umayyads found they could no longer keep their huge polity. The Abbasids blackened the reputation of the Umayyads and exalted their own. During this period traditions may were distorted to accomplish their ends: undermining the foundations of the Umayyad state, and affirming the legitimacy of the Abbasid caliphate as descendants of the Prophet.⁹

⁷ For more detail see Muir, William, *The Life of Mohammad from Original Sources*. (Edinburgh: John Grant 31 George IV-Bridge, 1923), pp. 38-43; Schacht, Joseph, *An Introduction to Islamic Law*. (Oxford: Oxford University Press 1982), pp. 34-36; Robson, James, “Muslim Tradition: The Question of Authenticity”. *Manchester Literary and Philosophical Society* 93, 1951, pp. 1-19.

⁸ Schacht, *An Introduction to Islamic Law*, pp. 34-36.

⁹ Brown, Jonathan, *Hadith Muhammad’s Legacy in the Medieval and Modern World*. (Oxford: Oneworld Publication, 2009), pp. 199-210.

Based on this brief review of the ongoing scholarly debate concerning the authenticity of the *Ḥadīth*, it will be apparent that there are many dissimilar visions concerning this issue. Some believe all *Ḥadīths* underwent deep content criticism by early Muslim scholars, which led to preserving authentic *Ḥadīths*. Others refute these claims and indicate that there are many questionable issues, so that it is difficult to assert that there is reliable collection of *Ḥadīths* attributable to the Prophet.

Geographical Sources

Most of what we know about al-Juhfa during the pre-Islamic period derives in very large measure from what Muslims wrote later. However, one may wonder if there was anything earlier to read, or if these later descriptions of al-Juhfa can be corroborated by archaeological evidence. On the other hand, during the Abbasid period our evidence improves, so that the cultural gap between event and record becomes narrow. For example, in the 9th, 10th, 11th, and 12th centuries, we find that many contemporary sources aptly describe al-Juhfa and provide a variety of unusual architectural descriptions, as we shall see in later chapters.

Numerous geographers, historians, and travelers of different times have been keen to follow the news of the *Mīqāt* of al-Juhfa and its architectural features and historical events. Some significant examples of these scholars are as follows:

Ibrahim al-Harbi (d. 898) is perhaps the earliest geographer to describe al-Juhfa (in the 9th century). Al-Harbi wrote a book entitled, *Kitāb al-Manāsik wa Amākin Ṭuruq al-Hajj wa Ma'ālim al-Jazīrah*. This book focused on identifying many sites in the Arabian Peninsula, describing their architectural features and some economic and social aspects of the sites. It describes all the major pilgrimage routes leading to Mecca and mentions many poems that describe certain places, including al-Juhfa. Indeed, the detailed description of al-Juhfa provided by al-Harbi suggests that he saw al-Juhfa for himself, probably during one of his journeys to

Mecca to perform Hajj.¹⁰

‘Ubaydallah b. Khurradadhbah (d. 912), *Kitāb al-Masālik wa- al-Mamālik*. Ibn Khurradadhbah was one of the first geographers and historians with diverse knowledge in the Abbasid era. Ibn Khurradadhbah’s book describes astronomical theories relating to the Earth and the universe. In addition, it describes many countries and administrative divisions and numerous routes in Persia, India, China, and Arabia. His book remained an important source for the great authors and writers after him. However, it appears that Ibn Khurradadhbah’s book was not concerned with archaeology and architecture; thus, it is not certain that he visited al-Juhfa: more likely, he described it based on other written sources.¹¹

Ahmad Ibn Rustah (fl. late 10th century), *Al-A ‘lāq al-Nafīsah*. Ibn Rustah's book was one of the first works on geography during the 10th century. He mentions many cities and countries that he visited, and makes accurate observations about their natural features, residents, customs and traditions, and economic activities. He probably saw al-Juhfa in 902 (and provided us with important architectural descriptions) during his journey to Mecca to perform the Hajj.¹²

Al-Hasan al-Hamdani (d. 947), *Ṣifat Jazīrat al- ‘Arab*. In his time, al-Hamdani was one of the greatest geographers of the Arabian Peninsula in his time. He was an expert on the history of Arabia, which he describes in this book some chapters dealing with Tihama, Hijaz, Najd, and Yemen. In addition, he paid special attention to record all stations located on the pilgrimage routes. Al-Hamdani traveled to Mecca in the first half of the 10th century and recorded descriptions for all pilgrims’ stations located on the Medina-Mecca route, including al-Juhfa.¹³

¹⁰ Al-Harbi, Ibrahim b. Ishaq, *Kitāb al-Manāsik wa Amākin Ṭuruq al-Hajj wa Ma ‘ālim al-Jazīrah*. Ed. Hamad al-Jasir, (Riyadh: Dar al-Yamama, 1981).

¹¹ Ibn Khurradadhbah, ‘Ubaydallah, *Kitāb al-Masālik wa- al-Mamālik*. (Leiden: Brill, 1889).

¹² Ibn Rustah, Ahmad, *Al-A ‘lāq al-Nafīsah*. Ed. Khalil al-Mansour, (Beirut: Dar al-Kutub al- ‘Ilmiyah, 1998).

¹³ Al-Hamdani, Al-Hasan, *Ṣifat Jazīrat al- ‘Arab*. Ed. Muhammad al-Akwa’, (Riyadh: Dar al-Yamamah, 1977).

Ibrahim al-Istakhri (d. 957), *Kitāb al-Masālik wa al-Mamālik*. Al-Istakhri was a geographer and traveler. He wrote his book by visiting many geographical locations. He visited many countries, beginning with the Arabian Peninsula and described numerous cities and routes. Al-Istakhri also visited some regions of India and Persia and described them in detail. It is most likely that al-Istakhri visited al-Juhfa and offered important descriptions about its developed architecture and the nature of life within it.¹⁴

Muhammad Ibn Hawqal (d. 977), *Kitāb Ṣūrat al-Arḍ*. Ibn Hawqal was a geographer, historian, traveler, and merchant. He was eager to learn news of other countries and to understand their situation. He spent a lot of time writing about the areas and things he saw, his book contained a comprehensive description of many Islamic countries, including the Arabian Peninsula. It seems Ibn Hawqal depended heavily on al-Istakhri's book (mentioned above), because his own gives identical information to that provided by al-Istakhri: especially the architectural descriptions of al-Juhfa.¹⁵

Muhammad al-Maqdisi (d. 990), *Aḥsan al-Taqāsīm fī Ma'rifat al-Aqālīm*. Al-Maqdisi was a geographer and traveler, whose book, which appeared in the 10th century, is one of the most famous geographical encyclopedias. It includes descriptions of the Islamic territories, the seas, lakes, rivers, famous cities and active routes. Some personal views on geographical, human, economic, religious, and historical matters also emerge in his book. Al-Maqdisi traveled to most parts of the Muslim world and distinguished by his accurate observations based on what he saw. He went to Mecca in 987, then visited al-Juhfa and provided important information about the site.¹⁶

¹⁴ Al-Istakhri, Ibrahim, *Kitāb al-Masālik wa al-Mamālik*. (Leiden: Brill, 1937).

¹⁵ Ibn Hawqal, Muhammad, *Kitāb Ṣūrat al-Arḍ*. (Leiden: Brill, 1937).

¹⁶ Al-Maqdisi, Muḥammad b. Aḥmad, *Aḥsan al-Taqāsīm fī Ma'rifat al-Aqālīm*. (Leiden: Brill, 1906).

Yaqut al-Hamawi (d. 1229), *Muʿjam al-Buldān*. Yaqut was a geographer, traveler, writer, and poet. He traveled to Persia, all parts of the Levant, the Arabian Peninsula, and Egypt. During his travels he recorded his own observations about places, countries, mosques, palaces, ancient and modern monuments, and tales. He always kept up with the new information he collected in his book, which is a lexicon for most countries in the Islamic world. One of the sites that he described based on his own observations was al-Juhfa. He offered a valuable description about its architectural situation during his time.¹⁷

Muhammad al-ʿAbdari (d. 1300), *Al-Rihla al Maghrībya (Rihla al-ʿAbdari)* Al-ʿAbdari was a Moroccan traveler, historian, and judge. It seems from reading this book that he had a great knowledge of Islamic culture, Arabic language, literature, and poetry. His book concerns a journey from Morocco to Mecca to perform the Hajj in 1289. His journey was rich with natural landscapes: plains, mountains, rivers, and seas. In addition, the journey included detailed descriptions of cities and architectural monuments, which he described as an eyewitness, including al-Juhfa.¹⁸

3. The Problem of Research and its Questions

Al-Juhfa can claim to be the largest inhabited archaeological *Mīqāt* in the Islamic world during the early Islamic period. Although many Umayyad and Abbasid constructions have been the subject of detailed monographs, it is remarkable that al-Juhfa has not previously had an extended study devoted to it. Until now, the *Mīqāt* of al-Juhfa has been neglected. Its architecture, design, and buildings planning were unexplored. The striking point to be drawn from the present situation is how little is known about the largest ancient *Mīqāt*, and herein lies the problem of research. Many challenges face the researcher in studying and analyzing of this type of site, most

¹⁷ Yaqut al-Hamawi, ʿAbdullah, *Muʿjam al-Buldān*. (Beirut: Dar Sader, 1996).

¹⁸ Al-ʿAbdari, Muhammad b. Muhammad, *Al-Rihla al-Maghrībya (Rihla al-ʿAbdari)*. Ed. Shaker al-Faham, (Damascus: Dar Saʿad al-Din, 1999).

notably, the complete lack of an indication of the construction date, determining which descriptions of the site are the most reliable and useful for our understanding of al-Juhfa. These descriptions come from wide variety of available Arabic textual sources, including comments on the *Ḥadīth*, Islamic law, history and geography, literature, poetry, and travellers' observations.

Consequently, I intend to touch on the following questions, both to understand al-Juhfa itself and to shed light on the wider context of urbanization at the beginning of the Islamic era. Among these questions are: Which were the five main *Mawāqīt* and its meaning and major types? When did the five main *Mawāqīt* of Hajj originate? What were the principal urban features of the five *Mawāqīt*, and how did they develop over time? How can we understand the relationship of the *Mawāqīt* to the main pilgrimage routes in the Arabian Peninsula? What are the geographical aspects of al-Juhfa site? What was the historical development of al-Juhfa site? Why and when did the Muslims build a new city in this particular area? What were the factors affecting the prosperity and development of al-Juhfa? What factors led to al-Juhfa's decline and abandonment, and when did this happen? What sort of urbanism is actually represented at al-Juhfa?

The most important question among these questions—which is directly related to our main subject—is: “What were the physical characteristics of the five *Mawāqīt*?” From their beginning, there was no urban development in all these *Mawāqīt*, as will be shown shortly. They were merely halting places for pilgrims before they arrived at Mecca. They were uninhabited places, completely devoid of any physical manifestations of the urban life of the times. However, with the passage of time, it seems that, from an early stage, one of these five places was quite the opposite: a developed urban space. This place, the *Mīqāt* of al-Juhfa, is our main theme. In this research we will study in particular the historical and archaeological aspects of this site during the early centuries of Islam (defined broadly- 7th-10th centuries). We seek to demonstrate that the *Mīqāt* of al-Juhfa was not just a halting station but a complete Islamic city (*madīna*) starting in the 7th century.

We hope this study uncovers abundant data concerning the underlying reasons and processes for the transformation of al-Juhfa from an ordinary resting station to an inhabited city, characterized by a sophisticated architecture, unique planning, and developed civic installations.

4. Methodology

The preparation of this study requires adopting the correct method, which is the basic pillar in dealing with the study. The researcher has made his best efforts at every step of the research methodology, which will be based on three fundamentally different approaches: methods related to textual analysis, archaeological fieldwork, and comparative studies.

Primary Sources

We posit that more exact examination of reliable textual sources will reveal significant indications about this major, urban *Mīqāt*; thus, any assessment of the site of al-Juhfa has to take into account such primary sources as a vital resource and main point of departure for the research. As mentioned above, numerous sources mention the *Mīqāt* of al-Juhfa throughout the ages such as religious, geographical, and historical sources, and travelers' observations. These sources constitute important scientific material on al-Juhfa, as they provided information about different aspects of site in ancient times. Some information was derived from authentic *Ḥadīths* and some from writing of contemporary scholars, the oldest of which can be dated to the 9th century.

After reading and comprehending the primary written sources, the researcher evaluated and interpreted much textual evidence, taking advantage of detailed accounts of al-Juhfa site: most notably, accounts relating to architectural features and the nature of the landscape at different times. The study identified these features through accurate scientific examination and comprehensive analysis of all ancient cultural remains in al-Juhfa. The study is supported by

photographs, satellite imagery, maps, and appropriate sketches.

In addition, the study benefited from important information provided by these primary texts in ascertaining different aspects of al-Juhfa, such as the chronology of the site, its historical and cultural development, location, topographical features, the nature of the landscape at different times, the function of specific objects, human activities that took place at the site, and factors that led to its prosperity and decline.

These texts tend to report on different types of information about archaeology on the al-Juhfa site. This field is often called “historical archaeology” or “text-aided archaeology”. This approach is commonly used in Middle Eastern studies, being applied by a great many scholars and researchers.¹⁹ Archaeology cannot be expected to make definitive contributions to several basic historical problems. For example, archaeology cannot contribute to the problems of chronology beyond the broad limits determined by ceramic or radiocarbon dating. Archaeology addresses chronology through typologies of material remains that lack the precision of the chronological framework established by texts. However, these textual sources can conflict with the archaeological evidence found at a particular site since their authors often lived at a later time or in a different place from the events they describe and as a result relied on oral accounts of informants or texts of earlier authors for their information. In this case, archaeology must correct or dispute the information, either by revealing other primary sources that are more authentic or by offering material evidence.²⁰

¹⁹ Grunebaum, G. von, *Islam: Essays in the Nature and Growth of a Cultural Tradition*. (London: Routledge and Kegan Paul, 1955); Lassner, Jean, “The Caliph’s Personal Domain”. In: A. Hourani and S. Stern, eds. *The Islamic City*. Oxford: Cassirer, 1970, pp. 103-118; Grabar, Oleg, “The Architecture of the Middle Eastern City from Past to Present: The Case of the Mosque”. In: O. Grabar, *Studies in Medieval Islamic Art*, Aldershot: Variorum Reprints, 197, pp. 26-46.

²⁰ For more information about the correlation of primary text and archaeology, see Hall, Martin, Silliman, Stephen, *Historical Archaeology*. (Malden, MA: Blackwell Pub, 2006), pp. 42-65; Orser, Charles E, *Historical Archaeology*. (New York: Routledge, 2017), pp.3-5, 124-125.

Archaeological Fieldwork

Archaeological fieldwork is one of the fundamental methods this study relied on to reveal cultural evidence for the site of al-Juhfa. Fieldwork provides the specific material context for any of the events narrated in literary texts. It focuses primarily on two important matters. The first, archaeological survey is a specific plan to collect and document all information about archaeological remains on the surface of the archaeological site, to detect patterns in the distribution of material culture across the region, and to link them together. The omission of monuments or parts of monuments does give the wrong impression about the site, and disjointed discoveries do little to produce a detailed and accurate picture of its urban life, especially the layout of the town and the nature of occupation.²¹

The second matter is archaeological excavation. The excavation (though of limited scope) is, of course essential to understanding al-Juhfa in its historical and architectural context—including al-Juhfa's cultural role it played—as well as determining the size of the site and locating critical features of its urban elements. Through excavations at al-Juhfa we can learn about its planning and defences, the architecture of houses, walls, and public buildings, building technique, building material, architectural functions, pottery, glass, metal, worked stone, and other features and objects. Archaeological remains gathered from the survey and excavations enabled us to reconstruct the site setting and its changes over time. These physical remains of the past were analyzed, classified, photographed to reach a broad and comprehensive understanding of human culture in al-Juhfa: the lives of individuals, families, and communities that might otherwise remain invisible.²²

²¹ Northedge, Alastair, *The Historical Topography of Samarra*. (London: British School of Archaeology in Iraq, 2005), pp. 27-35.

²² Al-Rashid, Sa'ad, *Al-Rabadha: A Portrait of Early Islamic Civilization in Saudi Arabia*. Riyadh: King Saud University, 1986); Gallan, Rodrigo, *Methods of Archaeological Research*. (Beirut, Besan Publishing, 1998).

Comparative Study

The site of al-Juhfa and the detailed architectural features revealed by comparable sites should not be studied in isolation: these new findings will benefit from comparison with sites broadly similar in style and/or date. The general architectural design prevalent in the early Islamic period, and the types of sites to which al-Juhfa may be compared, share many characteristics that may give us an idea of al-Juhfa's nature and features. The large number of monuments surviving from early Islamic sites (particularly those located on the main pilgrimage routes on the Arabian Peninsula) can be used to reconstruct the architecture of the *Mīqāt* of al-Juhfa. In addition, early Islamic sites located outside the Arabian Peninsula in different parts of the Islamic world will provide us with more general information about the architectural elements in al-Juhfa.

Comparative study will also shed light on the wide range of distinctive archaeological finds that were discovered during the archaeological survey and excavation of al-Juhfa site. Many of these finds date to well-known types discovered at other sites in the Islamic world. Parallels between the finds at these sites will greatly help our understanding of al-Juhfa during the early Islamic period, particularly with regard to the historical and cultural development of the site and its relationship with other Islamic sites. Numerous published studies have described comparable archaeological models and finds to those discovered at al-Juhfa.²³

5. Literature Review

The *Mīqāt* of al-Juhfa has not yet been studied in detail, but it should be noted that there is a brief report about al-Juhfa entitled, "Program of the Egyptian and Syrian Route Survey". This report was published in *Atlat* Magazine in 1983 and written by Ali Al-Mughanem, Salah al-

²³ This issue is dealt with fully in chapter 6 and 7. See for examples, Lane, Arthur, *Early Islamic Pottery: Mesopotamia Egypt and Persia*. (London: Faber and Faber, 1974); Creswell, Keppel, *A Short Account of Early Muslim Architecture*. Revised and enlarged by James Allan. (Aldershot: Scolar Press, 1989); Genequand, Denis, "Al-Bakhra' (Avatha), from the Tetrarchic Fort to the Umayyad Castle". *Levant*, 36, 2004, pp. 225-242.

Hilwa, and Jamal Mousa as part of the field survey of the Egyptian and Syrian route conducted by the Saudi Commission for Tourism and National Heritage. The report pointed out that al-Juhfa contains a square fortress with a side length of 20 m. surrounded by some architectural units and Islamic potsherds. The report was very brief because its main purpose was only to identify dozens of major stations along the Egyptian and Syrian route, including al-Juhfa, without going into the architectural details of each station.²⁴ After this report, the Saudi Commission constructed a huge iron fence that extends a long distance, around the entire perimeter of al-Juhfa site. The purpose of the fence is to protect the site and highlight it for future exploration.

However, it must be borne in mind that there are numerous research studies associated with the framework of this research that are intimately linked with its main subject (early Islamic architecture and urbanism). The following we will single out some Titles examples, which cover the most main subjects of al-Juhfa site and focus on works that relate more closely to the topic under study.

Early Islamic Architecture

The architectural evidence during the early Islamic period will permit a broader understanding of al-Juhfa and to determine its features and importance. As we will see in chapter 5, the architectural evidence during the formative years of Islamic rule (622-692) represent a small body of data, thus it is difficult to document the early stages of the development of architecture during this period. However, after 692 during the reign of the fifth Umayyad leader, ‘Abd al-Malik b. Marwan (r. 685-705) and his Umayyad successors (r. 705-750), the material culture witnessed a significant activity and advances in the process of building in large parts of the Near

²⁴ Al-Mughanem, Ali, et al. “Program of the Egyptian and Syrian Route survey” *Atlat* 7, 1983, p. 57.

East. After that, during the Abbasid period (750-1258), the architectural record was turning point in the development of the early Islamic architecture. A variety of monumental building were built in different cities of the Islamic world. In addition, various pilgrimage routes were given very great care where they supplied with a variety of important architectural utilities for the comfort of travelers coming from all around the Islamic world.

One of the oldest books on early Islamic architecture is Keppel Creswell's 1932 book, *Early Muslim Architecture*. No further work or thought on early Islamic art and architecture can succeed without building upon Creswell's labor. We took into account some detailed architectural features described in this book during the first century of Islamic history. These architectural features of Umayyad art and architecture in many sites all over Syria, Transjordan, and Palestine helped us to conduct a detailed comparative study of al-Juhfa's architectural features and accurately define their functions. Comparing these architectural elements with their counterparts in the Arabian Peninsula helped in understanding al-Juhfa during the early Islamic period, especially the architectural development of the site, its relationship with other Islamic sites, and the extent of its active interaction with various cultures.²⁵

There are two significant works by Sa'ad al-Rashid on early Islamic architecture. The first (published in 1978) is entitled *Darb Zubayda: The Pilgrim Road from Kufa to Mecca*. This book is important for making architectural comparisons at al-Juhfa. The archaeological buildings located along this route, such as wells, canals, pools, milestones, forts, and many buildings provided us with further information about architectural elements in the site in general. Moreover, documenting all the main stations on the route Zubayda route to reach the Holy cities of Mecca and Medina during the early Islamic period enabled us to understand the position of the *Mīqāt* of al-Juhfa, its connection to the route itself, explaining the considerable interplay between

²⁵ Creswell, Keppel, *Early Muslim architecture*. (Oxford: Clarendon Press, 1932-1940).

them as well as to recognize how various pilgrims used the route to reach al-Juhfa, and then Mecca, to perform the Hajj.²⁶

Al-Rashid's second book, *Al-Rabadha: A Portrait of Early Islamic Civilisation in Saudi Arabia*, was published in 1986. This work opened new prospects concerning many architectural characteristics and features in al-Juhfa that were discovered during the archaeological survey and excavation, such as dwellings, fortifications, buildings surrounded by thick walls, water supply, and building materials. Close examination of these qualities led to fruitful conclusions in the comparative study of the *Mīqāt* of al-Juhfa during the early Islamic period. The al-Rabadha site was the most important station on the main trade route between Mecca and the east (beyond the Islamic world) and it is somewhat close to ours, and they were built for the same reason: to serve as a main station for pilgrims and travelers. Thus, al-Rabadha is highly important to our understanding of al-Juhfa in general.²⁷

In 2004, Denis Genequand's article, "Al-Bakhra' (Avatha), from the Tetrarchic Fort to the Umayyad Castle", permitted a comparative study of the fort of al-Juhfa. The convincing explanation for the late-Roman fort of the Tetrarchate (293–305), which was remodeled into an Islamic palace during the Umayyad period added greatly to our knowledge of the fort of al-Juhfa and the early Islamic forts in general, including the plan, building technique, the measuring, forms of towers, the main gateway, and function of our fort. In addition, the study benefited from this article by providing much information about the features of Roman forts and to what extent forts adopted the Roman method of construction during the early Islamic period, particularly with regard to their square ground-plans and the towers projecting at the corners and on each side of the forts.²⁸

²⁶ Al-Rashid, Sa'ad, *Darb Zubayda: The Pilgrim Road from Kufa to Mecca*. (Riyadh: Dar al-Watan, 1993)

²⁷ Al-Rashid, *Al-Rabadha*.

²⁸ Genequand, "Al-Bakhra'", pp. 225-242.

In 2005, Alastair Northedge offered a major contribution to the understanding of the medieval Islamic city in his book, *the Historical Topography of Samarra*. Our study took advantage of the archaeological evidence presented in this book and the history and development of this enormous site, 45 km long during the 9th century. These evidences provided us with much information and a detailed and systematic account in order to weave a new interpretation of how the city worked, its general physical appearance and the planning style used in house-building. This information is essential for the comparative study of architectural elements in al-Juhfa, particularly with regard to the dwellings, building techniques, main functions, dating, and mutual cultural impact. In addition, our study took advantage of the Northedge methodology applied in this book, which focuses on conducting an archaeological survey in Samarra to determine geographical and archaeological landmarks on the site.²⁹

In 2010, Fahad al-Hawas led a team of researchers funded by the Saudi Commission for Tourism and National Heritage and published an article entitled “Preliminary Report on Archaeological Excavations in the Historical City of Faid in Hail: First Season”. Islamic architecture within the 9th century city of Faid, and the city’s historical and cultural role as the main station on the Darb Zubayda are relevant to comparative study of the *Mīqāt* of al-Juhfa as a main station locating on the Medina-Mecca route. In addition, some early geographical sources in the 19th century mention that al-Juhfa is similar to Faid both in size and in its highly developed architecture. Therefore, the article is very useful for identifying and classifying several architectural features discovered at the al-Juhfa site such as the fort, dwellings, building materials.³⁰

²⁹ Northedge, *The Historical Topography of Samarra*.

³⁰ Al-Hawas, Fahad et al, “Preliminary Report on Archaeological Excavations in the Historical City of Faid in Hail: First Season”. *Atlat* 20, 2010, pp. 31-53.

Early Islamic Urbanism

The urban evidence during the early Islamic period will permit a broader understanding of al-Juhfa and to determine its features and importance and will greatly help us to reveal different urban aspects of al-Juhfa site. Many Greco-Roman and Sassanian traditions influenced on Islamic thought and that this contributed to the subsequent history of Islamic traditions as we will see in chapter 5 and 6.

In 1978, Oleg Grabar published his book, *City in the Desert: Qasr al-Hayr East*. This Qasr is located in Syria and includes two palace enclosures and numerous buildings that still remain unexplored. The essential features of the site and interpreted it (according to an inscription found in the site mosque) as an extensive urban desert settlement of the early Islamic period greatly helped our research to interpret the main urban issues of al-Juhfa as a new urban site and a complete Islamic town with several urban functions, featuring developed architecture and planning rather than a small settlement with a minimal number of functions.³¹

In 1987, Janet Abu-Lughod offered a key work on urbanism in the Islamic world, “The Islamic city – Historic Myth, Islamic Essence, and Contemporary Relevance”. Our research took advantage of information presented in this article about the structure of Islamic city and what might constitute an Islamic urban space. The acknowledging that Islamic society organized the life of Muslims into a community and ultimately formed an image of the Islamic city with a clear cultural concept that became a model for the planning of Muslim cities afterwards helped us to define al-Juhfa as an urban place during the early Islamic period. The new urban concept in the Islamic city allows us to infer that al-Juhfa possessed an urban planning, which created insights corresponding specifically to the needs of the Muslim community in al-Juhfa.³²

³¹ Grabar, Oleg, *City in the Desert: Qasr al-Hayr East*. (Cambridge, Mass: distributed for the Center for Middle Eastern Studies of Harvard University by Harvard University Press, 1978).

³² Abu-Lughod, Janet L, “The Islamic city–historic myth, Islamic essence and contemporary relevance”. *International Journal of Middle East Studies* 19, 1987, pp. 155-176.

In 1999, Timothy Insoll published a book entitled, *The Archaeology of Islam*. The book is ideal for examining the cultural implications of Islam in the *Mīqāt* of al-Juhfa and identifying several characteristics of early urban society. The author's conclusions about the component parts of the stereotypical Islamic town in Arabia and the Near East, some common urban patterns within an urban settlement, and the means and methods of uncovering Islamic material records greatly helped us to reveal different aspects of the al-Juhfa site and to determine its features and importance.³³

In 2010, Marcus Milwright published *An Introduction to Islamic Archaeology*. Milwright's book served the *Mīqāt* of al-Juhfa as a main key to understanding what constitutes the urban entity and many aspects of Islamic culture in the early Islamic period and its development in time and space. Dealing with a vast subject that spans a huge geographical area, from Central Asia to Spain contributed to understand different aspects of al-Juhfa, especially in the early Islamic period and late antiquity such as the history of Islamic archaeology, the variety of demographic and settlement patterns, irrigation systems, agricultural innovation, towns, cities, palaces, pilgrimage, and trade routes.³⁴

6. Structure of the Dissertation

Beside the current chapter, the research dealt in detail over six main chapters, they are as follows:

Chapter 2

This chapter focuses on several issues concerning the five *Mawāqīt* of the Hajj. It interprets these *Mawāqīt* and their temporal and spatial types, the principal urban features of the five

³³ Insoll, Timothy, *The Archaeology of Islam*. (Oxford: Blackwell, 1999).

³⁴ Milwright, Marcus, *An Introduction to Islamic Archaeology*. (Edinburgh: Edinburgh University Press, 2010).

Mawāqīt and their evolution over time, and the relationship of the *Mawāqīt* to the main pilgrimage routes of the Arabian Peninsula.

Chapter 3

This deals with various geographical aspects of al-Juhfa site, such as administrative affiliation, topography, climate, water sources, economic activity of the population, and settlement centers close to al-Juhfa. This chapter also touches on numerous points associated with the historical development of al-Juhfa over time, such as the pre-Islamic period, the era of the Prophet, the era of Rashidun caliphs, the era of the Umayyad, the era of the Abbasids, factors in the prosperity and development of al-Juhfa, and the abandonment of al-Juhfa (as well as factors in its decline).

Chapter 4

This chapter focuses on the fieldwork at al-Juhfa, which depends on both archaeological survey and excavation. In the survey section, the chapter in the beginning touched on archaeological survey definition, basic goals, and the methods by which the research was conducted. Next, it addressed the field survey results, which were divided into three sections: architectural features, surface finds, and rock inscriptions. As for the excavation section, it contains an overview of the importance of excavation, its objectives, and the methodology used in excavation in general. Moreover, the excavation section dealt with the details of the work and with the discoveries in two main trenches T1 and T2 that were dug in al-Juhfa at two different locations (the residential area and the fort).

Chapter 5

This chapter gave a comprehensive introduction to the archaeological evidence in the Near East, the main features of the architectural development in many cities and sites, and the interpretation

of most of the cultural and intellectual factors that influenced architectural formation during the early Islamic period. The chapter covered the formative years of Islamic rule, the Umayyad period, and the Abbasid period. This comprehensive introduction allowed us to understand a variety of urban architectural elements in the site of al-Juhfa and its architectural and archaeological context.

Chapter 6

This chapter contained a detailed comparative study of key architectural elements in al-Juhfa, comparing them with their counterparts inside and outside of the Arabian Peninsula. The key architectural elements include the general layout of al-Juhfa, dwellings, fortifications, water supply, and building materials.

Chapter 7

This chapter was devoted to analytical study of the archaeological finds at al-Juhfa. It contains an introduction to the importance of studying the artifacts, the difficulties that may confront us in such type studies, and the approach we used. The archaeological finds include varied shards of unglazed and glazed pottery, glass, worked stone, and metal pieces. All these finds were divided into two sections in the chapter: surface survey finds and excavation finds, which were then studied and compared to similar models discovered at other important Islamic sites.

The research concludes by illustrating the most important results that were reached by the researcher during the study.

Chapter 2

The *Mawāqīt* of the Hajj

1. Introduction
2. The Meaning of the *Mawāqīt* and their Major Types and Dating
3. The Five Major *Mawāqīt* and their Evolution over time
4. The Major *Mawāqīt* and the Pilgrimage Routes

1. Introduction

Interpreting the *Mawāqīt* of the Hajj from various angles, introducing more general discussions on the *Mawāqīt*, and beginning a careful examination of the *Mīqāt* of al-Juhfa, (the main subject of this study) is critically important. This chapter should, therefore, highlight the meaning of the *Mawāqīt* of the Hajj, their temporal and spatial types, and their dating. In addition, this chapter will include the figure who designated these *Mawāqīt*, how the Hajj was carried out through them, the reason behind designating them, how these *Mawāqīt* developed over time, and what are their principal urban features. The last section of this chapter will deal with the relationship of the *Mawāqīt* to the main pilgrimage routes of the Arabian Peninsula. The present chapter will concentrate on numerous interdisciplinary sources in religion, history, geography, and travel accounts, as well as archaeological evidence.

2. The Meaning of the *Mawāqīt* and their Major Types and Dating

Once a year, Muslims of every ethnic group, color, social status, and culture gather together in Mecca to perform the Hajj and stand before the Ka'ba praising Allah together. For Muslims, the Hajj is the fifth and final pillar (*rukṅ, pl. arkān*) of Islam. It occurs in the month of *Dhūl-Ḥijja* which is the twelfth month of the Islamic calendar. Every mentally competent, able-bodied adult Muslim must undertake this journey at least once in their lives if they can afford it and are physically able. This duty derives from the Qur'an: "Pilgrimage to the House is a duty to Allah for all who can make the journey."³⁵

³⁵ Qur'an, *Sūra Āl 'Imrān*, Aya no. 97. For more information about the Islamic pilgrimage, see Bianchi, Robert, *Guests of God: Pilgrimage and Politics in the Islamic World*. (New York: Oxford University Press, 2004); Al-Qahtani, Sa'id, *Hajj in Islam, in the Light of the Quran and Sunnah*. (Riyadh: King Fahd National Library, 2010).

Opinions differ as to when the Hajj became obligatory for the Muslim community. One opinion says in 6/628 because of the verse, “Fulfill the pilgrimage and make the visitation for Allah”³⁶ revealed for the first time in that year; while another opinion says in the 9/631 based on the verse, “Pilgrimage to the house is a duty to Allah”³⁷ revealed in the same year. Furthermore, there is an opinion that thinks that 10/632 is the year that the Hajj became one of the five pillars of Islam because the Prophet Muhammad performed Hajj in this year. However, the last two opinions are commonly accepted. In 9/631 the Prophet sent his companion Abu Bakr as the leader of the Hajj delegation, but he himself did not go. The Prophet Muhammad performed Hajj only once: in 10/632, the last year of his life.³⁸

Muslim pilgrims during the Hajj ceremony are required to stop at one of five fixed places, called *Mawāqīt*, or (entry stations) to the Hajj, just outside Mecca. After that, all pilgrims must wear the *iḥrām* (simple white clothing for men and modest clothing for women), then proceed towards Mecca to perform the Hajj (designation of the *Mawāqīt* and wearing *iḥrām* will be discussed shortly).

The word *Mawāqīt* (pl. *Mīqāt*) is derived from the Arabic word *waqt* (time), whether in its spatial or temporal sense. Thus, the *Mawāqīt* of the Hajj are the fixed times and places in which pilgrims begin the rituals of Hajj.³⁹ The *Mawāqīt* of the Hajj are divided into two main types, the temporal and the spatial. The temporal *Mawāqīt* is mentioned in two significant verses in the Qur’an. The first is, “They question you about the crescents. Say: They are *Mawāqīt* (times) fixed for people and for the pilgrimage”.⁴⁰

³⁶ Qur’an, *Sūra al-Baqara*, Aya no. 196.

³⁷ Qur’an, *Sūra Āl ‘Imrān*, Aya no. 97.

³⁸ Al-Bukhari, *Ṣaḥīḥ al-Bukhārī*, *Ḥadīth* no. 4363, p. 1068.

³⁹ Ibn Manzur, Muhammad b. Mukarram, *Lisān al-‘Arab*. Ed. Amin Abdel Wahab and Muhammad al-Obeidi, (Beirut: Dar Ehia Al-Turath al-‘Arabi, 1999), vol. 15, pp. 361-362.

⁴⁰ Qur’an, *Sūra al-Baqara*, Aya no. 189.

The context of revelation (*sabab al-nuzūl*) in this verse is that some companions of the Prophet Muhammad were asking him about the crescent (*al-Hilāl*), why it looks thin, why each day its size increases to become a full circle, before gradually decreasing to its previous size. Thus, the Qur'an told that the wisdom of creating the crescents is for people in general to understand how their times are arranged, especially the entry times for worship during the Hajj.⁴¹ Indeed, the Islamic calendar is a lunar calendar that is based on lunar phases, consisting of twelve months in a year of 354 or 355 days, eleven days shorter than the Gregorian calendar used in the Western world. Each month of the Islamic calendar commences on the birth of the new lunar cycle and can have twenty-nine or thirty days depending on whether the crescent is visible or not in the beginning of lunar cycle (termed hollow and full). Observation of the cycles of the monthly lunar phases is used by Muslims everywhere to date events and to determine the proper days on which to observe the annual fasting, to attend Hajj, and to celebrate other Islamic holidays and festivals.⁴²

The second verse is, "The pilgrimage is in the appointed months".⁴³ This verse points out that the Hajj must be in appointed months. According to Qur'anic exegesis, the appointed months of the Hajj are three consecutive months in the Islamic calendar as follows: the tenth month (*Shawwāl*), the eleventh month (*Dhūl-Qa'da*), and the first ten days of the twelfth month (*Dhūl-Hijja*) that include the majority of pilgrimage rituals. Hence, all pilgrims must make the statement of intention of the Hajj and assume *ihrām* only during any day of these appointed months.⁴⁴

⁴¹ Al-Qurtubi, Muhammad b. Ahmad, *Al-Jāmi' li Ahkām al-Qur'an*. (Cairo: Dar Al-Kutub al-Masriya, 1964), vol. 2, pp. 341-344.

⁴² For more detail, see Cajee, Na'eel, "Circular Calculus and Elliptical Realities: The Standardization of the Islamic Lunar Calendar in the United States, 1966-2006". *Journal of Muslim Minority Affairs* 31, 3, 2011, pp. 441-462.

⁴³ Qur'an, *Sūra al-Baqara*. Aya no. 197.

⁴⁴ Al-Bukhari, *Ṣaḥīḥ al-Bukhārī*, *Ḥadīth* no. 1572, p. 382; Al-Qurtubi, *Al-Jāmi' li Ahkām al-Qur'an*, pp.101-106.

The second type of *Mawāqīt* of the Hajj is, the spatial *Mawāqīt*. Based on some *Ḥadīths*, the Prophet Muhammad during the last years of his life, designated five spatial *Mawāqīt* for various pilgrims, coming from different parts of the Islamic world, to perform the Hajj in Mecca. These *Mawāqīt* of the Hajj as follows: Dhul-Hulaifa as the *Mīqāt* for the people of Medina; al-Juhfa for the people of Syria (Sham); Qarn-al-Manazil for the people of Najd; Yalamlam for the people of Yemen; and Dhatu-‘Irq for the people of Iraq.⁴⁵ (Map 1).

These *Ḥadīths* place the foundation of the five *Mawāqīt* in the lifetime of the Prophet. However, the question arises: How did the Prophet designate two *Mawāqīt* for people who had not yet converted to Islam during his life and whose countries had not yet been conquered by Muslims at that time? Iraq and Syria, all respectively conquered by Muslims during the caliphate of ‘Umar b. al-Khattab (r. 634-644), which means that these countries have become Islamic countries after the death of the Prophet in 11/632.⁴⁶

However, after careful research and investigation into the *Ḥadīth* books, we found one significant narration clearly indicating that one of the five *Mawāqīt* was designated after the time of the Prophet. This passage occurs in *Ṣaḥīḥ al-Bukhārī* and is attributed to the Caliph ‘Umar b. al-Khattab (not to the Prophet). It is as follows:

When the two towns (Basra and Kufa) in Iraq were conquered during the reign of the Caliph ‘Umar, the people of Iraq went to him and said, “O the Chief of the faithful believers, the Prophet fixed Qarn-al-Manazil as the *Mīqāt* for the people of Najd, it is beyond our way and it is difficult for us to pass through it. He said, take as your *Mīqāt* a place situated opposite to Qarn on your usual way. So, he fixed Dhatu-‘Irq (as their *Mīqāt*)”.⁴⁷

⁴⁵ Malik b. Anas, Abu Abdullah, *Al-Muwatta’*. (Beirut: Dar Ihya’ al-Turath al-‘Arabi, 1985), Chapter 20, *Ḥadīth* no. 22-24, pp. 330-331; Muslim, Abu al-Husayn b. al-Hajjaj, *Ṣaḥīḥ Muslim*. (Riyadh: Dar Tibah, 2006), *Ḥadīth* no. 1183, p. 530.

⁴⁶ For more information on the Arab conquests of the 7th century, see Milwright, *An Introduction to Islamic Archaeology*, pp. 24-28.

⁴⁷ Al-Bukhari, *Ṣaḥīḥ al-Bukhārī*, Chapter of Hajj 13, pp. 372-373.

Based on this narration, it is not surprising that the *Mīqāt* of al-Juhfa was also designated in the reign of the Caliph ‘Umar when this *Mīqāt* was fixed for the people of Syria (whose country was conquered in the same reign, after the death of the Prophet). Al-Juhfa is located in a strategic location on the route between Medina and Mecca (as we will see shortly). ‘Umar was very interested in this route, which he followed passing from Medina to Mecca, and he issued the command to provide it with all possible conveniences as we shall see later, in chapter 3. The interest of ‘Umar in the Medina-Mecca route shows that he was aware of al-Juhfa’s location and realized that after the conquest it was suitable for the people of al-Sham, thus he decided to fix it as their *Mīqāt*.

In addition, the narration indicates that Qarn-al-Manazil, the *Mīqāt* of the people of Najd, was fixed by the Prophet. Indeed, this indication fits well with the general historical context of the expansion of the Islamic domains into Najd during the time of the Prophet.⁴⁸ Besides the *Mīqāt* of Qarn-al-Manazil, two *Mawāqīt* may also have been fixed during the lifetime of the Prophet. The first was the *Mīqāt* of the people of Medina, Dhul-Hulaifa, where the Prophet used to perform Hajj as we shall see shortly. The second was the *Mīqāt* of Yalamlam, which was designated for the people of Yemen (who had been Muslims since the time of the Prophet).⁴⁹ As for our *Mīqāt*—al-Juhfa—and the *Mīqāt* of Dhatu-‘Irq, they seem to have been fixed by the Caliph ‘Umar b. al-Khattab, not by the Prophet as described above.

Consequently, it is by no means asserted that all *Mawāqīt* were designated during the Prophet’s time—especially those fixed for people whose countries were conquered after the Prophet. It seems that some narrators were confused about the designation of *Mawāqīt* fixed by the Prophet and those fixed by ‘Umar. Thus, they attributed all *Mawāqīt* to the Prophet: not only some of them. Hence, modern specialists of the *Ḥadīths* should re-consider the authenticity of

⁴⁸ Al-Bukhari, *Ṣaḥīḥ al-Bukhārī*, *Ḥadīth* no. 2422, p. 584.

⁴⁹ Al-Bukhari, *Ṣaḥīḥ al-Bukhārī*, *Ḥadīth* no. 4349, p. 1064.

Ḥadīths mentioning that the Prophet designated some *Mawāqīt* for regions where there were (as yet) no Muslims and investigate the underlying reasons and processes concerning this important issue. The dating of *Mawāqīt* in general would open the door wide for archaeologists to carefully investigate the dating of the *Mawāqīt*, which requires extensive excavations and comprehensive research.

On the whole, the five above-mentioned *Mawāqīt* are for all the people living at those places, and also for those who pass through them intending to perform ‘*Umra*⁵⁰ and Hajj. Consequently, whoever lives within these places should assume *iḥrām* from his or her dwelling place, while the people of Mecca itself may assume *iḥrām* in Mecca. However, there are also some flexible religious regulations relating to *Mawāqīt* that are too far from people’s route and it is difficult to pass through them. Thus, the *Mawāqīt* of the Hajj have special status for all Muslim pilgrims.⁵¹

After knowing the exact meaning of the *Mawāqīt* of the Hajj and its spatial and temporal types and dating, it is now time to consider how the Hajj was carried out through these *Mawāqīt*. When various pilgrims halt at one of the five *Mawāqīt* during the appointed months of the Hajj, they must be in a state of *iḥrām*, which is a special state of ritual purity such as taking a shower, wearing a perfume, wearing simple white clothes which are also called *iḥrām*, and finally making a statement of intention: I now enter into the actions of Hajj. After that Muslims recite *Talbya* together, “*Labbaīka allahumma labbaīk, labbaīka lā sharīka laka labbaīk, inna al-ḥamda wa al-ni‘mata laka walmulk, lā sharīka lak*” (I respond to your call o Allah, I respond to your call, and I am obedient to your orders, you have no partner, I respond to your call all the praises and blessings are for you, all the sovereignty is for you, and you have no partners with you).⁵²

⁵⁰ ‘*Umra* means paying a visit to the Ka‘ba. It is known as the lesser pilgrimage, in comparison to the annual Hajj. It is performed independently of the Hajj and can be performed at any time of the year.

⁵¹ Al-Bukhari, *Ṣaḥīḥ al-Bukhārī*, *Ḥadīth* no. 1522-1531, pp. 371-373.

⁵² Al-Bukhari, *Ṣaḥīḥ al-Bukhārī*, *Ḥadīth* no. 1549, 1550, p. 376.

Wearing *iḥrām*, pilgrims must follow certain regulations, avoiding all that Allah has prohibited, such as fighting, obscenity, disobedience, controversy, and harming any Muslim, whether by words or actions. In addition, pilgrims must observe all of the restrictions of *iḥrām*: most notably, sexual intercourse between couples. The Qur'an states: "(For) whosoever undertakes the pilgrimage there is no approaching (women), neither transgression nor disputing in the pilgrimage. Allah is Aware of whatever good you do".⁵³

What is the purpose of stopping at the *Mawāqīt* and assuming *iḥrām*? To answer this question, we should focus our attention on the spiritual meaning of the *Mawāqīt* and assuming *iḥrām*. In fact, the *Mawāqīt* and *iḥrām* represent invisible, spiritual aspects. They are starting points that lead forward to Mecca and the divine realm, towards the Holy Mosque (*al-Masjid al-Ḥarām*) that includes the Ka'ba, the place where the human meets the divine, or where the divine reveals itself to the human. Once pilgrims arrive at the *Mawāqīt*, they move in the direction of the Ka'ba and leave behind them all their ordinary concerns. Their attention is not distracted by anything around them. In other words, they point the way to the divine realm that connects human beings with Allah directly. Therefore, all pilgrims must wear *iḥrām* (the simple white clothes) at the *Mawāqīt* to denote purity of soul and receiving a new era without any discrimination between rich and poor, white and black, Arab and non-Arab; all pilgrims wear the same dress and are equal in the eyes of Allah.

Thence, the pilgrims reciting *Talbiya* together, loudly, and in unison. This action is to affirm the oneness of Allah or a common faith (monotheism), which is the most important creed in Islam and the highest moment of religiosity. After affirming this faith and showing the Muslims unity with Allah and with other Muslims, all pilgrims are expected to be a united Islamic community or as it is known, the Islamic *umma*.

⁵³ Qur'an, *Sūra al-Baqara*. Aya no. 197.

3. The Five Major *Mawāqīt* and their Evolution over Time

As previously mentioned, the five spatial *Mawāqīt* of the Hajj were designated for various pilgrims. These *Mawāqīt* almost surround Mecca from the north, south, east and west. The following is an attempt to shed light on the five *Mawāqīt* in terms of their toponyms and locations, the main features of their historical development as well as the importance of physical evidence within these *Mawāqīt*.

The *Mīqāt* of Dhul-Hulaifa

Al-Hulayfa is the diminutive of the Arabic word “*al-ḥalafa*” which is the singular of the word of “*al-ḥulafa*” (Stipa Tenacissima), one of the known plants in the area of the *Mīqāt*. Thus, this *Mīqāt* called the *Mīqāt* of Dhul-Hulaifa, which means the *Mīqāt* that contains the *al-ḥulafa*’ plant.⁵⁴ The *Mīqāt* of Dhul-Hulaifa is the *Mīqāt* of *iḥrām* that designated for pilgrims from Medina and other pilgrims who are passing through it. It is located in the famous Aqiq Valley, northwest of Medina. Dhul-Hulaifa is regarded as the farthest *Mīqāt* from Mecca, being situated 450 km to the north.⁵⁵

When the Prophet Muhammad wanted to perform ‘*Umra* or Hajj, he assumed *iḥrām* from Dhul-Hulaifa under a tree that stood there.⁵⁶ The *Mīqāt* of Dhul-Hulaifa was uninhabited, and did not contain many architectural installations. There are a few references in the early sources concerning the architecture within Dhul-Hulaifa; for example, the early geographer al-Harbi in his 9th century book *Kitāb al-Manāsik* mentions that Dhul-Hulaifa consists of a mosque and some wells at the same site of the tree where the Prophet assumed *iḥrām*.⁵⁷ In the 10th century, al-Maqdisi in his book *Aḥsan al-Taqāsīm fī Ma‘rifat al-Aqālīm* indicates that Dhul-Hulaifa

⁵⁴ Yaqut al-Hamawi, *Mu‘jam al-Buldān*, vol. 2, pp. 295-296; Ibn Manzur, *Lisān al-‘Arab*, vol. 2, p. 287.

⁵⁵ Al-Bukhari, *Ṣaḥīḥ al-Bukhārī*, *Ḥadīth* no. 1551, p. 377; Al-Harbi, *Kitāb al-Manāsik*, p. 427.

⁵⁶ Al-Bukhari, *Ṣaḥīḥ Bukhari*. *Ḥadīth* no. 1551, p. 377; Muslim, *Ṣaḥīḥ Muslim*, *Ḥadīth* no. 1186, p. 532.

⁵⁷ Al-Harbi, *Kitāb al-Manāsik*, p. 428.

contains a mosque and some wells but does not contain any houses.⁵⁸

Thereafter, the scholar al-Mutari, who was living in Medina during the 14th century, refers to this mosque, saying it was ruined and destroyed.⁵⁹ However, according to some historians of Medina, such as al-Samhudi in the 15th century and Kibrit in the 17th, the mosque was renovated over the ages as a sign of the position of the *iḥrām* of the Prophet Muhammad.⁶⁰

In 1984, the Saudi government rebuilt the old mosque and the surrounding area, providing many facilities to serve pilgrims. The *Mīqāt* of Dhul-Hulaifa still receives many pilgrims coming from different Islamic countries, but does not contain any archaeological remains dating back to the early Islamic period.⁶¹

The *Mīqāt* of al-Juhfa

The *Mīqāt* of al-Juhfa is the *Mīqāt* of the people of Syria and all the pilgrims coming through it such as the pilgrims of Turkey, Egypt, and Africa. It is located about 187 km northwest of Mecca. Some Islamic historical sources and geographical dictionaries mention that al-Juhfa was known as Mahya‘a during the pre-Islamic period, but when a great torrent swept the place at that time, it became widely known as al-Juhfa through history, meaning “the place of torrent”.⁶²

Al-Juhfa was extensively described in a number of early Islamic geographical sources. These sources described al-Juhfa as a complete Islamic *madīna*, featuring developed architecture and planning. For example, the early geographer al-Harbi, said that in al-Juhfa there is a huge pool, a cistern, many wells, a spring in the middle of the valley, a fort, two gates, houses, and a

⁵⁸ Al-Maqdisi, *Aḥsan al-Taqāsīm*, p. 77.

⁵⁹ Al-Mutari, Muhammad b. Ahmad, *Al-Ta‘rīf Bimā Anasat al-Hijra min Ma‘ālim Dār al-Hijra*. Ed. Sulaiman al-Ruhaili, (Riyadh: King Abdulaziz Foundation, 1995), pp. 190-191.

⁶⁰ Al-Samhudi, Nur al-Din ‘Ali, *Wafā al-Wafā bi-Akḥbār Dār al-Muṣṭafā*. Ed. Muhammad Abdulhameed, (Beirut: Dar Ehia Al-Tourath Al-Arabi, 1984), vol. 3, pp. 1002-1004; Kibrit, Muhammad b. ‘Abd Allah, *Al-Jawāhir al-Thamīnah fī Maḥāsīn al-Madīnah*, Ed. A. Al-Radadi, (Riyadh, 1998), vol. 1, p. 347.

⁶¹ Abdul Ghani, Muhammad, *Ancient Mosques in Medina*. (Medina: al-Rasheed, 2003), pp. 255-260.

⁶² Al-Tabari, Abu Ja‘far Muhammad, *Tārīkh al-Rusul wa al-Mulūk*. (Beirut: Dar al-Kutub al-‘Ilmiyah, 2005), vol. 1, p. 128; Yaqut al-Hamawi, *Mu‘jam al-Buldān*, vol.2, p. 111; Ibn Manzur, *Lisān al-‘Arab*, vol. 2, pp.186-187.

marketplace. Before reaching al-Juhfa, there is a mosque of the Prophet Muhammad called ‘Azzur on the way between Medina and Mecca and in the end of al-Juhfa next to the two towers, there is another mosque of the Prophet Muhammad, named al-’A’ama.⁶³

Two contemporaries of al-Harbi, Ibn Khurradadhbah and Al-Hamdani, recorded all pilgrim’s stations located on the route of Zubayda from Kufa- to Medina- to Mecca. They mention that al-Juhfa is one of the most important stations between Medina and Mecca and contains a variety of wells.⁶⁴ Moreover, Ibn Rustah in the 9th century mentions that al-Juhfa is a great city, contains a marketplace, and its water from the wells.⁶⁵

Also, al-Istakhri and Ibn Hawqal⁶⁶ in the 10th century both mention that al-Juhfa is a thriving, energetic city populated throughout the year, and there is no city equal to it between Mecca and Medina. Al-Juhfa is similar to Faid both in size and in its highly developed architecture.⁶⁷ Furthermore, al-Maqdisi describes al-Juhfa as active city consisting of a fort with two gates, wells, and a large pool.⁶⁸

During the 11th century (as will be seen shortly), the port of Jeddah on the east coast of the Red Sea replaced the *Mīqāt* of al-Juhfa. Jeddah is approximately 50 km west of Mecca and about 204 Km from al-Juhfa. Currently, Jeddah serves as the main *Mīqāt* for various pilgrims coming to Mecca by sea, land, and air. During the 13th century, another new *Mīqāt* replaced Jeddah and al-Juhfa. This new *Mīqāt* called Rabigh, is only about 4 km south of al-Juhfa. In 1985, the Saudi government built a new *Mīqāt* in the same location of the *Mīqāt* of Rabigh. It is still in use today as a main *Mīqāt* for numerous pilgrims coming through it. (Map 2, Table 1).

⁶³ Al-Harbi, *Kitāb al-Manāsik*, pp. 413-415, 457.

⁶⁴ Ibn Khurradadhbah, *Kitāb Al-Masālik wa-al-Mamālik*, p. 187, p. 187; Al-Hamdani, *Ṣifāt Jazīrat al-‘Arab*, pp. 335-339.

⁶⁵ Ibn Rustah, *Al-A‘lāq al-Nafīṣah*, p. 156.

⁶⁶ Al-Istakhri, *Kitāb al-Masālik wa al-Mamālik*, p.21; Ibn Hawqal, *Kitāb Ṣūrat al-Ard*, p. 33.

⁶⁷ Faid is one of the most important early Abbasid city in the center of Arabian Peninsula. For more detail, see Al-Hawas, “Preliminary Report on Archaeological Excavations in the Historical City of Faid”, pp. 31-53.

⁶⁸ Al-Maqdisi, *Aḥsan al-Taqāsīm fī Ma‘rifāt al-Aqālīm*, pp. 77-78.

The *Mīqāt* of Dhatu-‘Irq

The *Mīqāt* of Dhatu-‘Irq is the *Mīqāt* of the people of Iraq and who are beyond them from the people of the *Mashriq* (east). The Arabic word ‘*irq* means a small mountain, which is still standing in the *Mīqāt*. This one of Arabia’s famous mountains, and is the reason for naming the *Mīqāt* of Dhatu-‘Irq, implying that the *Mīqāt* contains ‘*irq*. From north and south, the *Mīqāt* is surrounded by several plateaus, and from east and west by two valleys (al-Nakhil and al-Dhariba valley). Dhatu-‘Irq is about 94 km northeast of Mecca.⁶⁹

Al-Harbi mentions that *Mīqāt* of Dhatu-‘Irq has some abandoned houses on the mountain dating back to the pre-Islamic era, and that the Caliph al-Mahdi (r. 775-785) established a mosque for pilgrims there. He also pointed out the existence of a palace, a square pool, another rounded pool, and about thirty wells.⁷⁰

Also, Ibn Khurradadhbah in the 9th century, agrees with al-Harbi that the *Mīqāt* of Dhatu-‘Irq is characterized by large quantities of water.⁷¹ Moreover, Ibn Rustah in his book indicates that the *Mīqāt* of Dhatu-‘Irq enjoys the abundance of water and trees and many people live there.⁷² However, in the end of the 10th century, al-Maqdisi indicated that the wells in Dhatu-‘Irq were dry.⁷³

The *Mīqāt* of Dhatu-‘Irq now consists of several archaeological hills and some buried wells and pools, which were intended to provide the pilgrims with water. East of the *Mīqāt*, at a distance of 700 m from the old *Mīqāt*’s well, is a recent well drilled by Saudi Arabia’s Ministry of Islamic Affairs. Not far away is a stone prayer place built by one of the shepherds for those passing through the *Mīqāt*. The Ministry also created a stone monument coated in white color to

⁶⁹ Al-Harbi, *Kitāb al-Manāsik*, pp. 346-347, 603; Yaqut al-Hamawi, *Mu‘jam al-Buldān*, vol. 4, pp. 107-108; Ibn Manzur, *Lisān al-‘Arab*, vol. 9, p. 166.

⁷⁰ Al-Harbi, *Kitāb al-Manāsik*, pp. 347, 351-352.

⁷¹ Ibn Khurradadhbah, *Kitāb Al-Masālik wa-al-Mamālik*, p. 186.

⁷² Ibn Rustah, *Al-‘Alāq al-Nafīṣah*, p. 157.

⁷³ Al-Maqdisi, *Aḥsan al-Taqāsīm fī Ma‘rifat al-Aqālīm*, p. 78.

denote the *Mīqāt*, which is now abandoned because the modern paved roads that were constructed in the end of 20th century were no longer passing through the *Mīqāt* of Dhatu-‘Irq. So, most pilgrims assume *ihrām* from the main *Mīqāt* of the people of Najd (Qarn-al-Manazil), where the modern road passes through. The *Mīqāt* of Qarn-al-Manazil is about 35 km from Dhatu-‘Irq.⁷⁴ (Map 2, Table 1)

The *Mīqāt* of Yalamlam

Yalamlam is the *Mīqāt* of the people of Yemen and various pilgrims passing through it, such as those of Indonesia, Malaysia, China, India and others from South Asian. It is situated approximately 92 km south of Mecca. Some geographical sources pointed out that Yalamlam is the name of one of the mountains of Tihama and of one of the valleys of the Hijaz in the *Mīqāt* area. This *Mīqāt* also has other names, such as Lamlam and Alamlam. Little is written about the architecture of the *Mīqāt* of Yalamlam in early sources. However, according to one of early geographical sources during the 9th century, there was a mosque called Mu‘adh Ibn Jabal stood in the *Mīqāt*.⁷⁵

Currently, Yalamlam belongs to al-Lith governorate which, in turn, belongs to Mecca region. It consists of an old, abandoned mosque built by the Saudi government. At a distance of 30 m from the mosque is an old well called the Well of al-Sa‘diyya that is related to al-Sharif Sa‘ad (fl. early 17th century), one of the noble figures in Mecca. This ruler built the well to provide water to pilgrims coming from Yemen and Tihama. The well was restored many times; for example, in 1796 the Sultan of India Mohammad Ali Khan restored the well and recorded this in a foundation inscription, which still exists within the well.⁷⁶ Al- Sa‘diyya Well

⁷⁴ The Ministry of Islamic Affairs in Saudi Arabia intends to reconstruct the *Mīqāt* of Dhatu-‘Irq and establish many important services for pilgrims.

⁷⁵ Al-Hamdani, *Ṣifāt Jazīrat al-‘Arab*, p. 326.

⁷⁶ Al-Thenayian, Mohammed, “A Dated Inscribed Restoration of the Well of al-Sa‘diyyah Pilgrim Station, Saudi Arabia”. *Proceedings of the Seminar for Arabia Studies* 30, 2000, pp. 193-204.

still stands; the water authority in Mecca built a modern engine over the well to draw water for residents.

By and large, the *Mīqāt* of Yalamlam is abandoned now and no longer used by the pilgrims. The *Mīqāt* moved to an adjacent place located about 20 km southwest of the old one. The new *Mīqāt* was established in 1979 due to the construction of a new paved road on the bank of the valley of Yalamlam connecting Jazan city with Mecca through al-Lith. The new *Mīqāt* is situated approximately 130 km from Mecca and contains a modern mosque equipped with all services for pilgrims; there is also a large market to meet the needs of pilgrims and travelers. (Map 2, Table 1)

The *Mīqāt* of Qarn-al-Manazil

This is the *Mīqāt* of the people of Najd (al-Yamama) and the pilgrims from the east of the Islamic world. *Al-Qarn* generally is a small rectangular mountain that separated from the large mountain (hence, the name *Mīqāt* of Qarn-al-Manazil). This small mountain extends north and south on the both sides of a large valley, also called the Valley of Qarn-al-Manazil. The 8th century author Ibn Hisham states that the Prophet Muhammad passed through the *Mīqāt* of Qarn-al-Manazil during the *Ghazwa* (Battle) of al-Ta'if in 8/629.⁷⁷ This *Mīqāt* lies northeast of Mecca, and is considered the nearest to Mecca.⁷⁸

Today, the *Mīqāt* of Qarn-al-Manazil is called the *Mīqāt* of al-Sail al-Kabir. It contains a large, newly constructed mosque and several necessary amenities to serve the pilgrims who still pass through.

⁷⁷ Ibn Hisham, Abu Muhammad 'Abd al-Malik, *As-Sīra an-Nabawīya*. Ed. Mustafa al-Sakka, Ibrahim al-Anbari, and Abdul Hafeez al-Shalabi, (Riyadh: Dar al-Akhyar, 2004), vol. 2, p. 923.

⁷⁸ Yaqt al-Hamawi, *Mu'jam al-Buldān*, vol. 4, p. 332; Ibn Manzur, *Lisān al-'Arab*, vol. 11, pp. 137-143.

In 1979, a new *Mīqāt* was established in the west of al-Ta'if. It lies 33 km from Qarn-al-Manazil and about 76 km from Mecca. The new *Mīqāt* is called the *Mīqāt* of Wadi Mehram because it is located in the *wādī* (valley) of Mehram. This new *Mīqāt* was constructed because, when the paved road al-Hada or al-Kara was opened between al-Ta'if and Mecca, the *Mīqāt* of Qarn-al-Manazil became hard to be reached for some pilgrims coming via this road. Therefore, 'Ulamā' (religious scholars) worked hard to set a new *Mīqāt* adjacent to the *Mīqāt* of Qarn-al-Manazil to facilitate the process of *iḥrām* for pilgrims coming from the new road al-Hada, especially the pilgrims of al-Ta'if and the southern regions of Saudi Arabia. Now, the *Mīqāt* of Wadi Mehram consists of a mosque and many toilets as well as thirteen residential units and parking for both buses and cars. It also contains shops selling *iḥrām* and other items needed by the pilgrims. (Map 2, Table 1)

In closing, after giving an overview of the five main *Mawāqīt* of the Hajj as a unified whole, it is possible to derive some interesting results. It seems that three *Mawāqīt* were designated during the time of the Prophet: Dhul-Hulaifa, Qarn-al-Manazil, and Yalamlam. Two are likely fixed by the Caliph 'Umar after the death of the Prophet: al-Juhfa and Dhatu-'Irq. It is also fairly clear that the *Mīqāt* of al-Juhfa experienced extensive urban development, becoming a lively town during the early Islamic period. The archaeological evidence at al-Juhfa confirms the importance of the site as an urban entity characterized by a sophisticated culture and advanced organization in all aspects of life. Thus, it is worth analyzing in more detail. In addition, the *Mīqāt* of Dhatu-'Irq witnessed some architectural activity as noted above.

The other three *Mawāqīt* of the Hajj, were merely halting stations where pilgrims assumed *iḥrām* and got water before reaching Mecca. They were uninhabited, and show few physical manifestations of urban life, such as wells and pools to provide water to the pilgrims. Accordingly, no *Mīqāt* rivals the *Mīqāt* of al-Juhfa as a source of early Islamic architecture. Al-

Juhfa was characterized by many factors of prosperity and development that may some *Mawāqīt* lack them as we will see in chapter 3.

It is also remarkable that some new *Mawāqīt* have appeared: Jeddah, Rabigh, the new *Mīqāt* of Yalamlam, and the *Mīqāt* of Wadi Mehram. None of these were designated by the Prophet or by ‘Umar, but pilgrims have used them as alternative or additional *Mawāqīt*. In fact, according to some religious scholars, this act does not go against the rules of *iḥrām* at the main *Mawāqīt*, because the new *Mawāqīt* are located outside Mecca on the perimeter of the five main ones set by the Prophet and parallel to them. Moreover, they have become a very necessary crossing point for various pilgrims.⁷⁹

The appearance of new *Mawāqīt* signifies that the five designated *Mawāqīt* are mere signs to alert the pilgrims to assume *iḥrām* before arriving Mecca. Thus, if some *Mawāqīt* have become inaccessible, it is permissible to assume *iḥrām* from any place nearby or within the perimeter of the five main *Mawāqīt*. However, the point that merits emphasis here is the five major *Mawāqīt* are not strictly obligatory as some assume.

In addition, after tracing the development of the five main *Mawāqīt*, three became abandoned and disused; the *Mīqāt* of al-Juhfa and Yalamlam moved to other adjacent locations, and the *Mīqāt* of Dhatu-‘Irq was abandoned by pilgrims, but no alternative *Mīqāt* was established there; the *Mīqāt* of Qarn-al-Manazil was used, instead. As to the *Mīqāt* of Qarn-al-Manazil, it seems to have continued in use, but an additional new *Mīqāt* was established nearby, called the *Mīqāt* of Wadi Mehram. The only *Mīqāt* not abandoned or even changed from its original place, and where no alternative *Mīqāt* was established beside it, is the *Mīqāt* of Dhul-Hulaifa, where the Prophet Muhammad himself assumed *iḥrām*. (Map 2, Table 1).

⁷⁹ Al-Sha‘lan, ‘Ali, *Al-Nwāzil in the Hajj*. (Riyadh: Dar Al-Tawhid, 2010), pp. 120-123.

5. The Pilgrimage Routes and the Major *Mawāqīt*

There is a considerable amount of material in the modern scholarship regarding the pilgrimage routes in Arabia, but the information provided by these references does not seem to have any great detail of the positions of the *Mawāqīt* of the Hajj along the main pilgrimage routes. The challenge, then, is to establish links between the *Mawāqīt* and the main pilgrimage.⁸⁰

The pilgrims' caravans follow various main pilgrimage routes in the Arabian Peninsula, heading towards Mecca to perform the Hajj. All pilgrims greatly look forward to the most important stage in their journey, the starting point of the Hajj rites. This stage begins when the pilgrims stop to assume *iḥrām* at the five main *Mawāqīt* of the Hajj. So, these *Mawāqīt* are intimately linked with the main pilgrimage routes. To understand the importance of this relationship, it is imperative to document the positions of the *Mawāqīt* of the Hajj along the main pilgrimage routes including al-Juhfa, focusing on how they were used by various pilgrims depending on many early historical and geographical sources which described the routes of pilgrimage in the Arabian Peninsula and their main stations.

Darb Zubayda (The Route of Zubayda)

The route of Zubayda is one of the most important routes used to reach to the Holy cities of Mecca and Medina during the early Islamic period. It was also used during the pre-Islamic era by some tribes, travelers, and commercial convoys to navigate between Iraq and Hijaz. After establishing the Abbasid state, especially during the reign of the Caliph Harun al-Rashid, the route of Zubayda extensively reconstructed from Kufa to Mecca and supplied with important utilities for the comfort of pilgrims, travelers, traders, soldiers, and employees of the state.

⁸⁰ Al-Rashid, *Darb Zubayda*; Al- Al-Thenayian, Mohammed, *An Archaeological Study of the Yemeni Highland Pilgrim Route Between San 'a' and Makkah*. (Riyadh: Deputy Ministry of Antiquities and Museums, 1999); Al-'Utaybi, Sa'eed, *The Basri Pilgrimage Route from Dhryah to Otas*. Riyadh: Antiquities and Museums Agency, 2005); Ghabban, 'Ali, *Les Deux Routes Syrienne et Égyptienne de Pèlerinage au Nord-ouest de l'Arabie Saoudite*. (Le Caire: Institut Français D'Archéologie Orientale, 2011).

Among the most important accomplishments made along the route are the wells, canals, springs, milestones, forts, stations, and widening of the course of the route and removal of barriers to make it usable by travelers and their animals.⁸¹

Many early historians and geographers confirm that Queen Zubayda b. Ja‘far al-Mansur (766-831), the granddaughter of the Caliph al-Mansur (r. 754-775) and wife of Caliph Harun al-Rashid, greatly contributed to this route and devoted much of her money to the comfort of the pilgrims. For example, al-Harbi in the 9th century described about eleven stations along the Zubayda route, containing a variety of wells, pools, water-tanks, forts, and palaces. Al-Harbi usually attributed these installations to Zubayda, such as Zubayda pool, the pool of Umm Ja‘far, and the palace of Umm Ja‘far.⁸²

In addition, al-Ya‘qubi (d. 897) emphasizes Zubayda’s contribution in building many facilities for the pilgrims, for instance, that Zubayda excelled over her husband al-Rashid in ordering the digging of the spring of al-Mishash in Mecca, which cost approximately 1,700,000 dinars. Therefore, the route itself as well as many architectural installations along it is called Zubayda in honor for her contributions.⁸³

The course of the Zubayda route is described in detail by most of the early geographers, and notably by al-Harbi. It runs from Kufa, traversing varied terrain and stations until its arrival in Mecca. There are approximately fifty-four stations located close together along this route. Each station was supplied with a variety of wells, pools, and other architectural installations needed by travelers and pilgrims, as well as residents living within these stations. The first station pilgrims would stop at is al-Qadisiyya, 30 km from Kufa. Thence, the pilgrims would pass tens of main stations, some being significant human settlements, containing a great deal of

⁸¹ Al-Rashid, *Darb Zubayda*, pp. 47-62.

⁸² Al-Harbi, *Kitāb al-Manāsik*, pp. 282-303, 320, 288-292.

⁸³ Al-Ya‘qubi, Ahmad b. Abu Ya‘qub, *Mushākalat al-Nās li-Zamānihim*. Ed. William Millward, (Beirut: Dar al-Kitāb al-Jadid 1962), p. 26.

architecture. The most notable are: al-Qa‘, Zubala, al-Tha‘labiyya, al-Ajfur, Faid, Samira, Ma‘din al-Niqra, al-Rabadha, Ma‘din Bani Sulaym, al-Misla, al-Ghamra, and Awtas.

About 52 km from Awtas station is the *Mīqāt* of Dhatu-‘Irq, the *Mīqāt* of Iraqi pilgrims. The pilgrims then continue the journey towards Mecca.⁸⁴ (Map 3)

The route of Zubayda directly leads to Mecca without passing any *Mīqāt* except the *Mīqāt* of Dhatu-‘Irq. However, it should be noted that two minor routes branch off from the main route of Zubayda at the sites of two rest-stations. The two minor routes lead to Medina, pass through the *Mīqāt* of Dhul-Hulaifa and the *Mīqāt* of al-Juhfa, then proceed towards Mecca to perform the Hajj. Some early geographical sources mentioned the two minor routes (see below).

Tariq al-Akhrija (The Route of al-Akhrija)

Al-Harbi described the course of this route, clearly pointing out its main stations and the distances between them. The al-Akhrija route diverges from the parent Zubayda route at Faid station, then extends to Medina as follows: Faid, al-Akhrija, Ghimrat Marzouq, al-Unaba, Hesa al-Rimma, al-Ruqem, al-Sa‘ad, al-Nukhayl, al-Shuqra, Bi‘r al-Sa‘ib, Medina.⁸⁵

At Medina, al-Akhrija route merges with that linking between Medina and Mecca, which in turn passes through many stations, among them the *Mīqāt* of Dhul-Hulaifa and the *Mīqāt* of al-Juhfa. The following is a selection of the main stations along this route: the *Mīqāt* of Dhul-Hulaifa, Al-Hufair, Malel, Al-Sayala, Al-Rawha‘, Al-Ruwaitha, Al-‘Araj, Al-Suqayya, Al-Abwa‘, the *Mīqāt* of al-Juhfa, Qudaid, Khulais, ‘Usfan, Mur al-Dhahran, and Mecca.⁸⁶ (Map 3, 4).

⁸⁴ Al-Harbi, *Kitāb al-Manāsik*, pp. 554-556; Ibn Khurradadhbah, *Kitāb Al-Masālik wa-al-Mamālik*, pp. 125-127; Ibn Rustah, *Al-A‘lāq al-Nafisah*, pp. 153-155; Al-Hamdani, *Ṣifat Jazīrat al-‘Arab*, pp. 335-337.

⁸⁵ Al-Harbi, *Kitāb al-Manāsik*, pp. 515-525.

⁸⁶ Al-Harbi, *Kitāb al-Manāsik*, pp. 420-467; Ibn Khurradadhbah, *Kitāb Al-Masālik wa-al-Mamālik*, p. 187; Al-Hamdani, *Ṣifat Jazīrat al-‘Arab*, pp. 337-338.

In this regard, it is worth noting an important inscription found at the foot of one of the mountains in Faid, which bears the earliest mention of the Hajj in a dated text. It contains a supplication for acceptance of the Hajj and for forgiveness in 82/701-702.⁸⁷ In fact, the inscription indicates that pilgrims from early times during the reign of Caliph ‘Abd al-Malik b. Marwan (r. 685-705) were using the Zubayda route to reach Mecca and perform Hajj. In addition, as the inscription was found in Faid, it also indicates that the pilgrims may have used the al-Akhrija route, hence passing through the *Mīqāt* of al-Juhfa and then to Mecca. (Fig 1. A).

The Route of Ma‘din al-Niqra

This sub-route is described by some early geographical sources. It diverges from the Zubayda route at the station of Ma‘din al-Niqra and passes through the following selected main stations: Ma‘din al-Niqra, ‘Usayla, Batn Nakhl (al-Hanakyya), and Taraf (al-Suwaidra). At the borders of Medina, the Ma‘din al-Niqra route and the first sub-route, al-Akhrija, merge with each other and continue their extension via the Medina-Mecca route, passing through the above-mentioned stations between Medina and Mecca including the *Mīqāt* of Dhul-Hulaifa and the *Mīqāt* of al-Juhfa.⁸⁸ (Map 3)

Accordingly, the specified *Mīqāt* for pilgrims using the minor routes that diverged from the main route of Zubayda was either the *Mīqāt* of Dhul-Hulaifa in the beginning or the *Mīqāt* of al-Juhfa if some pilgrims did not assume *ihrām* from Dhul-Hulaifa. With respect to the return journey from Mecca to Kufa, pilgrims would have had two significant options, which are worth mention in this regard in order to understand the relationship between the *Mawāqīt* and the route of Zubayda during this journey.

⁸⁷ Al-Hawas, “Preliminary Report on Archaeological Excavations in the Historical City of Faid”, p. 35.

⁸⁸ Ibn Khurradadhbah, *Kitāb Al-Masālik wa-al-Mamālik*, p. 187; Ibn Rustah, *Al-A‘lāq al-Nafīṣah*, pp. 154-156; Al-Hamdani, *Ṣifāt Jazīrat al-‘Arab*, pp. 337-338.

The first option was for pilgrims to follow the main route of Zubayda, leading directly to Kufa and passing through the *Mīqāt* of Dhatu-‘Irq. The second option was for pilgrims to use the Medina-Mecca route, passing again through the *Mīqāt* of al-Juhfa and the *Mīqāt* of Dhul-Hulaifa and then continue their journey via minor routes, especially Ma‘din al-Niqra. On reaching Ma‘din al-Niqra, they would follow the main route of Zubayda, then proceed towards Kufa.⁸⁹

In any case, according to al-Harbi⁹⁰, most of the pilgrims who approached Mecca via the two minor routes and followed the Medina-Mecca route passing through the *Mīqāt* of Dhul-Hulaifa and the *Mīqāt* of al-Juhfa, did not use the same itinerary on the return journey. The main route of Zubayda, leading directly from Mecca to Kufa was their best choice. But pilgrims who came directly to Mecca via the main route of Darb Zubayda, would use the Medina-Mecca route passing through the *Mīqāt* of al-Juhfa and the *Mīqāt* of Dhul-Hulaifa on their return, then follow the minor route Ma‘din al-Niqrah leading to Kufa.

The underlying cause of pilgrims’ interest using the Medina-Mecca route and passing through the *Mīqāt* of al-Juhfa and the *Mīqāt* of Dhul-Hulaifa -whether coming or going- is the desire to visit Medina and pray in the Prophet’s mosque. Among the prominent figures who used the Medina-Mecca route on the return journey from Mecca to Kufa, and stopped in the *Mīqāt* al-Juhfa was Queen Zubayda during one of her journeys to perform the Hajj as will be seen shortly.

⁸⁹ Al-Harbi, *Kitāb al-Manāsik*, pp. 545-572.

⁹⁰ Al-Harbi, *Kitāb al-Manāsik*, pp. 545-572.

The Basri Route

This route, linking Iraq and the East of Islamic world with the two Holy Mosques in Mecca and Medina is ranked second in importance after the Zubayda route. Parts of the route were used for transportation and trade during the pre-Islamic period. The Basri route received a great care from the time of the Rashidun caliphs and reached the peak of its prosperity during the early Abbasid period (750-900). As many as twenty-seven major stations were established along the route. These stations contained many necessities for travelers, pilgrims and traders, such as wells, springs, dams, pools, palaces, forts, mosques, and other constructions that still stand today as varied cultural landmarks.⁹¹

This route runs from Basra in Iraq heading towards the northeast of the Arabian peninsula, and crosses the vast sandy belt of al-Dahna' desert and several major stations. The route goes along with the Zubayda route till they meet in the station of Umm Khurman or Awtas station. Thereafter, the two routes merge into one, proceeding towards the *Mīqāt* of Dhatu-‘Irq and then to Mecca.⁹² (Map 3) Also, the route would pass through the *Mīqāt* of Dhul-Hulaiifa and the *Mīqāt* of al-Juhfa by a minor route as follows:

The Route of al-Nabaj

Some early Arab geographers mention that this sub-route branched off from the main Basri route at the station of al-Nabaj as follows: al-Nabaj, Batn Qaw, Uthal, Najiya, al-Fawara. After that, the pilgrims of the Basri route and the Zubayda route would have gathered together at the station of Ma‘din al-Niqra and used the minor Ma‘din al-Niqra route mentioned above, which leads to Medina, passing through the *Mīqāt* of Dhul-Hulaiifa and the *Mīqāt* of al-Juhfa.⁹³ (Map 3)

⁹¹ Al-Harbi, *Kitāb al-Manāsik*, p. 26; Al-‘Utaybi, *The Basri Pilgrimage Route*, pp. 25-38.

⁹² Al-Harbi, *Kitāb al-Manāsik*, p. 26.

⁹³ Al-Harbi, *Kitāb al-Manāsik*, pp. 604-608; Ibn Khurradadhbah, *Kitāb Al-Masālik wa-al-Mamālik*, pp. 146-147; Ibn Rustah, *Al-A‘lāq al-Nafīṣah*, p. 159.

During the return journey from Mecca to Basra, the pilgrims also would have had two options. Some who had not yet visited Medina take the Mecca-Medina route, passing through the *Mīqāt* of al-Juhfa and the *Mīqāt* of Dhul-Hulaifa. Thereafter, the pilgrims would continue the journey via the minor Ma‘din al-Niqra route, then via the other minor route, which links the stations of Ma‘din al-Niqra and al-Nabaj, then follow the main Basri route towards Basra. But pilgrims who had already visited Medina on their way in, as previously discussed, would go directly from Mecca to Basra via the main Basri route, passing through the *Mīqāt* of Dhātu-‘Irq.⁹⁴

The Darb al-Masri (The Egyptian Route)

Parts of this route were known before the Muslim conquest of Egypt. After the Muslim conquest of Egypt in 640, the route acquired a wider importance to the caravans of pilgrims and traders. The route linked the west and east of the Islamic world where it was the only direct land route connecting the Islamic west with the Holy cities of Mecca and Medina passing through Egypt. The route enjoyed a lot of interest during the Umayyad and Abbasid period. Various architectural constructions were established along its course, such as wells, pools, mosques, and all the difficult obstructions that may face the pilgrims were paved.⁹⁵

The official starting point for pilgrims intending to travel along the main Egyptian route was Birkat al-Hajj in northeast of Cairo. Most pilgrims would assemble at this station prior to departure and caravans would then proceed towards Mecca. When the pilgrims reached Madyan, the route forks into two main branches, the coastal and desert routes.⁹⁶

⁹⁴ Al-Harbi, *Kitāb al-Manāsik*, pp. 545-561, 604-608.

⁹⁵ Al-Ya‘qubi, Ahmad b. Abu Ya‘qub, *Kitāb al-Buldān*. (Leiden: Brill, 1883), p. 341; Ibn Rustah, *Al-A‘lāq al-Nafisah*, p. 183; Ghabban, *Les Deux Routes Syrienne et Égyptienne de Pèlerinage*, vol. 1, pp. 26-33.

⁹⁶ Al-Ya‘qubi, *Kitāb al-Buldān*, p. 329.

The Egyptian Coastal Route

This route, follows the eastern coastline of the Red Sea. Pilgrims would have been able to continue their journey directly from Ayla to Mecca and pass through the *Mīqāt* of al-Juhfa. The main stations situated alongside this route are: Ayla, Madyan ‘Aynuna, al-Musalla, al-Nabak, Dubba, al-Murra, ‘Awnid, al-Wajh, Mankhus, al-Hawra, Qusayba, al-Bahra, Yanbu‘, al-Jar, the *Mīqāt* of al-Juhfa, Qudaid, Khulais, ‘Usfan, Mur al-Dhahran, Mecca.⁹⁷ (Map 3).

The Egyptian Desert Route

This route runs from Ayla to Medina. Thence, the pilgrims would follow the Medina-Mecca route, which, of course, passes through the *Mīqāt* of Dhul-Hulaifa and the *Mīqāt* of al-Juhfa, and thence to Mecca. The main stations situated alongside this route are: Ayla, Madyan, Shaghab, Bida, al-Suqya, al-Marwa, Medina, the *Mīqāt* of Dhul-Hulaifa, the *Mīqāt* of al-Juhfa, Mecca.⁹⁸ (Map 3)

What is significant about the Egyptian route -whether via the coastal or desert path- is that pilgrims stopped at the *Mīqāt* of al-Juhfa in both directions (going-return). This would have made the Egyptian route the main pilgrimage route that passes directly through the *Mīqāt* al-Juhfa during the inbound and return journey, in contrast to some other routes that did not pass directly through al-Juhfa unless the pilgrim desired to visit Medina.

Moreover, a letter has been found in Egypt, written on papyrus dated to 86-99/705-717, during the reign of the Caliph al-Walid b. ‘Abd al-Malik (r. 705-715) and the Caliph Sulayman b. ‘Abd al-Malik (r. 715-717). The papyrus mentions that Sahl b. ‘Abd al-‘Aziz, the son of the governor of Egypt, wrote a letter to ‘Uqba b. Muslim (deputy governor of Fustat in Egypt), conveying a message from the caliph. The caliph had permitted for the people to make the Hajj,

⁹⁷ Al-Ya‘qubi, *Kitāb al-Buldān*, p. 329; Al-Harbi, *Kitāb al-Manāsik*, pp. 651-652; Al-‘Abdari, *Al-Rihla al-Maghribiya*, pp. 243-244.

⁹⁸ Al-Harbi, *Kitāb al-Manāsik*, pp. 649-651; Ibn Rustah, *Al-A‘lāq al-Nafisah*, p. 160.

and exhorted all to do so.⁹⁹ (Pl. 1. A).

This papyrus is considered one of the oldest documents to mention the Hajj during the Umayyad period. It clearly indicates that a large group of people in Egypt were performing the Hajj at that time after the caliph gave permission, and they, of course, were using either the coastal or desert Egyptian route, then passing through the *Mīqāt* of al-Juhfa in both directions.

Finally, it is noteworthy that the Egyptian route experienced some historical events which contributed to its deactivation for a long period of time during the Fatimid period (909-1171). The first is that Egypt suffered from a major crisis represented in famines that took place during the days of the Fatimid caliph al-Mustansir Billah (r. 1036-1096). This crisis was known as *al-Shida al-'Uzma* (the major difficulty) or al-Mustansiriyya, and lasted for seven years uninterruptedly (1064-1071). This crisis was the ugliest in Egyptian history. The water level of the Nile fell, agricultural land dried up, crops died, people lost their jobs, prices rose, and money lost its value. This had extremely negative results on the economy of the Fatimid state. It was no longer able to pay the expenses of the Egyptian route, which was disrupted for several successive years.¹⁰⁰

The second event was the arrival of Crusaders in the region after 1099. Crusaders formed four centers in the Levant, which probably affected the Egyptian route. According to Ibn al-Athir, the greatest danger to the Egyptian route was the Kingdom of Jerusalem, the influence of which expanded until it ruled Ayla in 1116 led by Baldwin I (r. 1100-1118). The main aim of ruling Ayla, one of the most important stations in the Egyptian and Syrian route, was to separate the west of the Islamic world from the east, including the two Holy cities of Mecca and Medina. Furthermore, two significant castles were built in the south of Jordan: Montreal by Baldwin I and

⁹⁹ The papyrus is now saved in The Oriental Institute, University of Chicago. For more information, see Sijpesteijn, Petra M, "An Early Umayyad Papyrus Invitation for the Hajj". *Journal of Near Eastern Studies*, 73, no. 2, 2014, pp. 179-190.

¹⁰⁰ Al-Maqrizi, Ahmad b. 'Ali, *Al-Mawā'iz wa-al-I'tibār bi-Dhikr al-Khiṭaṭ wa-al-Āthār*. (Beirut: Dar Sader, 1999), vol.1, p. 202.

al-Karak by Fulk, King of Jerusalem (r. 1131-1143). These fortresses worked hand-in-hand, playing an important role in controlling the transport between Syria and Mecca on one hand, and Syria and Egypt on the other. Many traders, and pilgrims' caravans, not to mention the resistant military campaigns, were attacked by the Crusaders.¹⁰¹

However, some Arabic sources perhaps exaggerated the scale of the Crusades' impact on the pilgrimage routes. For example, they describe Reynald of Chatillon, the Prince of Antioch and the Lord of Oultrejordain (d. 1187), as the most devilish of the Franks, and the one who possessed the strongest hostility to Muslims. They indicate that Reynald developed a scheme to attack the Holy cities of Mecca and Medina, and more broadly, the Red Sea and the pilgrimage and trade routes. Moreover, these sources say that Reynald wanted to insult the Prophet Muhammad himself and dig up and remove his body.¹⁰²

In fact, some raids by Reynald are believed to be among the main reasons why Reynald is so despised in the Arabic chronicles. Reynald did engage in some raids against Muslim caravans and other Islamic targets. The first mention of an attack into the Arabian Peninsula was in 1181, when Reynald is reported to have attacked the town of Tayma, which is located on the Syrian route. In 1183, Reynald transported at least five warships to the Red Sea. Two of these ships immediately began the successful siege of the fort of Ayla and the others set sail down the Red Sea until landing at Rabigh. For around forty-five days they gained booty not only from pilgrim and merchant shipping, but also from attacks on coastal towns such as 'Aydhab.¹⁰³

¹⁰¹ Ibn Al-Athir, Abu al-Hasan 'Ali, *Al-Kāmil fī at-Tārīkh*. Ed. Abu al-Fida Abdullah al-Qadi, (Beirut: Dar al-Kutub al-'Ilmiyah, 1971), vol. 9, pp. 21- 43; Milwright, Marcus, *The Fortress of the Raven: Karak in the Middle Islamic Period (1100 -1650)*. (Leiden; Boston: Brill, 2008), pp. 29-30.

¹⁰² Ibn Jubayr, Muhammad b. Ahmad, *Rihlat Ibn Jubayr*. (Beirut: Dar al-Hilal, 1986), p. 43; Ibn Al-Athir, *Al-Kāmil fī at-Tārīkh*, vol. 9, pp. 25-29.

¹⁰³ Ibn Jubayr, *Rihlat Ibn Jubayr*, pp. 43-44; Milwright, *The Fortress of the Raven*, pp. 34-35.

The possible reason for these actions was not to attack Mecca and Medina and to disrupt Muslim trade, and neither were they part of a plundering expedition along the pilgrimage routes (as some Arabic chronicles say)¹⁰⁴. Evidence suggests that these raids were about much more than plunder. There was a military strategy to limit the strength of the Muslim leader, Salah al-Din al-Ayyubi (r. 1174–1193), and distract him from carrying out his Syrian aims: uniting Damascus and Aleppo, thereby uniting the whole of Syria against the crusaders.¹⁰⁵

Promoting news about attacking Mecca and Medina, capturing the body of the Prophet, disrupting trade, threatening pilgrims, and raiding caravans, likely cast terror in the hearts of pilgrims and merchants, and led to their avoiding both the Egyptian and Syrian routes at this time.

However, as a result of the two events (mentioned above), traffic along the Egyptian route fell tremendously. The Egyptian route changed from land to sea. The great Egyptian historian, al-Maqrizi (d. 1442) pointed out that most Egyptian and Moroccan pilgrims abandoned the Egyptian land route and followed the sea route for more than two hundred years from 1058 until about 1261. The maritime route runs from Qus city in the south of Cairo, thence through the desert to the ‘Aydhāb port on the west coast of the Red Sea, then to the port of Jeddah on the east coast, and finally to Mecca.¹⁰⁶

Consequently, Egyptian, Moroccan and African pilgrims were no longer able to assume *iḥrām* from the *Mīqāt* of al-Juhfā or the *Mīqāt* of Dhul-Hulaifa. The alternative *Mīqāt* for these pilgrims became Jeddah port on the east coast of the Red Sea. In fact, despite the difficulty of the voyage along the Red Sea, its long distance, the lack of water as well as the heavy taxes imposed upon pilgrims and traders, it was the only way for the vast majority of pilgrims to cross and

¹⁰⁴ Cf. footnote 95.

¹⁰⁵ For more detail, see Hillenbrand, Carole, *The Crusades: Islamic Perspectives*. (Edinburgh: Edinburgh University Press 1999), pp. 344-345; Moosa, Matti “The Crusades: An Eastern Perspective, with Emphasis on Syriac Sources”. *The Muslim World* 93:2, 2003, pp. 249-289.

¹⁰⁶ Al-Maqrizi, *Al-Mawā‘iz wa-al-I‘tibār*, vol.1, p. 202.

(assuming *ihrām* from Jeddah port), the alternative *Mīqāt*. Thus, the famous traveler Ibn Jubayr (d. 1217) mentioned that he was hoping to use the Egyptian land route during his journey to the Hajj in 1183, but could not because of the presence of the Crusaders in the region. He was forced to use the maritime route.¹⁰⁷

Following Salah al-Din recapture of most of the territories that were occupied by the Crusaders following the Battle of Hittin in 1187, the Egyptian route was used again after a long period of disruption. With the beginning of the Bahri Mamluks state (1250-1382), the activity of the Egyptian route considerably increased and acquired primary importance during the rule of the Sultan of Egypt, Baybars al-Bunduqdari (r. 1260-1277).¹⁰⁸

Many caravans of pilgrims and traders considerably used the Egyptian route. Thus, we can recognize the situation of the *Mīqāt* of al-Juhfa which travelers passed through along the route. For example, among the early travelers who used the Egyptian route is al-‘Abdari. Al-‘Abdari came from Morocco to Mecca via the Egyptian coastal route in 1289 and provided us with a detailed description of the course of the route and its main stations. He mentioned that al-Juhfa was no longer valid to use as a *Mīqāt* for pilgrims (a subject to which the dissertation will return later). According to al-‘Abdari, al-Juhfa was ruined place and situated several miles to the left of the route. Thus, the pilgrims assumed *ihrām* from a new *Mīqāt* called Rabigh instead of al-Juhfa.¹⁰⁹ It is now quite evident that the change in the Egyptian coastal route gave renewed importance to Rabigh.

¹⁰⁷ Ibn Jubayr, *Riḥlat Ibn Jubayr*, p. 43.

¹⁰⁸ Al-Fasi, Taqi al-Din Muhammad, *Shifā` al-Gharām bi-Akhhār al-Balad al-Ḥarām*. Ed. Ayman Sayed and Mostafa al-Dahabi, (Mecca: al-Nahda al-Haditha Press, 1999), vol. 1, pp. 89-99.

¹⁰⁹ Al-‘Abdari, *Al-Riḥla al Maghrībya*, p. 349.

The Darb al-Shami (The Syrian Route)

This route was the main commercial route in pre-Islamic times. Later, during the Islamic period, it became frequented Hajj route uniting Damascus with the Holy cities of Mecca and Medina. During the Umayyad period, some caliphs, such as al-Walid b. ‘Abd al-Malik and Hisham b. ‘Abd al-Malik (r.724-743) were greatly interested in the route, so they constructed a variety of water features such as pools, cisterns, and canals. During the Abbasid period, the whole route, including its main stations, prospered considerably.¹¹⁰

The Syrian pilgrimage route forks into two main branches, the coastal and desert routes as follows:

The Coastal Route

This route, known as the al- Mu ‘riqa route, was the shortest link between Syria and Mecca; thus the commercial caravans of the Quraish in Mecca followed it to reach Syria during the early Islamic period. It ran from Damascus south to towards Gaza in Palestine, then towards Ayla, and merged with the Egyptian route whether the coastal or desert path.¹¹¹ (Map 3)

The Desert Route

The desert route was widely known as the al-Tabukiyya route, which is derived from the town of Tabuk, one of the main stations on the route. It begins in Damascus and passes through many main rest stations, most notably al-Suqya where the route merges with the Egyptian desert route and both go towards Medina passing through the *Mīqāt* of Dhul-Hulaiifa, the *Mīqāt* of al-Juhfa, and thence to Mecca.¹¹² (Map 3). Here, the pilgrim had two options to use the *Mawāqīt* and

¹¹⁰ Al-Harbi, *Kitāb al-Manāsik*, p. 653; Ibn Rustah, *Al-A ‘lāq al-Nafīṣah*, p. 160; Ghabban, *Les Deux Routes Syrienne et Égyptienne de Pèlerinage*, vol. 1, pp. 19-24.

¹¹¹ Al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol. 2, p. 331; Yaqut al-Hamawi, *Mu ‘jam al-Buldān*, vol. 5, p. 155.

¹¹² Al-Harbi, *Kitāb al-Manāsik*, p. 653; Ibn Rustah, *Al-A ‘lāq al-Nafīṣah*, p. 160.

assume *ihrām*, through either the *Mīqāt* of Dhul-Hulaifa or the *Mīqāt* of al-Juhfa.

On the Syrian route, there is an inscription dated 91/710 that contains a supplication for acceptance of the Hajj. It is the second-earliest inscription to mention the Hajj in the early 8th century, after the Zubayda route inscription mentioned above. Another inscription on the same route dated 100/719 mentions that a complete tribe (Anzatul Azad) were performing the Hajj and had supplicated for paradise.¹¹³ (Fig 1. B; Fig 2). The two inscriptions indicate that pilgrims trod the Syrian route for the Hajj from early times. This leads us to infer that a great number of pilgrims must have passed through the *Mīqāt* of al-Juhfa and used it either as a *Mīqāt* or as a main station.

In any case, the Syrian route, like the Egyptian, probably was influenced by the Crusaders' presence in the region, particularly after erecting the fortresses of Montreal and al-Karak, as noted above. The Syrian route was disrupted for a long period of time. Under these circumstances, it seems pilgrims followed the more secure minor routes (Tariq Wabir and al-Sirr) which connect 'Amman with Medina via Tayma, and then followed the Medina-Mecca route, passing through the *Mīqāt* of Dhul-Hulaifa and the *Mīqāt* of al-Juhfa. The two *Mawāqīt* seem to have continued in use by pilgrims but not actively as in the past. Al-Maqdisi during the 10th century directs his attention to two sub-routes and informs us of his personal experience of following these routes more than once and how they were used by the early Islamic armies as an alternative to the Syrian route.¹¹⁴

When the activity of the Egyptian route widely returned in the beginning of the State of Bahri Mamluks, it was natural then that traffic via the Syrian route also returned again but with passing through the new *Mīqāt* Rabigh that replaced the *Mīqāt* of al-Juhfa as we have seen.

¹¹³ Al-Kilabi, Hayat, *Al-Nuqūsh Al-Islāmīyah 'ala Tarīq al-Hajj al-Shāmī bi-Shamāl Gharb al-Mamlakah al-'Arabīyah al-Sa'ūdīyah*. (Riyadh: Maktabat al-Malik Fahd al-Wataniyah, 2009), pp. 70-73.

¹¹⁴ Al-Maqdisi, *Aḥsan al-Taqāsīm fī Ma'rifat al-Aqālīm*, pp. 249-250.

The Bahrain-al-Yamama Route

This route crosses the middle parts of the Arabian Peninsula and links Bahrain and al-Yamama with Mecca. The Abbasid state supplied the route with the necessary services and played an important role in protecting pilgrims from attack by highwaymen. Some early Muslim geographers noted that this route divided into several, most notably as follows.

The Bahrain-al-Yamama- al-Qaryatayn Route

It is starting in Bahrain and passes through many stations including the province of al-Yamama until it reaches al-Qaryatayn, one of the most significant stations on the Basri route. At al-Qaryatayn, the pilgrims would have joined the Basri route and proceeded towards the *Mīqāt* of Dhatu-‘Irq, then to Mecca.¹¹⁵ (Map 3).

The Bahrain-al-Yamama- Dhrya Route

This route runs from Bahrain, passing through the province of al-Yamama and many stations until reaching Dhrya station on the Basri route, at which point the pilgrims would have joined the pilgrims of Basra and continued towards the *Mīqāt* of Dhatu-‘Irq, then to Mecca¹¹⁶. (Map 3).

The Bahrain-al-Yamama-Marat Route

It begins from Bahrain to al-Yamama and then to some important stations, such as Marat. The route continues westbound towards the *Mīqāt* of Qarn-al-Manazil, thence to al-Ta’if and finally Mecca.¹¹⁷ (Map 3).

¹¹⁵ Al-Harbi, *Kitāb al-Manāsik*, pp. 616-620; Ibn Khurradadhbah, *Kitāb Al-Masālik wa-al-Mamālik*, p. 147.

¹¹⁶ Al-Harbi, *Kitāb al-Manāsik*, pp. 616-620; Al-Hamdani, *Ṣifāt Jazīrat al-‘Arab*, p. 260.

¹¹⁷ Al-Harbi, *Kitāb al-Manāsik*, pp. 616-620; Ibn Rustah, *Al-A‘lāq al-Nafīṣah*, p. 159.

When looking at the *Mawāqīt*, which were utilized by the Bahrain-al-Yamama pilgrims, we will see that the pilgrims utilized their own specified *Mīqāt*, the *Mīqāt* of Qarn-al-Manazil. But they also used the *Mīqāt* of Dhatu-‘Irq, which was designated for the people of Iraq.

The Yemeni Route

This route was one of the essential pilgrimage routes that linked Yemen with Hejaz since ancient times before Islam. During the Islamic period, the route became more widely utilized by Muslims for Hajj. Archaeological studies have revealed many architectural constructions scattered along the route as well as many early Islamic inscriptions and a variety of pottery.¹¹⁸

The Yemeni pilgrim route is divided into three main routes as follows:

The Highland Route

This is classified as the first major Yemeni route. The starting point is San‘a’ in Yemen, and the route proceeds towards many important cities in Saudi Arabia such as Bisha and Tabala. Thence the route halts at the *Mīqāt* of Qarn-al-Manazil in order to assume *iḥrām*, then the route continues its course towards al-Ta’if then Mecca.¹¹⁹ (Map 3)

The Coastal Route

This main route runs from Aden and follows the eastern coastline of the Red Sea, advancing northwards to many important coastal stations such as ‘Aththar, Hili, Sirrayn, al-Shu‘ayba, and Jeddah. At Jeddah pilgrims assume *iḥrām*, and then proceed towards Mecca.¹²⁰ (Map 3).

¹¹⁸ Al-Hamdani, *Ṣifat Jazīrat al-‘Arab*, pp. 338-342; Al-Thenayian, *An Archaeological Study of the Yemeni Highland Pilgrim Route*, pp. 47-64.

¹¹⁹ Al-Harbi, *Kitāb al-Manāsik*, pp. 643-645; Al-Hamdani, *Ṣifat Jazīrat al-‘Arab*, pp. 338-341; Yaqut al-Hamawi, *Mu‘jam al-Buldān*, vol. 4, p. 332

¹²⁰ Al-Hamdani, *Ṣifat Jazīrat al-‘Arab*, pp. 341-342.

The Royal Route

The al-Jadda al-Sultaniyya (or Royal Route), also known as the Tihama route, connects southwestern regions of the Yemen with Mecca. It begins in Ta'iz and runs parallel to the highland route, passing through many stations including the *Mīqāt* of Yalamlam, in which pilgrims assume *iḥrām* before proceeding towards Mecca.¹²¹ (Map 3)

In light of this description of the use of the *Mawāqīt* by Yemeni pilgrims, it appears they used three different *Mawāqīt*. The First was the *Mīqāt* of Qarn-al-Manazil, which was the *Mīqāt* of the people of al-Yamama. The second *Mīqāt* is Jeddah, which is the new *Mīqāt* that pilgrims preferred to utilize as an additional *Mīqāt*. Last was the *Mīqāt* of Yalamlam, the main *Mīqāt* designated for Yemenis.

The Omani Route

Some geographical sources indicate that the majority of Omani pilgrims share with two Yemeni routes during the journey to Mecca; Omani pilgrims followed the route that stretches from the southern coast of Oman, through the northern coast of the Arab Sea leading to Aden in Yemen. Thence the pilgrims would have joined the Yemeni coastal route leading to Jeddah to assume *iḥrām*, and then proceeded towards Mecca. Also, the Omani pilgrims could have gone from Aden to San'a', merged with the Yemeni highland route leading to the *Mīqāt* of Qarn-al-Manazil, then continued the journey towards Mecca.¹²² (Map 9)

In short, we can draw some intriguing conclusions from the process of documenting the main *Mawāqīt* of the Hajj and determining their positions along the main pilgrimage routes in Arabia. It is fairly apparent that there was a powerful link and considerable interplay between the five

¹²¹ Al-Harbi, *Kitāb al-Manāsik*, p. 646; Al-Hamdani, *Ṣifāt Jazīrat al-'Arab*, p341.

¹²² Ibn Khurradadhbah, *Kitāb Al-Masālik wa-al-Mamālik*, pp. 192-193; Ibn Hawqal, *Kitāb Ṣūrat al-Ard*, p. 41.

Mawāqīt and the main pilgrimage routes, which were of major importance in explaining the location of the *Mawāqīt* in general. The course of these routes suggests that the *Mawāqīt* were directly related to them. The regularity of the locations of the *Mawāqīt* seems to be quite deliberate and they would have provided convenient communication between the pilgrims and the pilgrimage routes themselves.

The Hajj caravan halt at the *Mawāqīt* shows the appropriateness of the location chosen for various pilgrims. When pilgrims travel via variant pilgrimage routes, they did not need to change their course in order to use their designated *Mawāqīt*. They will find their specified *Mawāqīt* on the same journey whether to Mecca initially, or to first to Medina and then to Mecca. In fact, the main *Mawāqīt* are ideal for a major halt by the caravans and served as way stations as well as meeting points of the pilgrims. The locations of the five main *Mawāqīt* suggest coherent and accurate planning along the major routes to facilitate its use by pilgrims from different parts of the Islamic world.

One of the most conspicuous results is that the *Mīqāt* of Dhul-Hulaiifa and the *Mīqāt* of al-Juhfa are the only two *Mawāqīt* that can be reached by most pilgrims coming via main pilgrimage routes. This unique feature was largely due to the strategic and distinguished location of the two *Mawāqīt* on the route linking Medina and Mecca. Dhul-Hulaiifa and al-Juhfa were indeed, the key to this route, which was from early times an important artery for pilgrim traffic and an extension for some pilgrimage routes that led to Mecca. Also, many pilgrims followed it to reach Medina in order to visit the Prophet Muhammad's grave and pray in his mosque. For this reason, pilgrims halted at both *Mawāqīt* whether as a *Mīqāt* or as a main station.

Another conclusion is that pilgrims assumed *iḥrām* from different *Mawāqīt* which were not basically designated to them. The main reason is that the pilgrims had various options to use any pilgrimage route, which, of course would lead them to the *Mīqāt* of Hajj. In this case, the

pilgrims must have assumed *iḥrām* from the *Mīqāt* they passed through according to the spatial *Mawāqīt* regulations. (Table 2).

Chapter 3

The Geographical and Historical Aspects of al-Juhfa

1. Introduction

2. The Geographical Aspects

Administrative Affiliation

Topography

Climate

Water Sources

Economic Activity of the Population

Settlement Centers Close to al-Juhfa

3. The Historical Aspects

Pre-Islamic Period

The Era of the Prophet

The Era of Rashidun Caliphs

The Era of the Umayyad

The Era of the Abbasids

Factors of Prosperity and Development

Factors of the Decline and Abandonment

1. Introduction

Studying the geographical and historical aspects of al-Juhfa is essential to understanding the natural and human factors that affected the site of al-Juhfa and its inhabitants. Based on early geographical and historical sources, previous writings on the region of west Arabia, field observations, and the personal views of local people, this chapter will highlight important geographical and historical features of al-Juhfa, such as its administrative affiliation throughout history, and its topography (including low plains, high mountainous territories, and several valleys). The chapter will also deal with the climate of al-Juhfa, focusing on some important climatic elements, such as atmospheric pressure and winds, heat and humidity, and rainfall. Moreover, the chapter will refer to water sources in al-Juhfa and economic activity of the inhabitants, and the size and architectural features of settlement centers near al-Juhfa. The last section in this chapter is dedicated to the historical aspects of al-Juhfa in order to understand its relative chronology, the early development stages, and the factors of prosperity and abandonment.

2. The Geographical Aspects

Administrative Affiliation

Al-Juhfa was an important city under the authority of Medina during the early Islamic period. Al-Harbi in the 9th century, listed the important urban centers that were subsumed into the administration of Medina and contained a congregational mosque. One of these centers was al-Juhfa¹²³, which remained dependent on Medina throughout history. According to the Egyptian historian al-Batanuni in the 16th century (i.e. during the Ottoman era), al-Juhfa came under the administration of Rabigh province. Rabigh at that time was belonging to the Hijaz area, which

¹²³ Al-Harbi, *Kitāb al-Manāsik*. pp. 413-415.

became an Ottoman province in 1516, and consisted of several major cities, such as Mecca, Medina, and al-Ta'if.¹²⁴ It seems that neighboring Rabigh became more important after the ruin of al-Juhfa. However, al-Juhfa continues to be part of Rabigh until the present day but both belong to Mecca province. As for Medina, it became a separate province that includes many cities.

Topography. (Map 5).

According to the field survey conducted by the researcher, it is clear that al-Juhfa is characterized by varying topography: low plains, high mountainous territories, and many valleys. This topography is described, below.

The Coastal Plain

Al-Juhfa is located on the eastern coast of the Red Sea, which is known as the Tihama coastal plain. In order to shed more light on this, it is important to follow the line of this plain, extended over a distance of about 100 km. The line starts in Thuwal passing through al-Juhfa, Rabigh, and thence to Mastaura. It is relatively narrow where it begins, on the south of Thuwal, then gradually expanding northward to form a wide area surrounding al-Juhfa from the south, west and northwest. The strip continues its extension to the north, then begins to narrow again to the south of Mastaura.

The measuring of plain levels above sea level vary from place to place along the coastal plain. For example, in the area adjacent to al-Juhfa, the plain rises more than 4-5 m. above sea level. In some other areas, the plain ranges between 1-3 m. above sea level as in the west of

¹²⁴ Al-Batanuni, Mohamed Labib, *Al-Rihla al-Hijāzīya in 1909*. (Cairo: The School of the Mother of Abbas I), p. 38.

Thuwal and Rabigh, and north of Mastaura. These areas are usually vulnerable to tidal water submersion during high winds, creating marshes - the most important natural phenomena of the coastal plain. These are rectangular, parallel to the coast, and non-arable due to their high salinity. Among the most famous of these marshes is Rabigh Marsh, which extends for a distance of 26 km and whose width varies from 1-3 km.

Field survey shows that most of the coastal plain is covered with sand sediment and characterized by many bays where the sea forms inlets, most notably the inlets of Thuwal, Rabigh, and Mastaura. These have a significant impact on navigation and marine transport, and play an important role in protecting harbors from the danger of wind and high waves. Today, there are plenty of population centers near these inlets. Finally, another striking feature of the coastal plain is coral, which forms a broad strip parallel to the coast. Among the reasons contributing to the emergence of this coral is the suitable temperature of the Red Sea as well as the low salinity and shallowness of the water in that area.

The Montane Area

The montane area can be divided into three main blocks: First Harrat Rahat¹²⁵, which is located about 100 km to the east of al-Juhfa. Harrat Rahat is a huge block of volcanic rock, rising about 1,200 m above sea level, then sloping gradually to the west until reaching the height of about 200 m. The second block is central mountains, which are a series of mountain ranges, covered with black basalt rocks. They are located west of Harrat Rahat and east of al-Juhfa. The mountains rise about 1,000 m above sea level, then slope west to reach the coastal plain. According to residents, the most important mountain in the area is Fursan Mountain, which rises about 1,700 m above sea level and where, today, marble is quarried. Other famous mountains

¹²⁵ Harra is the singular of the word of Hidar. It is an Arabic word means a volcanic lava field.

include, al-Hudaibiya, al-Shaghf, Atwal, al-Qatna, Umm-Mukhbaz, and al-Tharwa. These overlook the coastal plain and range between 50 to 100 m above sea level.

Third is the coastal hills. The area surrounding al-Juhfa contains a wide range of hills. They describe a line extending from north of Mastaura, continuing south and passing through al-Juhfa. The width of this line ranges from 15-25 km. The hills are generally covered in sand and gravel of small and medium size, brought down by floods from the mountains during the rainy seasons. Al-Juhfa is located on a high hill called Barqa al-Kharja, which stretches to the west of al-Juhfa. East of al-Juhfa, there is also a range of hills called Barqa al-Quta'a. Within these hills there is a group of small *hirar* surrounding al-Juhfa from various sides; Harrat al-Rumha in the northeast, Harrat al-Wabriyya in the east, Harrat 'Azzur (now called al-'Azzuryya) in the north and northwest, as well as a small *harra* surrounding al-Juhfa from the south side. These *hirar* consist of black basalt stones, which formed an important source for building materials in al-Juhfa.

Valleys

According to field survey, al-Juhfa is located on the right bank of a large valley, called al-Gha'idha by local people. This valley provided al-Juhfa with copious amounts of water for drinking and agriculture. Al-Gha'idha valley is a sedimentary plain consists of clay, gravel, and sand granules. It surrounds al-Juhfa from the east, where its width is about half kilometer, and becomes as wide as 2 km on the southeast side of al-Juhfa. After that, the valley continues its course to the south of al-Juhfa and expands into a delta varying between 3 and 7 km in width.

Indeed, al-Gha'idha valley is a part of a huge valley named al-Mur. The al-Mur valley begins in the upper headwaters on the eastern side of Harrat Rahat, extends towards the southwest, then veers south to feed both al-Gha'idha and al-Kharrar valley, which is also part from al-Mur valley and located upper al-Gha'idha from northeastern side. According to one of

geographical study, at some time in the past, the course of al-Mur valley changed towards the west instead of south to feed Rabigh valley, causing both al-Kharrar and al-Gha'idha valley to be dry, as will be seen later.¹²⁶

In any case, al-Mur valley features a wide basin and has many tributaries that flow within it, such as the valley of al-Khudhra, Hijr, Nada. These valleys run in various directions in an irregular shape according to the broken topography of the region.¹²⁷ Consequently, flooding of the al-Mur valley increased significantly, which led to the availability of huge quantities of water in al-Kharrar and al-Gha'idha valley as well as forming the delta in the bottom of al-Gha'idha valley. Al-Mur valley is still active until our present time and feeds Rabigh valley with large quantities of water.

Climate

Climate is one of the natural environmental factors that have a direct impact on human, plant, and animal life, as well as on the earth's crust and the formation of soil. Al-Juhfa is located in tropical dry regions, north of the equator on the Tropic of Cancer; thus the climate in al-Juhfa is characterized as dry desert. Climatic elements in al-Juhfa are discussed as follows. First, the atmospheric pressure and winds. Al-Juhfa is located normally under the influence of a high-pressure area, which usually leads to the confluence of the air in the upper atmosphere layers and its dispersion in the lower atmosphere layers, causing the drought conditions that distinguish al-Juhfa. In addition, the topography of al-Juhfa area is much affected by prevailing winds, which are often northerly. These winds are mild and usually moderate the temperature during the sweltering summer season.¹²⁸

¹²⁶ Department of Geography, *Emirate of Rabigh, a Field and Geographical Study*. (Jeddah: King Abdulaziz University, 1984), pp. 28-29.

¹²⁷ Department of Geography, *Emirate of Rabigh*, pp. 28-34.

¹²⁸ Fayed, Yousef, "The Climate of Jeddah City". *Journal of the Faculty of Arts and Humanities*, 1, p. 207.

Second is the heat and humidity. The temperature in al-Juhfa is very high during the summer and varies from time to time during the day. Between dawn and sunrise, the temperature is rather low, then gradually rises until it reaches a maximum in the afternoon, when the temperature often exceeds 45° C. After sunset, the temperature falls slightly. In winter, the temperature is moderate reaching less than 16° C. The climate in al-Juhfa is also characterized by high humidity, especially in late summer and early fall: sometimes up to 90%, due to increased rate of evaporation from the Red Sea.¹²⁹ In fact, variations in temperature and humidity between day and night, summer and winter, may account for the phenomenon of the peeling and splitting rocks that litter al-Juhfa area.

Third is the rainfall. Rain is an element of great importance in tropical, hot, dry regions. As al-Juhfa is located within these regions, no doubt the residents of al-Juhfa keenly await the date of rainfall particularly in winter and spring season. Rainfall in al-Juhfa is usually linked to what is happening in the north of the Mediterranean basin during winter. It is known that the rains of the Mediterranean region fall in winter, spring, and fall, with a notable increase in winter and spring. In any case, rainfall amounts in al-Juhfa today differ from one season to another, and from one year to another. It is usually sudden and heavy. For example, in 1971, rains in al-Juhfa region reached heights of up to 30 mm. In contrast, in 1976 and 1980, rains recorded the lowest rate, which was 2 mm.¹³⁰

Water Sources in Al-Juhfa

Al-Juhfa is very rich in pure groundwater, which accumulated in the area over time. Due to al-Juhfa locating on the banks of the al-Gha'idha valley, it receives a large amount of the floods that flow into the region during the rainy season. These torrents seep from the surface into the

¹²⁹ Fayed, "The Climate of Jeddah City". pp. 207-216.

¹³⁰ According to information issued from the climate station in Rabigh.

inner layers of the earth. According to environmental science, this process is called “groundwater recharge”, a hydrologic process where water moves downward from surface water to groundwater.¹³¹

In fact, the broken nature of the ground’s surface in al-Juhfa area, which is (as previously stated) entirely covered in sand and small gravel containing large pores, aids greatly in moving water from the surface to an aquifer. Thus, over time, al-Juhfa acquired a great store of groundwater that supplied al-Juhfa with sustainable quantities of pure water. Evidently, groundwater remains an important source that can be depended upon to meet the needs of people animals and plants in al-Juhfa region. The people of al-Juhfa significantly benefited from groundwater in several key ways evidenced by wells, and channels. All of these water installations will be studied in detail in the chapters to follow.

Economic Activity of the Population in Al-Juhfa

Economic activity of the population in any region is the result of human interaction with the natural environment and what produce of this environment of natural resources. These resources depend on the geography of the region, and the extent of people’s ability to exploit these resources. Geographical manifestations in al-Juhfa, such as topography, climate, and water played an important role in guiding and determining the economic activity of the population in al-Juhfa. Consequently, we can identify the main economic activities of the population in al-Juhfa as follows:

¹³¹ For further information, see King, A. C., Raiber, M., Cendón, D. I., Cox, M. E., and Hollins, S. E., “Identifying Flood Recharge and Inter-Aquifer Connectivity Using Multiple Isotopes in Subtropical Australia”. *Hydrology and Earth System Sciences Discussions* 5, 19, 2015, pp. 2315-2335.

Agriculture

It is clear that agriculture was one of the main occupations of the population in al-Juhfa and formed the backbone of the economic structure in the region. In order for agriculture to perform its function, certain factors that have to be present in the agriculture. These are determining factors that control agricultural production and affect it positively or negatively, the most prominent being climate and soil. Climate is the most important natural factor influencing the quantity and quality of agricultural production. As mentioned above, rainfall in al-Juhfa is usually very heavy in the winter and spring, increasing the flow into groundwater. Adequate groundwater contributes significantly to irrigating agricultural crops, thereby increasing agricultural production. Most geographical and historical sources do not indicate what kind of agricultural crops al-Juhfa produced; but al-Harbi, stated that fourteen sites exported various agricultural crops to Medina; among them, al-Juhfa.¹³² In any case, the environmental conditions in al-Juhfa are favorable for crops widely grown in the Arabian Peninsula, most notably, dates, lemons, watermelons, cucumber, wheat, and some types of vegetables. Such crops, especially dates, are usually unaffected by the high temperatures in summer and can also grow in a dry atmosphere.

The second agricultural factor is the soil. Fertile soil is a key factor in agricultural production processes and the growth and reproduction of vegetation. It also plays an important role in determining the quality of natural plant life and influences the choice of crops that can be grown.¹³³ As stated earlier, al-Juhfa has very fertile and arable sedimentary soil. This type of soil contains clay, gravel, and sand, and is concentrated in valleys near al-Juhfa, such as al-Kharrar and al-Gha'idha. As to the coastal plains near the Red Sea, the soils there are mostly unsuitable for farming because of their high salinity. Soil formation depends on the prevailing climatic

¹³² Al-Harbi, *Kitāb al-Manāsik*. pp. 413-415.

¹³³ For more detail, see Hamza, Hasan, *Agricultural Development of Saudi Arabia*. (Riyadh: The Ministry of Agriculture and Water, 1997).

conditions. The most important condition affecting the soil is, temperature. The high summer temperatures in al-Juhfa positively affected soil fertility and played an important role in the equations of chemical reactions and the vital activity of the soil. Also, the continual rise and fall in temperatures has the effect of expanding, contracting, and so breaking down, soil particles. As a result, the movement of water and the decomposition of organic material in the soil becomes very fast, easing the absorption of water by plants as well as accelerating soil formation and plant growth.¹³⁴

Grazing

Because of the nature of al-Juhfa area along the al-Gha'idha valley, which is rich in natural grasses and plants that usually grow after rainfall and torrential runoffs, it seems that grazing cattle was a prevalent occupation in al-Juhfa. Grazing cattle produce great livestock wealth, which is a significant source of food for humans. In fact, livestock production is closely linked to high agricultural potential. Whenever agricultural development increased, the number of livestock grew and became more productive. Accordingly, it seems most likely that livestock production in al-Juhfa was considerable because of al-Juhfa's agricultural potential.

Trade

As is known, al-Juhfa is located on the route between Medina and Mecca, which was an extension for various Hajj and trade routes that led to Mecca. Since pre-Islamic period times, this route has played an important role as a link between Mecca and the Levant. Many commercial convoys of the Quraish used this route to convey their trade from Mecca to the Levant and back. The Qur'an refers to this journey: "For the custom of the Quraish, their custom of the winter and

¹³⁴ Zainal Abidin, Abdullah. *Fundamentals of Soil Science*. (New York: Wiley, 1985), pp. 70-75.

summer journey. Therefore, let them worship the Lord of this House (the Ka‘ba) who fed them from hunger and secured them from fear”.¹³⁵

With the advent of Islam, the Prophet Muhammad understood the commercial importance of this route; so, he decided to intercept some convoys of the Quraish. For example, in 2/622 the Prophet led the battle of al-Abwa’; but there was no fighting between the Prophet and the Quraish. Rather, the purpose of this battle was to explore the commercial importance of the route and send a strong message to the Quraish that Muslims might pose a major threat to their trade along the route.¹³⁶ Undoubtedly, the strategic location of al-Juhfa on the Medina-Mecca route enabled it to benefit from active convoys traffic along the route. Therefore, al-Juhfa had many opportunities to trade with various travelers (as will be shown in chapter 7 and in the conclusion of this research), which would have enhanced the prosperity and development of al-Juhfa.

Settlement Centers Close to al-Juhfa

As we know that al-Juhfa is located on the Medina-Mecca route, this route attracted interest from the very dawn of Islam. In 638, Caliph ‘Umar b. al-Khattab followed this route coming from Medina to Mecca to perform ‘*Umra*. During his journey, he met the owners of water sources along the route. Many owners asked ‘Umar for permission to set up rest-stations along the route between Medina and Mecca, where there were no buildings or basic amenities along the route. ‘Umar allowed them to do so, but he stipulated that they provide suitable shelter and enough water for everyone using the route, and this according to his saying, “The wayfarer has an absolute right in shadow and water”.¹³⁷

¹³⁵ Qur’an, *Sura Quraish*, Aya no. 1-4, p. 602.

¹³⁶ Ibn Hisham, *As-Sira an-Nabawīya*, vol. 1, pp. 56-57.

¹³⁷ Al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol. 2, p. 492.

With the passage of time, Islam spread to many countries, including Iraq, Iran, Syria, Egypt, and North Africa. Consequently, the importance of the route increased dramatically. As previously noted, it became a vitally important route for most pilgrims, who followed it to get to Medina and Mecca. Due to this importance, many stations grew up near al-Juhfa along the stretch of this route. Many early geographical sources, particularly al-Harbi's book set down important geographical information about those stations, numbering fourteen in all (including al-Juhfa).¹³⁸ The following is a selection of these stations along the Medina-Mecca route. (Map 4).

The Mīqāt of Dhul-Hulaifa

As noted earlier, Dhul-Hulaifa was the *Mīqāt* for pilgrims from Medina and other pilgrims passing through it. It was the first station on the route between Medina and Mecca. Dhul-Hulaifa likely lacked great architectural features and were devoid of people.

Al-Hufair

Early geographers' books do not say much about al-Hufair. Thus, al-Harbi's information on this station is important. He says that al-Hufair is a *mut'asha* (a minor station) located 12 km from the *Mīqāt* of Dhul-Hulaifa. It contains some architectural installations such as some houses, a well dug by 'Umar b. Abdul 'Aziz (d. 720) in order to supply travelers with pure water, and a mosque.¹³⁹

¹³⁸ Al-Harbi, *Kitāb al-Manāsik*. pp. 440-468.

¹³⁹ Al-Harbi, *Kitāb al-Manāsik*. p. 440.

Malel

Malel is mentioned in the books of al-Harbi and Ibn Khurradadhbih. Both indicate that Malel is 12 km from the previous station of al-Hufair. They also say that Malel has some wells.¹⁴⁰

However, it seems that Malel was a minor station, with little architecture.

Al-Sayala

Al-Harbi mentions that al-Sayala is located 14 km from Malel and contains many wells, houses, farms, many palm trees, and a pure water spring called Suwiqa, about 2 km from al-Sayala.¹⁴¹ In addition, Ibn Khurradadhbih and Ibn Rustah both indicate that al-Sayala contains a small market selling hawks.¹⁴²

Al-Rawha'

According to al-Harbi, al-Rawha' is 26 km from al-Sayala and contains many wells and cisterns, a market, two pools, two palaces (one large and another small), the remains of graves and ancient buildings, and a mosque of the Prophet Muhammad, located 4 km from al-Rawha', called al-Munsarif.¹⁴³ Based on this information, it is clear that al-Rawha' was a large main station on the Medina-Mecca route.

Al-Ruwaitha

Both al-Harbi and al-Hamdani place al-Ruwaitha at a distance of 26 km from al-Rawha'.¹⁴⁴

Moreover, al-Harbi indicates that al-Ruwaitha contains many wells, as well as a tower to determine the distance between the stations located on the route. Al-Harbi mentions that this

¹⁴⁰ Al-Harbi, *Kitāb al-Manāsik*. pp. 440-441; Ibn Khurradadhbih, *Kitāb al-Masālik wa- al-Mamālik*, p. 187.

¹⁴¹ Al-Harbi, *Kitāb al-Manāsik*. pp. 442-444.

¹⁴² Ibn Khurradadhbih, *Kitāb al-Masālik wa- al-Mamālik*, p. 187; Ibn Rustah, *Al-A'lāq al-Nafīṣah*. p. 156.

¹⁴³ Al-Harbi, *Kitāb al-Manāsik*. pp. 443-446.

¹⁴⁴ Al-Harbi, *Kitāb al-Manāsik*. p. 445; Al-Hamdani, *Ṣifāt Jazīrat al-'Arab*, p. 337.

tower was broken from the top and standing on one leg, which contains many inscriptions.¹⁴⁵

Al-‘Araj

Most geographical sources do not refer to al-‘Araj station. However, al-Harbi indicates that al-‘Araj is located 28 km from al-Ruwaitha. About 4 km before al-‘Araj, beside a well named al-Athaya, is a mosque for the Prophet Muhammad. Also, al-Harbi states that al-‘Araj includes many wells, a mosque, and a cistern. 16 km from al-‘Araj is a spring called al-Munbagse, and two cisterns. Approximately 6 km after the spring is a well, called al-Tulub. 2 km from the well is a mosque for the Prophet Muhammad called Luhi jamel.¹⁴⁶

Al-Suqayya

Al-Harbi states that al-Suqayya lies 34 km from al-‘Arge.¹⁴⁷ Ibn Khurradadhbah puts al-Suqayya 72 km from al-Ruwaitha¹⁴⁸, while Ibn Rustah identified it as being 68 km.¹⁴⁹ Both measurements are close to al-Harbi. Al-Harbi also mentions that al-Suqayya consists of a mosque for the Prophet Muhammad next to a mountain, beside which is a spring with clear water. Al-Harbi saw this spring several times and pointed out that it dried up three different times. He says “The spring dried and then returned in 248 (862), then dried in 252 (866) and then returned, then I also saw it dried in 274 (888) and then returned again”.¹⁵⁰ Al-Harbi indicates that the spring runs for a distance of more than 2 km to irrigate farms that contain thirty wells and produce different varieties of vegetables and dates. In addition to these thirty wells, al-Harbi points out that Caliph al-Mutawakkil (r. 847-861) constructed another fifty wells on the farms of the area.¹⁵¹

¹⁴⁵ Al-Harbi, *Kitāb al-Manāsik*. pp. 446-447.

¹⁴⁶ Al-Harbi, *Kitāb al-Manāsik*. pp. 447-450.

¹⁴⁷ Al-Harbi, *Kitāb al-Manāsik*. p. 448.

¹⁴⁸ Ibn Khurradadhbah, *Kitāb al-Masālik wa- al-Mamālik*, p. 187.

¹⁴⁹ Ibn Rustah, *Al-A‘lāq al-Nafīṣah*, p. 156.

¹⁵⁰ Al-Harbi, *Kitāb al-Manāsik*. p. 451.

¹⁵¹ Al-Harbi, *Kitāb al-Manāsik*. p. 451-452.

Ibn Khurradadhbah and Ibn Rustah concur that al-Suqayya contains a lot of palms and trees, and so many people live there¹⁵², implying that al-Suqayya was a large main station on the route between Medina and Mecca.

Al-Abwa'

According to al-Harbi, al-Abwa' is located 34 km from al-Suqayya.¹⁵³ However, Ibn Khurradadhbah gives a different distance, saying that al-Abwa' lies 58 km from al-Suqayya.¹⁵⁴ Ibn Rustah and al-Hamdani agree that al-Abwa' is situated 38 km from the previous station of al-Suqayya.¹⁵⁵ Al-Harbi points out that 4 km before reaching al-Abwa', there is a mosque called al-Ramada and in the center of al-Abwa' another mosque of the Prophet Muhammad. He also said that al-Abwa' consists of a palace, square pool, spring, and many wells, among them one attributed to Caliph 'Uthman b. 'Affan (r. 644-656).¹⁵⁶

Moreover, Ibn Khurradadhbah indicates that in al-Abwa' there are many wells and farms.¹⁵⁷ As to Ibn Rustah, he points out that al-Abwa' is a large village close to the sea, relying on wells water.¹⁵⁸ Here it is clear that al-Abwa' is an important station on the Medina-Mecca route, containing many architectural features.

Al-Harbi indicates that 10 km after al-Abwa' there is a mosque of the Prophet Muhammad. 6 km from this mosque is a hilly barrier called Harsha. It is a difficult descent and easy climb and the Medina-Mecca route on its side. Before reaching this barrier, at a distance of 2 km, there is a milestone marking the halfway point between Medina and Mecca. 6 km from

¹⁵² Ibn Khurradadhbah, *Kitāb al-Masālik wa- al-Mamālik*, p. 187; Ibn Rustah, *Al-A' lāq al-Nafīṣah*, p. 156.

¹⁵³ Al-Harbi, *Kitāb al-Manāsik*. p. 451.

¹⁵⁴ Ibn Khurradadhbah, *Kitāb al-Masālik wa- al-Mamālik*, p. 187.

¹⁵⁵ Ibn Rustah, *Al-A' lāq al-Nafīṣah*, p. 156; Al-Hamdani, *Ṣifat Jazīrat al-'Arab*, p. 337.

¹⁵⁶ Al-Harbi, *Kitāb al-Manāsik*. p. 453-454.

¹⁵⁷ Ibn Khurradadhbah, *Kitāb al-Masālik wa- al-Mamālik*, p. 187.

¹⁵⁸ Ibn Rustah, *Al-A' lāq al-Nafīṣah*, p. 156.

the barrier is a well, a spring watering grove of trees and palms, and a dilapidated building.¹⁵⁹

Al-Juhfa

Al-Juhfa is the *Mīqāt* of the people of Syria and various pilgrims passing through it from different countries as we saw previously. It contained a large amount of architecture, as we saw in the previous pages. Al-Harbi does not refer to the distance between al-Juhfa and the previous station al-Abwa', but does point out that the distance between al-Juhfa and the Red Sea is 12 km.¹⁶⁰ Ibn Khurradadhbah and Ibn Rustah both indicate that al-Juhfa is located 54 km from al-Abwa' and 16 km from the Red Sea.¹⁶¹ Al-Hamdani¹⁶² mentions that al-Juhfa is situated 46 km from al-Abwa'.

In addition, al-Harbi indicates that 8 km before al-Juhfa, there was a site called Ghadir Khumm, in the al-Kharrar valley surrounded by many gnarled trees. The Medina-Mecca route lies between the trees. Indeed, Ghadir Khumm is an important site for Shiites because the Prophet Muhammad passed through this site heading towards Medina after performing Hajj in 10/632 and delivered a famous speech there, called the *Ḥadīth* of Ghadir Khumm. He said "Of whomsoever I had been Master (*Mawla*), 'Ali ('Ali b. Abi Talib, the fourth caliph) here is to be his Master".¹⁶³ This *Ḥadīth* has been interpreted differently by Shiites and Sunnis. Shiites believe that the Prophet Muhammad appointed 'Ali as his heir and successor. On the other hand, the Sunnis do not deny the Prophet's declaration about 'Ali at Ghadir Khumm, but they believe that the Prophet was only urging the audience to hold his cousin and son-in-law in high esteem and

¹⁵⁹ Al-Harbi, *Kitāb al-Manāsik*. pp. 455-256.

¹⁶⁰ Al-Harbi, *Kitāb al-Manāsik*. p. 457.

¹⁶¹ Ibn Khurradadhbah, *Kitāb al-Masālik wa- al-Mamālik*, pp. 131, 187; Ibn Rustah, *Al-A'lāq al-Nafīṣah*, p. 156.

¹⁶² Al-Hamdani, *Ṣifāt Jazīrat al-'Arab*, p. 337.

¹⁶³ Muslim, *Ṣaḥīḥ Muslim*, *Ḥadīth* no. 2408, p. 1130.

affection.¹⁶⁴ At any rate, al-Harbi also mentions that 24 km from al-Juhfa, there is a well, named Kuliya, surrounded by a range of shops.¹⁶⁵

Qudaid

Some geographical sources give different distances between Qudaid and al-Juhfa, but they agree closely. For example, Ibn Khurradadhbih indicates that Qudaid is located 52 km from al-Juhfa.¹⁶⁶ Ibn Rustah states that the distance is 58 km.¹⁶⁷ Al-Hamdani says the distance between Qudaid and al-Juhfa is 48 km.¹⁶⁸ However, al-Harbi mentions that Qudaid is a village containing a lot of wells and one pool. 2 km from Qudaid, there are four wells and after 3 km is a dried-up spring.¹⁶⁹ Ibn Khurradadhbih concurs with al-Harbi that Qudaid includes many wells.¹⁷⁰ Ibn Rustah points out that Qudaid is a large village with a substantial population. The area is fertile, drawing its water from wells, and located on the right side of the Red Sea.¹⁷¹

Khulais

Khulais is little mentioned by early geographers, except al-Harbi, who states that Khulais is 16 km from Qudaid. About 6 km before Khulais is a barrier called Thanyat Laqaf, next to a Mosque of the Prophet Muhammad. Al-Harbi also adds that Khulais consists of a copious spring, palms, many trees, and one pool.¹⁷²

¹⁶⁴ For more information about Ghadir Khumm at Shiites and Sunnis, see Al-Triri, Abdulwahab, *The Hadith of Ghadir with our master Ali ibn Abi Talib in Ghadir Khumm*. Riyadh: Dar Wejoooh for publication and distribution, 2015).

¹⁶⁵ Al-Harbi, *Kitāb al-Manāsik*. pp. 458-459.

¹⁶⁶ Ibn Khurradadhbih, *Kitāb al-Masālik wa- al-Mamālik*, p. 187.

¹⁶⁷ Ibn Rustah, *Al-A' lāq al-Nafīsah*, p. 156.

¹⁶⁸ Al-Hamdani, *Ṣifāt Jazīrat al- 'Arab*, p. 337.

¹⁶⁹ Al-Harbi, *Kitāb al-Manāsik*. p. 460.

¹⁷⁰ Ibn Khurradadhbih, *Kitāb al-Masālik wa- al-Mamālik*, p. 187.

¹⁷¹ Ibn Rustah, *Al-A' lāq al-Nafīsah*, p. 156.

¹⁷² Al-Harbi, *Kitāb al-Manāsik*. pp. 460-461.

Furthermore, al-Harbi indicates that 4 km from Khulais, there is a site containing many farms, palms, and twenty wells used by farmers in agriculture. 12 km from the site, another site named al-Qadeed contains a running spring and many palms.¹⁷³

‘Usfan

Al-Harbi states that the distance between Khulais and ‘Usfan is 30 km.¹⁷⁴ Other geographical sources do not indicate the distance between Khulais and ‘Usfan, but refer to that between Qudaid and ‘Usfan. For example, Ibn Khurradadhbah and Ibn Rustah mention that ‘Usfan is 48 km from Qudaid¹⁷⁵, and al-Hamdani indicates that the distance between Qudaid and ‘Usfan is 46 km.¹⁷⁶ Anyway, all distances are very close to the distance between Khulais and ‘Usfan as calculated by al-Harbi.

Regarding architecture, al-Harbi indicates that there are a lot of wells and one pool. 2 km from ‘Usfan is a spring, and after 12 km, there is a mosque called al-Arabi. After 6 km, there is a site named al-Kara Valley, containing ancient archaeological remains and a well called al-Qaryatayn. After 18 km, there are some wells and high buildings in which to store water. 2 km from these wells and buildings there is a narrow road between two mountains. This road is the most difficult terrain along the route between Medina and Mecca.¹⁷⁷

¹⁷³ Al-Harbi, *Kitāb al-Manāsik*. p. 461-462.

¹⁷⁴ Al-Harbi, *Kitāb al-Manāsik*. p. 463.

¹⁷⁵ Ibn Khurradadhbah, *Kitāb al-Masālik wa- al-Mamālik*, p. 187; Ibn Rustah, *Al-A‘lāq al-Nafīṣah*, p. 156.

¹⁷⁶ Al-Hamdani, *Ṣifāt Jazīrat al-‘Arab*, p. 338.

¹⁷⁷ Al-Harbi, *Kitāb al-Manāsik*. pP. 463-464.

Mur al-Dhahran

Both al-Harbi and al-Hamdani agree that Mur al-Dhahran is situated 46 km from ‘Usfan.¹⁷⁸ As to Ibn Khurradadhbah and Ibn Rustah, each gives different measurements: the former indicating that Mur al-Dhahran is 66 km from ‘Usfan, the latter, 68 km.¹⁷⁹ Al-Harbi pointed out that 2 km before Mur al-Dhahran, there is a running spring and many ruined shops. Inside Mur al-Dhahran is pool filled with rainwater, and a spring called al-Aqiq.¹⁸⁰ Ibn Khurradadhbah agrees with al-Harbi that Mur al-Dhahran contains a spring and pool. In addition, Ibn Khurradadhbah mentions that Mur al-Dhahran is a large village, containing palms and plants which has many people and houses.¹⁸¹ Ibn Rustah emphasizes what Ibn Khurradadhbah mentioned, that Mur al-Dhahran is a fine, extensive village, with many people and palms, within which a pool receives water from the nearby mountain.¹⁸²

Mur al-Dhahran is the last station on the Medina-Mecca route before reaching Mecca. Al-Harbi¹⁸³ indicates that 8 km after Mur al-Dhahran, there is a well-known as al-Bihar. After another 6 km, there is a mosque. 6 km from the mosque, there is a place called al-Tan‘im, and 8 km beyond al-Tan‘im, is Mecca.

In short, we drew in this section a geographical map, derived from the early Islamic sources, for fourteen stations located along the route between Medina and Mecca, extending over a distance of 400 km.¹⁸⁴ Some stations greatly benefited from their prime location on the Medina-Mecca route. As we noted above, these stations, such as al-Sayala, al-Rawha’, al-Abwa’, al-Juhfa, Qudaid, contained a great deal of architecture and are described as large populated stations.

¹⁷⁸ Al-Harbi, *Kitāb al-Manāsik*. p. 464; Al-Hamdani, *Ṣifāt Jazīrat al-‘Arab*, p. 338.

¹⁷⁹ Ibn Khurradadhbah, *Kitāb al-Masālik wa- al-Mamālik*, p. 131; Ibn Rustah, *Al-A‘lāq al-Nafīṣah*, p. 156.

¹⁸⁰ Al-Harbi, *Kitāb al-Manāsik*. pp. 464-465.

¹⁸¹ Ibn Khurradadhbah, *Kitāb al-Masālik wa- al-Mamālik*, pp. 131, 187.

¹⁸² Ibn Rustah, *Al-A‘lāq al-Nafīṣah*, p. 156.

¹⁸³ Al-Harbi, *Kitāb al-Manāsik*. pp. 465-467.

¹⁸⁴ Al-Harbi, *Kitāb al-Manāsik*. p. 468.

On the other hand, there are some small stations that contain few buildings except some wells to supply the pilgrims and travelers with water. However, it is striking that although al-Juhfa is located between two large stations (al-Abwa' and Qudaid) it also became a large station, rich in architecture, and surpassed all stations along the Medina-Mecca route due to its Islamic status as a *Mīqāt*.

According to calculations in early geographical sources, the furthest distance between two stations was 48-58 k, between al-Juhfa and Qudaid. This probably confirms that al-Juhfa was supplying the pilgrims with all necessities to enable them to reach the next station. The shortest distance between stations was calculated as 12 km, between the *Mīqāt* of Dhul-Hulaifa, and al-Hufair. The same distance was calculated between al-Hufair and Malel. All these stations were small and do not contain a lot of architecture.

3. The Historical Aspects of al-Juhfa

The historical significance of al-Juhfa and its precise chronology are crucial. The early development stages of al-Juhfa can hardly be understood without reference to primary sources and the archaeological findings. Explaining this direction of development is somewhat more difficult for the historian and archaeologist alike as we saw in the introduction at talking about the references to al-Juhfa in the primary sources.

In order to open the road for a much wider view on the complex process of development at al-Juhfa and arrive at a more perceptive and sophisticated understanding, we will review the relative chronology of al-Juhfa and consider the process of prosperity and abandonment.

Pre-Islamic Period

Al-Juhfa is considered an ancient city which has existed since before the advent of Islam. Some historical sources mention that al-Juhfa dates to the period of the Amalekites (about 2500 BC).¹⁸⁵ These sources claim that the Amalekites invaded Yathrib (Medina) and the surrounding area, defeating the ‘Abil tribe¹⁸⁶ and driving them out. After the Amalekites’ victory in Medina, they settled in al-Juhfa (then called Maha‘ia) until a great torrent swept them away, then became called al-Juhfa.¹⁸⁷

As a matter of fact, scant information is given in the historical sources regarding the occupation of Medina and al-Juhfa by the ‘Abil tribe and the Amalekites, which do not help us to form a clear picture on this issue. We have no exact information about the ‘Abil tribe and Amalekites and how they occupied Medina and al- Juhfa. Did the Amalekites really defeat the ‘Abil tribe in Medina and drive them out? Therefore, in the absence of corroborating sources, the references to ‘Abil tribe and the Amalekites seem to be legendary.

The Era of the Prophet (622-632)

Some early Islamic religious texts connect al-Juhfa to some events during the lifetime of the Prophet. They clearly indicate that the Prophet visited al-Juhfa several times during his lifetime.

¹⁸⁵ Some historical sources for the ancient history of the Arabian Peninsula claim that the Amalekites were the oldest inhabitants of the Arabian Peninsula in about 2500 BC. They are ancient extinct nations such as Cananites, Assyrians, and Amorites. Amalekites were descended from the progeny of Amalek b. Aoz b. Eram b. Sam b. Noah. They founded several kingdoms and cities, formed a great civilization, and ruled many countries—for example, Yathrib (Medina), Najd, Bahrain, Oman, Yemen, Tihama, the Levant, and Egypt. However, there is no evidence for the Amalekites’ history: the stories concerning them may be mythological and unrelated to actual historical events. For more information, see Al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol. 1, pp. 125-127; Mas‘udi, Ali b. al-Husayn, *Murūj al-Dhahab wa-Ma‘ādin al-Jawhar*. Ed. Kamal Hassan, (Beirut: Al-‘Asriyah Library, 2005), vol. 1, pp. 34-35.

¹⁸⁶ The historian al-Ṭabari (d. 923) reports beliefs of his time that ‘Abil, the grandson of the Prophet Noah was living at Babel in Iraq. After a long period of time, the grandsons of ‘Abil migrated to Medina led by one of the grandsons, called Yathrib, and settled there. Thus, the old name of Medina is derived from the name of the commander, Yathrib, al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol. 1, pp. 126-128.

¹⁸⁷ Al-Harbi, *Kitāb al-Manāsik*. p. 457; Al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol. 1, p. 128; Yaqut al-Hamawi, *Mu‘jam al-Buldān*, vol. 2, p. 111; Ibn Manzur, *Lisān al-‘Arab*, vol. 2, pp.186-187.

In addition, these texts mention that al-Juhfa was associated with some significant historical events, and legislation some religious regulations during the early Islamic period. The following are some examples of these religious texts.

The scholars of prophetic biography and Qur'anic exegesis point out that the Prophet Muhammad and his companion Abu Bakr migrated from Mecca to Medina in 1/622 and alighted in al-Juhfa. While they were at al-Juhfa, the Prophet Muhammad became more nostalgic for his home Mecca, and during these moments, he received a revelation from the Angel Gabriel "He who has obligated the Qur'an will bring you to an appointment (Mecca). Say: My Lord knows well who comes with guidance, and who is in clear error".¹⁸⁸ Here, al-Juhfa emerged within the most important event in Islamic history, *hijra* (the Prophet's migration). It was one of the major stations on the route of the migration and witnessed a revelation one of the verses of the Qur'an.

'Aisha, *Umm al-Mu'minīn* "Mother of the Believers" and the Prophet's wife, narrated a *Ḥadīth* related to al-Juhfa. She said that when the Prophet emigrated from Mecca to Medina, Medina was the most unhealthy land, and that the valley of Bathan (the valley of Medina) used to flow with impure colored water. And the Prophet's companions, Abu Bakr and Bilal, got a fever and they were about to die. Then 'Aisha came and informed the Prophet of this, whereupon he said, "O Allah make us love Medina as much or more than we love Mecca. O Allah make it healthy and bless its *Mudd* and *Sā'* [a kind of food weight] for us, and take away its fever and put it in al-Juhfa" After that, the Prophet said, "I saw (in a dream) a black woman with unkempt hair going out of Medina and settling at al-Juhfa. I interpreted that as a symbol of epidemic of Medina being transferred to that place (al-Juhfa)".¹⁸⁹ In this *Ḥadīth* the Prophet hoped that the fever moved from Medina to al-Juhfa, which indicates that al-Juhfa was a great distance from Medina, an uninhabited place, and devoid of any physical manifestations of urban life during the

¹⁸⁸ Ibn Hisham, *As-Sīra an-Nabawīya*, vol. 2, p. 132; Al-Qurtubi, *Al-Jāmi' li Ahkām al-Qur'an*, pp. 304-305.

¹⁸⁹ Al-Bukhari, *Ṣaḥīḥ al-Bukhārī*, *Ḥadīth* no. 1889, 5654, 7038, pp. 454, 1433-1434.

time of the Prophet Muhammad.

In 2/624, at the Battle of Badr, the Prophet defeated the disbelievers (the Quraish), a powerful merchant tribe that controlled Mecca and Ka'ba at the time. Al-Juhfa is where the Quraish army alighted before facing the Muslims at Badr.¹⁹⁰

Another *Ḥadīth* points out that one day, the Prophet Muhammad and some of his companions went outside Medina towards water. When they reached the source of water, which was (at al-Kharrar valley near al-Juhfa), one of the Prophet's companions, Sahl b. Hunayf, did a *ghusl* (bathing) at al-Kharrar and removed the *jubbah* [a kind of clothing]. Another companion called 'Amir b. Rabi'a was watching him and said "I have never seen anything like what I have seen today, not even the skin of a virgin". Sahl fell ill on the spot, and his condition grew worse. Somebody went to the Prophet, and told him that Sahl was ill and could not go with him. The Prophet came to him, and Sahl told him what had happened with 'Amir. The Prophet said, "Why does one of you kill his brother? Why did you not say, May Allah bless you? The evil eye is true. Do *wudu*' (ablution) from it". 'Amir did *wudu*' from it and Sahl went with the Prophet and there was nothing wrong with him.¹⁹¹

The picture which emerges from this *Ḥadīth* suggests that the al-Kharrar Valley near al-Juhfa previously mentioned was still rich in water and vegetation during the time of the Prophet. Clearly, al-Kharrar has served as a watering place for large numbers of people and animals from ancient times up to the time of the Prophet Muhammad.

To underscore this important point, one *Ḥadīth*¹⁹² mentions that in 6/628 (the event of the al-Hudaibiya treaty), the Prophet Muhammad commanded his companions to go forth from Medina to Mecca in order to perform 'Umra (Quraish did not allow Muslims to do this 'Umra). The Prophet and his companions left Medina with 1,400 or more. When they reached al-Juhfa,

¹⁹⁰ Al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol, 2, pp. 22, 28-29, 31.

¹⁹¹ Malik b. Anas, *Al-Muwaṭṭa'*, Chapter 50, *Ḥadīth* no. 1-2, pp. 938-939.

¹⁹² Al- Bukhari, *Ṣaḥīḥ al-Bukhārī*, *Ḥadīth* no. 4151, p. 1022

they all alighted and brought water from al-Kharrar valley, signifying that al-Kharrar valley has continued uninterruptedly to provide pilgrims with water since the time of the Prophet.

The last visit by the Prophet Muhammad to al-Juhfa was in 10/632,¹⁹³ when he set out on a journey for Hajj (*Hajjat-al-Wadā'*: the Farewell Pilgrimage) from Medina to Mecca along with thousands of his companions. During this occasion, one of the most important in the sacred life of the Prophet, the caravan stopped at al-Rawha' before al-Juhfa where a woman lifted up a boy to the Prophet and said, "Would this child be credited with having performed the Hajj? Thereupon the Prophet said, Yes, and you will have a reward". After that, the caravan continued its journey toward Mecca and stopped at al-Juhfa on Friday. The Prophet prayed at al-Juhfa beside *arāk* trees (*Salvadora persica*: this type of trees is still famous in al-Juhfa and widely grows until our present time) then left towards Mecca.

The Era of Rashidun Caliphs (632-661)

As previously noted, Caliph 'Umar (r. 634-644) was very interested in the route between Medina and Mecca. He issued the command to provide it with all possible conveniences for pilgrims and travelers. This actually formed the first nucleus for al-Juhfa's prosperity and later development. Suffice it to say that the interest of 'Umar in the route is the key to our understanding of the early construction stages of al-Juhfa.

In addition, one narration mentions that during the era of Rashidun caliphs *Umm al-Mu'minīn* 'Aisha often traveled from Medina to Mecca to perform the Hajj. After the Hajj, she also used to do 'Umra before the end of *Dhūl-Ḥijja* (the Hajj month). However, she later stopped doing 'Umra during *Dhūl-Ḥijja*, going instead to al-Juhfa before the new crescent of *Muḥarram* (the next month after *Dhūl-Ḥijja*), where she stayed until she seeing the new

¹⁹³ Al-Waqīdi, Abu Abdullah Muhammad b. 'Umar, *Kitāb al-Maghāzī*. Ed. Muhammad 'Atta, (Beirut: Dar al-Kutub al-'Ilmiyah, 2004), vol. 3, p. 1097; Muslim, *Ṣaḥīḥ Muslim, Ḥadīth* no. 1336, pp. 607-608.

crescent. After that, she assumed *ihrām* in al-Juhfa and proceeded towards Mecca to do ‘*Umra*.¹⁹⁴

This narration clearly indicates that ‘Aisha was using the *Mīqāt* of al-Juhfa as a *Mīqāt* after the death of the Prophet Muhammad. This supports what we discussed in chapter 2 about the dating of the *Mawāqīt* and that the *Mīqāt* of al-Juhfa was not designated in the Prophet’s time but in the reign of the Caliph ‘Umar. The narration also gives us indication that at this time, al-Juhfa was a suitable place to live. Consequently, may we can say that al-Juhfa contained various necessities for humans and animals, such as water, plants, and perhaps some architectural constructions.

The Era of the Umayyad (661-750)

The care for the route between Medina and Mecca and the area surrounding al-Juhfa seems to have continued during the Umayyad era. In 707, Caliph al-Walid b. ‘Abd al-Malik (r. 705-715) commanded his governor of Medina, ‘Umar b. Abdul ‘Aziz to fix the whole route between Medina and Mecca and dig wells along it.¹⁹⁵

Also, al-Walid paid special attention to the Egyptian route that directly passes through al-Juhfa as a main *Mīqāt* for pilgrims. In 710, al-Walid performed Hajj and commanded the repair of the pilgrimage routes in Arabia and the building of wells along them. This was part of al-Walid’s project to renovate all the main pilgrimage routes in the Arabian Peninsula. Among these routes was the Egyptian route. Al-Walid issued orders to reconstruct it, improve its course and dig wells in most of its major stations. It is not explicitly stated but, al-Juhfa maybe one of these stations reconstructed at that time, being one of the main stations on the same route.¹⁹⁶

¹⁹⁴ Malik b. Anas, *Al-Muwaṭṭa’*, Chapter 20, *Ḥadīth* no. 48, pp. 338-339.

¹⁹⁵ Al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol. 3, p.677; Ibn Al-Athir, *Al-Kāmil fī at-Tārīkh*, vol. 4, p. 247.

¹⁹⁶ Ibn al-Faqih, Ahmad b. Muhammad, *Mukhtaṣar Kitāb al-Buldān*. (Leiden: Brill, 1885), pp. 106-107.

Moreover, the early historian and geographical al-Mas‘udi (d. 956) mentioned in his book, *Murūj al-Dhahab wa-Ma‘ādin al-Jawhar*, that Caliph Hisham b. ‘Abd al-Malik established many cisterns and pools between Damascus and Mecca and greatly contributed to the regularity and safety of the caravan trade.¹⁹⁷ Given this, some buildings in al-Juhfa may have been constructed by Hisham.

In fact, a significant indication concerning the date of al-Juhfa’s building during the Umayyad period is cited by Ibn Shakir al-Kutubi (d. 1363). He said “‘Umar b. Abdul ‘Aziz constructed al-Juhfa, where he bought workers from (Rum) Rome and constructed it”.¹⁹⁸ Here, al-Kutubi states Caliph ‘Umar b. ‘Abdul Aziz (r. 717-720) is the main builder of al-Juhfa during the Umayyad period; but most unfortunately, his book is late and does not provide any more detail. However, this indication should not be dismissed; perhaps ‘Umar b. Abdul ‘Aziz constructed al-Juhfa during the repair of the Medina-Mecca route in 707, when he was governor of Medina, as above mentioned.

The Era of the Abbasids (750-1258)

After transferring the Islamic caliphate from Syria to Iraq in 750, the Abbasid caliphs paid great attention to the pilgrimage routes leading to Mecca, including the route between Medina and Mecca, where al-Juhfa is located. For example, in 782 Caliph al-Mahdi ordered watch-towers built for the first time along the route between Medina and Mecca.¹⁹⁹ Also, Queen Zubayda commanded the construction of variety of architectural installations along the Medina-Mecca route, such as water-tanks and pools.²⁰⁰

¹⁹⁷ Al-Mas‘udi, *Murūj al-Dhahab wa- Ma‘ādin al-Jawhar*, vol. 3, p. 170.

¹⁹⁸ Ibn Shakir al-Kutubi, Salah-ad-Din Muhammad, *Fawāit al-Wafayāt*. Ed. Ihsan ‘Abbas, (Beirut: Dar Sader, 1973), vol. 3, p. 134.

¹⁹⁹ Al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol, 4, p. 578.

²⁰⁰ Ibn Khallikan, Ahmad b. Muhammad, *Wafayāt al-A‘yān wa-Anbā’ Abnā’ az-Zamān*. (Beirut: Dar Sader, 1977), vol. 2, p. 314.

As for al-Juhfa, according to a number of Abbasid-era geographical sources, al-Juhfa was developed in large measure, and occupied a prominent place in all aspects of urban life, during the early Abbasid period.²⁰¹ These sources admirably portray al-Juhfa as earlier mentioned, but fail to disclose the date of al-Juhfa's construction. It is, therefore, worth asking when exactly was al-Juhfa established?

There can be no doubt that al-Juhfa was standing during the early Abbasid period. In addition to several contemporary sources that described al-Juhfa in this period, there is also enough indication in al-Harbi's book, *Kitāb al-Mānasik*, which is tentatively the oldest contemporary source describing al-Juhfa's architecture in the 9th century. Al-Harbi refers to a poem attributed to Ahmad b. 'Amr. The poet Ahmad escorted Queen Zubayda in one of her journeys for the Hajj, and wrote a long poem describing each station which Zubayda passed through. He says that Zubayda was riding in a beautiful domed compartment, placed on a tame, energetic, and swift camel. He also adds that when Zubayda finished the Hajj rites, she went back to Kufa, using the route between Medina and Mecca, and stopped at al-Juhfa. The poet Ahmad described the situation of al-Juhfa at that time, saying that al-Juhfa is surrounded by many rocks, characterized by various shops arranged next to each other (i.e. in rows), and its water is so sweet and pure.²⁰²

This important description by the poet Ahmad shows that, most probably, in the second half of the 8th century, during the life of Zubayda (766-831) al-Juhfa was flourishing and included many water installations and shops to meet the needs of travelers and pilgrims.

²⁰¹ Al-Harbi, *Kitāb al-Manāsik*, pp. 413-415, 457; Ibn Rustah, *Al-A'lāq al-Nafisah*, p. 156; Al-Hamdani, *Ṣifat Jazīrat al-'Arab*, p. 335-339; Al-Istahri, *Kitāb Masālik al-Mamālik*, p. 11; Ibn Hawqal, *Kitāb Ṣūrat al-'Arḍ*, p. 33; Al-Maqdisi, *Aḥsan al-Taqāsīm fī Ma'rifatal-Aqālīm*, pp. 77-78.

²⁰² Al-Harbi, *Kitāb al-Manāsik*, pp. 545-572.

After the death of Zubayda in 831 the care given to areas along the Medina-Mecca route and al-Juhfa's surroundings increased tremendously in its entirety, particularly in the rule of al-Mutawakkil. Al-Mutawakkil supplied the Medina-Mecca route with all necessary facilities; for example, he ordered fifty wells dug to different depths near the al-Suqayya station in order to provide pure water for pilgrims as previously described. In addition, al-Mutawakkil supplied the route with towers and milestones, and in some locations on the route, he ordered forts and wells dug.²⁰³ Thereafter, al-Juhfa continued in occupation until its importance began to decrease. It then became abandoned and uninhabited (see below).

To determine accurately medieval occupation at al-Juhfa, the researcher will benefit from new developments in Islamic archaeology, as this discipline provides a unique opportunity to study the stages of creation of al-Juhfa. Archaeology must correct or dispute the information mentioned in the primary sources by offering material evidence. In the following chapters, this study will date al-Juhfa through analysis of formal and technical qualities within the context of the medieval architecture of the Arabian Peninsula and adjacent areas. Many architectural features can be compared with analogous elements at early Islamic sites. Also, small-scale excavations will give additional information about the date of construction.

The Factors of Prosperity and Development

Religious Status

Al-Juhfa is defined as an Islamic *Mīqāt*, designated for pilgrims from Syria and all pilgrims who pass through it from other more widespread regions. These pilgrims were to stop at al-Juhfa to assume *iḥrām* and initiate the rituals of Hajj. Thus, the prominence of al-Juhfa as an Islamic *Mīqāt* gave it great importance and contributed greatly to its growth during the early Islamic

²⁰³ Al-Harbi, *Kitāb al-Manāsik*, pp. 319, 336, 344, 452.

period.

Strategic Location

The relationship between the human settlement site and the routes and other sites was an important factor in the development and prosperity of the site itself, and in increasing the number of inhabitants, unlike isolated sites without links to any route or nearby site. As we noted in chapter 2, al-Juhfa was a key station located on the Medina-Mecca route and the Egyptian coastal road. The Medina-Mecca route was a major route for the majority of pilgrims intending to visit Medina and the Prophet Muhammad's mosque. Thus, al-Juhfa could be reached by many pilgrims coming via different pilgrimage routes. Many convoys of pilgrims and merchants from different parts of the Islamic world passed through al-Juhfa either as a *Mīqāt* or as a main station. Moreover, there were many stations located next to al-Juhfa along the Medina-Mecca route, which facilitated the communication process between al-Juhfa and other stations. Consequently, al-Juhfa, of course, greatly benefited from active traffic along the route between Medina and Mecca.

Patronage of the Muslim Caliphs

As noted previously in this chapter, early interest in the Medina-Mecca route by the Caliph 'Umar b. al-Khattab had a great impact on al-Juhfa's later growth. Furthermore, there was interest in the route by some Umayyad caliphs. The presence of many major services for pilgrims and travelers at route stations increased settlement activity over time. During the early Abbasid period, some Abbasid caliphs considerably interested in the route, thus al-Juhfa became the most important human settlement located between Medina and Mecca at that time.

Abundant Water Supplies

Al-Juhfa was located on the bank of the al-Gha'idha Valley, which was very rich in water and vegetation as noted previously in the geographical aspects of al-Juhfa. This valley supplied al-Juhfa with huge quantities of water and afforded the region a large agricultural potential.

Consequently, the people of al-Juhfa owned a huge area of arable land, richly covered with grass, especially after winter and spring rains. Also, caravans used to halt in al-Juhfa, and were watered at the plentiful wells there. Al-Juhfa would always have served as a watering place for large numbers of travelers and their animals after heavy rains. Of course, because of the presence of basic factors for stability, such as the abundance of water sources and supplies, al-Juhfa flourished as a developed urban settlement. In al-Juhfa, there are a number of water installations to facilitate irrigation and agriculture. Water architecture in al-Juhfa will be studied in detail in this research.

Fertile Soil

As stated earlier, al-Juhfa possesses large tracts of land characterized by fertile and arable soil. This increased agricultural production and the growth and reproduction of vegetation in the al-Juhfa area, which, of course, significantly contributed in attracting the population into the area, and played a great role in its prosperity.

Factors of the Decline and Abandonment

The Disruption of the Egyptian and Syrian Route

Based on the medieval textual sources mentioned previously, al-Juhfa continued to be occupied since the late 8th century, but its importance began to decline gradually between the second half of the 11th century and the first half of the 12th century. During this period al-Juhfa most likely was considerably influenced by two significant events previously described. Both the economic

crisis of Fatimid state and the arrival of Crusaders in the region played an important role in disrupting the Egyptian and Syrian route, for a long period of time. This in turn led al-Juhfa to be affected during this long disruption, as it became isolated from the active traffic of various pilgrims and travelers coming via the Egyptian and Syrian routes. Pilgrims turned to Jeddah (about 204 Km from al-Juhfa) as a new *Mīqāt* instead of al-Juhfa, using the maritime route. Indeed, this transition had a major impact on al-Juhfa, leading to its abandonment ever since.

The abandonment of al-Juhfa was mentioned by the famous geographer Yaqut al-Hamawi in 13th century. He pointed out in his geographical dictionary, *Muʿjam al-Buldān*, that in his time, al-Juhfa was ruined place. The implication is that al-Juhfa was ruined before Yaqut al-Hamawi's death in 1229, likely during the first half of the 12th century, when the Egyptian and Syrian routes were disrupted.²⁰⁴ In addition, the Moroccan traveler al-ʿAbdari (d. 1300) confirmed in 1289 that al-Juhfa was still ruined and devoid of any water and that pilgrims assumed *ihṛām* from a new *Mīqāt* called Rabigh.²⁰⁵ After al-ʿAbdari, some travel accounts during the 17th century confirmed that al-Juhfa was ruined and that Rabigh was the main *Mīqāt* for the pilgrims.²⁰⁶ Hence, al-Juhfa has been not reoccupied from the time it became ruined until the present day.

Natural Factors

Ecological conditions play an important role in the occupation of the principal medieval towns. It is extremely difficult to forecast weather conditions and consequent natural disasters. Given this, heavy rain and violent floods in some seasons may have caused massive destruction for many

²⁰⁴ Yaqut al-Hamawi, *Muʿjam al-Buldān*, vol.2, p. 111.

²⁰⁵ Al-ʿAbdari, *Al-Rihla al Maghrībya*, p. 349.

²⁰⁶ To name a few, Al-Qaisi, Siraa al-Din, *Uns al-Sārī wa-al-Sārib min Aqṭār al-Maghārib ilá Muntahá al-Āmāl wa-al-Maʿārib*. Ed. Muhammad al-Fasi, (Morocco: Fez, Ministry of Cultural Affairs, 1968), p. 73; Al-Dimashqi, Abu Bakr, *Jazīrat al-ʿArab fī kitāb, Mukhtaṣar al-Jughrāfiyā al-Kabīr*. Ed. Massʿad b. Sweilem al-Shaman, (Riyadh: Hamad al-Jasir Cultural Centre, 2007), p. 385.

buildings used by residents, travelers, pilgrims or merchants. Therefore, some sites became unsuitable for human settlement due to the difficulty of restoring and repairing necessary installations that had been destroyed thus forcing residents to flee. Moreover, drought was probably among the reasons to abandon the place, as happened at Qasr al-Hayr al-Sharqi, in Syria. When it was established (in the beginning of 8th century) it depended on the provision of a water system, and its final decline was probably a consequence of the decay of this system in the mid of 14th century.²⁰⁷

It is clear that al-Juhfa suffered from drought that led to its abandonment. Perhaps this drought was due to the changing course of the Mur Valley. This huge valley runs south towards al-Kharrar Valley, then passing through al-Gha'idha Valley, the main valley that supplied al-Juhfa with an enough water. In the west and north of the Mur Valley is a sedimentary block called al-Nab'a. This block separates the Mur and the Rabigh valleys, forcing the course of the Mur Valley south towards the al-Kharrar and al-Gha'idha valleys. One geographical study indicate that because of the violent water currents usually accompanying torrential rain, the al-Nab'a block was eroded over time, thus the course of the Mur Valley turned from the south to the west towards the Rabigh Valley.²⁰⁸ (Map 5).

However, we lack accurate information about when the Mur Valley changed course, but assuming it occurred in the 13th century, it may have been one of the reasons that led to the abandonment of al-Juhfa. Accordingly, the flow of water into the al-Kharrar and al-Gha'idha Valley was completely cut off at that time, which led to drought in al-Juhfa and ultimately to its abandonment. So, it seems reasonable to regard the changing of the course of the Mur Valley towards the Rabigh Valley as evidence of the abandonment of al-Juhfa (as we saw earlier in this chapter). In any case, the Rabigh Valley is still active today and is characterized by frequent

²⁰⁷ Grabar, *City in the Desert: Qasr al-Hayr East*, pp. 148-173.

²⁰⁸ For more detail, see Department of Geography, *Emirate of Rabigh*, pp. 28-34.

torrents, thus the Saudi government in 2009 built a huge dam to protect the residents from any potential flood.

Miscellaneous Political Factors

As a result of political instability, pilgrimage routes were exposed to persistent attacks, threats, and violations. This naturally led to a deterioration of life in the Arabian Peninsula, the disruption of traffic between the two Holy cities (and some Islamic regions) for many years, and the abandonment of several major stations. However, al-Juhfa was not significantly affected by these security threats, although they had a gradual impact on its decline, ruin, and abandonment in later stages. To illustrate this issue, it is important to provide an overview of important political events in the region since the early years of al-Juhfa, in the late 8th century.

From the reign of the Caliph Abu al-‘Abbas al-Saffah (r. 750-754) till the reign of the Caliph al-Mu‘tasim (r. 833-842), most of the pilgrimage routes and stations remained fully secure. Pilgrims and merchant enjoyed safe traffic along the pilgrimage routes and probably rarely experienced any kind of risks or harassment that could threaten their security and safety. The Abbasid caliphs during this period expended great efforts to secure the pilgrimage routes and track tribes that jeopardized security and attacked the pilgrims. For example, in 783, Caliph al-Mahdi fought the Bedouins who gathered along Bahrain al-Yamamah route and attacked travelers and pilgrims. Also, during the reign of the Caliph al-Ma‘mun (r. 813-833) and al-Mu‘tasim, a group called al-Zuṭ had taken over the Basri route and committed several sabotage and demolition actions. In 834, after nine months of war, al-Mu‘tasim defeated this group and completely destroyed them.²⁰⁹

²⁰⁹ Al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol, 5, pp. 154-155, 207-208.

However, by the beginning of the reign of the Caliph al-Wathiq Billah (r. 842-847) some Arab tribes began to rebel against authority and threaten the pilgrimage routes, specially the Medina-Mecca route, which contains al-Juhfa. This threat put the security of the people of al-Juhfa, as well as the pilgrims, at real risk. In 844, the tribe of Banu Sulaym under the leadership of the 'Uzara b. Qatab al-Sulami attacked the areas neighboring Medina, imposed prices in the markets as they desired, and increased their looting. Thereupon, the governor of Medina, Muhammed b. Salih al-Abbasi al-Hashimi, appointed Hammad b. Jarir al-Tabari to lead a campaign to counter the threats of Banu Sulaym. Hammad clashed with them near the station of al-Ruwaitha on the Medina-Mecca route; but Hammad's forces were outnumbered by those of Banu Sulaym: Hammad was killed, and his army defeated. After this one-sided fight, the Banu Sulaym expanded their control and looted the villages and stations located between Medina and Mecca, which caused disruptions in the route between the two Holy cities. Other tribes, such as Ghatafan, Fazarah, Banu Kilab, and others, dared to act similarly to the tribe of Banu Sulaym, which led to a strong reaction on the part of Caliph al-Wathiq. He outfitted a military campaign, led by the Turkish commander Bagha al-Kabir, who defeated the tribe of Banu Sulaym and restrained the other tribes.²¹⁰

After the reign of Caliph al-Wathiq, some tribes did not stop their attacks and threats to the pilgrimage routes in general, and the Medina-Mecca route in particular. They attacked convoys of pilgrims in many stations and stole a lot of money. Among the tribes that strongly threatened the Medina-Mecca route and took over it was the tribe of Harb. The contemporary geographer, al-Hamdani describes the degree of control that the Harb had over the road between Medina and Mecca during the 10th century, stating that no one was able to pass without their permission. Furthermore, the Harb began to bargain for the safety of the pilgrims. Caliph al-

²¹⁰ Al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol, 5, pp. 278-279.

Muqtadir Billah (r. 908-932) is said to have bought safety for the pilgrims between Medina and Mecca from the Harb, and most likely other tribes on other parts of the route were similarly bribed.²¹¹

In fact, threats to the pilgrimage routes were not limited to Arab tribes, but the most serious threats emerged particularly after the appearance of the Qarmatians during the 9th century on the east coast of the Arabian Peninsula. During the Hajj journey, whether going or on the return journey, the Qarmatians robbed convoys, killing many people, destroying facilities on the route, and imposing taxes on the pilgrims. Several tragic events in this period, all perpetrated by the Qarmatians. For example, in 906 the Qarmati leader, Zikrawayh b. Mihrawayh, spread many troops along the northern part of the Zubayda route, from Faid station to the city of Kufa. Thence, he attacked convoys of pilgrims and merchants coming from Mecca. Also, Zikrawayh and his troops besieged many stations for several days, killed men and captured women, and did not leave until filling several wells and pools with dead bodies and rocks.²¹²

During the reign of Caliph al-Muqtadir, the influence of the Qarmatians remained extremely powerful, threatening security along the Zubayda route and all its stations. In addition, they redoubled their threats and attacked Mecca itself in 930. The Qarmatians desecrated *al-Masjid al-Ḥarām*, killed hundreds of pilgrims, and threw their bodies in the Well of Zamzam. They also stole all the valuables inside the Ka'ba, then went back to their home. After this painful incident, the Hajj from Iraq ceased for nearly ten years.²¹³

Among the most important stations that were destroyed at the end of the reign of Caliph al-Muqtadir is al-Rabadha station on the Zubayda route. In 931, the Qarmatians and the people of Dhrya station support each other and attacked al-Rabadha and destroyed it until

²¹¹ Al-Hamdani, Al-Hasan, *Kitāb al-Iklīl min Akhbār al-Yaman wa Ansāb Ḥimyar*. Ed. Muhammad al-Akwa', (Cairo: Al-Sunnah al-Muhammadiyah, 1963), vol. 1, p. 406.

²¹² Al-Tabari, *Tārīkh al-Rusul wa al-Mulūk*, vol, 5, pp. 665-668.

²¹³ Ibn Al-Athir, *Al-Kāmil fī at-Tārīkh*, vol. 7, pp. 53- 54.

became abandoned and devoid of people.²¹⁴

Afterwards, the influence of the Qarmatians began gradually to decline. But the threat of Arab tribes still constituted a considerable danger to the security of the pilgrimage routes. For example, in 965, the threat of Banu Sulaym returned once again and they attacked convoys of pilgrims; but this time they focused on the convoys of North Africa and al-Sham (i.e, the north), which were supposed to halt in al-Juhfa. These convoys were loaded with a lot of money and goods owned by pilgrims and traders coming from al-Sham, Egypt, and Morocco. Banu Sulaym captured all of these convoys and killed many pilgrims and traders.²¹⁵

In fact, the power of the aggressors increased dramatically until they controlled the transportation routes linking the two Holy cities and the other Islamic regions. The majority of deterrent measures taken against any attack and threat, such as sending campaigns to repel the attacks of aggressors, fierce resistance by some convoys, and establishing huge forts in some important stations to protect the population and the convoys of pilgrims and merchants, were not sufficient. In fact, it became impossible to put an end to tribal raids along the pilgrimage route due to the content of the convoys and stations, which were often laden with precious cargo and cash.

The continuous security threats cast terror into the hearts of residents and pilgrims, causing great devastation to many stations, where most of the necessary facilities, such as wells, pools, and forts became damaged. Consequently, many stations along the pilgrimage routes were abandoned. Indeed, there was no complete safety of the routes and its stations. Therefore, it is likely that al-Juhfa was somewhat affected by these continual threats where these threats led to the disruption of large areas of the route linking Medina and Mecca. This, in turn, diminished al-Juhfa gradually and decreased its importance over time. These factors, however, did not cause its

²¹⁴ Yaqut al-Hamawī, *Mu'jamal-Buldān*, vol.3, pp. 24-25.

²¹⁵ Ibn Al-Athir, *Al-Kāmil fī at-Tārīkh*, vol. 7, p. 296.

complete abandonment according to the geographer al-Maqdisi's description of the late 10th century, where he described al-Juhfa as active city in his time (as we noted in chapter 2).²¹⁶

In conclusion, from the foregoing, it seems that al-Juhfa was an important place since the pre-Islamic period. It became an appropriate stopping point during the time of the Prophet Muhammad, who stopped in al-Juhfa several times, but it was devoid of people and architectural installations. During the caliphate of 'Umar ibn al-Khattab, urban activity in the area surrounding al-Juhfa began to grow. By the early Abbasid period, al-Juhfa had become a complete Islamic settlement.

According to the geographical sources that described al-Juhfa in previous pages, it seems that al-Juhfa reached the peak of its prosperity and development in the second half of 8th century. Afterwards, al-Juhfa continued to be occupied until mixture of internal and external factors emerged as late as the 11th century, and culminated during the first half the 12th century. This led to the abandonment of al-Juhfa. Thus, we may now be able to suggest the number of years in which al-Juhfa was standing from the period of its prosperity until its abandonment: approximately 250 to 300 years.

²¹⁶ Al-Maqdisi, *Aḥsan al-Taqāsim fī Ma'rifat al-Aqālīm*, pp. 77-78.

Chapter 4

Archaeological Field Work in al-Juhfa

1. Introduction

2. Archaeological Survey

Goals of the Archaeological Survey

Archaeological Survey Methods

Results of the Archaeological Survey

3. Archaeological Excavation

Goals of the Archaeological Excavation

Archaeological Excavation Methodology

Results of the Archaeological Excavation

1. Introduction

After collecting a variety of geographical and historical information from early sources on the *Mīqāt* of al-Juhfa (as shown in previous chapters) we should now trace this significant information archaeologically on the site. To do so a specialized archaeological team including the main researcher undertook an important aspect of this study: the archaeological fieldwork, which depends on both archaeological survey and excavation.²¹⁷ This chapter will highlight the significance of the fieldwork, its goals, methods, and various results that have been achieved. In this chapter detailed study on the ground will also be supported by numerous satellite images, schematic and illustrative maps, drawings, and photographs.

2. Archaeological Survey

An archaeological survey in al-Juhfa is a specific plan to document and identify all archaeological remains on the surface of the site. It offers a range of important information about the nature of the archaeological area and its surroundings, the continuity of occupation, and the extent of civilization in the region by examining the distribution of discoveries on the site, as well as the quality and date of the materials found. To identify precisely these archaeological remains and to ascertain any indications of human activity during early times, the surface survey process covered a wide area of al-Juhfa, which extends over a long distance—up to about 4 km from the four directions.

²¹⁷ The team consists of five people: the main researcher, Nayef al-‘Awfi, the specialist assistant, Khaled al-Jabri, the specialist in the cadastral planning, and two workers (Abou al-Tayeb Uthman and Muhammad ‘Umran). The team carried out all archaeological fieldworks at the site of al-Juhfa, which took two full weeks (from 28-February 2017 to 14-March 2017). The fieldwork in al-Juhfa required obtaining certain official licenses from some official institutions in Saudi Arabia, such as the Saudi Commission for Tourism and National Heritage, and College Archaeology and Tourism at King Saud University.

However, the distribution of archaeological remains over a large area may create difficulties of interpretation. Great precision and effort was required during the survey in order to avoid missing any visible remains on the site surface. In addition, the site of al-Juhfa has been exposed throughout history to various environmental factors, such as sand encroachment and erosion, which has resulted in many architectural features being buried underground. In such cases, it was difficult to distinguish these features during the surface survey.

Goals of the Archaeological Survey

The archaeological survey offered archaeological and scientific contributions to this study and achieved the following set of basic goals: First, determining the dimensions of the archaeological site, especially the residential area. Second, documenting the geographical and archaeological landmarks on the site and recording and sketching their data in daily work forms. (Form 1). Third, collecting surface archaeological finds from various materials, such as pottery, glass, and worked stone. Fourth, choosing suitable places to conduct some excavations and detailed analytical studies to reveal the historical and cultural depth of the site. Fifth, the surface survey helped us to draw certain geographical and illustrative maps of the study area.

Archaeological Survey Methods

The team has conducted a comprehensive survey of the site of al-Juhfa and adopted four main methods as follows:

Textual Sources

It is critically important to conduct several studies and researches through the ancient historical and geographical sources of the early Islamic era. These sources are of great interest in determining the location to be excavated and to what extent this location contains archaeological

remains (this subject was discussed in detail in the chapter 2 and 3 of this study).

Satellite Images

Satellite imageries are a modern method in the field of archaeological excavations, which contributes significantly to our general understanding of the sites and the drawing of illustrative maps of the ground surface. These imageries are an important source for identifying the layout of the archaeological sites and the former extent of their walls. Matching these photographs with modern maps can yield valuable results for determining where best to excavate. Indeed, we should use the oldest images of the site and not rely on its current form in photographs in order to define any recent changes happened on the ground, hence achieve clear and logical results.²¹⁸

Three sets of satellite images of al-Juhfa site are available at King Abdulaziz City for Science and Technology in Saudi Arabia. These images date to 2004 and were taken by two different satellites (Geo-Eye and Landsat).²¹⁹ (Pl 1. B, Pl 2. A-B).

Google Earth Imageries

We can also rely on Google Earth in its professional and public versions. Google Earth provides a variety of images from different heights above the ground. Despite the simplicity of these images in comparison with the most sophisticated satellite images, they facilitate archaeological studies in general and archaeological excavations in particular²²⁰. The researcher used Google Earth to draw some preliminary diagrams of al-Juhfa. (Pl 3. A-B).

²¹⁸ Northedge, *The Historical Topography of Samarra*, pp. 27-28.

²¹⁹ It should be noted here that we have not yet found any old aerial photographs of al-Juhfa, which are also important in the field of archaeology and lead to outstanding results.

²²⁰ Mu'ayqal, Khalil et al, "Report on Excavations at al-Mabiyat Site: Second Season". *Atlat* 21, 2005, pp. 28-30.

Field Survey

The site of al-Juhfa is somewhat clear and easily recognizable. As a result, a ground field survey, on foot, is feasible. This is one of the most important methods for determining the visible landmarks of the site and gathering preliminary information about them. The field survey on foot relies on a careful observation of surface manifestations on the site in order to document and describe them using pictures and maps. The process of walking on foot began in the perimeter of the residential area of the site in an area of 200×200 m (see below). The area was divided into size of squares appropriate to the area size and the number of team members participating in the survey process. The team started to walk systematically in a straight line within a selected square. After completing a survey of the entire square, the team advanced to the next square until the whole site was covered. Once a team member notices any archaeological manifestation, such as pottery shards, a change in the shape of the surface, stone foundations, it is necessary to mark up the notice position, then continue the process of walking. When the survey process was complete, the main researcher determined where the most important objects had been found, then selected the locations on the map to study them and determine the starting point for the excavation.

Results of the Archaeological Survey

As a result of this comprehensive archaeological survey, conducted for al-Juhfa area, traces of a large-scale, walled Islamic city have been found (interpreting al-Juhfa as an urban city will be discussed in more detail in chapter 6). This city comprises a variety of architectural types as well as many different surface finds and some rock inscriptions. The scale of the archaeological materials scattered on the surface of the site indicates the great importance of al-Juhfa as an urban center. The following are the most important archaeological elements on the site and the results that have been reached during the survey process.

Architectural Features

All prominent architectural features in al-Juhfa site were recorded and documented, such as the residential area, city wall, the fort, water installations, and the cemetery. Below, a detailed record of their physical remains and a description of the location and setting of the buildings, supported by some schematic and illustrative maps for detailed study.

The Residential Area

The residential area of the *Mīqāt* of al-Juhfa is located about 4 km north of the *Mīqāt* of Rabigh, which was newly built in 1985. The area forms an important part of the settlement area of the Islamic city of al-Juhfa mentioned in many early geographical sources (as we noted in chapter 2). It consists of a large archaeological hill rising about 4 m from the valley floor. The residential area measures 200 m from north to south and 150 m from east to west. The entire area are buried under the sands and some foundations appear on the surface, which built in courses of black basalt stones. (Fig 3).

Traces of these foundations reveal that most of them are various architectural units. Some are medium-sized and built in regular shape stretched in a straight way to a distance ranging between 2 and 7 m. Others contain non-straight foundations. The walls of foundations, some covered with white stucco, range in thickness from 60 to 90 cm (the main and secondary building material in al-Juhfa will be discussed in detail later). These medium-sized architectural units, separated by narrow streets, constituted the schematic fabric of al-Juhfa city. (Fig 3; Pl 4. A-B, Pl 5. A).

There are also some stone foundations form large architectural units up to five units, with most notable the unit being located in the north-west of the residential area with a dimension of 17.50 x 16 m and walls 60 cm thick. This unit is built of black basalt stones and comprises five rooms connected to each other. The rooms lengths are equal in size, with a room length of 4.80

m and its width is ranging between 3.80 m and 2.30 m. The five rooms overlook a courtyard from the east side. The courtyard is rectangular, measuring 17.50 x 10.60 m. The size of this unit and its design indicates that it was an important structure belonging to important people. (Fig 3, 4. A; Pl 5. B). The general layout of al-Juhfa as well as this architectural unit will be studied in detail in chapter 6 of this research.

City Wall

The residential area is surrounded by the remains of somehow regular wall (now ruined). It is built of black basalt stones, and seems to have been huge, with a thickness of 1 m. The presence of the wall around the residential area indicates the existence of major entrances to the city that were defended by strong gates. Therefore, we traced the path of the wall and its architectural remains and noticed a protruding block of stones located on the northern side of the wall, which may represents the main gateway of the wall. (Fig 4. B, Pl 6. A).

In addition, we noticed that there are no clear signs of secondary gates, towers, and buttresses along the wall. However, further future excavations will reveal a lot of information about the architectural details of the city wall. (The wall will be discussed in chapter 6).

The Fort

The fort is one of the most important monuments in al-Juhfa site so far identified. It is called the palace (*qaṣr*, pl. *quṣūr*), or as most local residents incorrectly say, “Qasr ‘Aliya”.²²¹ Enough of the building still stands to permit a complete reconstruction of its plan. The fort is situated at the

²²¹ ‘Aliya was the lover of Arab leader Abu Zayd al-Hilali during the 11th century, and Abu Zayd al-Hilali was a prominent historical figure in the Arabian Peninsula. His biography was written by many writers and poets, who gave exaggerated descriptions of his supernatural heroism and courage and his ability to use great tricks in wars. Therefore, his mythical stories spread among people and across generations, consequently, the people attributed to him and to his beloved ‘Aliya any unique thing they saw. For more information, see Abdel Rahim, Mohamed, *Taḡhrībat Banī Hilāl*. (Beirut: Dar al-Kutub al-‘Ilmiyah, 1998).

southeastern corner of the residential area on a promontory of an elevated terrace rising about 4 m above the valley floor in order to avoid flood. The city wall extends to the southwest corner of the fort and abuts it. (Fig 3).

The fort is square in shape, consisting of a square open court, with four walls surrounding the fort on four sides. Each wall is 29 m long and built of black basalt stones. The stones are different sizes and shapes, and built in the form of dressed courses connected by clay material. Also, small stones were used to fill the gaps between the large stones during the construction. The fort was reinforced at its four corners from outside by four tower buttresses in the shape of a half-circle. Two of these buttresses (the southeast and northeast) still stand; the other two have fallen. In addition, several buttresses project into the middle of the fort from the outside walls. Moreover, the inside of the fort contains numerous semicircular arches. Indeed, the fort design indicates that it was an impressive structure. The architectural details of the fort are discussed below.

Eastern Wall of the Fort

The wall, most of which remains intact, overlooks the steep right bank of the al-Ghad' dha valley. The maximum height of the wall is about 8 m and its thickness about 2 m. Some parts of the upper wall, especially the northern part, are in ruins. The outside of the wall is covered with sand dunes rising about 2 m. It is also reinforced from outside by three semicircular buttresses extending from the bottom of the wall to its top. These towers are still in good condition and are distributed in the middle of the wall at almost equal distances, ranging from 4.50 to 7.30 m. The circumference of the towers proved to be 4.30 m.

In the southern part of the wall there is a long cavity extending from top of the wall to the bottom. This cavity is located 40 cm from one of the semi-circular towers in the southern part of the wall. The width of this cavity is up to 20 cm and its depth up to 25 cm. The function of the

cavity is not sufficiently clear but seems to have contributed to the drainage of accumulated rainwater. (Fig 5. A-B; Pl 6. B, 7. A-B).

The inside of the wall contains eleven semicircular arches, five of which have collapsed from the top located on the north end of the wall. The rest of the arches are in good shape. All of the arches were erected on columns rising 4.30 m with dimensions of 90 × 90 cm. These columns erected on a stone base rising about 3 m from the fort floor. The arches can only be seen from the inside. They were built next to each other, decorating the wall with an aesthetically attractive shape. (Fig 6. A; Pl 8. A).

Northern Wall of the Fort

The western part of the wall is ruined now, the length of the ruined part being 10.40 m. As to the rest of the wall, it is still standing with some damage to the upper parts. The northern wall appears to be similar to the eastern one in dimensions and shape. From the outside it appears to consist of three semicircular buttresses, which also are distributed in the middle of the wall at almost equal distances ranging between 5.60 m to 5.80 m. (Fig 6. B; Pl 8. B).

The inside of the wall consists of semicircular arches placed on columns, which were erected on a stone base just as in the eastern wall. The base is no longer visible, as it is covered with sand dunes rising about 3 m. The number of arches seems to be similar to that in the eastern wall, but all are dilapidated except for two on the eastern side of the wall. (Fig 7. A; Pl 9. A).

Western Wall of the Fort

The western wall is completely destroyed, and its stones lie in stacked piles one on top of the other. However, after careful examination, we found in the ruins, especially in the northern part of the wall, some cobble stones in the form of stair thresholds ascending to the fort and other thresholds descending, signifying that the main entrance of the fort was built on this side. The

width of the fort staircase generally is 2 m and the descending stair was built between two walls of 1m thickness. Also, the presence of the fort stair indicates two important possibilities; either that the fort contains more than one storey, especially in this particular side, or that ground level on the inside of the fort was generally low and did not match that outside the fort. (Fig 7. B, 8. A; Pl 9. B-12. B).

Regarding the semicircular buttresses and arches in this side, the wall may contain some of them but it is difficult to say so until extensive excavations are conducted in this particular side. It seems apparent that this side was different from other sides of the walls due to the existence of the fort stair in this side as we saw above. On the whole, the western wall needs extensive exploration to discover more architectural details.

Southern Wall

A large part of this wall is fallen, especially on the western side. The length of the ruined part is about 15.80 m. The remaining small portion of the eastern part of the wall still stands; but is in poor condition. The wall is similar to the eastern and northern walls in its measurements and seems also to be similar in shape as well. On the outside the wall consists of one semicircular buttress, the rest having fallen. It appears that the number of fallen buttresses is two, where their traces can be distinguished. Thus, the total number of buttresses on the southern wall becomes three, just as in the eastern and northern walls. (Fig 8. B; Pl 13. A).

On the inside, the wall seems to contain eleven semicircular arches similar in design and shape to those in the eastern and northern walls. All but five arches have fallen, and one still standing is broken at the top. (Fig 9. A; Pl 13. B).

In conclusion, after all the foregoing, it seems clear that al-Juhfa fort was built in a compact and strong shape. The walls are massive, thick and high and reinforced on the outside by semicircular tower buttresses in order to reinforce the walls and give them a unique, aesthetic quality. These semicircular buttresses were erected at the four corners of the fort as well as in the middle of fort walls, especially the eastern, northern, and southern walls. In addition, the interior of the fort is surrounded by semi-circular arches built in an orderly, aesthetic fashion.

Interestingly, as will see later, the fort's interior does not contain architectural units or clear wall foundations, which are usually used as living and accommodation units, and for storage of food. Moreover, the fort does not contain a lot of surface finds such as shards of pottery that that would normally spread on the surface. However, while excavating the fort, some potsherds were discovered. More details about the fort's architecture, building technique, main function, and the results of the excavation will be studied in detail in chapter 6 and 7 of this research.

Water Installations

During the field survey, some water installations were monitored as follows:

The Fort Pool

We called this the "fort pool" because of its proximity to the eastern fort wall: about 100 m. It appears that the pool was connected to the fort, providing it with the necessary water. This pool was discovered while tracing landmarks on the site. We noticed a slight hollow near the eastern fort wall from the outside, and after checking and removing some of the accumulated sand above it, became clear that there were stones built of black basalt in a round shape. We traced these stones and discovered a wall belonging to a water pool. The pool is now entirely filled with sand. It is circular in shape, its diameter being 3.60 m inside and 4.18 m outside, with a wall 58 cm

thick. (Fig 9. B; Pl 14. A-B).

The pool was an important means of gathering rain and flood water. It also seems to have been provided with a surface water canal to provide the pool with water. This canal, built of black basalt, descends from elevation located to the north of the pool at a distance of 5 m. Measurement of length, width, and thickness of the channel is difficult because most of its parts are now ruined and its stones scattered (Pl 15. A). However, preliminary results from the exploration of the pool and its canal will be studied in chapter 6.

Underground Canal (Qanāt)

During the archaeological survey process, we discovered a canal stretching for a great distance under the ground. Along the canal there are numerous wells connected to each other, built to facilitate monitoring and repairing the canal. In some places, these wells are hidden underground and covered with sand so that they cannot be seen. The size of the wells differs; but the average diameter is 2.60 to 3.80 m. The distance between each well also varies the average distance being 5 to 10 m. They all took one shape, a circular shape and possibly built of stones and plaster, especially in the upper parts as can be seen from material scattered around the well holes. The wells (mostly buried now, and damaged by floods and winds) are in the form of wide circular hollows, and need more exploration. (Fig 10; Pl 15. B).

Tracing the course of the wells built above the canal, they start almost in the center of the al-Kharar valley, 8 km northeast of al-Juhfa and continue until 500 m north of al-Juhfa. It seems the starting point of the canal was in a spring located in the middle of the al-Kharar valley. This spring was mentioned in the 9th century by the geographer al-Harbi, who writes that there is a spring in the middle of al-Kharar valley called the spring of Abdullah b. ‘Abbas.²²² However, the

²²² Al-Harbi, *Kitāb al-Manāsik*, p. 458.

site of this spring is now invisible as it has been buried by seasonal floods. (Map 5; Fig 3).

The canal was designed in a precise gradual way. A large amount of water emerges from the spring, running into the canal at a certain depth under the ground that decreases gradually until reaching al-Juhfa. We do not know the construction materials of the underground canal, but it may have been made with mortar, using large basalt stones cut from mountains of the surrounding area.

Finally, the residents of al-Juhfa chose to build their city in an area close to the confluence of valley streams. This provided for drinking water and agriculture. Therefore, the irrigation system in al-Juhfa is not limited to the pool and canal mentioned above. As seen earlier, many ancient geographic sources mention that al-Juhfa had a unique irrigation system constituting a variety of water installations located on the site and in nearby valleys. These included wells, cisterns, and pools. These water installations (which the residents of al-Juhfa relied on in their daily lives for drinking water, agriculture, and irrigation) are among the most important sources of water in the area and helped residents achieve stability and growth. However, many of these installations in al-Juhfa have been destroyed or buried underground. There is no doubt that extensive archaeological excavation at the site will reveal more information about these structures, the methods of construction, and the building materials used, particularly with regard to wells, which were a significant source of the water that people relied on in much of their daily life. The wells often constituted the nucleus for settlement, determining where towns, villages and farms were located.

The Cemetery

During a field survey of the entire site, no clear evidence was discovered indicating the existence of a cemetery, (such as tombstones, which were usually placed on the grave and contained the deceased's name and date of death, a prayer, and some verses of the Qur'an).²²³ However, there is an area located about 1 km southwest of al-Juhfa, it is wide and flat, the land is not rocky, and as it is far from the valley floor, this may be al-Juhfa's inhabitants placed a cemetery. (Fig 3; Pl 16. A). Notably, a present-day resident saw about five years ago in this area a rock of basalt stone (now missing) carved with Qur'anic verses describing death. This rock may have been a tombstone for one of the graves. Generally speaking, the whole area needs further exploration.

Surface Finds

Numerous finds of objects that met the needs of al-Juhfa residents (as well as pilgrims from several other countries) are scattered on the surface of the site. The most numerous are shards of unglazed and glazed pottery and glass. Many of these finds were collected and recorded to identify their relative sequence during the period the site dates back to. Recording surface finds in this study were based on a qualitative classification approach according to the raw material used in the industry (pottery, glass, worked stone). After that, we divided and described each group made from the same material into other sub-groups depending on the structure of material itself (paste characteristics, the method of preparation and manufacture, and the vessel shape and its decoration). Moreover, all of these groups were illustrated with drawings and images.

After registering all finds, we moved to the most important step, a comparison and analysis of finds, in order to learn more about the archaeological and historical identity of al-Juhfa site. This study was carried out by comparing the finds with counterparts that have been

²²³ Al-Khalifa, Khalifa et al, *Ahjar al-Mu'lah al-Shahdiyya fi Mecca*. (Riyadh: Agency of Antiquities and Museums, 2004).

discovered in other archaeological sites on the Arabian Peninsula pilgrimage routes as well as other sites discovered in the Levant and others regions of Islamic world. The chapter 7 of this study was devoted for the detailed research and study on this topic.²²⁴

Moreover, we must take into account the separation of surface finds discovered during the survey process from those resulting from archaeological excavations. The information provided by the stratified finds helps us to identify the sequence of historical stages occurring at the site—unlike the surface finds which, despite their importance in helping to give a general history of the site, cannot definitively identify the chronology of the site where they sometimes do not contain further detailed finds in comparison to those in archaeological layers.

Rock Inscriptions

Through the field study, a few Islamic rock inscriptions were discovered carved at the foot of a mountain locating in the east of al-Juhfa. The vast majority of these inscriptions are unclear and cannot be read due to environmental factors and erosion. (Pl 16. B). However, these inscriptions maybe written by some pilgrims who passed through the *Mīqāt* of al-Juhfa and then to Mecca to perform the Hajj and contain a supplication for acceptance of the Hajj and for forgiveness. Hopefully future studies will discover more inscriptions to find out further details about the identity of al-Juhfa site.

²²⁴ Our study took advantage of many published works about archaeological objects in different parts of Islamic world, see for example, Ibrahim, Muhammad et al, “Preliminary Report on the Results of Archaeological Discoveries in the Islamic Site, al- Mabiyyat, First Season”. *Atlat* 9, 1984, pp. 117-120; Al- Rashid, *Al-Rabadhah*; Hendrix, Ralph; Drey, Philip; Storfjell, Bjørnar, *Ancient Pottery of Transjordan: An Introduction Utilizing Published Whole Forms Late Neolithic Through Late Islamic*. (Institute of Archaeology/Horn Archaeological Museum, Andrews University, 1997); Al-Kilabi, *Islamic Monuments in the Town of Bida, Northwest Saudi Arabia*. (Riyadh: Saudi Commission for Tourism and Antiquities, 2010).

In conclusion, it is clear that al-Juhfa was characterized by the large size and diversity of its archaeological features and remains. Most architectural features are buried underground and covered with sand and rocks, especially in the residential area, thus identifying them in detail is difficult and will require considerable effort and extensive exploration. In addition, there are a large number of surface finds and some rock inscriptions spread over the surface of the site. This confirms what the early Islamic sources say about al-Juhfa being an important Islamic city located between Mecca and Medina and receiving large numbers of travelers and pilgrims from various countries of the Islamic world.

3. Archaeological Excavation

After completing an archaeological survey of the entire surface of the site and determining the extent of the archaeological remains, and the spatial relationships on-site, it is now possible for the first time to think of a starting point for launching the excavation process in al-Juhfa (no excavation has been done before). An archaeological excavation is one of the most important steps in identifying the cultural role played by any archaeological site. By tracing archaeological layers, we can identify the chronology of the site and its relationship to other archaeological sites, based on the style of the urban planning and construction, and the archaeological material discovered.

However, as this study is a doctoral thesis, conducting large-scale excavations is not a feasible plan. The scale of the excavations is not a goal in itself; the real goal is to what extent the process of exploration will ultimately answer the questions raised by the thesis. Therefore, the researcher conducted limited excavations to answer the key questions raised about the site of al-Juhfa, its history, building plans, and cultural features.

Choosing specific places to conduct excavations was not an easy task, especially as these excavations will serve as the basis for subsequent archaeological studies. Thus, the researcher has raised many questions and hypotheses about the feasibility, objectives, and rationale for starting at one location or another. However, excavation at any given location should be according to an objective methodology and meet the following objectives:

Goals of the Archaeological Excavation

The archaeological excavation at the site of al-Juhfa should achieve two significant goals: first, the proposed location for exploration should reveal as much important information as possible, based on the most prominent archaeological manifestations scattered on the site, such as the distribution of archaeological mounds, contrasting surface finds, detection of architectural foundations, and so on. Second, the chosen location for excavation should be in suitable position so that future studies and excavations can continue, and that the conduct of subsequent excavations will not be adversely affected. This process, in turn, will lead to linking the biggest possible exploration results in future, which are associated with stratigraphic sequences, successive residential stages, and other prominent manifestations.

Based on these objectives, as well as the results of the archaeological survey previously mentioned, two important places have been identified where two different sizes of trench grids can be designed by the team members (see below). The two trenches were given the numbers T1 and T2. Before that, the entire site was divided into grid of numbered squares, measuring 10×10 m for each square. The goal of the grid of squares is to precisely locate the two trenches mentioned above on the site. Consequently, the locations of the two trenches on the grids of site are 19/o and 7/r respectively.²²⁵ (Fig 11).

²²⁵ Division of the site into a grid of squares (a method developed by the archaeologist Mortimer Wheeler in the 1950s) is one of the best-known methods of archaeological excavation. For more information, see Gallan, *Methods of Archaeological Research*, p. 150.

Archaeological Excavation Methodology

The excavation methodology at the site of al-Juhfa is founded on stratigraphic excavation. This method deals with archaeological finds sensibly and realistically based on practical considerations suitable for our limited excavation plan mentioned above. The method relies on tracing the stratigraphic sequences, and recording all information relating to each layer as a separate unit (for example, the surface layer, sandy layer, muddy layer, virgin soil, etc.). All layers were given a sequential number in order to facilitate the process of describing, classifying, photographing, and drawing all the architectural manifestations and the archaeological finds that have been uncovered. The team proceeded gradually to excavate trench number T1. After completing work in the trench, they moved to the trench number T2. In order to achieve more accurate results each trench, the researcher designed two forms to register and document all the information obtained by the team (Forms 2-3). In fact, accurate registration of the stages of archaeological excavations is one of the most important stages. It serves as a real record of the archaeological site.²²⁶

Results of the Archaeological Excavation

Trench T1

This trench is located at 19/o on the site grid. This represents the center of the residential area. A group of small and medium-sized basalt stones spread over the surface of the trench in the form of stone foundations constitute a complete architectural unit (likely a place to cook as will see shortly). The reason for choosing this location is the occurrence of visible stone foundations in the trench, which indicates the presence of a large building representing multiple residential

²²⁶ The excavation methodology in our study is largely applied in many archaeological sites in Saudi Arabia; most archaeologists use it as a main method in the excavation, see for example, Al-Rashid, *Al-Rabadhah*, pp. 44-50; Al-'Utaybi, Sa'eed, *Dhrya: A Historical and Archaeological Study*. Riyadh: Agency of Antiquities and Museums, 2008), pp. 117-120; Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faid", pp. 38-39.

stages. Also, the center of any city usually contains the most important residential, commercial, and religious buildings.

The work began in this trench by identifying a rectangle extending from the south to the north with dimensions of 6.10×3.50 m. We surrounded the rectangle by cords from all sides and installed them with poles in the corners. (P1 17. A).

Due to the large size of the trench, the excavation was carried out gradually and at different depths in order to determine the details of the trench in full and the contents of its archaeological layers. Some parts of the trench were deeply excavated until they reached the plaster floor at a depth of 3.05 m. Others were excavated with lower depths and various archaeological layers emerged. Given this, excavation of the trench was conducted through two main stages of work as follows:

The First Stage

Excavation at this stage covered the entire trench to a depth of 90 cm and two archaeological layers emerged:

Layer 1

This is the surface layer of the trench, from the surface to a depth of 40 cm. After scraping this layer, we discovered that it is a layer of fine sand, characterized by a friability. It also contains some black stones that may have been parts of fallen wall courses.

Layer 2

This 50-cm-deep layer, extending from a depth of 40 to 90 cm is completely different from the first layer. It is a soil of clay, characterized by a light color. In addition, interspersed with it is a layer of coarse sand, small plant roots, and organic materials such as ash, charcoal, broken

wood (probably constitute remains of roof material as we will see later), and small fragments of animal bones, perhaps belonging to birds. In fact, the appearance of the ash-mixed soil layer with some broken bones showing the effects of burning (which caused its color to turn black), indicates that the site was a place for cooking operations and related activities (see below).

Also, many archaeological finds were found in this layer; the most important were as follows:²²⁷

1. Two shards of a medium-sized jar, made on the wheel, of unglazed red pottery. (Shard. No. T1/P1-2).
2. Shard of hand-shaped vessel body, made of non-fine red pottery containing many impurities. (Shard. No. T1/P8).
3. Three shards of vessels of monochrome, lead- glazed ware type. These were made on a wheel of pale red paste, and covered with a thin coating of lead glaze that takes an olive-green color. (Shard. No. T1/P23-25).
4. Shard of a vessel body of lead-glazed splashed ware type. It is made of a red paste containing a thin layer of yellow lead glaze and decorations executed under the glaze (sgraffito ware). (Shard. No. T1/P28).
5. Two pieces made of copper, one of which is a curved handle painted in a corrosive green color, the other cylindrical in shape with a pointed head that was a likely cover for some bottles or a tool to put on eyeliner (*kohl*). (Shard. No. T1/M1-2).

Moreover, we found in this layer a rectangular architectural unit. This unit comprises four stone walls surrounding the unit on all sides as well as one door permitting entry and exit. The four walls are built of black basalt stones in the form of courses grouted with clay mortar. The walls are 4.90 m long, 2.30 m wide, and 60 cm thick. As to the unit door, it is located in the middle of the southern wall of the unit where the measurement of one side of the wall next

²²⁷ All important archaeological finds during the excavation will be studied and analyzed in detail in chapter 7 of this research.

to the door is 60 cm and another side is 90 cm. The door, which is buried underground and of which only the upper part of the door is visible, consists of rectangular black basalt stones with a length of 50 x 20 cm. The door entrance measures 80 cm. (Fig 12; Pl 17. B-19. A).

The Second Stage

After clearly identifying the four walls of the unit and its doorway, the team decided to focus on the northern side of the unit, which is corresponding to the door, to explore in more detail. (Pl 19. B). Excavation on this side has gone through two important steps as follows:

The First Step

This was to excavate to a depth of 35 cm from the bottom of the second layer, where a significant third layer emerged. Details about this layer are shown below.

Layer 3

This layer extends from a depth of 90 cm to 1.25 m and its thickness is 35 cm. It is a soil of clay, tending to a light brown color. Parts of the soil were found mixed with ash, charcoal, and some decaying organic materials such as bird bones. The soil is also interspersed with large pieces of broken plaster that covered the unit walls. With regard to the archaeological finds, the layer included various finds:

1. One shard of a medium-sized jar neck, made on the wheel, of unglazed red pottery. (Shard. No. T1/P3).
2. Two shards of bodies of water flasks of egg-shell ware type, made of a thin white paste. (Shard. No. T1/P13, 14).
3. Two glass shards representing the body of a white bottle and dish. Both were made by a free blowing method from thick, opaque paste. (Shard. No. T1/G1, 2).

4. Part of the base of a flat pot made of black steatite. (Shard. No. T1/N1).

Also, it became clear in this layer that the wall was still there, thus digging continued near the wall and proceeded to the second step in order to detect the status of the wall and to ascertain the depth of its foundation.

The Second Step

In this step, the excavation space on the northern side of the trench was minimized, and the northwest angle was selected to be excavated deeply. A small square trench with a measuring of 1 × 1 m. was drilled in this angle. (Pl 20. A). The excavation continued in this square until reaching the plaster floor at a depth of 1.80 m. from the bottom of the third layer. As a result of this work, two important archaeological layers appeared:

Layer 4

This layer is 70 cm thick and extends from a depth of 1.25 to 1.95 m. It is a pile of compact clay, tending to a dark brown color. The soil is also a mixed with some stones, broken pieces of plaster, and small bones. While excavating this layer, several significant shards of pottery were discovered:

1. A circular base for a small jar, made on the wheel, of unglazed red pottery. It is decorated with small lines executed with an incising method. (Shard. No. T1/P4).
2. A shard of a large vessel body, made on the wheel, of unglazed red pottery. It contains a ribbed decoration inside and out. (Shard. No. T1/P5).
3. A shard of a large jar body, hand-made, of unglazed red pottery. The surface of the shard is rough and contains many impurities. (Shard. No. T1/P9).

4. A shard of decorated bowl base with a small part of the body. The shard is subsumed under the type of pottery with white tin glaze. It is made on a wheel out of fine yellow paste covered inside and out with a layer of bright white tin glaze. (Shard. No. T1/P30).

Layer 5

This layer is 1.10 m thick and extends from a depth of 1.95 to 3.05 m. It is considered one of the layers that characterize with its large thickness, where reached to more than 1 m. This layer was detected after the features of soil began to change. The layer is a compact red clay contains some broken bones, wood, small stones, and pieces of plaster. In this layer, we also found various archaeological finds.

1. A shard of vessel body, hand-made, of unglazed red pottery containing a lot of impurities. (Shard. No. T1/P10).
2. Three shards of a flask representing a neck and round base. The three shards are of the egg-shell ware type. They are made of thin, fine-yellow pottery and one of them contains decoration. (Shard. No. T1/P15, 16, 17).
3. A neck of vessel made on the wheel out of pale red paste and of monochrome, lead-glazed ware type. The internal surface of the shard contains a thin layer of olive green lead glaze, and the external surface is decorated with straight lines executed by an incising method under the glaze. (Shard. No. T1/P26).
4. Part of a medium-sized vessel body, made on the wheel out of semi-fine red paste. It is of lead-glazed splashed ware type. The interior surface is covered with a layer of translucent lead glaze that tends to a green color. The external surface is decorated and covered with a layer of yellow lead glaze. (Shard. No. T1/P29).
5. Two thin fragments of glass from a bottle body. One of the two fragments is green and the other, white. Both were made by a free blowing method from semi-translucent paste. (Shard. No. T1/G3, 4).
6. Four pieces of volcanic stones use for grinding cereals and sharpening blades. (Shard. No. T1/N 2, 3, 4, 5).

Layer 6

This was the lowest-excavated layer in the trench. Below the fifth layer, at a depth of 3.05 m, the sixth layer appeared. This is a floor paved with compacted mud and covered with a layer of plaster, most of which has disappeared. The floor measuring is 1×1 m.

In addition, during this layer, we reached the foundation of the architectural unit's wall. The wall reaches a height of 2.65 m from the base of the foundation. It is built of eighteen consecutive stone courses, grouted with clay mortar. Also, the facade of the interior wall seems to have been covered with a layer of mud and stucco, to judge by the amount of stucco discovered during the excavation and the remains of mud and stucco found on the wall. Moreover, we did not find any clear sign that this was a multi-floor building (as we will see in chapter 6). (Fig 12, 13; Pl 20. B-21. A).

Trench T2

The location of this trench on the site grid is 7/r. It is located inside the fort in front of the fort south wall, and measures 2×2 m. Some black basalt stones are spread over the fort's surface; but there is no large collection of pottery shards or stone foundations visible on the surface including the trench surface. The purpose of digging a trench here was to detect any remaining architectural details and to determining their boundaries and construction technique, as well as to discover any archaeological finds. (Pl 21. B).

The trench was dug out until reaching virgin soil at a depth of 2.60 m. The excavation resulted in the discovery of four sequential archaeological layers that vary in size and archaeological content. The following is the results from the exploration process in this trench.

Layer 1

This is the surface layer seen on the surface trench, from the surface to a depth of 50 cm. This layer was scraped and a layer of desert sand mixed with different sizes stones emerged.

Layer 2

This layer, which is 1 m thick, extends from a depth of 50 cm to 1.50 m. It is a pile of coarse sand, mixed with small and medium-sized stones. The layer contains some wooden fragments as well as some archaeological finds:

1. Fragment of body of a large jar. It is made on the wheel, of unglazed red pottery. The interior face contains a simple ribbing decoration. (Shard. No. T2/P6).
2. A shard of body of a large jar. It is hand-made out of pale red pottery. The external face of the shard contains decorations consisting of a bundle of parallel and wavy lines executed by an incising method. (Shard. No. T2/P12).
3. Two shards of bodies of water flasks of egg-shell ware type. One of the shards contains decoration constituting a grid of cross-cutting lines executed by an incising method. (Shard. No. T2/P18, 19).

Layer 3

This layer, which is 70 cm thick, extends from a depth of 1.50 to 2.20 m. It is a dark, sandy soil, similar to the valley soil adjacent to the site, and mixed with small stones and some small wooden fragments. The layer also contains some archaeological finds:

1. Fragment of medium-sized jar body. It is made on the wheel of unglazed red pottery. (Shard. No. T2/P7).
2. Part of a medium-sized jar, hand-shaped out of pale red pottery. (Shard. No. T2/P11).
3. Three different shards of water flasks consisting of shards of base, body, and handle. All are of egg-shell ware type and made of yellow and **brown pottery**. (Shard. No. T2/P20, 21, 22).

4. Part of a vessel body of monochrome lead- glazed ware type, made on the wheel from fine red paste, and well prepared. It is covered inside and out with thin layer of yellow lead glaze. (Shard. No. T2/P27).
5. A thin, flat fragment of the body of a green glass bottle made by a free blowing method from a semi-translucent paste. (Shard. No. T2/G5).

Layer 4

This layer is 40 cm thick, extending from a depth of 2.20 to 2.60 m. It is a soil of clay mixed with sand, tending to a brown color, and containing a group of small and medium-sized stones. The layer does not contain any structural details or archaeological materials, indicating that this layer is the virgin soil that is usually devoid of cultural remains and represents the last layer that formed over time in this part of the site. (Fig 14; Pl 22. A-B).

In conclusion, the excavation at the site of al-Juhfa resulted in the discovery of several archaeological layers in a sequence: six archaeological layers in Trench T1 at a depth of 3.05 m and another four layers in Trench T2 at a depth of 2.60 m. All layers contain a collection of archaeological finds of different pieces of pottery, ceramic, glass, metal, and stone works. These finds clearly indicated to the relative chronology of the site (see chapter 7).

Trench T1 was excavated in the residential area and revealed an architectural unit that extends from south to north and consists of one rectangular room, 4.90 m long and 2.30 m wide. It was accessible through a door located in the middle of its east wall. The room has one floor and is characterized by a plaster floor representing the last layer discovered at the site. Also, it seems to be an important component of a larger architectural unit, due to the presence of some stone foundations next to the room and related to it, which still need to be excavated and researched.

The room is entirely built of black basalt stones with a mortar composed of mud and plaster— not of impermanent mud-brick— and, therefore, was not much decayed. Indeed, this marriage in the use of different building materials is one of the distinctive aspects of the room and gives an impression of work by skilled artisans. Likely, these artisans planned the building to serve as a place to cook, as most archaeological layers in the building contained some burned broken bone, ash and charcoal (mixed with soil), and some volcanic stones used for grinding cereals and sharpening blades.

After completing the excavation work in this unit and tracing the archaeological layers, it became clear that all the layers were in a continuous sequence of occupation. We did not discern any layer free of material culture, which usually form a separation between layers. This, in turn, may indicate that the building passed through one extended residential phase. Furthermore, the walls of the unit and building materials are aligned with each other and do not refer to any addition or modification of the building, which means that they are contemporary and built in one period of use.

The excavation of trench T2 (inside the fort) did not recover evidence of architectural features built in the fort. However, the whole structure of the fort was studied in detail in chapter 6 of this study.

Chapter 5

Archaeological Evidence in the Near East

1. Introduction
2. Archaeological Evidence of the Formative Years of Islamic Rule (622-692)
3. Archaeological Evidence of the Umayyad Period (661-750)
4. Archaeological Evidence of the Abbasid Period (750-1258)

1. Introduction

As we saw in the previous chapter, the archaeological survey and excavation in al-Juhfa revealed a variety of urban architectural elements during the early Islamic period, including the residential area, wall, fort, pool, and water canal. These architectural components will be discussed and compared with their counterparts in different Islamic sites throughout the chapter 6; but as the architectural context of these components is relevant to the comparative study, it will be useful in this chapter to provide an overview of archaeological evidence in the Near East between the period of formative years of Islamic rule and the Islamic Abbasid period. Discussing the nature of the archaeological evidence during this period will permit a broader understanding of al-Juhfa and place the site in its architectural and archaeological context.

2. Archaeological Evidence of the Formative Years of Islamic Rule (622-692)

The Islamic state of the first few decades particularly during the first seventy years of the *hijra* (622-692), did not possess a sufficiently centralized infrastructure. Indeed, there is a shortage of archaeological evidence for the state of Islam particularly during this period. Thus, it is, of course, immensely difficult to document the early stages of a new religious tradition and a new regime.²²⁸

However, there is a few archaeological evidence appeared during the formative years of the Islamic rule, for example, the early construction phase of the Aqsa Mosque in 660s during the reign of Mu‘awiya b. Abi Sufyan (r. 661-680). In addition, the large building that discovered in *the Dār al-Imāra* (residence of governor) in Kufa. This building was built of brick with a fortified wall and an *intervallum*. *The Dār al-Imāra* contained three constructions phases, the first phase dated to 670 and attributed to the governor, Ziyad b. Abi Sufyan. There are also two

²²⁸ Johns, Jeremy, “Archaeology and the History of Early Islam: The First Seventy Years”. *Journal of the Economic and Social History of the Orient* 46. 4, 2003, p. 433.

earlier structures: first one is Khirbat al-Karak in northern Israel (known in Arabic sources as Sinnabra or Sinnabris). This structure was constructed by both Mu‘awiya and ‘Abd al-Malik b. Marwan (r. 685-705). The second one is al-Bakhra’ (discussed in chapter 6), a Tetrarchic fort (293–305 CE) south of Palmyra.²²⁹

These examples mentioned above represent a small body of data about the early archaeological record during Islam’s formative years. There are few details about the archaeological context for the rise of Islam in Arabia. In addition, there is little prospect that archaeology will uncover new evidence of Islam from the first seventy years.²³⁰ However, the shortage of archaeological evidence during the first seventy years of the *hijra* is not surprising where this shortage occurred with the formation of the early Islamic state. However, this scarcity of physical evidence almost never occurs after 691-92 during the reign of the Umayyad caliph ‘Abd al-Malik as will see in the section below.

3. Archaeological Evidence of the Umayyad Period (661-750)

The Umayyad Caliphate was founded in 661 in Damascus, Syria by the Umayyad leader Mu‘awiya b. Abi Sufyan. This caliphate was regarded as the second to be established after the death of Prophet and centered on the Umayyad dynasty who ruled until the year 750. The Umayyads continued Muslim conquests, and by the early 8th century, their rule extended as far west as present-day Tunisia, north to the Syrian–Turkish border, and as far east as Turkmenistan. Moreover, in 711 Muslim troops crossed from North Africa into the Iberian Peninsula, where they took control of most of the region, naming it al-Andalus (Spain). Islamic patronage during this extended period fostered an artistic milieu that produced art and architecture of great beauty and sophistication. In general, Umayyad caliphs were responsible for building a highly efficient

²²⁹ Milwright, *An Introduction to Islamic Archaeology*, pp. 27-28; “Archaeology and Material Culture”. In Robinson, Chase F, *The New Cambridge History of Islam*. Volume 1, 2011, pp. 665-666.

²³⁰ Milwright, *An Introduction to Islamic Archaeology*, p. 25.

and lasting governmental structure.²³¹

However, some scholars differ about the nature of the early Islamic state during the Umayyad period. Some say that the Islamic state was significantly organized under Mu‘awiya b. Abi Sufyan, whereas others maintain that the administrative system was absent during the reign of Mu‘awiya, and is first introduced during the reign of the fifth Umayyad leader, ‘Abd al-Malik b. Marwan and his Umayyad successors.²³²

Indeed, during the reign of the Umayyad caliph ‘Abd al-Malik b. Marwan, the Islamic state began to produce media that preserved evidence for the religion, giving archaeology a chance to form a view about the evolution of the early Islamic period. The first detailed proclamation of Islam and of the role of Muhammad occurs in the inscriptions of the Dome of the Rock in Jerusalem, built by ‘Abd al-Malik and dated 691-92. The Dome of the Rock is characterized by a unique plan and contains creative mosaic decorations. This marks a watershed, as immediately thereafter religious declarations and architectural monuments become common. In fact, not a single public monument built under the Arab conquests has yet been found that can be securely dated before the reign of ‘Abd al-Malik. The archaeological record after 691-92 is so rich in comparison to the previous period, as to suggest that Islam had now found its voice and was expressing the presence of religion and Muslim hegemony.²³³

The reign of ‘Abd al-Malik witnessed a series of significant advances in the process of state formation. ‘Abd al-Malik was an effective ruler responsible for a number of important changes, such as the introduction of a single uniform coinage throughout Islamic empire carrying Qur’anic verses. In addition, justice, peace, and security spread widely in the regions under his control, harvests were plentiful, and trade prospered. These advances led to the adoption of

²³¹ For more detail, see Hawting, Gerald. *The First Dynasty of Islam: the Umayyad Caliphate AD 661-750*. (London: New York: Routledge, 2000); Rosser-Owen, Mariam, *Islamic Arts from Spain*. (London: V&A Publishing, 2010).

²³² Foss, Clive, “A Syrian Coinage of Mu‘awiya”, *Revue Numismatique* 6, 2002, p. 353.

²³³ Grabar, Oleg, *The Dome of the Rock*. (Cambridge: Belknap Press of Harvard University Press, 2006), pp. 60 -61; *The Shape of the Holy: Early Islamic Jerusalem*. (Princeton: Princeton University Press, 1996), pp. 184-186.

material culture as the medium for a new rhetoric of rule.²³⁴

‘Abd al-Malik’s Umayyad successors undertook several building projects throughout Greater Syria (characteristics of some Umayyad buildings will be discussed in the next chapter). The most important caliph, who played a leading role in encouraging development projects in al-Sham, was Caliph al-Walid b. ‘Abd al-Malik. Al-Walid constructed several important mosques such as the Umayyad Mosque in Damascus, al-Aqsa Mosque in Jerusalem, and the Mosque of the Prophet in Medina. He also renovated all the main pilgrimage routes in Arabia and established many buildings and *quṣūr* like Qasr al-Burqu‘, the Qasr at Minya on Lake Tiberias, the Palatial Complex in Jerusalem, Qasr al-Kharana, and ‘Anjar.²³⁵

Also, among the most active Umayyad caliphs was Hisham b. ‘Abd al-Malik. Hisham invested a great deal in building roads and towns and establishing markets, khans, and watering facilities along the ways leading to and from al-Sham. Hisham’s name is associated with many buildings and sites in al-Sham such as Khirbat al-Mafjar in Palestine, Qasr al-Hayr al-Gharbi, Qasr al-Hayr al-Sharqi, and the congregational mosque of Jarash, Qasr Qastal, and Qasr al-Hallabat in Jordan.²³⁶ In addition, during the reign of Crown Prince al-Walid b. Yazid, later Caliph al-Walid II (r. 743-744) four famous buildings were established in Jordan: Qasr al-Mshatta, Qasr Tuba, and Qasr Bayir.²³⁷

²³⁴ Hoyland, Robert, “New Documentary Texts and the Early Islamic State”, *Bulletin of the School of Oriental and African Studies* 69.3, 2006, p. 400.

²³⁵ Ibn al-Faqih, Ahmad b. Muhammad, *Mukhtaṣar Kitāb al-Buldān*. (Leiden: Brill, 1885), pp. 106-107; Creswell, *A Short Account*, pp. 91-126; Milwright, *An Introduction*, p. 28; Khamis, Elias, “Two Wall Mosaic Inscriptions from the Umayyad Market Place in Bet Shean/Baysan”. *Bulletin of the School of Oriental and African Studies* 64/2, 2001, p. 171.

²³⁶ Al-Mas‘udi, *Murūj al-Dhahab*, vol. 3, p. 170; Creswell, *A Short Account*, pp. 135-178; Genequand, Denis, “From ‘Desert Castle’ to Medieval Town: Qasr al-Hayr al-Sharqi (Syria)”. *Antiquity* 79, 2005, pp. 350-361; Walmsley, Alan. “The Umayyad Congregational Mosque of Jarash in Jordan and its Relationship to Early Mosques”. *Antiquity* 79, 2005, pp. 362-378; R. W. Hamilton and Oleg Grabar. *Khirbat al-Mafjar: an Arabian Mansion in the Jordan Valley*. (Oxford: Oxford University Press, 1959).

²³⁷ Creswell, *A Short Account*, pp. 179-214; Grabar, Oleg. “Umayyad Palaces Reconsidered”. *Ars Orientalis* 23, 1993, pp. 93-108; Fowden, Garth. *Qusayr ‘Amra: Art and the Umayyad Elite in Late Antique Syria*. (University of California Press: Berkeley and Los Angeles, 2004).

In general, the Umayyads left a legacy whose multiple layers of meaning were of value to Islamic cultural history. The Umayyad period was characterized by innovative building activity, especially in al-Sham, where numerous religious and secular edifices were built within an urban context and in the countryside.

This legacy has been the main subject of some specialists who have doubted as to whether there was an architecture that can be called “Islamic”, and if so, what did it mean and what were its main characteristics. Some of them consider Umayyad architecture an outgrowth of the architectural traditions of the Late Antique and Christian Mediterranean world and see Byzantine influence as essential to the growth of Umayyad architecture. They perceive Byzantine effects on Umayyad architecture as resulting from early Islamic conquests that brought the nascent Islamic empire into direct contact with diverse cultures and that the early Islamic secular art in Syria and Palestine illustrates Late Antique and not new Islamic art. They also believe that the ancient Graeco-Syrian schools of Antioch, Damascus and Jerusalem as well as Persian schools must have been able to supply the Arab patrons with workmen familiar with the old tradition. Thus, the mixture of classical, local Christian, and Iranian themes appeared in early Islamic architecture and decoration. Consequently, early Islamic art is primarily the art of those lands conquered by the Arabs in the 7th and 8th centuries; therefore, this kind of art in Islamic lands should not be regarded as something new.²³⁸

In fact, many great buildings that were built under patronage of several Umayyad caliphs bear numerous examples of Umayyad iconography and paintings that reflect obvious external influences: such as the human figures in Khirbat al-Mafjar, which appear nude above the waist and may have represented dancers and attendants at the royal court. These influences were adopted by the patron of the building to express his ideas and his secular tendency. These

²³⁸ Grabar, Oleg, *The Formation of Islamic Art*. Revised and expanded edition. (New Haven: Yale University Press, 1987), pp. 43-71;” Umayyad Palaces Reconsidered”, p. 94; Allen, Terry. *Five essays on Islamic art*. (Manchester: Solipsist Press, 1988), pp. 1-4.

external influences were brought into Islamic lands and were adopted by Muslims patrons. Scholars commonly assume that the immense booty collected by Muslims throughout the East was sent to Syrian centers of government, where Muslims imitated what they had brought on the walls of their palaces. Or perhaps these external influences were brought into Muslims by objects that sent as tribute or as gifts.²³⁹

Umayyad architecture was a mixture of motifs prevalent in Byzantine and Sassanian art and architecture, and this combination of ancient artistic legacies stimulated the first beginnings of Islamic arts and architecture. Muslims did not hesitate to confer many distinctive characteristics on Islamic Art and architecture. They created an architectural and artistic tradition that would be compatible with the requirements of their religious message and express the spirit of Islamic culture.²⁴⁰

4. Archaeological Evidence of the Abbasid Period (750-1258)

The Abbasids came to power by overthrowing the Umayyads in 750, thus shifting the focal point of Islamic political and cultural life eastward, from Syria to Iraq. The Abbasid caliphs ruled an empire that stretched from the Atlantic to Central Asia. The archaeological evidence improves considerably during the Abbasid period in the 9th, 10th, 11th centuries, becoming far less obscure than that for the 7th and 8th centuries.²⁴¹ Also, the range and quality of the written sources also improves as noted in chapter 1.

A large number of monuments survives from various Abbasid provinces in the Islamic world, which can be used to reconstruct the vibrant architectural record over time. Physical evidence from the Abbasid period is plentiful, extending across large parts of the Muslim world.

²³⁹ Grabar, *The Formation of Islamic Art*, pp. 132-177; “Umayyad Palaces Reconsidered”, pp. 96- 97.

²⁴⁰ Grabar, *The Shape of the Holy*, pp.52- 55; Al-Jasmi, Abdullah; Mitias, Michael H. “Does an Islamic Architecture Exist?”. *Revista Portuguesa de Filosofia* 60, 2004, pp. 197–214; Hoffman, Eva “Between East and West: The Wall Paintings of Samarra and the Construction of Abbasid Princely Culture”. *Muqarnas*, 25, 2008, pp. 107-32.

²⁴¹ Robinson, Chase F, “Introduction”. In *The New Cambridge History of Islam*. Volume 1, 2011 pp. 5-6.

A variety of mosques, palaces, and commemorative structures were built in new settlements and in existing towns in the east and west of the Islamic world.²⁴² Moreover, various pilgrimage routes leading to Mecca were given great care during the early Abbasid period. Numerous stations along the pilgrimage routes were supplied with monumental architecture and important utilities for the comfort of pilgrims and travelers as shown in previous chapters.

The major architectural activity of the Abbasid caliphs was building large new cities. Many Abbasid caliphs established a variety of cities that served as cultural and commercial centers of the Islamic world. For example, in 762 the second Abbasid caliph, al-Mansur, established Baghdad, the Round City or City of Peace (*Madīnat al-Salām*). The Round City was, in fact, an administrative center of the Abbasid Empire, consisting of three architectural elements: the outer fortifications, an inner residential area of symmetrically arranged streets, and the vast inner courtyard where the Caliph's mosque and residence were situated.²⁴³

In 771-772 the Abbasid caliph al-Mansur also built a new city in northeast Syria called al-Raqqā/al-Rafīqa. Al-Mansur built al-Rafīqa for the accommodation of his Khurasan soldiery and as a military headquarters directed against Byzantium, and sent his successor al-Mahdi to al-Rafīqa to supervise its construction. Al-Rafīqa is a massive, horse-shoe-shaped city, built according to the layout of the Round City. It contains walls backed with many massive buttresses, a vast inner courtyard, a congregational mosque, and an extensive extramural industrial and commercial area.²⁴⁴

In the year 796-97, Caliph Harun al-Rashid chose al-Rafīqa for his new royal residence and seat of government. For about thirteen years al-Rafīqa was the capital of an Abbasid empire stretching over a vast area of the world. Under Caliph al-Rashid, al-Rafīqa expanded

²⁴² For more details, see Creswell, *A Short Account*, pp. 229-419.

²⁴³ Lassner, "The Caliph's Personal Domain", pp. 104-106.

²⁴⁴ Heidemann, Stefan, "The History of the Industrial and Commercial Area of Abbasid Al-Raqqā, called Al-Raqqā Al-Muhtariqa". *Bulletin of the School of Oriental and African Studies* 69, 2006, p. 36; Henderson, Julian, "Experiment and Innovation: Early Islamic Industry at al-Raqqā, Syria". *Antiquity* 79, 2005, pp. 130-132.

considerably and continued to flourish into the 9th century. Harun al-Rashid ordered the construction of many palaces north of the city, such as the Peace Palace, the White Palace, and the Hiraqla Palace. Also, viziers and high-ranking officials followed the caliph to his new residence and built palaces of their own.²⁴⁵

Al-Rafiqa was the largest urban complex in the west of Baghdad, until the foundation of Samarra in the 9th century. Samarra was founded by the Abbasid caliph, al-Mu‘tasim in 836 as a site for the court and principal army base, outside of Baghdad, in the wake of troubles between the army and the population of Baghdad. Samarra was called *Surra Man Ra`a* (“He who sees it is delighted”), and popularly *‘Askar* al-Mu‘tasim (“the camp of al-Mu‘tasim”). It can claim to be the largest archaeological site in the world and one of the world’s most famous historic cities. Following al-Mu‘tasim death in 842, the city began to expand rapidly over a period of twenty years up to the death of the caliph al-Mutawakkil in 861, reaching a maximum about 58 km. of buildings.²⁴⁶

Samarra was composed of the Caliphal Palace (in medieval Arabic: *Dār al-Khilāfa*, or as incorrectly stated in most modern literature, al-Jawsaq al-Khaqani), and many large mansions. A central avenue about 70 m wide ran straight for 7 km parallel to the Tigris. The first mosque (now disappeared) and markets were built on the south bank of the valley. On both sides of the avenue were located the cantonments of the military: Iranians and Turks from Central Asia, and the Maghariba, who were Arabs from Egypt. Also, another new congregational mosque (with its famous spiral minaret) was built in Samarra.²⁴⁷

²⁴⁵ Heidemann, Stefan., “The History of the Industrial and Commercial Area of Abbasid Al-Raqq”. pp. 39-40; Henderson, “Experiment and innovation: Early Islamic Industry at al-Raqq”, p. 133.

²⁴⁶ Rogers. J. M. “Samarra: A Study in Medieval Town Planning”. In A. Hourani and S. Stern, eds. Oxford: Cassirer. *The Islamic City*, 1970, p. 129.

²⁴⁷ Northedge, Alastair. “Creswell, Herzfeld, and Samarra”. *Muqarnas* 8, 1991, pp. 77-79; “Remarks on Samarra and the Archaeology of Large Cities”. *Antiquity* 79, 2005, pp.122-123.

Architectural record during the Abbasid period was critical turning point to identify the identity of Islamic architecture and its development. When the Islamic capital moved from Umayyad Damascus to Abbasid Baghdad, the Abbasids somewhat broke the Western Graeco-Roman tradition, which had been dominant under their Umayyad predecessors, so that political and cultural life in the Abbasid period shifted toward the traditions of the Eastern (Persian, Sassanian) heritage. The Abbasids did not completely cut their relationships with the Mediterranean heritage and the Umayyad tradition. Eventually, they succeeded in creating a distinctive (Abbasid) identity distinguished by unique architectural motifs and methods, which carry special humanitarian and social function, came through integration, interaction between diverse cultures during different periods and realms.²⁴⁸

In fact, what happened during the Abbasid period was not merely a powerful political order, but a hugely creative cultural moment. Empire-building unleashed several processes, particularly a measure of political, social and economic integration, which resulted from a military-administrative system. This led to the production of high culture on a massive scale. However, by the 10th century, there were regions in the west of the Islamic world ruled by several independent dynasties: the Tulunids, Aghlabids, and Idrisids. In addition, there was the rise of the Fatimid Ismailis in North Africa and Egypt. Consequently, despite the disintegration of this unified state (which began in the middle of the 9th century and accelerated during the 10th), diverse architectural styles appeared and enormous cultural accomplishments were achieved.²⁴⁹

²⁴⁸ Hoffman, "Between East and West", pp. 118-119.

²⁴⁹ For further information about the development of Abbasid architecture, see Creswell, *A Short Account*.

In conclusion, there is a wide range of architectural evidence to be found in the Islamic lands during the Umayyad and Abbasid period. These multiple monuments expressed continuities with themes and styles from the diverse Greco-Roman and Sassanian traditions and the deliberate integration of these legacies (as we will see in chapter 6 when talking about some archaeological elements in al-Juhfa). In some instances, Muslim patrons may have used specific styles to express particular ideological and political messages.

There is no doubt that early Muslims did break away from the pre-Islamic world. The early Umayyad and Abbasid empires succeeded in the “active integration” of previous varied cultural traditions, particularly during the Abbasid period. The Abbasids, of course, actively integrated with the pre-Islamic traditions but as part of a much larger theme. This brilliant Abbasid synthesis caused the creation of a unique Islamic character in various fields of life (architecture, writing, translation from foreign sources, literature, and poetry). The cultural richness that resulted is one of the most striking features of the early Islamic tradition, and one of the major intellectual movements in human history.²⁵⁰

²⁵⁰ Hoffman, “Between East and West”, pp. 107-108, pp. 118-119.

Chapter 6

A Comparative Analytical Study of the Key Architectural Elements in al-Juhfa

1. Introduction

2. Comparative Analytical Study

Dwellings

Fortifications

Water Supply

Building Materials

1. Introduction

Some early geographical sources during the 9th and 10th century (as we saw in chapter 2) describe al-Juhfa as a complete Islamic *madīna* (literally a town or a city), featuring developed architecture planning.²⁵¹ Definitions of what constitutes an Islamic *madīna*, differ from one source to another. Some Arabic dictionaries and geographic sources referred to many definitions of the Islamic city, for example, Yaqut al-Hamawi (d. 1229) in his dictionary states that the city is defined as a *miṣr*, which means a large area where houses, markets, and other public facilities are built.²⁵² Qazwini (d. 1283) mentions that a city is the vast place where a group of people live. This place is surrounded by a wall that is tightly built and contains a place dedicated to the ruler, the houses of the inhabitants, and many facilities such as a congregational mosque, a market, and a number of water sources.²⁵³ Ibn Manzur (d. 1331) in his famous dictionary *Lisān al-‘Arab* indicates that a city is a large fort that is built on a large area, and every site where a large fort is built is defined as a *madīna*.²⁵⁴ In addition, al-Fayruzabadi (d. 1414) defined the city from a social perspective, saying that the *madīna* is equivalent to the nation (*umma*).²⁵⁵

All the above definitions are based on material, administrative, and social criteria that have significance related to urban standards that distinguish the city from other settlement centers. The Islamic city is characterized by great size, the existence of many structures and facilities associated with the lives of people, and strong fortifications to protect the population, most notably the fort and the wall. It was necessary, therefore, to have a governor and administrative and judicial authority to laws and regulations within the city. As a result, the

²⁵¹ Ibn Rustah, *Al-A‘lāq al-Naḥḥīyah*, p. 156, Al-Istakhri, *Kitāb al-Masālik wa al-Mamālik*, p.21; Ibn Hawqal, *Kitāb Ṣūrat al-Ard*, p. 33, Al-Maqdisi, *Aḥsan al-Taqāsīm fī Ma‘rifat al-Aqālīm*, pp. 77-78.

²⁵² Yaqut al-Hamawi, *Mu‘jam al-Buldān*, vol. 5, pp. 137-143.

²⁵³ Qazwini, Zakariya b. Muhammad, *Āthār al-Bilād wa-Akhhbār al-‘Ibād*. (Beirut: Dar Sader, 1960), pp. 7-8.

²⁵⁴ Ibn Manzur, *Lisān al-‘Arab*, vol. 13, pp. 55-56.

²⁵⁵ Al-Fayruzabadi, Majid al-Din Muhammad, *Al-Qāmūs al-Muḥīt wa-al-Qābūs al-Wasīf*. (Cairo: Dar al-Hadith 1989), vol. 4, p. 195

Islamic city had a wider dimension than a mere residence. It reveals a planned vision addressing various functional aspects.²⁵⁶

However, describing al-Juhfa as a *madīna* rather than a small settlement with a minimal number of functions may raise some questions about the possibility of interpreting al-Juhfa as a real urban entity (an Islamic city). Indeed, we have an early example that may help greatly in interpreting this matter, as described below.

Qasr al-Hayr al-Sharqi, located in Syria, includes two palatial enclosures—one large, the other small. The larger enclosure is situated 42 m west of the smaller one. It is an immense square, measuring 167 m on each side. It contains four gates and a central courtyard, which is surrounded by an arcade. A large rectangular and roofed water cistern is located in the middle of the courtyard. It also includes six large dwellings, several smaller dwellings, an industrial unit, an administrative unit, and a mosque with a square minaret. An inscription found on a pier of the mosque (now lost) mentioned the foundation of the larger enclosure by the caliph Hisham b. ‘Abd al-Malik in 110/728-29 and described it as a *madīna*. The most logical interpretation of the word “*madīna*” in the inscription is that it related not only to the foundation of the larger enclosure, but to the foundation of the whole site, including the small enclosure and numerous buildings that still remain unexplored. Therefore, the whole Qasr al-Hayr al-Sharqi site can be interpreted as a new urban center with several urban functions.²⁵⁷

Based on the example of Qasr al-Hayr al-Sharqi, the wider interpretation of the word “*madīna*” as noted above, permits al-Juhfa to be seen as a central urban site and a real city with a number of functions. In other words, the designation is not principally related to the scale of the development or the size of the population. The characteristics of the early Islamic city’s urban

²⁵⁶ Abu-Lughod, “The Islamic city—historic myth, Islamic essence and contemporary relevance”, pp. 155-176.

²⁵⁷ Genequand, “From 'Desert Castle' to Medieval Town”, pp. 351-355.

plan apply substantially to the site of al-Juhfa. It occupies a large area of land and consists of various architectural features, such as substantial perimeter wall around the residential area, a fort in the southeast corner of the site, a number of houses and architectural units, a network of narrow streets, a variety of water sources, and other structures, as yet unexplored.

However, it is difficult to conduct a detailed comparative study of all the architectural features in al-Juhfa and accurately define their functions based solely on the foundation plans visible on the surface of the site. This would require conducting comprehensive archaeological excavations and investigation of all the buildings on the site. However, the following is a detailed comparative study of the main urban components in al-Juhfa that were discovered during the archaeological survey and excavation, such as dwellings, fortifications, water supply, and building materials.

This comparative study will be based on comparing these architectural elements with their counterparts in the Arabian Peninsula, especially the architecture of Islamic cities located on the main pilgrimage routes. These sites are highly important to our understanding of al-Juhfa due to the proximity of the inception of these sites, which were built by Muslim patrons apparently for the same purpose: namely to serve as a main station for pilgrims and travelers.

Consequently, one should regard al-Juhfa as a sister or twin city to many of these sites. Comparative study will also shed light on similarities and differences between the architecture in al-Juhfa and that located outside the Arabian Peninsula, particularly in the Levant. It is hoped that this study will provide us with more information about the architectural elements in al-Juhfa in general; its architectural planning, building techniques, main functions, its origin and history, and the extent of mutual impact and active interaction between various cultures.

2. Comparative Analytical Study

Dwellings

As mentioned earlier, a complete residential area was discovered in al-Juhfa. It was built of black basalt stones and measures 200 m from north to south and 150 m from east to west. Most architectural units are medium-sized, some regular and others, irregular. In addition, there are some large architectural units. Indeed, residential units in al-Juhfa represent the most important places for the activity and social life of the population. They are an important factor in providing us with much information about the architectural planning used in building houses. The dwellings played an important role in the life of the Muslim community and had a special and distinctive design. Below we will highlight the most important planning features that were discovered during the survey and archaeological excavations.

During the archaeological survey of al-Juhfa site, some large architectural units were discovered, most notably the unit located in the north-west of the residential area. Based on the plan of this unit we may be able to determine the general framework for the planning of some of al-Juhfa's buildings. As shown previously, the unit is located in the northwest of the residential area, and has five rooms connected to each other, overlooking an external rectangular courtyard (Fig 4. A). The presence of rooms built around an external courtyard may suggest that we are in front of a type of dwelling that was widely known in Islamic architecture and dominated the planning of houses and palaces in various regions of the Islamic world. The planning of many Umayyad and Abbasid palaces in the Levant is similar to that in the unit discovered in al-Juhfa. For example, two Umayyad palaces are located in Jordan: Qasr al-Kharana, dated to 710; and Qasr al-Mshatta, dated to 744. Each contains an open, rectangular courtyard. At the long sides of each courtyard are two adjacent rooms with two medium-sized entrances (Fig 15. A, B).²⁵⁸

²⁵⁸ Creswell, *A Short Account*, pp. 96-104, 201-207, 248-257.

The Abbasid structure, Qasr al-Ukhaidir in Iraq (dated to 778) consists of residential units overlooking an open courtyard almost square in shape. On opposite sides of the courtyard are groups of three units. All three units being directly open to the courtyard and have medium-sized entrances (Fig 16. A).²⁵⁹ In addition, during the reign of the caliph al-Mutawakkil, in the 9th century, a wide range of buildings was constructed in Samarra using the same layout. For example, the site of al-Istablat, located 13 km south of modern Samarra, consists of many residential houses built in a vast area measuring 1,721 x 575 m. Some of these houses contain courtyards with groups of rooms (Fig 16. B).²⁶⁰ Moreover, many dwellings in Fustat, dating back to the Tulunid period (868-905), share the same planning feature of an open courtyard surrounded by residential units containing entrances leading to the courtyard. The shape of the courtyard in these dwellings is of two types: a square (or near-square) shape, which is the most common in Fustat; and a less prevalent rectangular shape (Fig 17. A).²⁶¹

Regarding the Abbasid sites that are located on the main stations of the pilgrimage routes, a group of 9th-century houses there have a courtyard layout. For example, many houses with rooms that overlook an external courtyard were discovered at the al-Rabadha station on the Zubayda route and at al-Mabiyat on the Syrian route (Fig 17. B; Pl 23. A).²⁶² However, this plan (of a courtyard surrounded by rooms on all sides) had been known in Arabic architecture since the pre-Islamic period. Archaeological excavations revealed several models of this type of Arabic house in certain areas of the Arabian Peninsula such as Saudi Arabia, Yemen, and Oman.²⁶³

²⁵⁹ Creswell, *A Short Account*, pp. 248-257.

²⁶⁰ Northedge, *The Historical Topography of Samarra*, pp. 200-203.

²⁶¹ Shafi'i, Farid, *Arabic Architecture in Islamic Egypt*. (Egypt: General Egyptian Book Organization, 1994), pp. 227-231.

²⁶² Al-Rashid, *Al-Rabadha*, p. 56; Mu'ayyal, "Report on Excavations at al-Mabiyat Site", pp. 37.

²⁶³ Al-Ansary, Abdulrahman, *Qaryat al-Faw: A Portrait of Pre-Islamic Civilization in Saudi Arabia*. (Riyadh: University of Riyadh, 1982), pp. 21-22, 40-41.

The plan of rooms built around a courtyard had been a key element in the planning of dwellings since pre-Islamic period. During the early Islamic period, this type of planning dominated the design of many dwellings in various Islamic cities, including al-Juhfa. The open courtyard plan made for good ventilation and adequate lighting, and the courtyard was an important gathering point for family members.

On the other hand, the rooms and the courtyard entrances of the architectural unit discovered at al-Juhfa are not visible now. They seem to be buried under the sand and require further excavation. However, as noted above, the entrances of the rooms in the residential units are usually regular, which directly allow entry and exit to the courtyard, and most are medium-sized. As for the entrance to the courtyard, it may be regular and medium-sized (about 1 m wide), overlooking the public street and directly leading to the courtyard as in many of the palaces and houses at Islamic sites mentioned above.

In contrast, the entrance of the courtyard may be of a special and distinctive type. This special type was designed in a bent or broken shape in order to prevent passers-by and the curious from seeing the inside of the courtyard. Therefore, if anyone standing outside the front door wanted to look or enter the courtyard, they had to first take a left- or right-angle turn, walk along a short corridor, then turn again at the end of the corridor to enter the courtyard of the house. Besides providing privacy to the residents of the house through this type of entrance, it was also an important factor in strengthening the defense of the large house in case of an attack. The aggressors would have found themselves besieged between two walls in a narrow corridor. Among the earliest examples of bent entrances are those described in the Round City of Baghdad during the 8th century.²⁶⁴ They are also seen in some Islamic houses in al-Mabiyat and Fustat during the 9th and 10th century.²⁶⁵ (Pl 23. A).

²⁶⁴ Creswell, *A Short Account*, pp. 10-11.

²⁶⁵ Shafi'i, *Arabic Architecture*, pp. 433-435; Mu'ayyad, "Report on Excavations at al-Mabiyat Site", p. 153.

Consequently, the houses in al-Juhfa may contained some bent entrances, especially as al-Juhfa served as a *Mīqāt* and main station to receive many pilgrims and travelers from different Islamic countries. The population of al-Juhfa may have needed such entrances for privacy and safety.

While tracing building foundations during the archaeological survey of al-Juhfa, we observed that the main entrances of the houses were not restricted to a certain geographical direction or oriented to directions that may have suited certain environmental conditions of the time. Many entrances were constructed from all four directions, East, West, North and South.

We also noted that the houses were largely adjacent to each other and sharing walls. However, may be there are some reasons that helped to construct houses next to each other in al-Juhfa—for example, security reasons. Constructing houses close together hampers an enemy's attack. As the residential area was surrounded by wall, its size was limited, which may have been another reason houses were built close together. It may also be directly related to social life. Building houses close together increases social links within the population and facilitates family contacts. Building the houses adjacent to each other are a common feature in many cities located on pilgrimage routes, most notably al-Rabadha and al-Mabiyat during the 9th and 10th century.²⁶⁶

Furthermore, the houses in al-Juhfa contain irregular foundations, indicating that the streets leading to these houses were winding as in the case of Fustat, mentioned earlier. Therefore, we can say that al-Juhfa's plan did not take into account a clear geometric system in the planning and construction of streets converging at right angles—as, for example, in the orthogonal planning in the 8th-century site of 'Anjar. (Fig 18. A). However, despite the irregular layout of al-Juhfa, it seems that the engineers succeeded in making the houses' courtyards in geometrical shapes—as we have seen in the large architectural unit mentioned above, which

²⁶⁶ Al-Rashid, *Al-Rabadha*, pp. 56-60; Mu'ayyad, "Report on Excavations at al-Mabiyat Site", pp. 153-155

came in a rectangular shape.

During the excavation of al-Juhfa's residential area, an architectural unit was discovered in trench T1 (Fig 12). It was built of basalt stones and contains a regular entrance (not curved). It was also mostly designed for cooking purposes. This unit, as mentioned earlier, may be a component of a larger architectural unit indicated by the presence of some adjacent stone foundations. Thus, it is likely that the unit is located next to some other rooms and overlooks an open courtyard as in the large architectural unit discovered during the survey.

The height of this unit's wall is 2.65 m and its thickness, 60 cm. These measurements indicate that the unit was built on one floor. In fact, although the thickness of most dwellings' walls is between 60 and 90 cm, which probably permits them to bear more than one storey, we have not yet discovered any architectural evidence indicating that the houses of al-Juhfa had upper floors. Some other Islamic sites conform with al-Juhfa in having only one floor, the most important of which are al-Rabadha and Faid.²⁶⁷ However, several Islamic cities, the most important of which are al-Mabiyat and Fustat, contain many houses built on more than one floor. House walls in these two cities are thick—exceeding more than 1 m— which permitted them to support more than one floor.²⁶⁸ Perhaps the reason for constructing the houses of al-Juhfa from one floor is the high cost and the great effort required for construction in stone (the main building material in al-Juhfa), unlike at al-Mabiyat and Fustat, where the buildings were constructed mainly in brick, which requires less cost and effort.

As for the roofing system used to cover this unit and the others in the residential area, there are three possibilities.

²⁶⁷ Al-Rashid, *Al-Rabadha*, pp. 48-61; Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faid, pp. 37-43.

²⁶⁸ Mu'ayqal, "Report on Excavations at al-Mabiyat Site", pp. 28-29; Shafi'i, *Arabic Architecture*, p. 433.

First, the roofing may have been done using black basalt stones, as there was much stone rubble scattered on the trench surface before excavation. (During the excavations, many more stones were discovered.) The best-known site to use basalt stone to roof buildings is the late-Roman/Byzantine/Umayyad, Umm al-Jimal, in northeastern Jordan. Hard basalt stones were widely used in Umm al-Jimal as the main building material. Door and window frames, sills and lintels, are all of basalt. The use of durable basalt in building and roofing helped maintain many buildings in an amazingly good state of preservation: some of the residential two- to three-storey high complexes still stand.²⁶⁹

Second, is the possibility that al-Juhfa's houses were roofed with brick. Some medium-sized brick pieces were found scattered on the site surface and within the archaeological layers: these pieces may have fallen from the roofs. Brick (as we will see later) was used in large Islamic cities during the early Islamic period. Some houses in the famous sites of al-Rabadha and al-Mabiyat, both near al-Juhfa, were roofed with brick.²⁷⁰ So, brick may have been the roofing material used in al-Juhfa, just as in these nearby sites.

The third possibility is that the roofs may have been built from wood, as small and medium-sized pieces of wood were discovered within the archaeological layers. These may be the remains of roofing materials; although, as yet, this is uncertain. The use of wood in the roofing of houses may have been an important factor in the speed of destruction of the roofs over time, as wood is a perishable material due to moisture and chewing insects. The most prominent contemporary Islamic site to use wood in roofing its buildings is al-Mabiyat, where some thick wood rafters were found in the site. Some small, circular holes were also discovered in the walls. These holes contain some remains of wood pieces, indicating that wood was used in roofing

²⁶⁹ De Vries, B., *Umm El-Jimal: Gem of the Black Desert*. (Amman: Al-Kutba Publishers, 1990), pp. 17-20.

²⁷⁰ Al-Rashid, *Al-Rabadha*, pp. 57-61; Mu'ayqal, "Report on Excavations at al-Mabiyat Site", p. 39.

some buildings.²⁷¹ Another site that used wood for roofing is Fustat, where pieces of palm stems were found in some houses that were most likely roofed with this material—suggesting that the use of wood in roofing was common at the site.²⁷² In any case, proving what type of roofing material was used at al-Juhfa will entail extensive excavation to reveal more details.

Fortifications

Fortifications are one of the most important characteristics of Islamic cities that were established for defence and protection. Al-Juhfa was protected by two important types of fortifications: the perimeter wall, and the fort. The following is a detailed and comparative study of these two types.

The Perimeter Wall

The ruined wall now surrounds the residential area on all sides in semi-regular shape. It is built of black basalt stones, and seems to have been huge, with a thickness of approximately 1 m. We cannot give more architectural and historical details about the wall in its current dilapidated condition. It needs comprehensive exploration. However, we can perhaps say that al-Juhfa was one of several important walled cities in the Levant and the Arabian Peninsula, especially on the main pilgrimage routes.

A number of important Islamic cities were built and walled for security purposes. The first such city, Wasit in Iraq, was built during the Umayyad period at the beginning of the 8th century. Wasit was established by the governor of Iraq, al-Ḥajjaj b. Yusuf al-Thaqafi (r. 694-714) as a main base for his soldiers from the Levant. It featured a huge wall containing four gateways and supported by circular towers.²⁷³

²⁷¹ Al-‘Umair, Abdullah et al, “Report on the Excavations of the Islamic City, Al-Mabiyat, First Season”. *Atlat* 19, 2004, p. 243.

²⁷² Shafi‘i, *Arabic Architecture*, p. 445.

²⁷³ Creswell, *A Short Account*, pp. 40-43.

In addition, one of the finest examples of walled Islamic cities is Baghdad (the Abbasid city mentioned previously). It took the form of two concentric walls separated by an inter-vallum and surrounded by a broad moat. The inner wall, since it was the protective wall of the city, was the larger of the two and was flanked by roundels. The outer wall had four gateways and arcades providing access to the residential area and central court.²⁷⁴ In addition, the city of al-Rafiq (another Abbasid city as shown previously) consists of double walls separated by an inter-vallum, surrounded by a moat from the southern side adjacent to the river. The outer wall was backed with many massive buttresses and four gateways permitting access to the courtyard.²⁷⁵

As for Islamic walled cities on the pilgrimage routes, important examples are found in the excavations of some of the main stations on these routes, where some walls were discovered, dated to between the 7th century and the 10th century. For example, Ayla on the Egyptian route, excavations uncovered Muslim settlement to the south of the Byzantine city, dates to 7th century. The settlement of Ayla is enclosed by a sandstone wall measuring 167 x 134 m. The wall is 2.60 m thick and 4.50 m height. It contains a series of U-shaped towers with a single gate placed in the center of each wall and flanked by semi-circular towers.²⁷⁶

Another example of a walled city on the pilgrimage routes al-Rabadha (on the Zubayda route) contains a residential area surrounded by the remains of a huge wall in a square regular shape. It is built of two adjacent walls of sun-dried bricks. The wall measures about 69 x 57 m and its thickness is about 2.20 m. The wall is also supported from the outside by circular towers in the corners, and half-circular towers along its sides.²⁷⁷

²⁷⁴ Lassner, "The Caliph's Personal Domain", pp.104-106.

²⁷⁵ Heidemann, "The History of the Industrial and Commercial Area of Abbasid Al-Raqq", p. 36.

²⁷⁶ Kennedy, Hugh, *Muslim Military Architecture in Greater Syria: from the Coming of Islam to the Ottoman Period*. (Leiden; Boston: Brill, 2006), pp. 61-62.

²⁷⁷ Al-Rashid, *Al-Rabadha*, pp. 53-56.

A third example is Faid (also on the Zubayda route). Some early geographical sources indicate that the residential area in Faid was surrounded by a wall containing iron gates and a trench dug at the beginning of the Abbasid period.²⁷⁸ However, excavations carried out in Faid have not yet discovered the remains of this wall. Faid was affected by the movement of population and modern urban planning and was divided into two parts, north and south, which led to the disappearance of most of the features of the residential area, including the wall.²⁷⁹

A fourth example is al-Mabiyat on the Syrian route. Archaeological excavations in this city revealed the remains of a huge wall surrounding the residential area in an irregular shape. The wall was built of sun-dried bricks, and the interior side was covered by a layer of clay and stucco. It measures about 800 x 800 m and its greatest thickness is 1.5 m (in other parts, less). The wall contains two gates, on the north and east sides. It was built without towers, but later some baked-brick pillars were added to support the internal wall.²⁸⁰

In fact, city walls are a prevalent defensive feature of the Late Antique world before the advent of Islam. From the beginning of the 4th century, fortified towns became more common in different parts of the Roman Empire. During the early Islamic period many cities in the Islamic world adopted this defensive feature. Some Roman settlements provide evidence for the construction of defensive walls, such as Umm al-Jimal where excavations revealed a town measures 800 x 500 m and was surrounded by a perimeter wall with a gate, date to the 2nd century²⁸¹. Also, the important administrative center on the Euphrates, Dura Europos (300 BC-257 AD) was provided with defensive walls.²⁸²

²⁷⁸ Al-Maqdisi, *Aḥsan al-Taqāsīm fī Maʿrifat al-Aqālīm*, pp. 108, 254; Ibn Jubayr, *Riḥlat Ibn Jubayr*, p. 183.

²⁷⁹ Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faid", p. 35.

²⁸⁰ Muʿayyad. "Report on Excavations at al-Mabiyat Site", pp. 28-30.

²⁸¹ De Vries, *Umm El-Jimal*, pp. 18-19.

²⁸² Milwright, *An Introduction to Islamic Archaeology*, p. 32.

In short, the important Islamic cities in the Levant and those located on the pilgrimage routes contained densely populated residential areas served as the heart of a city that was characterized by movement and activity. Thus, these populated areas had to be walled, in order to protect the permanent population. All the cities mentioned above were surrounded by massive walls in different shapes and supported by thick towers and pillars to strengthen the wall. These walls were thick and high to protect the population from external threats, which was a Roman feature in origin.

Many important cities located on the different routes of the Arabian Peninsula were subjected to many hostile attacks, especially during the Abbasid period as seen earlier. This repeated threat had a significant influence on the construction of strong and massive walls surrounding the major and important cities, which expected to be attacked. The construction of walls around these Islamic cities ensured a stable and secure life for the population as we will see shortly when talking about the function of al-Juhfa's fort.

The Fort

The fort is the most prominent architectural building in al-Juhfa (as we noted in chapter 3). Most parts of the fort still stand and are visible. The fort is situated at the southeastern corner of the residential area inside the wall. It is square in shape, built of black basalt stones and clay material, surrounded by four walls and with a square open court. It is also reinforced from the outside by semicircular buttresses at all four corners and in the middle of the fort walls. The interior contains several attractive semicircular arches.

The plan, building technique, and function of al-Juhfa fort is comparable in many regards to some of the Umayyad *quṣūr* (desert castles) in the Levant and to some Abbasid fortresses located on the pilgrimage routes during the early Islamic period. They are reviewed below.

Umayyad quṣūr

Umayyad *quṣūr* appeared during the 8th century across that part of the Near East dominated by the Umayyad dynasty, in what is now Jordan, Palestine, Syria, and Iraq. These intriguing early Islamic *quṣūr* still constitute one of the continuing puzzles of Islamic archaeology today.

There are different opinions regarding the use of these *quṣūr*: they may have been hunting lodges, estate centers, wayside stations and meeting places with the local Bedouins.²⁸³ Next, we will present some important examples of Umayyad *quṣūr* and compare them to the fort of al-Juhfa.

Qasr al-Kharana

Qasr al-Kharana is situated some 65 km east of Amman, in Jordan, and dates to 710. It is a well-preserved square building that measures 36.5 x 35.5 m. The corners of the building are marked by four solid three-quarter-circle towers. The entry gate in the center of the southern facade is flanked by two quarter-circle towers, and a semi-circular interval tower is situated at the middle of each of the remaining facades. Qasr al-Kharana is built of stone rubble with mortar. The structure includes two storeys of residential units arranged around a square courtyard that measures 13 x 13 m. Some residential units' walls contain a group of small semicircular arches erected on colonnettes built of small stones and covered with a thick layer of plaster. The construction techniques of al-Kharana, such as ornamental towers and arrow slits, indicate that al-Kharana was not built for military purposes. The palace quite probably served as a meeting place with the local tribes, to elicit their political support for the Umayyad dynasty (Fig 15. A; Pl 23. B).²⁸⁴

²⁸³ Creswell, *A Short Account*, pp. 91–126, 135–214; Milwright, *An Introduction to Islamic Archaeology*, pp. 34–38.

²⁸⁴ Creswell, *A Short Account*, pp. 96-104.

Qasr al-Hayr al-Sharqi

As mentioned in the introduction to this chapter, Qasr al-Hayr al-Sharqi is located in Syria and dates to 728. It includes one large and one small palace enclosure. The smaller is more like the fort of al-Juhfa. It is nearly square, and its sides are approximately 70 m long. Four circular towers are situated at each corner, and two semi-circular towers on each side. The towers are more closely spaced on the west wall, where they frame the only gate to the palace. This gate is nearly 3 m wide. The entrance leads into a roofed corridor and an open courtyard, measuring 36 m by 28 m. There are two storeys, identical in layout and constructed of hewn limestone blocks alternating with courses of fired brick. Some historians have suggested that the small palace was a residence of Hisham b. ‘Abd al-Malik (Fig 18. B).²⁸⁵

Certain architectural features in the fort of al-Juhfa show some affinity in plan and building technique with the two *quṣūr* described above. For example, the general layout of the fort of al-Juhfa is identical to the square ground-plan of these *quṣūr*. There is also similarity in building materials, as all structures were built of different types of stone. Another similarity is total size. Qasr al-Kharana measured 1,260 m in total, which is not too far to al-Juhfa’s 841 m. However, the total size of Qasr al-Hayr al-Sharqi differs from al-Juhfa fort. In addition, al-Juhfa’s fort resembles the semicircular towers, projected at the corners and walls. Indeed, most Umayyad *quṣūr* are characterized by a square ground-plan and solid semicircular towers, projected at the corners and walls—for example, Qasr al-Burqu‘, Qasr al-Hayr al-Gharbi, Qasr Qastal, Qasr al-Hallabat, Qasr ‘Amra, and Qasr al-Mshatta.²⁸⁶

²⁸⁵ Genequand, “From 'Desert Castle' to Medieval Town”, pp. 350-361.

²⁸⁶ For further information, see Creswell, *A Short Account*, pp. 91-126, 135-214; Hamilton and Grabar, *Khirbat al-Maffar*; Fowden, *Qusayr 'Amra*; Milwright, *An Introduction to Islamic Archaeology*, pp. 34-38.

Another striking similarity in the fort of al-Juhfa is its semicircular arches. We noted, in some rooms of Qasr al-Kharana, a group of small, semicircular arches erected on colonnettes. These arches are similar in design to those in al-Juhfa fort, but they differ in their size. The semicircular arches in Qasr al-Kharana are small, decorating some interior parts of the rooms' walls, while al-Juhfa arches are larger, covering the entire interior walls of the fort.

In fact, semicircular arches appear in many Umayyad *quṣūr*, most notably the Khirbet al-Mafjar. This *qasr* is located in Palestine and dates to 742. It is considered one of the most beautiful and grandiose of the Umayyad *quṣūr* in terms of its stucco wall decorations and mosaic floors. It consists of three main parts: a palace, an ornate bath complex, and an agricultural estate. The main gate of the compound is centrally located on the southern facade of the palace. This facade contains a group of semicircular arches erected on colonnettes at the front of the structure (Fig 19. A).²⁸⁷

In addition, semicircular arches appear in other Umayyad buildings, such as the Umayyad Mosque in Damascus, the al-Aqsa Mosque and the Dome of the Rock in Jerusalem.²⁸⁸ Accordingly, the semi-circular arches in al-Juhfa fort should be taken into consideration in future archaeological excavations because of their potential importance in accurately determining the history of the castle.

Concerning interior structures in al-Juhfa's fort, they may have included some rooms in the courtyard as its counterparts of Umayyad *quṣūr*. However, we have not yet discovered any building during the excavation process. As for the number of storeys in the fort of al-Juhfa, it is likely that it contained more than one storey, to judge by the fort stair that was discovered in the

²⁸⁷ Creswell, *A Short Account*, pp. 179-181.

²⁸⁸ Grabar, "Umayyad Palaces Reconsidered", pp. 93-108; *The Dome of the Rock*, pp.121 -158; Flood, Finbarr Barry, *The Great Mosque of Damascus: Studies on the Makings of an Umayyad Visual Culture*. (Leiden; Boston: Brill, 2001), pp. 114-132.

western wall, as noted earlier.

Abbasid fortresses

With the beginning of the Abbasid period, the building of fortresses spread widely across the Near East, especially along the trade and pilgrimage routes, next to the cities and residential communities. In general, these fortresses had more than a function. They served as the main center for the defense of cities and protected them from enemies. They could function variously as the seat of government and city administration as well as stores of ammunition, supplies, and equipment. These fortresses were also used as a prison for criminals, and as a place to host visiting pilgrims and travelers.²⁸⁹ Some Abbasid fortresses on the pilgrimage routes display various architectural characteristics and designs, notably the fortresses located on the Zubayda route. Four examples of these fortresses will be discussed below.

The Fortress of al-Rabadha

This fortress is located in the eastern part of al-Rabadha. It is nearly rectangular in shape and has a thick wall built of sandstone, uneven in measurement. The dimensions of the fortress differ slightly from one side to the other. The north side is 19 m long; the south 16.2 m; the east side is 21 m long; and the west 19 m. The fortress wall is supported by circular and semi-circular buttresses placed in the corners and in the middle of each side of the wall. The main side of the fortress is the northern side, where the main entrance is located in the middle of the wall. The entrance is surrounded by two semi-circular buttresses and leads to a rectangular corridor and from there to the fortress courtyard. The courtyard contains thirteen rooms spread out on the fortress's sides. Each room measures approximately 2.30 x 2.30 m. Archaeological excavations conducted in these rooms and in the fortress courtyard revealed ground tanks for storing water,

²⁸⁹ Al-Rashid, *Darb Zubayda*, pp, 392-393.

the remains of ovens for cooking, and small stores for keeping grain. In addition, the fortress contains a tower located in the northeast corner for surveillance and defense. This tower, which is now crumbling, had a hexagonal shape and appears to have consisted of two floors and a stair (Fig 19. B).²⁹⁰

The Fortress of Faid

This is located about 250 m east of the residential area of Faid. Archaeological excavations revealed the remains of a large fortress built of black basalt stones. The fortress consists of an external and internal wall. In the area available between the two walls, some architectural structures such as the well and water tanks were established. The outer wall has the shape of an irregular polygon and contains semi-circular buttresses at the corners and in the middle of the walls. It surrounds an area of up to 20 x 80 m. As for the inner wall, it has been identified as the fortress and is surrounded by semi-circular buttresses. The fortress, which takes almost a square shape, measures 30 x 40 m. It is now in poor condition and contains the remains of wall foundations representing many architectural units that were used for living, and for storing food. The fortress also contains some water installations such as basins and wells that fed the inhabitants (Fig 20. A).²⁹¹

The Fortress of al-Mabiyat

The fortress of al-Mabiyat was built on a small mountain at the northwestern corner of the city wall. The fortress forms an irregular polygon. The foundations of the fortress walls were constructed of large sandstone blocks, while its upper walls were constructed of bricks. Some of the remains of the fortress are still visible; but further exploration and study is needed to find

²⁹⁰ Al-Rashid, *Al-Rabadha*, p. 48.

²⁹¹ Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faid", pp. 35-38.

out many details (Fig 20. B).²⁹²

The Fortress of al-Kara‘

This fortress is located on the Zubayda route. It is run-down now, but from its architectural remains, it appears that the fortress was built of volcanic basalt stones in a square shape with dimensions of 55 x 55 m. The remains also show that the fortress was supported by circular and semi-circular buttresses at its four corners and in the middle of the walls. The main gate of the fortress seems to have been in the middle of the northern wall. It is clear that the wall foundations inside the fortress represent the remnants of many rooms. On the north-eastern side of the fortress there are the remains of the foundations of a rectangular mosque, measuring about 10 x 12 m (Pl 24. A).²⁹³

Based on these four examples of Abbasid fortresses mentioned above, we note that the fort of al-Juhfa resembles these fortresses in terms of their semi-circular towers projecting at the corners and the middle of walls, implying that al-Juhfa’s fort shares this architectural feature with Umayyad *quṣūr* and Abbasid. In addition, there is a similarity between the building materials of these fortresses and the fort of al-Juhfa. All were built of stones (whether sandstone or volcanic), except al-Mabiyat fortress, where the foundations were built of sandstone and the rest, of brick. However, al-Juhfa fort differs in its square layout from two of these fortresses, namely al-Rabadha and al-Mabiyat—the first characterized by a semi-rectangular, and the second by an irregular, polygon layout. As for the layout of Faid and al-Kara‘ (semi-square and square, respectively), they show great similarity with the square layout of al-Juhfa’s fort. This comparison may indicate that the Abbasid fortresses of the pilgrimage routes have different total measurements from al-Juhfa fort. The closest in measurements to al-Juhfa is the Faid fortress,

²⁹² Mu‘ayqal, “Report on Excavations at al-Mabiyat Site”, pp. 29-30.

²⁹³ Al-Rashid, *Darb Zubayda*, p. 267.

which is 1,200 m. sq. In fact, the similarity between the layout of the Faid fortress (its measurement, and its construction of volcanic stones), and that of al-Juhfa fort, confirms what some preliminary sources have reported: that Faid was similar to al-Juhfa in terms of architectural features.²⁹⁴

As for the semicircular arches in al-Juhfa's fort, they show a great similarity with the semicircular arches in Qasr al-Ukhaidir, in Iraq (770s). Al-Ukhaidir is located roughly 50 km south of Karbala. It is large, rectangular fortress comprising a primary hall, a mosque, a court of honor, audience halls, and four domestic compounds. It is unique in its architectural wealth and one of the best-preserved palaces of the early Islamic period (Pl 24. B).²⁹⁵

It should be noted here that al-Ukhaidir also contains pointed arches. This kind of arch was most common in the Abbasid period. Many Abbasid buildings contained such pointed arches, including the wall of al-Raqqā and its congregational mosque in Syria (771), the Caliphal Palace in Samarra, Iraq (836), Abu Dulaf mosque in Samarra, Iraq (860), and the Mosque of Ibn Tulun in Cairo, Egypt (877).²⁹⁶ (Pl 25. A). It is believed that these pointed arches originated in Iran. Most historians of architecture call them Persian arches, as it is known that Abbasid architecture adopted and used some Persian ideas, among them the pointed arch. However, with the passage of time, Muslim architects developed various types of semi-circular and pointed arches having both engineering and aesthetic functions and used them in their buildings.²⁹⁷

²⁹⁴ Al-Istakhri, *Kitāb al-Masālik wa al-Mamālik*, p.21; Ibn Hawqal, *Kitāb Ṣūrat al-Ard*, p. 33.

²⁹⁵ Jairazbhoy, R.A, *An Outline of Islamic Architecture*. (London and New York: Asia Publishing House 1972), p.55.

²⁹⁶ Pointed arch is an arch with a pointed crown. For more detail, see Creswell, *A Short Account*, pp. 43-47, 333-338, 367-372, 391- 406.

²⁹⁷ Wadah, Hani Hashem. "The Vaults of the Arab –Islamic Architecture and the Influence of the Abbasid Vault on the Gothic Architecture in the Middle Ages". *Engineering Sciences Series 27*, no. 2, 2005, pp. 195-196.

Umayyad *quṣūr* and Abbasid fortresses as well as our main subject, the fort of al-Juhfa basically resembles Greek and Roman forts (*castrum*, pl. *castra*) in some architectural features. Two examples of these forts are more similar to the fort of al-Juhfa as shown next.

Tylos Fortress (Coastal Fortress)

This fortress is situated in al-Bahrain, east of the Arabian Peninsula. Excavations have shown that the fort was constructed in the 3rd century AD during the Greek period in al-Bahrain or what the so-called Tylos period (300 BC-600AD). It was still in use for around 1000 years until its permanent abandonment during the 13th century. Tylos fortress appears as a stone, square building, with a main enclosure wall measuring 50 m on each side. The building is equipped with four semi-circular towers at the corners (the southeast corner has been destroyed), as well as semi-circular towers in the middle of each facade. In the middle of the east wall are two quarter-circular towers flanking the entrance to the fortress. The interior of the fortress is divided into four architectural quadrants. Each of these built quadrants appears as a dwelling ensemble set around an individual small square courtyard. The building's structure reveals its dual defensive and residential function (Fig 21. A).²⁹⁸

Qasr Al- Bakhra'

The site of al-Bakhra is 21 km south of Palmyra in Syria. It was mainly a late-Roman fort of the Tetrarchate period (293-305). During the Umayyad period, the fort was remodeled into an Islamic qasr through the addition of a new annex. The Roman fort consists of a rectangular structure measuring 152 x 98.50 m. It has eleven towers measuring 10 m in diameter. Four fan-shaped towers projected at the corners and seven U-shaped interval towers were situated at each

²⁹⁸ Kervran, Monik; Hiebert, Fredrik T; Rougeulle, Axelle, *Qal'at al-Bahrain: a Trading and Military Outpost 3rd Millennium B.C. - 17th century A.D.* (Turnhout: Brepols, 2005), pp. 155-162

side of the fort. Two U-shaped towers flanked the main gateway, which was located at the middle of the south-east side of the fort (Fig 21. B).²⁹⁹

In fact, early Islamic fortresses, including the fort of al-Juhfa, resemble Greek and Roman forts in terms of their square and rectangular ground-plans and the towers projected at the corners and on each side of the forts. These elements of planning were a feature of forts during pre-Islamic period. The comparison shows that fortresses during the early Islamic period adopted the basic plan of Greek and Roman forts, particularly for the towers. Greek and Roman forts were characterized by huge towers erected at the corners for purposes of defense and to lend an impression of strength, hardness, and prestige. However, early Islamic fortresses added some alterations in shape and function whereby they focused largely on the aesthetic side rather than the defensive style. The towers became smaller in size, circular and semicircular, and regularly distributed at the corners and along the whole walls of fortresses.

Moreover, the semicircular arches seen in Umayyad *quṣūr* and the fort of al-Juhfa are also attributed to Roman architecture in general. The Romans used huge semicircular arches on a large scale in buildings such as palaces and churches. This type of arch is one of the most important characteristics of Roman architecture throughout the ages. The purpose of the construction of these huge arches is to enlarge building entrances and to reduce the tensile strength of the building itself as well as its aesthetic appearance.³⁰⁰ (Pl 25. B).

The Function of al-Juhfa's Fort

Having discussed the general layout of al-Juhfa's fort and some of its architectural features, let us now consider the question of function. Fortresses located on the pilgrimage routes, next to

²⁹⁹ Genequand, "Al-Bakhra", pp. 225-229.

³⁰⁰ Wadah, "The Vaults of the Arab-Islamic Architecture", pp. 191-192.

cities and residential gatherings, had several functions as shown above. Since the fort of al-Juhfa is located next to a populated residential area, and as al-Juhfa itself was a place to receive pilgrims and travelers (being an important *Mīqāt* and main station on the route of various pilgrims), this would indicate clearly that al-Juhfa may have been under continuous threat by nomads, or by hostile resident powers as mentioned previously. Evidently, the construction of the fort of al-Juhfa was necessary for the care and security of the people and pilgrims in al-Juhfa and to eliminate any potential threat.

To emphasize this defensive function, the history of neighboring cities located on the pilgrimage routes is in many ways comparable to the nature of historical events at al-Juhfa. The majority of these cities had strong fortifications to defend the population and pilgrims. For example, in 906, the Qarmati leader, Zikrawayh attacked convoys of pilgrims and merchants on the Zubayda route, killing men and captured women as seen earlier. He besieged many pilgrim stations for several days, including Faid. Some historical sources indicate that Zikrawayh arrived at Faid and besieged residents and pilgrims who were protected by the Faid fort. Zikrawayh tried over and over again to storm the fort, but his attempt failed and he then left the region.³⁰¹

However, for a military interpretation of the fortresses in cities located on the pilgrimage routes, one should take into account that these fortresses were not designed to resist extensive sieges. The threat against these cities might soon end as happened at Faid. This would suggest that fortresses in cities located on the pilgrimage routes were not only for military purpose, but also served as a residential complex for important people. Consequently, we can say that the fort of al-Juhfa was perhaps intended to accommodate the population's upper classes rather than being solely a military fort, especially as it was built with fine technique, particularly with regard to the interior semicircular arches. This means in principle that the fort was built as a residence

³⁰¹ Al-Ṭabari, *Tārīkh al-Rusul wa al-Mulūk*, vol, 5, pp. 665-668.

as well as for defence, but further research and excavation of the fort are needed to discover more information.

In conclusion, the plan of the fort of al-Juhfa and its building technique are similar to some architectural characteristics of Umayyad *quṣūr* and Abbasid fortresses particularly with regard to the square ground-plan, and semicircular towers projected at the corners and walls. This indicates the application of a standardized style in the construction of early Islamic fortresses dated to the beginning of the 8th century. The style is mainly Greek and Roman in origin.

Indeed, the fortresses of the early Islamic period (including the fort of al-Juhfa) offer important examples of continuity from pre-Islamic to Islamic times. This refers to one aspect of mutual influence and active interaction between different civilizations as seen in chapter 5 of this study. The succession of civilizations on humanity led to the development of knowledge through alteration, coordination, and addition of some architectural elements based on the nature of the identity of each civilization.

Water Supply

Water supply is an essential element in cities and places where people gather. This was especially true in the main stations located on the pilgrimage routes. These stations were usually supplied with different water sources such as wells, cisterns, pools, canals, and dams that were built at the expense of the state (or by benefactors such as the princes and merchants) to serve pilgrims passing along these routes and meeting at many of the stations.³⁰²

During the comprehensive survey at the site of al-Juhfa, two important types of water supply were discovered; the fort pool and the ground canal, as discussed below.

³⁰² Al-Rashid, *Darb Zubayda*, p, 357.

The Fort Pool

This pool was discovered next to the fort on the east side as mentioned early. It is built of black basalt stones in a circular shape. Its diameter is 3.60 m (inside) and 4.18 m (outside), with a wall 58 cm thick. It is now filled with sand, and only the upper parts of its wall are visible. Therefore, it is not possible to know the whole structural characteristics of the pool and compare it with its counterparts.

However, it is important to give an overview of the architectural features of early Islamic pools in the Arabian Peninsula in order to illustrate the picture about the general architectural characteristics of the fort pool in al-Juhfa. During the early Islamic period great care was given to the establishment of water pools, especially in the Abbasid era. Most stations located on the pilgrimage routes were provided with a large number of water pools. For example, more than ninety pools were built on the Zubayda route. These pools were usually built in low places, on flat plains, far from water currents and torrential flood path. Water reached these pools during rainfall, or through side canals and dams extending along the valleys.³⁰³

Most of these pools are buried under the sands, and more architectural details cannot be known without excavation. In general, these pools have certain shapes, the best-known of which are circular, rectangular, and square. For example, a circular pool at Shihiyyat, a rectangular pool at al-Maslah, and a square one at al-‘Aqiq. The size of these pools varies, most attaining 30 m in diameter and some between 50 and 60 m. The thickness of the pools’ walls is about 2 m. As for depth, it is difficult to know as they are full of sand; but based on the pools’ size, the depth varies between 1.5 and 5 m. Some pools have interior semi-circular buttresses and others have semi-square buttresses. These pools are connected by a filter and a surface canal by which rainwater was directed to them. In addition, many pools contained stairs built of stone that lead to the

³⁰³ Al-Rashid, Sa'ad. "Ancient Water Pools on the Pilgrimage Route from Iraq to Mecca and its Counterparts in other Countries". *Atlat* 3, 1979, pp. 66-69.

bottom. The stairs are built either in the middle of one of the pool walls or on one of the corners. The main building material used in the construction of these pools was rock available in the local environment, so we find many pools built with different types of stone such as basalt, granite, and limestone. Mortar was used to bond the stones together and to cover the interior facade of the pools walls, perhaps to prevent water leakage (Fig 22. A).³⁰⁴

Some of the architectural features mentioned above are found in the pool at al-Juhfa, for example, the circular shape. It was likely provided with a surface canal, and the main building material is of basalt stone, using mortar. In addition, the interior facade of al-Juhfa's pool seems to be straight, as with the pools on the Zubayda route. As for its diameter and the thickness of its walls, it appears that al-Juhfa pool shows a clear difference, as it is smaller than its counterparts on the same route. Other features such as the depth, buttresses, filter, and stairs are no longer visible in al-Juhfa pool and need more excavation to determine whether they existed. However, based on some similarities mentioned above, it is likely that the pool of al-Juhfa can be attributed to the early Abbasid period.

The construction of water pools has been known since pre-Islamic times, however. For example, the south of the Arabian Peninsula witnessed many advanced farming systems during the era of the ancient Yemeni kingdoms, such as the Kingdom of Saba, Hadramawt, Qataban, Ma'in, and Himyar. Many stone pools of different sizes and shapes were built in several cities of these kingdoms. such as the pools of San'a', Hamdan, Hadramawt, and Aden.³⁰⁵ There was also great interest in water installations in the north of the Arabian Peninsula during the pre-Islamic period. Nabateans, Romans, and Byzantines built many stone pools in numerous places, such as

³⁰⁴ Al-Rashid, *Darb Zubayda*, pp, 357-362.

³⁰⁵ Harding, Lankester, *Archaeology in the Aden Protectorates*. (London: Her Majesty's Stationery Office 1964), pp. 25-26.

Petra, the Negev desert, Jerash, and Umm al-Jamal (Pl 26. A-B).³⁰⁶

Several of these ancient pools exist to this day and share many characteristics. In addition, some characteristics of these pools are greatly identical to those of pools located on the Zubayda route. Examples of frequent similarities between these pools are as follows.

All the pools are built from stone available in the local environment. They comprise various shapes, such as circular, rectangular, and square. Some pools are large, measuring between 225 and 1.600 sq m. The pools are up to 8-9 m deep, and the thickness of the walls is about 2.5 m. The inside of some pools is straight and covered with mortar. The pools contain stone filters and stairs. In contrast, there are some differences between the pools of the Zubayda route and those belonging to the pre-Islamic period located in the south and north of Arabia. For example, some these ancient pools are terraced inside, unlike the pools of Zubayda route, which are always straight. Some pre-Islamic pools do not have stairs, but rather, internal carved stones that project from the pool wall for people to descend and climb by. Carved stones used as stairs do not occur in the pools of the Zubayda route. Furthermore, the majority of pre-Islamic pools lack internal buttresses, while the pools on the Zubayda route have two kinds of buttress. Some pools in the south and north of Arabia are not built of stones; instead they are completely or partially carved out of the hard rock layers.

In summary, comparison shows that most of the pools from pre-Islamic until early Islamic times resemble each other in terms of size, geometric design, and the presence of stone stairs and filters. This means that the early Islamic pool adopted the model of pre-Islamic pools as a main model in building. It appears a group of skilled builders constructed many of these

³⁰⁶ Kraeling, Carl, *Gerasa, City of the Decapolis*. (New Haven, Connecticut, 1938), pp. 159-167; Glueck, Nelson, *Deities and Dolphins: The Story of the Nabataeans*. (New York: Hardcover 1965), pp. 5-6.

pools during the early Islamic period, especially on the Zubayda route. These builders were brought from various parts of the Islamic world. Consequently, they transferred their techniques and long experience in building pools to the Arabian Peninsula. Given this, al-Juhfa may have had pools (other than the small one discovered) resembling the building style of large pools on the Zubayda route. In particular, some 9th-century sources (as noted in chapter 2) say that al-Juhfa contained many water installations: among them, a large pool (*birka kabīra*). However, the location of this pool is unclear and needs further exploration.

Underground Canal (qanāt)

A long ground canal was discovered underground and containing many vertical wells. The source of the canal is the center of the al-Kharar valley, which is rich in groundwater. The canal gradually extends over long distances, penetrating all the layers it faces until it appears on the surface of the ground to irrigate low-lying areas in al-Juhfa. Clearly, engineers built the canal to meet the needs of the population and to provide them with ample pure water for drinking and agriculture. In addition, the establishment of the canal in al-Juhfa was needed to provide large numbers of pilgrims and travelers with water for the purpose of washing and purity, then entering into the rituals of Hajj (*ihrām*).

Ground canals were one of the most important water supply and irrigation systems in the Arabian Peninsula. They were among the greatest technological achievements of humans in dry areas. They are a unique innovation to draw ground water from its main sources (springs) via underground tunnels called canals and convey it to other sites. Ground canal construction was a complex, difficult, and expensive process. It begins with digging a main well in a higher place than the land intended to be irrigated. After ascertaining the abundance of the main well water, the process of drilling the canal starts, proceeding horizontally in a straight or winding direction according to the terrain of the area on the canal's route. The canal runs smoothly and gradually

from high to low areas. Along the canal, a series of vertical wells are drilled at spaced distances and connected to each other. These wells have no water; instead their purpose is to light, remove drilling waste, control the canal, and to repair any defects that may impede the flow of water. After the drilling of the canal is complete, the main well opens, and running water flows through the canal until it appears on the ground surface.³⁰⁷ (Fig 22. B).

Some historical and geographical studies indicate that the use of canals was widespread in Arabia during the early Islamic period. The owners of extensive agricultural lands contributed greatly to the digging of springs, bringing water to their farms. Among the most famous springs were those dug during the reign of Mu'awiya b. Abi Sufyan, such as the springs of Wadi al-Qura in al-'Ula and the spring of al-Zarqa' in Medina.³⁰⁸

During the Abbasid period, ground canals greatly spread in the main stations located on the pilgrimage routes. The most important route is the Zubayda route, containing many ground canals such as, the canals of Faid, Samira, and Ma'din Bani Sulaym.³⁰⁹ As a matter of fact, these ground canals (as well as al-Juhfa's canal) are buried underground at a great depth; so, excavating such canals is a hard and expensive process. Therefore, it is difficult to undertake a detailed study of the technology used in building and developing them, and then compare them with each other.

However, there are some general similarities between al-Juhfa canal and others in the region, especially those located on the pilgrimage routes (mentioned above). All the canals are similar in goal and engineering idea as a general feature and uniform system. They are centered in high places, in valleys that are rich in groundwater, where the main well is drilled. These

³⁰⁷ Nasif, Abdallah Adam, "Canals and Agricultural System in Medina". *Al-'Asur* 1, 1986, pp. 199-204.

³⁰⁸ Yaqut al-Hamawi, *Mu'jam al-Buldān*, vol. 4, p. 338; Al-Samhudi, *Wafā al-Wafā*, vol. 3, p. 987.

³⁰⁹ All these canals and other need more excavation and discovery. For more information, see Al-Dail, Khaled et al, "Preliminary Report of the Zubayda Route Survey, Third Phase". *Atlat* 3, 1978, pp. 56-57; Al-Hilwa, Salah and McKenzie, Neil, "Preliminary Report of the Zubayda Route Survey, Fourth Phase". *Atlat* 4, 1978, pp. 45; Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faid", p. 37.

canals are also characterized by the great distance that they traverse to irrigate low-lying distant areas.³¹⁰

It seems that the most important factor influencing the establishment of these canals is the region's topography and the availability of groundwater, where most of the canals are located in areas marked with an appropriate topography that allow flow of water gradually from high to low areas. Canals construction was not isolated from topographical, climatic and natural factors. It is clear that the engineers of the time had a great knowledge in the quality of these factors and how to adapt to them according to an advanced system.³¹¹

The digging of canals during the early Islamic period is a natural extension of previous human activities in the extraction and exploitation of groundwater. The origin of ground canals is not Islamic, it dates back many centuries before Islam. Some studies of ancient irrigation systems suggest that the homeland of this technique was Iran, and from there it spread to other regions throughout the ancient world. During the early Islamic period, canals became the main method of raising water from underground for agricultural and urban supply, especially in dry areas that did not receive enough rainfall or contain enough rivers.³¹²

In closing, the construction of the ground canal in al-Juhfa was a huge project. This indicates a collective effort exerted by the architects during the construction stages and reflects the extent of awareness of (and optimal investment in) groundwater and the knowledge of its sources in a dry environment. The geographical environment and its geological composition constituted a strong basis for the establishment of a unique irrigation system in al-Juhfa and other places. Thus, the architects achieved integration with the natural environmental at these sites and succeeded in

³¹⁰ Wilkinson, J. C. "Darb Zubayda architectural documentation program: The water resources". *Atlat* 4, pp. 63-80.

³¹¹ Wulff, Hans, *The Traditional Crafts of Persia: their Development, Technology, and Influence on Eastern and Western Civilizations*. (Cambridge: M.I.T. Press, 1966), pp. 251-254.

³¹² Wulff, *The Traditional Crafts of Persia*, pp. 249-251; Nasif, Abdallah Adam, *Al- 'Ula, An Historical and Archaeological Survey*. (Riyadh, King Saud University, 1988), pp. 157-158.

employing it for the benefit of residents and travelers, in light of their need for water.

It seems that the construction of the canal of al-Juhfa was very distinctive has continued to resist history from early Islamic period until the present day. Therefore, it is important to conduct deeper studies on the architecture of early Abbasid canals located on the pilgrimage routes, including al-Juhfa canal, to compare them with each other.

Building Materials

Building materials differ from one site to another, depending on the type of material available in the surrounding environment. The main material used in the construction of architectural elements in al-Juhfa was black basalt stone. In addition, clay and stucco were used as secondary construction materials. Next, we will review the most important characteristics of all these materials and their architectural uses.

Black Basalt Stone

Black basalt stone was widely available in al-Juhfa area, which is surrounded by a volcanic lava fields as described previously. The inhabitants of al-Juhfa exploited the availability of this material in their local environment and built their city, as it is seen in the fort and the architectural unit discovered in Trench T1, where most of the walls did not completely collapse and remained in good condition due to the strength and hardness of the black basalt stones. Moreover, careful examination of all other buildings at al-Juhfa site (where their upper parts are still visible above the surface) shows that these buildings depended mainly on basalt stones in the building process.

It seems that the people of al-Juhfa mostly used a mountain about 500 m south of the fort as the major source for the basalt stone used in the construction. We noticed on the sides of this mountain signs of the quarrying and cutting of large stones into small parts in the form of

courses differing in size according to their intended purpose (Pl 27). This indicates that the stone was cut, then prepared at the same place before being carried to the site in order to begin construction. These stones are irregular blocks that depend on mortar to hold them together as all the walls were built using boulder-and-chink construction.

Stone construction of this type is widely known during pre-Islamic and Islamic times. Stone is an essential means of construction, characterized by strength and hardness that increases the thickness of walls and their durability. In addition, the manner of treatment of the stone in walls (boulder-and-chink) continued to a great degree in both pre-Islamic and Islamic traditions, as in the buildings of Tell Jawa in Jordan during Antiquity³¹³, buildings in Dhrya on the Basri route and Faid on the Zubayda route during the early Abbasid period.³¹⁴

Clay and Stucco

Clay is a natural earthy material, mixed with the organic remains of plants or animals, and used for making baked bricks, sun-dried bricks, and pottery. Clay exists where rain flows and remains for long periods, such as in low areas and valley bottoms. Clay passes through certain preparatory stages to be ready for use, such as mixing it with liquid material: especially water.³¹⁵ As for stucco, it is a soft white material consisting of hydrated calcium sulphate. Gypsum is transformed into a disintegrated form (powder) by exposure to temperatures of up to of 190° C. (340 ° F). After that, it is applied in a pasty form to floors, walls, and ceilings where it is allowed to harden and dry.³¹⁶

³¹³ Walter E. Aufrecht, Steven W. Gauley, Neil A. Mirau, *Urbanism in Antiquity: From Mesopotamia to Crete*. (England: Sheffield Academic Press, 1997), p. 165.

³¹⁴ Al-'Utaybi, *Dhrya*, p. 191; Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faid", pp. 39-40.

³¹⁵ Nuweiser, Mohammed, *Characteristics of Urban Heritage in Saudi Arabia (Najd Region)*. (Riyadh: King Abdulaziz Foundation for Research and Archives, 1999), p. 149.

³¹⁶ Abdullah, Mohammed Ali, *Gypsum Decoration in the Gulf*. (The Popular Heritage Center of the States Arabic Gulf, Doha Press, 1985), p. 183.

No doubt, the natural environment of al-Juhfa was conducive to the presence of clay material, for the site of al-Juhfa is located on the banks of a large valley (al-Gha'idha) and surrounded by and surrounded by some streams of valleys and low-lying areas. The population certainly benefited from clay available in their environment. It was used in al-Juhfa as mortar to cover walls facades and to connect the stone courses in buildings. Here, it should be noted that we have not yet discovered any building built of mud brick probably because of the availability, in large quantities, of suitable stone for construction at al-Juhfa.

As for stucco, due to the requirement for fuel, it is likely that al-Juhfa's stucco was imported from outside the area. Stucco was used in al-Juhfa as a material placed above the layer of clay to cover the floors and facades of walls as we saw in the architectural unit discovered in Trench T1. The purpose of covering the walls with a layer of mud and stucco is to strengthen their surface of the walls and to beautify them. Mud and stucco are also a necessary and practical means of construction, since al-Juhfa can be very cold in winter (16° C) and very hot in summer (45° C). Given these extremes of climate, mud and stucco contribute to moderating temperatures inside the building. During examination of the stucco used in the construction, we noticed it was mixed with fine sand of a white color, sometimes tending to yellow. The difference in color is due to the method of burning the stucco during its preparation.

However, clay and stucco were widely used in the early Islamic period, especially under the Abbasids. For example, the principal construction materials for the large city, of Samarra in 836 were fired brick, sun-dried brick, and stucco. There are also a large number of structures built of clay and stucco in different Abbasid sites on the Arabian Peninsula, especially on the pilgrimage routes such as the buildings of al-Rabadha on the Zubayda route, and those of al-Mabiyat on the Syrian route.³¹⁷

³¹⁷ Northedge, "Creswell, Herzfeld, and Samarra", pp. 77-79; Al-Rashid, *Al-Rabadha*, p. 48; Mu'ayyad, "Report on Excavations at al-Mabiyat Site", p. 39.

Generally, the use of clay and stucco was not confined to the early Islamic period. Construction using these materials was widespread in various regions of the ancient world since the pre-Islamic period. Archaeological work at some pre-Islamic sites in Arabia, for example, Qaryat al-Faw in the south-west of Saudi Arabia (4th century BC to 4th century AD), and the Zubayda site in the north of Saudi Arabia (1st century to the 3rd century) discovered the remains of residential buildings that made considerable use of clay and stucco.³¹⁸

In closing, after reviewing the structural materials used in al-Juhfa (black basalt stones, clay, and stucco), we find that they are among the materials used in construction during pre-Islamic times and that they continued in use throughout the ages, from the early Islamic period through the Umayyad and Abbasid periods. Certainly, conducting extensive archaeological excavations at the site of al-Juhfa will reveal more information on these materials and its methods of use.

³¹⁸ Al-Ansary, *Qaryat al-Faw*, pp. 146-147; Peter J. Barr, Bitar and Gazdar, Muhammad. "The Excavations of Zubayda Site (the Architecture) in Al-Qassim Region". *Atlat*, 4, 1979, pp. 117-125.

Chapter 7

An Analytical Study of the Archaeological Finds in al-Juhfa

1. Introduction

2. Finds of the Surface Survey and the Excavations

Pottery

Glass

Worked Stone

Metal Pieces

1. Introduction

Distinctive archaeological finds were discovered during the archaeological survey and excavation of al-Juhfa site. These finds comprise varied shards of glazed and unglazed pottery, glass, worked stone, and fragments of metal. Therefore, this chapter aims primarily at determining the relative date of al-Juhfa site through the analysis of these uncovered finds. In addition, this chapter seeks to explain the spatial distribution of the finds and to what extent they are related to the strategic location of al-Juhfa on the route linking Medina and Mecca, which (as mentioned earlier) is regarded as an important artery for pilgrim traffic.

The study of artifacts, especially pottery potsherds, is very important for understanding the settlement of al-Juhfa during the early Islamic period. As these potsherds are the most abundant materials in archaeological sites throughout the Middle East, they can be used as a tool in historical investigation. Pottery shards are usually dated by specific stylistic and technical criteria. The archaeological finds uncovered during excavations that carried out in various Islamic sites and published in numerous studies do allow to identify the relative succession of historical stages experienced at the site of al-Juhfa. Many of these finds belong to well-known types that can be compared to similar examples discovered during the survey and excavation of the site. Indeed, parallels between the finds at these sites will help to gain a better understanding of al-Juhfa, including the cultural level achieved, and its cultural relationship with other Islamic sites. We chose some comparative sites from different parts of Arabia and the Islamic world. These sites provide abundant evidence, and relatively secure to identify the chronology of the site of al-Juhfa. They are as follows.

The sites are located on the pilgrimage routes in Arabia, such as Zubala, Faid, Samira, Ma' din al-Niqra, al-Rabadha on the Zubayda route, al-Mabiyat on the Syrian route, Dhrya on the Basri route, al-Hawra, al-Jar, and Bida on the Egyptian route, and 'Aththar and Sirrayn on the Yemeni route. There are also some sites in the south and east of Saudi Arabia, such as Najran,

Jazan and al-Battaliyya village.³¹⁹ In addition, several sites in different parts of Islamic world are included; for example, Samarra, al-Mada'in, and Abu Sarifa in Iraq, al-Raqqa in Syria, Tabaqat Fahl, Ayla, Darat al-Funun in Jordan, Fustat in Egypt, and Nishapur, Susa, and Siraf in Iran. These sites are the closest sites to al-Juhfa and some of them contain workshops produce some types of pottery found at al-Juhfa.³²⁰

However, the dating of pottery in al-Juhfa may present certain difficulties. For example, al-Juhfa is located on the Medina-Mecca route and was the only site on this route excavated during the study, while all the other sites located on the same route (including Mecca and Medina) have not yet been excavated. The lack of excavated material in these sites does not help in establishment of parallels between finds in the region. Moreover, while it is still possible to recognize the types of recovered finds in al-Juhfa (a relatively small number of objects) and their chronology, the small scale of excavations conducted in the site may makes it difficult to determine the relative date of all the historical stages of the whole site, which will need more extensive excavations.

After studying and analyzing all discovered finds, we reached the conclusion that they are mostly to be attributed to the early Abbasid period (late 8th-10th century). So, in this introduction it is critically important to mention the most important general characteristics of early Islamic pottery during this period. The many studies and excavations conducted in various Islamic sites have produced a huge trove of archaeological materials. These contribute significantly to the classification of Abbasid pottery and to the identification of its most important characteristics.

³¹⁹ See for example, Al-Rashid, *Al-Rabadha*, p. 103; Al-'Umair, "Report on the Excavations of the Islamic City, Al-Mabiyat, pp. 240-241; Al-'Utaybi, *Dhryah*, pp. 232-233; Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faïd", p. 51; Al-Kilabi, *Islamic Monuments in the Town of Bida*, pp. 57-59.

³²⁰ See for example, Wilkinson, Charles, *Nishapur: pottery of the Early Islamic Period*. (New York: The Metropolitan Museum of Art, 1973), pp. 338, 345; Adams, Robert McC, "Tell Abū Sarīfa: A Sassanian-Islamic Ceramic Sequence from South Central Iraq". *Ars Orientalis* 8, 1970, pp.87-119; Rousset, Marie-Odile, "Quelques Précisions Sur le Matériel de Hira (Céramique et Verre)". *Archéologie Islamique*, 1994, pp.19-55; Tonghini, Cristina; Henderson, Julian, "An Eleventh-Century Pottery Production Workshop at al-Raqqa. Preliminary Report". *Levant* 30, p. 123; Hendrix, *Ancient Pottery of Transjordan*, pp. 270-281.

Early Abbasid pottery grew out of a pottery industry prevalent during the pre-Islamic period. Potters in Iran, Iraq, Syria, and Egypt used traditional techniques of the pottery industry (known since pre-Islamic times), such as monochrome alkaline-glazed ware, monochrome lead-glazed ware, and incising under the glaze with one or several colors (sgraffito ware).³²¹

However, in the early Abbasid period the pottery industry developed significantly. For example, potters devised new methods in the decoration of pottery that became features of the pottery and ceramics industry in the Islamic world, such as plant, animal, or geometric decorations, and some simple Arabic writing. In addition, around the 9th century they invented a new industry called “lustre ware”, which is characterized by the beauty of its shape and color, and the accuracy of its decoration and diversity.³²²

Early Abbasid pottery combines both unglazed and glazed wares, including monochrome alkaline-glazed ware, monochrome lead-glazed ware, lead-glazed splashed ware and ware painted with white tin glaze. It is made by hand, on the wheel as well as in a mold, especially in the case of glazed wares. While the outer texture of some ceramic paste is soft, others have a rough texture, indicating the presence of percentage of impurities. Some wares are characterized by hardness caused by intentional firing at high temperature. Other types (called egg-shell ware) are thin and were baked at low temperature. The early Abbasid period was characterized by the spread of Chinese pottery products, such as Chinese white stoneware.³²³

³²¹ Fehérvári, Géza, *Islamic Pottery: A Comprehensive Study Based on the Barlow Collection*. (London, Faber and Faber, 1973), p. 11.

³²² Lane, *Early Islamic Pottery: Mesopotamia Egypt and Persia*; Grube, Ernest, *Islamic Pottery of the Eighth to the Fifteenth Century in the Keir Collection*. (London: Faber and Faber, 1976), p. 12; Soustiel, Jean, *La Céramique Islamique: Le Guide du Connaisseur*. (Fribourg: Office du livre, 1985), pp. 45-52.

³²³ For more information, see Wilkinson, *Nishapur*, pp. 295-300; Fehérvári, *Islamic Pottery*, p. 34; Lane, *Early Islamic Pottery*, p. 11; Grube, *Islamic Pottery*, pp. 114-119; Philon, Helen, *Early Islamic Ceramics: Ninth to Late Twelfth Centuries*. (London: Islamic Art Publications, 1980), pp. 35-41; Watson Oliver, *Persian Lustre Ware*. (London: Faber and Faber, 1985), p. 169; Ibrahim, “Preliminary Report on the Results of Archaeological Discoveries in the Islamic Site, al-Mabiyat, pp. 117-120; Al-Rashid, *Al-Rabadha*, pp. 103-113.

Before reviewing the finds in al-Juhfa and comparing them to similar ones in other sites of the Islamic world, it is important to refer to the method used to study these finds discussed in this chapter. As mentioned in chapter 4, our method is based on a qualitative classification approach according to the raw material used in the industry and its structure, such as the method of industry, the method of processing external and internal surfaces, the kind of paste (or prepared clay) and its shape, and the kind of decoration. In addition, all finds were illustrated with drawings and photographs. To highlight this subject, we divided the recovered finds into certain groups according to the type of raw material. After that, each shard was given a certain number.

2. Finds of the Surface Survey and the Excavation

Various fragments of pottery, glass, worked stone, and metal pieces were found during the surface survey and archaeological excavations at the site of al-Juhfa. They are as follows:

Pottery

A variety of potsherds are scattered on the surface of al-Juhfa site and within the archaeological layers. Pottery fragments constitute the largest number of finds discovered in al-Juhfa, totaling fifty-four fragments: twenty-four found during the surface survey and thirty during the excavations. These shards represent various types of bases, bodies, handles, and necks of pottery vessels. We divided all the shards into two main groups: unglazed and glazed pottery.

Unglazed Pottery

Thirty-four fragments of this type of pottery were discovered in al-Juhfa: twelve during the survey and twenty-two during the excavations. These shards are subsumed under the four well known types of early Abbasid pottery: egg-shell ware, yellow-bodied pottery, red-bodied pottery, and handmade pottery. Details are shown below.

Egg-Shell Ware (Table 3. SP1- 5; Table 6. T1/P13-17; Table 6, 7. T2/P18-22)

Egg-shell ware is a famous type of early Abbasid pottery. Five shards of this type were discovered during the survey in al-Juhfa (Fig 23; Pl 28). In addition, ten shards of this kind of pottery were discovered scattered in various archaeological layers of the two trenches: five in the third and fifth layer of trench number T1 and the other five in the second and third layer of trench number T2 (Fig 33, 34; Pl 38, 39). These shards represent different parts of flasks, three bases, three necks, six bodies, and three handles. The number of egg-shell wares is large in comparison with other finds, suggesting this type of ware was common in al-Juhfa.

All fragments are wheel-made and share in two features. The first is a fine paste—white, yellow, and pale brown. The second feature is the thinness of the fragments, which measure between 3 to 8 mm. These two features usually characterize this type of ware in various Abbasid sites where some shards are only about 1 mm thick because they were fired at low temperature.

Examples of this type of pottery come from the Bida site, which contains some bases, necks, and handles much resembling those found in al-Juhfa in terms of shape, color, and the fineness of paste. The bases are circular in shape and a small part of the body is connected to the base; the necks end with an outward-protruding edge that is curved in shape, and the handles are straight and curved, with a length ranging between 3 to 6 cm.³²⁴ Indeed, great similarity between wares in both sites indicates that al-Juhfa was chronologically related to the wares discovered in Bida, which have been dated the 8th and 11th century. In addition, the similarities indicate an increase in the number of pilgrims and merchants on the Egyptian route, which passes directly through many stations, including Bida and al-Juhfa, leading to the exchange of some objects.

³²⁴ Al-Kilabi, *Islamic Monuments in the Town of Bida*, pp. 57-58.

Also, there are many deposits shards of egg-shell ware in various sites date to 8th and 9th century, such as Samarra, Faid, Dhrya, and al-Mabiyat.³²⁵ In addition, in 1999 the French archaeological mission uncovered many fragments of eggshell wares in Hira, southern Iraq. These fragments dated to 8th and 9th century and were produced in a workshop in the site.³²⁶ Many high-quality eggshell wares were also found at al-Raqqa, dating to the early Abbasid period.³²⁷ This implies that the al-Juhfa fragments may be attributed to the same period. Moreover, archaeological excavations in several other Abbasid sites, such as Nishapur, Susa, and al-Rabadh revealed complete forms made of egg-shell ware. These vessels constitute water flasks, which indicates that the fragments of egg-shell ware discovered in al-Juhfa were parts of water flasks, especially as side handles were present to carry the flasks.

Most of the fragments found in al-Juhfa are undecorated—only two stratified fragments show incised decoration. The first fragment was found in the fifth layer of trench number T1 and contains three wavy lines facing another three to form a column of wavy lines (Fig 33; Pl 38). The second was found in the second layer of trench number T2 and constitutes a grid of cross-cutting lines executed in an incised manner. (Fig 34; Pl 39). The decoration method executed on both fragments is the same found on some fragments of egg-shell that have been discovered in many of the Islamic sites mentioned above. They are decorated with various geometric and plant motifs executed by incising.

In fact, egg-shell wares were conspicuously more frequent at contemporary sites in the vicinity that are larger and more important: notably Samarra, Hira, and al-Raqqa, as noted above. Thus, the wares at al-Juhfa were most likely imported from the closest center to our site, which

³²⁵ Sarre, Friedrich and Herzfeld, Ernst, *Die Ausgrabungen von Samarra*. Translation into Arabic, Ali Yahya Mansour. (Baghdad: General Organization of Antiquities and Heritage, 1985), vol. 2, pp. 16-17; Al-'Umair, "Report on the Excavations of the Islamic City, Al-Mabiyat, p. 240; Al-'Utaybi, Dhryah, p. 237; Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faid", p. 51.

³²⁶ Rousset, "Quelques Précisions Sur le Matériel de Hira (Céramique et Verre)", pp.19-55.

³²⁷ Tonghini, "An Eleventh-Century Pottery Production Workshop at al-Raqqa. Preliminary Report", p. 123.

was Hira. Workshops in Hira may have been the production centers for the type of egg-shell ware found at al-Juhfa and other sites.

Yellow-Bodied Pottery (Table 3. SP6)

Very little decorated yellow pottery was found during the survey and excavations at al-Juhfa. During the survey we found only one small surviving fragment; nothing was found during excavation. The fragment is wheelthrow and made of a semi-fine light-yellow paste. It contains decorations of crossed columns executed by incising (Fig 24. A; Pl 29. A). The scarcity of the decorated yellow fragments may indicate that this type of pottery was uncommon in al-Juhfa so far. Also, the increasing popularity of other types of pottery in al-Juhfa (such as egg-shell ware mentioned above) may played a considerable part in the declining use of this kind of ware. Therefore, it is difficult to give a clear and direct comparison for this fragment.

However, the fragment at al-Juhfa is not markedly different from those discovered in some Abbasid sites located on the pilgrimage route during the 9th and 10th century. For example, a complete jar of yellow-bodied pottery was found at the site of al-Rabadha. Some shards of this kind of pottery were also found in Faid and Bida.³²⁸ In addition, some yellow jars and flasks dated to the early Abbasid period were found in Tabaqat Fahl in Jordan. These contain lines on the neck and body.³²⁹

Forms examined so far, together with the fragment at al-Juhfa indicate that decorated yellow wares contain large and small jars and bowls. Some of these wares are more than 15 mm thick, and the majority are adorned with decorations executed by incising. Incised decoration in yellow pottery mostly consists of one bundle (or two) of lines or columns, parallel and crossed, running on the vessel's neck or on the top or bottom of the body as well as sometimes the middle

³²⁸ Al-Rashid, *Al-Rabadha*, p. 103; Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faid", p. 51; Al-Kilabi, *Islamic Monuments in the Town of Bida*, pp. 58-59.

³²⁹ Hendrix, *Ancient Pottery of Transjordan*, pp. 270-271, 276-277

of some vessels adorned with another bundle of wavy lines. Possibly, al-Juhfa's fragment and the examples in the region (mentioned above) were brought from workshops in the Levant.

Red-Bodied Pottery (Table 3. SP7-9; Table 5. T1/P1-5, T2/P6-7)

Ten fragments of this type of pottery were found in al-Juhfa. Three shards were discovered during the survey (Fig 24. B; Pl 29. B) and seven were found in different layers during the excavations: five in the second, third, and fourth layer of trench number T1; and two in the second layer of trench number T2 (Fig 30. A-31. A; Pl 35. A-36. B). These fragments represent different parts of vessels, one base, six bodies, and three necks.

The principal method of construction in these fragments is wheel-throwing. All are made of a semi-fine, red paste containing some sand grains and other impurities. Some reveal a black, grey, and brown core in their sections because of baking at varying temperatures. One stratified shard in trench number T1 shows the effects of burning, suggesting that the vessel was probably a cooking pot. The thickness of these fragments ranges between 1.4 cm and 4 mm.

Two surface fragments are decorated. The first contains an incised decoration of straight and wavy lines, and the second is decorated with three adjacent friezes of small circles executed by incising. Wavy lines separate these three friezes. The decorations seem to encircle the entire jar neck. At the upper end of the shard there is a lump, measuring 1.2 cm, which appears to be the remains of a handle (Fig 24. B). In addition, there are three stratified fragments exhibiting simple ribbed decorations (Fig 30. A, Fig 31. A-B).

Similar examples of red-bodied pottery were found in some Abbasid sites located on the pilgrimage route, for example, at al-Mabiyat, Dhrya, and Bida.³³⁰ This kind of ware also occurs in Ayla during the 10th century where some bowls were discovered.³³¹ Moreover, some shards

³³⁰ Al-'Umair, "Report on the Excavations of the Islamic City, Al-Mabiyat", p. 241; Al-'Utaybi, *Dhryah*, pp. 232-233; Al-Kilabi, *Islamic Monuments in the Town of Bida*, p. 59.

³³¹ Hendrix, *Ancient Pottery of Transjordan*, pp. 280-281.

of red pottery, found in Nishapur, date to the early Abbasid period.³³²

Red wares discovered in these sites are characterized by several features besides their red color. They are wheel-made; some shards contain incised and ribbed decorations forming straight and wavy lines. These features are comparable to those found at al-Juhfa in terms of their production methods, color pastes, and decorations. As a result of the similarities between these wares the fragments from al-Juhfa may have been brought from a great distance between the 8th and 10th century.

Handmade Pottery (Table 3. SP10; Table 4. SP11-12; Table 5. T1/P8-10, T2/P11-12)

During the surface survey and excavations on the site we discovered eight fragments of this type of pottery. Three fragments were found on the surface (Fig 25. A; Pl 30. A) and the rest in different layers of the excavated trenches: three in the second, fourth, and fifth layer of trench number T1, and two in the second and third layer of trench number T2 (Fig 32. A-B; Pl 37. A-B). These shards are parts of jar bodies.

All the fragments are made of a poorly levigated red paste, containing many impurities and much organic material. Hence, they are porous. Their internal and external surfaces have a hard, rough, and uneven texture. Some fragments contain a thick black core in their sections due to being burned at varying temperatures. The thickness of these shards varies between 1 and 2 cm. On the basis of this technical information, it is likely that most of al-Juhfa fragments were handmade. In addition, these handmade fragments may have been locally made, in al-Juhfa itself, since their clay resembles the type of clay found in the nearby valley as well as that used to clad the walls of architectural units. Also, these shards may were locally produced to meet the growing needs of the population and travelers for jars and bowls. In any case, this matter needs

³³² Wilkinson, *Nishapur*, pp. 338, 345.

further physical discoveries, such as the kilns used to prepare and manufacture the pottery.

Decoration is absent except in the case of two fragments. The first was found on the site surface and shows straight and wavy line executed by incising (Fig 25. A). The second was found in the second layer of trench number T2 and contains a bundle of parallel and wavy lines also executed by an incising method (Fig 32. B).

Anyway, handmade pottery is widespread in many Abbasid sites located on the pilgrimage routes, including Faïd, Dhrya, al-Mabiyat, and Bida.³³³ Also, Darat al-Funun in Jordan has a large handmade storage jar dated to the early Abbasid period that bears wavy lines.³³⁴

These wares are similar to examples discovered in al-Juhfa, where the shards are characterized by a thickening of their walls, a high percentage of impurities, surfaces the internal and external texture of which is rough, and not burnished. Furthermore, these shards are characterized by a variety of colors, especially red, grey, and brown. Some shards contain a thick black core in their sections as well as a decoration of incised and ribbed lines, particularly some shards in al-Mabiyat on the Syrian route, which bear incised straight and wavy lines.³³⁵

Glazed Pottery

The glazed pottery industry flourished in Iraq and Syria during the early Abbasid period. In general, most shards of the type belong to this period. Twenty fragments of glazed pottery occurred on the surface of al-Juhfa site and the excavations. Twelve fragments were picked up during the survey, and eight during the excavations. They include diverse and distinctive types of glazed pottery, such as monochrome alkaline-glazed ware, monochrome lead-glazed ware, lead-

³³³ Al-'Umair, "Report on the Excavations of the Islamic City, Al-Mabiyat", p. 241; Al-'Utaybi, *Dhryah*, pp. 204-206; Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faïd", p. 51; Al-Kilabi, *Islamic Monuments in the Town of Bida*, p. 59.

³³⁴ Hendrix, *Ancient Pottery of Transjordan*, pp. 274-275.

³³⁵ Al-'Umair, "Report on the Excavations of the Islamic City, Al-Mabiyat", p. 241.

glazed splashed ware, and tin-glazed ware. Below we will highlight each discovered type.

Monochrome Alkaline-Glazed Ware (Table 4. SP13-16)

The use of an alkaline glaze had been known since ancient times; vessels covered with a layer of alkaline glaze have been found in Egypt that date back to the age of the eighteenth pharaonic dynasty (1292–1550 BC). In addition, examples of bricks covered with alkaline glaze have been found in Iran and Iraq dating back to 1000 BC. In subsequent years, the alkaline glazed-ware industry continued in Egypt, Iraq, and Persia.³³⁶ During the pre-Islamic period, especially in the Sassanian era, this kind of pottery industry became widespread in Mesopotamia and on the Arabian Peninsula where it was characterized by a turquoise or blue-green glaze with ornamentation of strips and medallion (Hibs).³³⁷

During the early Islamic period, various vessels of alkaline-glazed ware were widely produced. Many show a lot of Sassanian influences, such as a blue-green color. These vessels are often referred to as (Sassanian-Islamic). However, during the Abbasid period, dark blue, cyan-blue, and brown glaze became widely used in the vessels. Some alkaline materials such as vinegar were used in the alkaline glaze industry, where they formed part of the composition the glaze. In addition, copper oxide was added to the alkaline glaze itself to give it varying degrees of blue color.³³⁸

Four shards of alkaline-glazed ware were picked up on the surface of al-Juhfa site, while we have not yet found any fragments of this type of ware during the excavations. The shards represent pieces of small vessels that contain an alkaline glaze on both sides. Two shards carry a dark blue glaze, and the other two once carried the cyan-blue glaze. All shards are wheel-made

³³⁶ Hodges, Henry, *Technology in the Ancient World*. (New York: Knopf, 1970), pp. 8-10.

³³⁷ Adams, "Tell Abū Sarīfa, pp.87-119.

³³⁸ Mason, Robert and Edward, Keall, "The 'Abbasid Glazed Wares of Siraf and the Basra Connection: Petrographic Analysis". *Iran*, 29, 1991, p. 52; Maher, Su'ad, *Islamic Arts*. (Cairo: General Egyptian Book Organization, 1986), p. 16.

of a semi-fine, yellow paste. These shards are thin: 4-8 mm (Fig 25. B, 26. A; Pl 30. B, 31. A).

Fragments of such pottery have been found on many early Abbasid sites. On the basis of the evidence gathered so far, the number of cyan-blue fragments are much less than those of dark blue. Therefore, cyan-blue pottery may have been uncommon, or else the number of centers that produced it was few in comparison to its dark-blue counterpart, as will see below. However, we did find some cyan-blue fragments in al-Rabadha and Bida that are very similar to those found in al-Juhfa.³³⁹

In contrast, dark-blue fragments have come from a wide variety of Islamic locations. For example, Faid, Samira, Ma‘din al-Niqra, al-Rabadha, Dhrya, al-Mabiyat, Bida, al-Hawra, and ‘Aththar.³⁴⁰ In addition, numerous dark-blue fragments dating to the early Abbasid period were found on other sites in Arabia, such as Najran and Jazan in the south of Saudi Arabia and in the village of Battaliyya, in the east. Moreover, a number of fragments is scattered on many Abbasid sites, such as Samarra, Susa, and Siraf.³⁴¹

Some important characteristics of the vessels from these sites were mentioned above, for example, that the majority of vessels are medium or large jars that were used to store liquids and oils. Also, a number of other vessels were made of this kind of pottery, such as small jars, vases, dishes, bowls, and lamps. Alkaline-glazed pottery vessels in these sites are wheel-made. The alkaline glaze layer that covers the vessels is often thick and sometimes cracked. The paste used in such pottery is often yellow and is of two types: a semi-fine paste (with some impurities), and a very fine paste. The first was used to make large and small jars, vases, and lamps; the

³³⁹ Al-Rashid, *Al-Rabadha*, p. 103; Al-Kilabi, *Islamic Monuments in the Town of Bida*, p- 62.

³⁴⁰ Zarnís, Juris et al, “Archaeological Excavations in the Southern Tihama Plain: The Site of ‘Aththar and Suha”. *Atlat* 9, 1985, p. 82; Al-Rashid, *Darb Zubayda*, pp, 440-443; Al-‘Umair, “Report on the Excavations of the Islamic City, Al-Mabiyat”, p. 242; Al-‘Utaybi, *Dhryah*, pp. 207-211; Al-Hawas, “Preliminary Report on Archaeological Excavations in the Historical City of Faid”, p. 49; Al-Kilabi, *Islamic Monuments in the Town of Bida*, pp. 61-62.

³⁴¹ Whitehouse, David, “Excavations at Siraf; First Interim Report”. *British Institute of Persian Studies* 6, 1968, p. 14; Zarnís, Juris et al, “Preliminary Report on the Survey and Excavation in Najran: al-Okhdood”. *Atlat* 7, 1982, 1982, pp. 21-29; Sarre, *Die Ausgrabungen von Samarra*, vol. 2, pp. 34-36; Al-Hussein, Fahd, *Islamic Monuments in the Village of Battaliyah, Eastern Province*. (Riyadh: Archaeological and Museums Agency, 2001), pp. 101-102.

second to make thin, small, dishes and bowls for use at the table. Decorations (executed using an incised method) are present under the glaze layer, especially on the upper parts of vessels. Indeed, the relatively high number of vessels with an alkaline glaze—especially the glazed, dark-blue type recorded in numerous early Abbasid sites—indicates that al-Juhfa fragments were brought from far-off locations.

Monochrome Lead- Glazed Ware (Table 4. SP17-20; Table 7. T1/P23-26; T2/P27)

Lead glaze has also been used since pre-Islamic period. First-century AD vessels made by mold and painted with green lead glaze have been found in some cities in Anatolia, such as Tarsus. In succeeding ages, the lead-glazed ware industry continued, and during the early Islamic period the manufacture of this type of pottery flourished, especially in the Abbasid period, when various vessels in different shapes and sizes were produced, such as jars, dishes, bowls, and lamps.³⁴²

Lead compound was used as a flux and the actual glaze was a silica. Some metal oxides were also added to give the lead glaze the desired color. The most important oxides used in lead glaze were copper oxide (to produce a green color), iron oxide (for brown and yellow), and manganese oxide (for black, violet, and dark brown).³⁴³

Nine early Abbasid fragments of monochrome lead-glazed ware were found on al-Juhfa site. Four were taken from the site surface (Fig 26. B; Pl 31. B) and five were discovered during the archaeological excavations—four in the second and fifth layer of trench number T1, and only one fragment in the third layer of trench number T2 (Fig 35; Pl 40). The fragments represent different sizes and shapes of vessels; one base, four bodies, three necks, and one rim. One of the necks contains a small, circular hole on one edge; another edge seems also to have contained such a circular hole that is now broken. The shard seems to have been connected to a copper

³⁴² Hodges, *Technology in the Ancient World*, p. 26; Lane, *Early Islamic Pottery*, p. 12.

³⁴³ Milwright, *The Fortress of the Raven*, p. 186; Maher, *Islamic Arts*, pp. 16-17.

handle with which to carry the vessel or hang it through the two small circular holes (as will be demonstrated shortly when talking about metal pieces discovered in the same archaeological layer).

All nine fragments were made in the same way, by wheelthrowing. Two kinds of paste were used, fine and medium-fine. The majority of fragments (seven) contain pale-red paste, and two are of yellow paste. As for the lead glaze, it takes different colors; five fragments are olive-green, another two are yellow, one is light-green, and the last, green. The fragments lack decoration, and they are thin—ranging between 3 and 9 mm.

Numerous examples of lead-glazed ware have been found in many sites during the early Abbasid period. For example, many fragments and complete vessels of this kind of pottery found in al-Rabadha date to the 9th and 10th century. These fragments and vessels are of an olive-green and green color exactly comparable to the glaze color of al-Juhfa fragments.³⁴⁴ Similar fragments have also been discovered in other sites on the pilgrimage routes, such as Dhrya, al-Mabiyat, al-Hawra, al-Jar, and Bida, and a variety of specimens have been found in many other Abbasid sites, such as Samarra, al-Mada'in, Susa, and Fustat.³⁴⁵

The fragments that belong to these sites have been dated to between the 8th and 10th century. They are characterized by several features that resemble our fragments in al-Juhfa. For example, a fine paste was used in their manufacture, and most of the vessels were formed on the wheel. In addition, the lead glaze layer is not thick, which sometimes reveals the paste's quality, color, defects, and composition. There are also few decorations on this type of pottery, represented by incised wavy and straight strips and lines. The lead glaze in these sites takes several colors, such as green, light (and dark) brown, yellow, black, and orange.

³⁴⁴ Al-Rashid, *Al-Rabadha*, p. 105

³⁴⁵ Dimand, M. S. *Islamic Arts*. (Cairo, Dar Al-Ma'arif, 1982), p. 165; Al-'Umair, "Report on the Excavations of the Islamic City, Al-Mabiyat", p. 242; Al-'Utaybi, *Dhryah*, pp. 227-229; Al-Kilabi, *Islamic Monuments in the Town of Bida*, pp. 63-64.

Lead-Glazed Splashed Ware (Table 4. SP21-23; Table 7. T1/P28-29)

The industry of lead-glazed splashed ware was well known at the beginning of the Abbasid period. It is regarded as one of the simplest types of glazed Islamic pottery in terms of the ease of the techniques used in its manufacture. Thus, it spread to a number of Islamic countries, such as Iran, Afghanistan, Iraq, and the Levant. However, some researchers believe this type of pottery was influenced by Chinese multicolored pottery, dating back to the Tang dynasty (618–907).³⁴⁶

Five fragments of lead-glazed splashed ware were discovered in al-Juhfa. Three were picked up on the surface (Fig 27. A; Pl 32. A) and two were found in the second and fifth layer of trench number T1, while we did not find any fragment of such a type in trench number T2 (Fig 36. A; Pl 41. A). The fragments constitute four bodies of vessels and only one base. These fragments are wheel-made, and their paste varies from fine to medium-fine. Three of them are of red paste, and two of yellow.

All five fragments are characterized by various decorations above the lead glaze except for one fragment containing slip-incised decoration under the glaze (sgraffito). The first is glazed on the inside, with a layer of yellow lead glaze containing adjacent small circles executed above the lead glaze. The second is covered with lead glaze on both sides. One side is glazed with a layer of yellow lead glaze, containing colored splashes in green, yellow, and black, executed above the glaze. The other contains a layer of transparent lead glaze tending to a green color. The third is glazed with yellow lead glaze on one side. The glaze consists of two lines in black color. Between the two lines there is a spot in a green color. Both lines and the spot are executed above the lead glaze (Fig 27. A). The internal face of the fourth shard contains a thin yellow lead glaze and decorations executed under the glaze (sgraffito). The decorations consist of repeated black and gold circles as well as small black lines. The interior surface of the fifth shard is covered

³⁴⁶ Lane, *Early Islamic Pottery*, p. 12.

with a translucent lead glaze that tends to a green color. The external surface has a decoration executed above the lead glaze. The decoration seems to be an incomplete medium-sized circle, the perimeter of which is executed in a black color. In the circle's center there is another, smaller, circle containing a grid of black lines (Fig 36. A).

Numerous examples of lead-glazed splashed ware have been found in many sites of the early Abbasid period, for example, al-Rabadha, Faïd, al-Mabiyat, al-Hawra, al-Jar, Bida, 'Aththar, and Sirrayn.³⁴⁷ Lead-glazed splashed ware is also commonly found at Nishapur, and at Susa.³⁴⁸ Lead-glazed splashed ware in these sites shows several characteristics, for example, all the vessels are similar in decorative technique; but differ in terms of the paste used in their manufacture. The majority of vessels contain a slip under the lead glaze, but sometimes these vessels lack any slip—instead they are directly covered with a layer of lead glaze. Some motifs are executed above the lead glaze layer, while others are executed under the glaze (sgraffito). The motifs are of two types: a) geometric motifs (representing lines, circles, and triangles); and b) contiguous splashes and floral motifs (usually representing plant leaves). After completion of the firing process, these motifs appear to have been combined. The most-used colors in the decorations are yellow, red, black, green, and brown.

Moreover, many bowls and dish shards of this type of ware were found at Abu Sarifa in Iraq. These shards contain splashes of green, brown, and violet under a thin transparent overglaze. Abu Sarifa's fragments have been dated to the 8th and 9th century. In addition, splashed sgraffito wares occurred in Siraf between the 8th and 10th centuries. Many fine bowls splashed with olive green, iron-yellow, and green were found in this site.³⁴⁹ Indeed, the large

³⁴⁷ Al-'Umair, "Report on the Excavations of the Islamic City, Al-Mabiyat", p. 242; Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faïd, p. 50; Al-Kilabi, *Islamic Monuments in the Town of Bida*, pp. 65-66.

³⁴⁸ Wilkinson, *Nishapur*, pp. 61-62, 76, 89; Fehérvári, *Islamic Pottery*, pp. 38-39; Ayalon, *Ville Royale de Suse IV*, pp. 253-259.

³⁴⁹ Mason, "The 'Abbasid Glazed Wares of Siraf and the Basra, pp. 62-63.

number of Siraf bowls that are characterized by high quality probably suggests that the workshops in Siraf were the production center of lead-glazed splashed ware during the early Abbasid period, and from there it was transported to al-Juhfa and elsewhere.

Tin-Glazed Ware (Table 4. SP24; Table 7. T1/P30)

During the late 8th and the beginning of the 9th century, tin-glazed ware industry flourished in the Islamic world. This kind of pottery is an imitation of Chinese white stoneware covered in a thick white glaze. Potters (as will be seen shortly) successfully imitated this much-admired pottery type because it was in great demand from caliphs, princes, and the rich. Chinese white ware was produced during the Tang dynasty (618–907) and brought to various Islamic countries through contemporary trade ties between China and the Muslim world. To make a tin vessel bright and white (similar to Chinese stoneware) potters added tin oxide to the glass composition, and then a glaze on the vessel's surface. In addition, potters did not confine themselves to producing one kind of tin-glazed ware; they added a new element to the tin vessels: geometric, floral, and writing motifs in different colors, particularly blue and green.³⁵⁰

During the surface survey in al-Juhfa, we found only one fragment of tin-glazed ware (Fig 27. B; Pl 32. B). We found another in the fourth layer of trench number T1 (Fig 36. B; Pl 41. B). Both fragments are wheel-made of very fine yellow paste, and their thickness ranges between 6 and 8 mm. One fragment represents a bowl or dish body and is covered on one side with opaque white tin glaze. The other is a concave bowl base and is connected to part of the body. It is covered inside and out with a bright, white tin glaze. In the middle of the inside of the base, there is a small concave circle with a diameter of 3 cm. The circle and the rest of the interior surface of the shard contain incised motifs representing overlapping and non-straight

³⁵⁰ Fehérvári, *Islamic Pottery*, p. 40. Dimand, *Islamic Arts*, p. 179; Al-Qaisi, Nahidh Abdul-Razzaq, *Pottery and Ceramic: An Historical and Archaeological Study*. (Amman: Dar Al-Manahig, 2001), p. 112.

lines executed over the glaze.

Fragments of this type of pottery are widespread on the surface of many Abbasid stations located on the pilgrimage routes, such as Faid, Ma‘din al-Niqra, al-Rabadha, Dhrya, and al-Mabiyat.³⁵¹ Moreover, many examples of tin-glazed ware have been found in various sites of the Islamic world, such as Fustat, Nishapur, Susa, and Siraf.³⁵² Tin-glazed fragments and wares that have been found on these sites bear a certain resemblance to al-Juhfa fragments. They are characterized by fine yellow or white paste, and the majority are dishes, bowls, and pitchers covered with an opaque layer of white tin glaze, bearing various geometric and floral motifs executed above the glaze layer in a different color.

During the 9th and 10th century, some production centers, such as Samarra and Basra, received a number of Chinese imports that contain cups and bowls made of the finest white stoneware. The local potters in Iraq succeeded in imitating these Chinese wares using opaque white glaze and produced various types of tin-glazed wares.³⁵³ So, presumably the two fragments found in al-Juhfa were brought from one of the production workshops in southern Mesopotamia, especially Basra, which was the best source for tin-glazed wares during the early Islamic period.

Glass (Table 8. SG1-6; Table 9. T1/G1-4; T2/G5).

From the pre-Islamic period, the Near East was famous for both its glass industry and its skilled glass workers. After the coming of Islam, the glass industry continued producing according to the methods previously inherited. However, with the beginning of the Abbasid period, the glass industry began to develop significantly. Glass workers at this time mastered glass manufacture

³⁵¹ Al-Rashid, *Darb Zubayda*, pp. 437-438; Al-‘Umair, “Report on the Excavations of the Islamic City, Al-Mabiyat, p. 242; Al-‘Utaybi, *Dhryah*, pp. 215-218; Al-Hawas, “Preliminary Report on Archaeological Excavations in the Historical City of Faid”, pp. 49-50.

³⁵² Whitehouse, “Excavations at Siraf”. p. 15; Grube, *Islamic Pottery*, p. 96; Friedrich and Herzfeld, *Excavations of Samarra*, vol. 2, pp. 54-55.

³⁵³ Mason, “The ‘Abbasid Glazed Wares of Siraf and the Basra, pp. 61-62; Lane, Arthur, “Medieval Finds at Al Mina in North Syria”. *Archaeologia* 87, 19, 38, pp. 31-32.

and the decoration of glass. They made the glasses with well-defined chemical type. This type is soda:lime:silica glass ($\text{Na}_2\text{O}:\text{CaO}:\text{SiO}_2$). Islamic glasses show nicely this fundamental tradition of glassmaking either using natron (a naturally occurring form of soda from Egypt) or with soda obtained by burning certain varieties of littoral or desert plants. Various shapes and sizes and uses of glass vessels were produced for different uses, such as bottles, cups, and dishes. The ingenuity of glassmaking generated great interest in the use and possession of these products by caliphs and the general public, whereby they spread to various parts of the Islamic world.³⁵⁴

During the surface survey and excavations at al-Juhfa site, several multi-colored glass fragments were found. The recovered glass fragments were quite small and in very poor condition owing to breakage and decay. Six glass fragments were found on the site surface (Fig 28. A; Pl 33. A), and five were uncovered in the excavations; four in third and fifth layer of trench number T1 and only one fragment in the third layer of trench number T2 (Fig 37. A; Pl 42. A). These fragments were found in the levels of Abbasid pottery previously discussed and date back to the same period. They represent fragments of bottles and dish bodies except for one fragment, which clearly represents a base. The base takes a circular shape, and is centrally concave from the outside due to its free-blowing method of manufacture (using a blowing pipe) as will be seen below. Nine of the eleven glass fragments are made of a medium-transparent paste—on some of which, air bubbles and impurities appear on their surface—and two are made of an opaque white paste. The glass paste is characterized by various colors; white, green, cyan-blue, and dark blue. The fragments are thin, measuring 1-4 mm.

All the glass fragments in al-Juhfa were made by the free-blowing method. This method is the most important in the glass industry. It has been widely known since ancient times. It requires great skill and experience as well as speed in execution. Glass workers often used this

³⁵⁴ Carboni, Stefano; Whitehouse, David, *Glass of the Sultans*. (New York: Metropolitan Museum of Art, 2001), pp. 27-28.

method in the manufacture of glassware because it helps to increase production and save time. Many Islamic sites contain a number of glass fragments that were made by this method, as we will see shortly. Free-blowing involved using a metal tube with two ends, one holding the soft glass paste and the other used for blowing. Air enters through the tube, reaching the glass mass which then inflates and forms according to the desired shape by continuous blowing and rotation. Glassware made by this method can be identified by the conspicuous marks left by the blowing tube on the glassware base.³⁵⁵

Five fragments contained simple decorations, and the others lacked any decorations. The principal method of decoration was incising. This method is based on scratching the glassware surface (while it is hot) with a tapered tool. After the scratching process is complete, the glassware is reheated and polished again. Consequently, the outer shape of the glassware becomes ribbed, particularly in the area of the neck. On the other hand, the scratching process was not confined to heated glassware. It is possible to scratch glassware after it becomes cold: a sharp tool was used to execute precise geometric and floral decoration.³⁵⁶ Below is detail of these decorated fragments.

Four decorated fragments come from the surface. The first—one side of which is broken—has a decoration representing an incised rectangular shape. It may have been executed by the incising method. The second contains a decoration consisting of two incised lines on the glassware body. The third is decorated with two columns carried out by the incising method while it was still hot where decoration seems to be somewhat deep. The fourth contains a decoration depicting small incised circles (Fig 28. A). In addition, there is one stratified fragment that has an ornament consisting of a simple incised line (Fig 37. A).

³⁵⁵ Abdul Khaliq, Hana. *Islamic Glass*. (Baghdad, Dar al-Hirya, 1976), pp. 43-51; Al-'Umair, "Report on the Excavations of the Islamic City, Al-Mabiyat", pp. 243-244.

³⁵⁶ Carboni, *Glass of the Sultans*, pp. 47-49; Abdul Khaliq, *Islamic Glass*, pp. 52-54.

The poor condition of al-Juhfa fragments and their simple, ordinary decorations do not permit much comparison with material from other sites. However, most archaeological Abbasid sites dated to between the 8th and 11th century contain decorated multicolored glass fragments, including those sites located on various pilgrimage routes.³⁵⁷ For example, the fragments found at Faïd, al-Rabadha, al-Mabiyat, and Samarra generally resemble those found at al-Juhfa. They bear some similarities in terms of their colors, which include white, green, and dark blue. Another similarity between some of these fragments is in terms of their free-blowing method of manufacture.

However, during the Fatimid period (between the 10th and 12th century), Egypt and Syria had glass-factories employing the best craftsmen in various types of glass, and exported many glass pieces—such as shallow cups with tonged ornament and little blue scent-bottles—to all the countries of the Near East.³⁵⁸ Since the site of al-Juhfa was the main *Mīqāt* for Syrians and Egyptians, al-Juhfa probably contains some imported glass pieces brought by traders and pilgrims. Therefore, the site needs extensive exploration to discover more glass pieces better than those discovered in this study.

In addition, some glass fragments from al-Juhfa may have been imported from nearby sites. For example, archaeological excavations in al-Rabadha revealed kilns and smelters for glass manufacture and pieces of glass slag (resulting from the process of melting and forming glass) dated to between the 8th and 10th centuries.³⁵⁹

³⁵⁷ Al-Rashid, *Al-Rabadha*, p. 89; Al-‘Umair, “Report on the Excavations of the Islamic City, Al-Mabiyat”, pp. 243-244; Al-Hawas, “Preliminary Report on Archaeological Excavations in the Historical City of Faïd”, pp. 52-53; Al-Janabi, Tariq Jawad, “Excavations and Maintenance in Samarra”. *Sumer* 37, 1981, 1981, p. 199.

³⁵⁸ Lane, “Medieval Finds at Al Mina”, pp. 64-66; Milwright, Marcus, “Glass and Glassworking in Damascus during the Late 19th and Early 20th Centuries”. *Journal of Glass Studies* 56, 2014, p. 201.

³⁵⁹ Al-Rashid, *Al-Rabadha*, p. 89.

Worked Stone

During the archaeological survey and excavation on al-Juhfa site, we discovered nine pieces of worked stone. Two are made of steatite and seven of volcanic basalt stones. The stone pieces are described, next.

Steatite Pieces (Table 10. SN1; Table 11. T1/N1)

Steatite is one of the natural materials called “schist chlorite.” It crumbles easily and is extracted from certain mines. Since ancient times, people in the Arabian Peninsula have made many steatite utensils, such as cooking pots, lamps for lighting, and incense braziers. Archaeological surveys and excavations at several sites in the Arabian Peninsula show that they contain many steatite vessels. Some date back to 3,000 BC and others—such as those found in Tarout, Buqayq, al-Hofuf, Thaj, Qaryat al-Faw, and al-Okhdood—to the Hellenistic period. During the early Islamic period, steatite vessels spread to most countries of the Islamic world, especially in the Arabian Peninsula.³⁶⁰

Only two small steatite fragments were found at al-Juhfa, besides the many Abbasid pottery fragments described earlier. One found during the surface survey represents a pot rim made of dark grey steatite. It is connected with part of the body and contains a handle protruding about 6 mm from the body (Fig 28. B; Pl 33. B). Another fragment was found in the third layer of trench number T1. It represents a pot base that seems to have been circular and flat. It is made of black steatite (Fig 37. B; Pl 42. B). Both fragments are free of decoration and show the effects of burning and use, which indicates they were used for cooking.

³⁶⁰ Zarnís, Juris, “Steatite Vessels in the Riyadh Museum”. *Atlat* 2, 1978, pp. 75-78; “Preliminary Report on the Survey and Excavation in Najran”, p. 31; Al-Ansary, *Qaryat al-Faw*, p. 29.

The two steatite fragments in al-Juhfa are similar to many discovered in several main pilgrimage routes sites dating back to the early Abbasid period. For example, al-Juhfa's fragments bear great similarity to those uncovered at Dhrya (on the Basri route) in terms of the color and the shape of rim (connected with part of the body) and the base (circular, flat).³⁶¹ This similarity suggests that both sites may be attributed to the same period and may have obtained this kind of steatite pot from the same production center as will be seen, below.

In addition, many steatite fragments dated to the early Abbasid period were found in other sites on the pilgrimage routes, such as Zubala, Faid, Samira, Ma'din al-Niqra, al-Rabadha, al-Mabiyat, Bida, and 'Aththar.³⁶² They are generally pots of different sizes, having a somewhat concave bottom, a wide body that is wide at the bottom, are straight or slanted at the top, and are provided with handles on both sides. These vessels also include lamps and braziers of various shapes, different sizes of containers, pots, covers, and small vases. Most such vessels were made of a kind of coarse-textured steatite, the color of which is grey or black, tending to green.

They are also characterized by a lack of decoration, although there are a few examples in other sites with geometric decorations executed by the incising method, such as the large lamp fragment found at the qasr of al-Fudayn in al-Mafraq, northern Jordan during the 8th century. This large fragment is made of soft steatite and measures 20 cm high. It shows an architectural decor in a style typical of the early Islamic buildings.³⁶³

However, it is possible that al-Juhfa's steatite fragments were not brought from a great distance; al-Hawra (the most famous steatite industry site during the early Abbasid period) is not very far from al-Juhfa, and both are located on the Egyptian coastal route. Al-Idrisi, in his

³⁶¹ Al-'Utaybi, *Dhryah*, pp. 268-269

³⁶² Al-Rashid, *Darb Zubayda*, pp. 445-446; Al-'Umair, "Report on the Excavations of the Islamic City, Al-Mabiyat", pp. 248-249; Al-Hawas, "Preliminary Report on Archaeological Excavations in the Historical City of Faid", p. 52; Al-Kilabi, *Islamic Monuments in the Town of Bida*, pp. 73-74.

³⁶³ Museum With No Frontiers, *The Umayyads: The Rise of Islamic Art*. (Amman: Ministry of Tourism, Dept. of Antiquities, 2000). p. 69.

12th-century book, *Nuzhat al-Mushtāq fī Ikhtirāq al-Āfāq*, describes al-Hawra as a large village where steatite was mined then exported to many countries, near and far.³⁶⁴ In this regard, an archaeological survey conducted in al-Hawra revealed a great number of steatite fragments, which have not yet been studied, indicating that al-Hawra's environment was very rich in steatite.³⁶⁵ This led to the production of large quantities of steatite vessels and their export to other cities. Accordingly, perhaps the steatite fragments found in al-Juhfa and elsewhere in the region were imported from al-Hawra.

Volcanic Stone Pieces (Table 10. SN2-4; Table 11. T1/N2-5)

During the survey and excavations on the site, we discovered seven pieces of worked stone next to different types of early Abbasid pottery (mentioned previously) and attributed to the same period. Three were found on the site surface (Fig 29; Pl 34) and four were only uncovered in the fifth layer of trench number T1 (Fig 38. A; Pl 43. A). All pieces were made of volcanic basalt stones and their colors tend to grey and brown. The shape of the pieces varies between arched shape, sharp angle, cylindrical, nearly rectangular, and conical. The surface of some pieces is well polished and their measurements range from 8 to 14 cm long and 2 to 9 cm wide.

Based on their shapes and designs, they seem to have been used to grind cereals and for other cooking needs. In addition, one piece contains hollow grooves that take a vertical shape in the piece's body and horizontal in its head. The piece shows the effects of use, indicating that it was used for sharpening blades (Fig 38. A). These worked stones were likely brought from Hawran in southern Syria. Hawran was known for its barley, legume, vine and orchard crops,

³⁶⁴ Al-Idrisi, Muhammad b. Muhammad, *Nuzhat al-Mushtāq fī Ikhtirāq al-Āfāq*. (Beirut: Dar al-Kutub, 1989), p. 350.

³⁶⁵ Al-Kilabi, *Islamic Monuments in the Town of Bida*, p. 73.

and a number of quarried millstones to grind these types of agricultural crops.³⁶⁶ In addition, these stones could be made locally where the site of al-Juhfa (as described earlier) is surrounded by volcanic lava fields. Thus, the people of al-Juhfa used this readily available material to meet their needs through volcanic worked stones.

Metal Pieces (Table 12. T1/M1-2)

Only two copper pieces were discovered in the second layer of trench number T1 (Fig 38. B; Pl 43. B) while we did not uncover any copper pieces on the site surface or in trench number T2. The small number of uncovered pieces probably suggests that the use of copper in al-Juhfa was on a very small scale, and the pieces may have been brought to the site by some pilgrims and travelers. Moreover, the two pieces do not contain much information to help us make clear comparisons. However, both pieces belong to the early Abbasid period and were found in the same levels as several unglazed and glazed pieces of Abbasid pottery discussed earlier (see shard numbers T1/P1, 2, 8, 23, 24, 25, and 28). In addition, one of the copper pieces connects to one of the glazed Abbasid fragments (shard number T1/P25), indicating that it belonged to the same period.

This piece is a curved handle, made of copper and painted in a corrosive green color. At the edges of the handle there are two small circular holes, one incomplete, where it is partially broken. The handle was found next to the shard of a vessel neck (mentioned above) in the same archaeological layer. Some specifications of the handle and the shard are identical to each other, such as the size of the circular holes and the space between them. So, it seems that their functions were related; for it appears that the two holes of the handle were placed at their equivalents in the shard vessel (by a small hook, or the like), for the purpose of carrying or hanging. The handle is

³⁶⁶ McPhillips, Stephen; Wordsworth, Paul D, *Landscapes of the Islamic World: Archaeology, History, and Ethnography*. (Pennsylvania: University of Pennsylvania Press, 2016), p. 152.

11 mm long, 1.5 cm wide, and 5 mm thick.

As for the second piece, it is cylindrical in shape and has a pointed head covered with a layer of rust. It is likely a cover for some bottles, or a tool to put on eyeliner. It is 6.02 cm long, 1 cm wide, and 8 mm thick.

In conclusion, through this chapter we have classified the types of archaeological finds at the al-Juhfa site and to identify their date in the early Abbasid period. The finds were divided into two main groups: finds picked up from the site surface, and others discovered through excavations. Both groups have the same types of finds, which emphasizes the sequence of historical stages that occurred at the site. A variety of archaeological finds was found at the site of al-Juhfa. These differ in in type, shape and function, and are distinct in their decoration and methods of manufacture. They are divided into four important sections: pottery, glass, worked stone, and metal pieces.

Two main kinds of pottery were found in al-Juhfa site: unglazed and glazed. Thirty-four unglazed pottery fragments were found in both the site surface and during excavations. These fragments belong to known types of early Abbasid pottery: egg-shell ware, yellow pottery, red pottery, and handmade pottery. They were made from paste varying in preparation (fine, medium-fine, non-fine) and in color (white, yellow, red, and pale red). In general, these fragments represent different parts of bases, bodies, necks, and the handles of different kinds of wares, such as flasks, jars, pots, and others vessels. Some contain diverse decorations constituting of crossed columns, straight and wavy lines, and a grid of cross-cutting lines, and small circles executed by the incising and ribbing methods. In addition, some fragments contain a brown core, black, and grey core in their section.

As for glazed pottery, twenty fragments were discovered on the surface and during excavations. These were classified under famous types of early Abbasid pottery, such as monochrome alkaline-glazed ware, monochrome lead-glazed ware, lead-glazed splashed ware, and tin-glazed ware. They made from yellow and pale-red paste, ranging from fine to medium-fine. All fragments were painted with different colors according to the type ware they belong to, such as dark blue and cyan-blue (alkaline glaze), green, olive-green, light green, and yellow (lead glaze), and white (tin glaze). These colors were used on both sides of some shards and in others, only on one. Generally, the fragments constituted different parts of bases, bodies, necks, and rims of various ware types, such as jars, dishes, pots, bowls, and other vessels. The fragments of lead-glazed splashed ware are characterized by a variety of motifs executed above or under the lead glaze layer, such as small circles, colored splashes, parallel lines, and a grid of lines.

A total of eleven glass fragments are shown in this study. They were found during the surface survey and excavations. They were made by the free blowing method out of thin and thick paste (semi-transparent and opaque). The fragments have different colors, such as white, green, dark green, cyan-blue, and dark blue. They constitute parts of bases and bodies of different types of bottles and glassware. Some fragments contain diverse decorations, such as rectangle, lines, columns, and small circles. These decorations were all executed using the incising method.

Only two metal pieces made of copper were found during excavation on the site (none were on the site surface). One piece represents a curved handle for carrying or hanging purpose; another is a pointed head used for varied purposes.

During the surface survey and excavations in al-Juhfa site, we found two types of worked stones: steatite, and volcanic basalt stone. Only two steatite shards were found, representing shards of base and rim pot. The two shards are free of decoration, and both show the effects of burning and of use, indicating their use in cooking. Seven volcanic stone shards, differing in

shape, size and color, were also found. These were used for grinding cereals and in cooking.

On the basis of a preliminary analysis of archaeological finds and comparison with their counterparts in various countries of the Islamic world, it is possible to determine periods of prosperity and decline that alternated in the Islamic city of al-Juhfa. We have already noted the scarcity of finds in the 7th century (during the early Umayyad period), where the results of the surface survey and excavations have not yet provided us with information on early settlement at that time. Perhaps further finds from this period will be detected in future studies at the site.

In contrast, the number of finds grew tremendously in al-Juhfa since the late 8th century (during the early Abbasid period) and continued in growing during the 9th, the 10th, 11th century, and then begins to decline during the 12th century. This suggests that al-Juhfa site was founded in the early Abbasid period, possibly by the second half of A.D. 700, and was still occupied in the beginning of the 12th century, and then began to decline and abandonment, which is supported by early geographical sources as mentioned earlier in chapter 3.

Moreover, some of the pottery and glass shards seem to be locally manufactured; made of paste that was not well prepared, non-fine, opaque, and containing a lot of impurities or air bubbles. However, we have not yet found any physical evidence supporting this matter, such as manufacturing kilns and slag of pottery and glass. On the other hand, some shards (especially of pottery) appear to have been imported from abroad, where the paste used in the industry was characterized by finesse, and good preparation. These shards are similar to those in some Islamic centuries (as shown above); thus, the imported finds can be probably attributed to two neighboring cultural centers: Iraq, and Syria. This indicates that al-Juhfa had strong cultural and economic links with various Islamic centers because of its distinctive location on the route between Mecca and Medina, which was an extension of many different pilgrimage routes.

Conclusions

Through early textual sources analysis, archaeological excavations, and comparative studies taken as primary methods in this study, we tried to answer the questions posed in the introduction to this research. We inferred several significant results about the Islamic *Mawāqīt* in general: its origin and meaning, its relationship to the main pilgrimage routes in the Arabian Peninsula, and its principal urban features. Concerning the *Mīqāt* of al-Juhfa (the main theme of this study) we derived many interesting results related to its history, geography, culture, and architecture. The details are described as follows.

This study shows that Muslim pilgrims during the Hajj ceremony were required to stop at one of the five fixed *Mawāqīt* (Dhul-Hulaifa, al-Juhfa, Qarn-al-Manazil, Yalamlam, and Dhatu-‘Irq). It seems that two of five *Mawāqīt* (the *Mīqāt* of Dhatu-‘Irq and the *Mīqāt* of al-Juhfa) were not designated during the lifetime of the Prophet Muhammad, which goes against with some *Ḥadīths* that state that all the five *Mawāqīt* were fixed by the Prophet. Based on a narration mentioned in *Ṣaḥīḥ al-Bukhārī* (as we saw in chapter 2), the *Mīqāt* of Dhatu-‘Irq and the *Mīqāt* of al-Juhfa were likely fixed by the Caliph ‘Umar b. al-Khattab after the Islamic conquest of Iraq and Syria in the mid of 7th century. As for the other three *Mawāqīt* (Dhul-Hulaifa, Qarn-al-Manazil, and Yalamlam), they may have been fixed during the lifetime of the Prophet where they fit well with the general historical context of the expansion of the Islamic domains into areas, in which these three *Mawāqīt* locate.

These five *Mawāqīt* had great status in the eyes of all Muslim pilgrims so that they are forbidden from passing them without stopping and assuming *iḥrām* in any one. In fact, these *Mawāqīt* represent the starting points in the journey towards Mecca and the Holy Mosque, where the Ka‘ba stands. However, the five major *Mawāqīt* were not strictly obligatory if they had become inaccessible or disused. Therefore, some new *Mawāqīt* appeared, such as Jeddah, Rabigh, the new *Mīqāt* of Yalamlam, and the *Mīqāt* of Wadi Mehram. These *Mawāqīt* were not designated during the early Islamic period; but they are all located outside Mecca on the

perimeter of the main *Mawāqīt* set in that period, and parallel to them. More importance is given in Islam to pilgrims performing the rituals of Hajj easily and conveniently, but with an emphasis on assuming *iḥrām* before arriving in Mecca.

As we noted in chapter 2, the *Mīqāt* of al-Juhfa is clearly one of the best archaeological sources to study the creation and initial development of early Islamic *Mawāqīt* in Arabia. The *Mīqāt* of Dhatu-‘Irq also experienced some architectural activity that warrants further discussion and analysis in future studies. The other three *Mawāqīt* were uninhabited and contain little architecture.

The study also revealed (as shown in chapter 2) that the five main *Mawāqīt*, including the *Mīqāt* of al-Juhfa, were intimately linked with the main pilgrimage routes in Arabia. This important relationship has been insufficiently documented in modern scholarship. All *Mawāqīt* are appropriately placed along the network of pilgrimage routes giving access to any particular *Mīqāt*. Also, we concluded that the *Mīqāt* of Dhul-Hulaifa and the *Mīqāt* of al-Juhfa were located in a strategic location on the route linking Medina and Mecca, which was an important artery for pilgrim traffic and an extension of some pilgrimage routes leading to Mecca. Therefore, the two *Mawāqīt* were the only ones accessible to most pilgrims coming via different main pilgrimage routes such as the route of Zubayda, the Basri route, the Egyptian route, and the Syrian route (Map 3). Moreover, this strategic location on the Medina-Mecca route contributed to the prosperity and development of the two *Mawāqīt*, especially al-Juhfa, which benefited from active convoy traffic along the route.

Regarding the historical development of al-Juhfa (as mentioned in chapter 3), some early Islamic religious texts indicate that al-Juhfa has existed since the time of the Prophet Muhammad. It has witnessed significant historical events; but it was an uninhabited place and devoid of any tangible architectural activity. After the time of the Prophet, the Medina and Mecca route received much attention from the Caliph ‘Umar ibn al-Khattab, being provided with

all possible conveniences for pilgrims and travelers, which greatly contributed to the prosperity of this route (and later, that of al-Juhfa).

This care for the Medina-Mecca route continued during the Umayyad era, especially during the reign of al-Walid b. 'Abd al-Malik and Hisham b. 'Abd al-Malik, who ordered the improvement of the route and its major stations. Thus, al-Juhfa may have been one of the stations reconstructed at that time. Indeed, there are a few sayings concerning the date of al-Juhfa's construction during the Umayyad period, such as that of the late historian, Ibn Shakir al-Kutubi, who stated that al-Juhfa was built by 'Umar b. Abdul Aziz early in the 8th century. However, in this study we have not yet found any archaeological evidence to clearly corroborate these hypotheses.

During the Abbasid period, the Abbasid caliphs paid great attention to the pilgrimage routes in Arabia, including the Medina and Mecca route. Queen Zubayda, the wife of the Abbasid caliph Harun al-Rashid was the most famous personality to do so, devoting much of her money and effort to building a variety of installations for the comfort of pilgrims. During this time, the number of stations located on the Medina to Mecca route reached fourteen (including al-Juhfa) extending over a distance of 400 km. Some stations were populated and contained a great deal of architecture, while others were small and contained few buildings. However, according to several contemporary sources, as late as the 8th century, al-Juhfa surpassed all stations along the Medina-Mecca route in terms of architectural activity and urban development. This is supported by the archaeological evidence we found in al-Juhfa as has been demonstrated in chapter 2 and 4).

As we noted in chapter 3, variety of factors led to the prosperity and development of al-Juhfa during the Abbasid period, such as religious status, strategic location, and the patronage of the Muslim caliphs, as mentioned above. Certain geographical factors also played an important role in al-Juhfa's development. Al-Juhfa's topography is characterized by two main

characteristics: first, coastal hills containing a concentration of black basalt stones (which formed an important source for building materials in al-Juhfa) and second, valleys. Al-Juhfa is located in an area rich in valleys, such as al-Gha'idha, al-Mur, and al-Kharrar. Thus, al-Juhfa was distinguished by fertile soil and abundant groundwater, which supplied it with sustainable quantities of water to irrigate agricultural crops and increase agricultural and livestock production, whereby al-Juhfa was able to export various crops to Medina during the 9th century.³⁶⁷

Al-Juhfa continued to be occupied until its importance began to decline gradually between the second half of 11th century and the first half of 12th century. This chronology is supported by both written sources and the archaeological evidence. During this period al-Juhfa most likely was considerably influenced by two significant events—the economic crisis of the Fatimid caliphate (mid of 11th century) and the arrival of Crusaders in the region (1099 onwards)—which contributed to the disrupting of the Egyptian and Syrian route. Al-Juhfa was affected during this disruption, which caused to pilgrims turn to the new *Mawāqīt* of, first, Jeddah, and later, Rabigh, instead of al-Juhfa. This resulted in al-Juhfa's abandonment until the present day. Other important reasons that led to the abandonment of al-Juhfa included natural factors and miscellaneous political factors, which were discussed in detail in chapter 3.

In chapter 4 the study undertook important fieldwork in al-Juhfa site that depended on both archaeological survey and excavation. The archaeological survey adopted four main methods: textual sources, satellite imagery, Google Earth imagery, and field surveys. We discovered traces of a large-scale, walled Islamic city. The buildings were built of black basalt stone in a compact and strong shape. The walls are massive, thick, and high. These walls were built using boulder-and-chink construction and covered with a layer of mud and stucco, and from their scales and designs they were evidently relatively impressive structures.

³⁶⁷ Al-Harbi, *Kitāb al-Manāsik*. pp. 413-415.

A large architectural unit was discovered in the residential area of al-Juhfa. This unit had five rooms connected to each other, overlooking an open rectangular courtyard. This is broadly similar to layout of many early palaces and houses during the pre-Islamic and Islamic period in the Levant and the Arabian Peninsula as we noted in chapter 6.

The site also contains a variety of urban architectural elements such as the fortifications (walls, fort). Al-Juhfa's residential area was surrounded by a ruined wall on all sides. This kind of fortification was known in several important cities of the Levant and the Arabian Peninsula, especially on the main pilgrimage routes of the early Islamic period. These cities were walled for defensive purposes to protect the population as well as travelling pilgrims and merchants. There is also a fort situated at the southeastern corner of the residential area to defend the population and pilgrims and served as a residential complex. The plan, building technique, and function of al-Juhfa fort is comparable in many respects to some of the Umayyad desert castles in the Levant and to some Abbasid fortresses located on the pilgrimage routes during the early Islamic period. For example, the general layout of the fort of al-Juhfa is identical to these castles in their square ground-plan, with semicircular towers projecting at the wall's corners. This form was a feature of Greek and Roman forts before Islam and indicates the continuity and active interaction between Islamic and pre-Islamic civilizations (as mentioned in chapter 6)

Fortifications were important elements in the built environment of the Islamic city. Security was essential to stabilizing urban Islamic society. Fortifications were very important in protecting cities and in the pattern of their development. They also accurately reflect an important aspect of the political and martial history of cities. Government patronage, in the shape of various fortifications, played a significant role in providing physical security for Muslims in the early Islamic period.³⁶⁸

In addition, two important types of water supply were discovered in al-Juhfa: the fort pool and the ground canal. The fort pool is circular in shape and built of black basalt stones. It is now filled with sand. However, most stations located on the pilgrimage routes were provided with great many such water pools. They resemble those of pre-Islamic period in terms of their

³⁶⁸ Creswell, *A Short Account*, pp, 229-291; Lassner, "The Caliph's Personal Domain", pp. 119-156.

large size, geometric design, and the presence of stone stairs and filters. Al-Juhfa may, therefore, have had pools (other than the small one discovered) resembling the building style of these large pools. However, this requires further exploration and research.

As for the underground canal (*qanāt*), it was a huge project, containing many vertical wells gradually extending over long distances until appearing on the surface of the ground to irrigate low-lying areas in al-Juhfa. *Qanāt*, which date back to the pre-Islamic period in Iran, are one of the most important water supply and irrigation systems in the Arabian Peninsula. The canal, which is now buried under the sands, needs further study and research. It resembles many such canals located on the pilgrimage routes in terms of its presence in valleys that are rich in groundwater, the great distance that they traverse to irrigate distant low-lying areas, and appropriate topography permitting the gradual flow of water from high to low areas.

Water supply was an essential element in early Islamic cities. Throughout history, water has been the main subject of interest, and people have sought constantly for water resources to invest in using different irrigation methods. The presence of water is essential in human life and represents a necessary element for survival and stability. The Arabian Peninsula is classified as one of the most arid areas. In these difficult conditions, people struggled by various ways and means to deliver water to their farms and settlements. Ultimately, people used a system of irrigation suitable to the conditions of drought and desertification, exploiting the water resources very efficiently. This system was an integral part of Islamic city planning and greatly contributed to the development and growth of society in general. Muslim authorities in early Islam considered the supply of water by wells, canals, and pools as an essential service for those who lived in the city.³⁶⁹

Moreover, there are many other architectural features that were buried underground and covered with sand and rocks. In fact, excavating these will require considerable effort in future studies. This confirms what the early historical and geographical sources say during the 9th and 10th century: that al-Juhfa was an important Islamic city containing many buildings.

³⁶⁹ Insoll. *The Archaeology of Islam*. pp.219-221.

As to the archaeological excavation, it is founded on stratigraphic excavation, in which two important places have been identified to make two trenches, numbered T1 and T2. Trench T1 was drilled in the residential area at a depth of 3.05 m. This revealed an architectural unit consisting of one rectangular room built of black basalt stones with a mortar composed of mud and plaster. The room, which belongs to one residential phase, had a single door and is characterized by a plaster floor. We also discovered a collection of archaeological finds, such as pottery, glass, metal, and work stone. In addition, some burned broken bone, ash, charcoal, and volcanic stones used for grinding cereals and sharpening blades were discovered mixed with soil, which likely indicates that the unit was a place to cook. Trench T2 was excavated in the fort to a depth of 2.60 m and did not reveal any architectural features. However, a variety of pottery and glass shards was discovered within the trench's archaeological layers.

A relatively small number of objects was discovered during the archaeological survey and excavation of al-Juhfa site, such as pottery, glass, worked stone, and metal pieces, as we saw in chapter 7. These shards were studied based on a qualitative classification approach, illustrating the finds with drawings. They were also compared to similar models discovered during previous archaeological excavations at some important Islamic sites and published in numerous studies. After comparison, we inferred that all archaeological finds date back to the Abbasid period between the late 8th century and the 11th century. This confirms the information about the date of al-Juhfa that was given in the analysis of primary sources in chapter 3.

Furthermore, we concluded that some fragments probably were imported from abroad: most likely from Iraq and Syria. This indicates the high level of activity and prosperity that achieved by al-Juhfa and the relationship it had with other Islamic sites (as we noted in chapter 2, 3, and 7). The range of materials can be explained by the site's distinctive location on the route between Mecca and Medina, which was an extension of many different pilgrimage routes. The archaeological evidence indicates that the percentages of objects along the pilgrimage routes

were more than those that found in a great distance. Merchants, pilgrims, and travelers greatly contributed to bring these object into the sites near to major pilgrimage and trade routes. In addition, seasonal traffic was an important factor to flow money and resources into the local economies of these sites. Many travelers stopped at many stations to buy supplies and foodstuffs from farmers and local merchants. Therefore, these stations took advantage of the annual economic opportunity provided by pilgrims and travelers, which reflected on the degree of their mercantile activity.³⁷⁰

Commerce and manufacture were the most important factors in the prosperity of early Islamic towns, and among the main requirements of the Muslim community. The prosperous trader was regarded as a pillar of society. It was natural, then, that the design of the city reflected the needs of this class and that the Muslim city embraced commercial considerations to be applied within it.³⁷¹ As we saw in chapter 2, some primary sources in the 9th and 10th century mentioned that al-Juhfa has a *suq*. In addition, the poet Ahmad b. ‘Amr in the 8th century mentioned that al-Juhfa contains various shops arranged next to each other (i.e. in rows).³⁷² It seems that the *suq* in al-Juhfa was active, containing various goods where it is located in a strategic location on the route linking between the Holy cities of Mecca and Medina. However, during the archaeological survey and excavation in al-Juhfa site we did not find any physical evidence refers to the *suq* and the shops, but they may be built within the walled residential area to provide more security and protection of goods and funds. The *suq* location requires deep excavation in future.

³⁷⁰ Milwright, Marcus, “Trade and the Syrian Hajj between the 12th and the Early 20th Centuries Historical and Archaeological Perspectives”. In Porter, Venetia and Saif, Liana, *The Hajj: Collected Essays*. (London: British Museum, 2013), Chapter, 5, pp. 29-30.

³⁷¹ Khamis, “Two Wall Mosaic Inscriptions”, pp. 173-176.

³⁷² Al-Harbi, *Kitāb al-Manāsik*, pp. 545-572.

Besides the importance of the architectural elements in the layout of al-Juhfa (described above), the most important features in the layout of early Islamic city was the mosque. The mosque served as a community center, court, and religious school. With time passed, the social role of the mosque was enhanced significantly and in a tangible way. The Mosque provided an essential focal point for the faithful to express their ideological and religious thoughts.³⁷³ As we noted in chapter 2, some primary sources briefly indicate that al-Juhfa contains a mosque. This potential mosque is not visible at the present and needs more excavation in future. However, it is expected that this mosque was built on a large area outside the walled residential area in order to accommodate the large number of pilgrims and travelers who came to al-Juhfa as a *Mīqāt* and a main station on the Medina-Mecca route. The permanent inhabitants may use this external mosque or may have another smaller mosque within the residential area. This internal mosque perhaps locates in a visible location and accessible by all members of the community.

In closing, the urban concept in the early Islamic cities including al-Juhfa allows us to infer that the Muslim community possessed an urban planning with its own insights. The urban environment of Islamic city began to change in keeping with the new Islamic society. The coming of the new religion of Islam brought changes to the urban planning of cities and greatly contributed to the forming of the Muslim city. The early Islamic community formulated a special concept by creation of new insights corresponding specifically to the needs of the Muslim community which involved Islamic ritual, piety, and social solidarity.³⁷⁴

The Islamic city was associated with Islam as a method and system in life. Therefore, any accurate and methodical study of the Islamic city and its physical form must bear in mind that Islam and its systems and provisions were the first major axis in the life of the city. A careful study of the city in the Islamic world will help us to link Islamic thought with the Islamic city

³⁷³ Creswell, *A Short Account*, pp. 4-5.

³⁷⁴ Milwright, *An Introduction to Islamic Archaeology*, pp. 24-25.

community that eventually formed the physical body of the Islamic city. Consequently, the Islamic city should be considered by many disciplines and methods in order to highlight the true nature of the Islamic city from different angles.

In fact, careful comparative study of the archaeological remains is essential if we are to arrive at any firm conclusions. Such an approach will assist in attaining a broader understanding of how to plan the reconstruction of urban site and how to interpret the character of human settlement within it and will open up further prospects for new work on this Islamic city.

Moreover, archaeology is more closely allied with philology and history. Thus, reliable texts and archaeology have often been employed in conjunction with one another to aid in the interpretation of the archaeological record and to solve a particular historical or archaeological problem. However, as we noted in chapter 2 when talking about the dating of *Mawāqīt*, texts are not always reliable sources since their authors are not contemporary to the event and depend on previous oral accounts to get the information. Thus, it is difficult to use these texts as evidence for what actually happened. Herein lies the importance archaeological excavations are essential to reveal much of the Islamic city's physical structure, and so, help us to interpret most of the cultural and intellectual factors that influenced the formation of the city life through the ages.

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Appendix

Glossary of Arabic Words and Terms

<i>Aḥad:</i>	Singular
<i>‘Askar:</i>	The camp
<i>Amīr al-Mu'minīn:</i>	Commander of the Faithful
<i>Arāk:</i>	Salvadora persica tree
<i>Asbāb al-Nuzūl</i>	The contexts of revelation
<i>Bilad al-Sham:</i>	The Levant
<i>Birka Kabīra:</i>	The large pool
<i>Dār al-Imāra:</i>	Governor’s residence
<i>Dhūl-Ḥijjah:</i>	The twelfth month of the Islamic calendar
<i>Dhūl-Qa‘dah:</i>	The eleventh month of the Islamic calendar
<i>Ghusl:</i>	Bathing
<i>Ḥadīth:</i>	Prophetic traditions
<i>Ḥajjat-al-Wadā‘:</i>	The farewell pilgrimage
<i>Al-Ḥalafah (pl. al-Ḥulafā‘):</i>	One kind of plants
<i>Hijra:</i>	The Prophet’s migration
<i>Al-Hilāl:</i>	The crescent
<i>Ḥīrar:</i>	Volcanic lava fields
<i>Iḥrām:</i>	Special state of ritual purity
<i>‘Irq:</i>	The small mountain
<i>Isnād</i>	Chains of oral testimony
<i>Jubbah:</i>	Kind of clothing
<i>Koḥl:</i>	Eyeliner
<i>Madīna:</i>	Town or a City
<i>Madīnat al-Salām:</i>	City of Peace

<i>Mashriq:</i>	Eastern side
<i>Al-Masjid al-Harām:</i>	The Holy Mosque at Mecca
<i>Mawla:</i>	Master
<i>Miṣr (pl. amṣār):</i>	Garrison towns of the Muslim army
<i>Mīqāt (pl. Mawāqīt):</i>	Halting places for pilgrims before they arrived at Mecca
<i>Muḥarram:</i>	The first month of the Islamic calendar
<i>Muṣṭalaḥ al-Ḥadīth</i>	The term of <i>Ḥadīth</i>
<i>Mut ‘asha:</i>	Minor station
<i>Mutawātir:</i>	Successive
<i>Qanāt:</i>	Ground canal
<i>Qarn:</i>	A small rectangular mountain
<i>Qaṣr (pl. qusūr):</i>	Muslim elite residence
<i>Rukn (pl. arkān):</i>	Islamic pillars
<i>Sharī‘a</i>	Islamic law
<i>Shawwāl:</i>	The tenth month of the Islamic calendar
<i>Al-Shida al- ‘Uzma:</i>	The major difficulty
<i>Surra Man Ra ‘a:</i>	He who sees it is delighted
<i>Talbiya:</i>	Special supplication during the Hajj
<i>‘Umra:</i>	Religious scholars
<i>Umma:</i>	United Islamic community
<i>Umm al-Mu ‘minīn:</i>	Mother of the Believers
<i>‘Ulamā ‘:</i>	The lesser pilgrimage
<i>Waqt:</i>	Time
<i>Wādī:</i>	Valley
<i>Wudu ‘:</i>	Ablution

Forms

Form 1

Information registration form during the field survey

Date:/...../.....

The Site: al-Juhfa.

Location of Find:

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Type of Find:

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Description of Find:

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Notes:

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Form 2

Daily record of archaeological excavations works

Date:/...../.....

The Site: al-Juhfa.

Trench Number:

Trench Number on the grids of site:

Description of the trench before excavation:

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Excavation Procedures:

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Description of Layers:

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Description of Find:

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Form 3

Registration card of finds during the excavations

The Site: al-Juhfa.

Date:/...../.....

Type of Find: Number:

Location of Find:

Trench Number: Layer Number: Depth:

Tables

Name of the <i>Mīqāt</i>	Current status	Alternative or additional <i>Mīqāt</i>	Time of abandonment
The <i>Mīqāt</i> of Dhul-Hulaifa	In use	—	—
The <i>Mīqāt</i> of al-Juhfa	Abandoned	1- Jeddah port	During the 6 th / 12 th century
		2- The <i>Mīqāt</i> of Rabigh	
The <i>Mīqāt</i> of Dhatu-‘Irq	Abandoned	The <i>Mīqāt</i> of Qarn-al-Manazil	During 1380’s/ 20 th century
The <i>Mīqāt</i> of Yalamlam	Abandoned	The new <i>Mīqāt</i> of Yalamlam	1399/1979
The <i>Mīqāt</i> of Qarn-al-Manazil	In use	The <i>Mīqāt</i> of <i>Wadi Mehram</i>	1399/1979

Table 1. The transformation the five major *Mawāqīt*.

The Pilgrims	Pilgrimage Route	Main <i>Mīqāt</i>	Other Used <i>Mīqāt</i>		
Iraqi Pilgrims	The route of Zubaydah	The <i>Mīqāt</i> of Dhatu-‘Irq	The <i>Mīqāt</i> of Dhul-Hulaifa	The <i>Mīqāt</i> of al-Juhfa	—
Iraqi Pilgrims	The Basri route	The <i>Mīqāt</i> of Dhatu-‘Irq	The <i>Mīqāt</i> of Dhul-Hulaifa	The <i>Mīqāt</i> of al-Juhfa	—
Egyptian Pilgrims	The Egyptian route	The <i>Mīqāt</i> of al-Juhfa	The <i>Mīqāt</i> of Dhul-Hulaifa	Jeddah (via the maritime route)	The <i>Mīqāt</i> of Raibgh
Syrian Pilgrims	The Syrian route	The <i>Mīqāt</i> of al-Juhfa	The <i>Mīqāt</i> of Dhul-Hulaifa	—	—
Yamamah Pilgrims	The Bahrain-al-Yamamah route	The <i>Mīqāt</i> of Qarn-al-Manazil	The <i>Mīqāt</i> of Dhatu-‘Irq	—	—
Yemeni Pilgrims	The Yemeni route	The <i>Mīqāt</i> of Yalamlam	The <i>Mīqāt</i> of Qarn-al-Manazil	Jeddah	—
Omani Pilgrims	The Omani route	The <i>Mīqāt</i> of Yalamlam	The <i>Mīqāt</i> of Qarn-al-Manazil	Jeddah	—

Table 2. The *Mawāqīt* used by pilgrims during their journey to the Hajj.

Number	Fragment Shape	Paste	Thickness	Construction	Glazes	Decoration	Comparanda
SP1	Circle flask base	Fine yellow	7 mm	Wheel	—	—	Bida (Al-Kilabi, 2010, pl. 19 A)
SP2	Flask neck	Fine white	6 mm	Wheel	—	—	Bida (Al-Kilabi, 2010, pl. 19 B)
SP3	Flask body	Fine Yellow	4 mm	Wheel	—	—	—
SP4	Flask handle	Fine yellow	8 mm	Wheel	—	—	Bida (see SP2)
SP5	Flask handle	Fine yellow	9 mm	Wheel	—	—	—
SP6	Medium-sized vessel	Semi-fine light yellow	6 mm	Wheel	—	Incised crossed columns	—
SP7	Medium-sized jar	Semi-fine red	9 mm	Wheel	—	Incised straight and wavy lines	—
SP8	Jar body	Semi-fine red	1.4 cm	Wheel	—	—	—
SP9	Jar neck	Semi-fine red	4 mm	Wheel	—	Incised friezes of small circles and wavy lines	—
SP10	Jars body	Non-fine red	2 cm	Handmade	—	Incised straight and wavy line	Al-Mabiyat (Al-'Umair, 2004, pl. 22)

Table 3. Pottery finds during the survey.

Number	Fragment Shape	Paste	Thickness	Construction	Glazes	Decoration	Comparanda
SP11-12	Jars bodies	Non-fine red	1-1.30 cm	Handmade	—	—	—
SP 13-14	Jar body	Semi-fine yellow	6-8 mm	Wheel	Dark blue alkaline	—	—
SP15-16	Dishes bodies	Semi-fine yellow	4-6 mm	Wheel	Cyan-blue alkaline	—	Al-Rabadhah (Al-Rashid, 1986, pl. 106), Bida (Al-Kilabi, 2010, pl. 25 B)
SP17	Circular jar base	Semi-fine pale red	6 mm	Wheel	Olive green lead	—	—
SP18	Dish body	Fine yellow	3 mm	Wheel	Yellow lead	—	—
SP19	Dish body	Fine yellow	4 mm	Wheel	Light green lead	—	—
SP20	Jar rim	Semi-fine pale red	9 mm	Wheel	Green lead	—	—
SP21	Vessel base	Semi-fine yellow	6 mm	Wheel	Yellow lead	Incised small circles	—
SP22	Vessel body	Fine yellow	5 mm	Wheel	Yellow lead	Incised colored splashes	—
SP23	Vessel body	Semi-fine red	7 mm	Wheel	Black and green lead	Incised colored spot and lines	—
SP24	Bowl or dish body	Fine yellow	6 mm	Wheel	White tin	—	—

Table 4. Pottery finds during the survey.

Number	Fragment Shape	Paste	Thickness	Construction	Glazes	Decoration
T1/P1	Jar neck	Semi-fine red	6 mm	Wheel	—	—
T1/P2	Jar body	Semi-fine red	7 mm	Wheel	—	Ribbed lines
T1/P3	Jar neck	Semi-fine red	8 mm	Wheel	—	—
T1/P4	Circular jar base	Semi-fine red	8 mm	Wheel	—	—
T1/P5	Vessel body	Semi-fine red	1 cm	Wheel	—	Ribbed lines
T2/P6	Jar body	Semi-fine red	1.3 cm	Wheel	—	Ribbed lines
T2/P7	Jar body	Semi-fine red	1 cm	Wheel	—	—
T1/P8	Pot body	Non-fine red	1.2 cm	Handmade	—	—
T1/P9	Jar body	Non-fine red	1.3 cm	Handmade	—	—
T1/P10	Vessel body	Non-fine red	1.3 cm	Handmade	—	—

Table 5. Pottery finds during the excavation.

Number	Fragment Shape	Paste	Thickness	Construction	Glazes	Decoration	Comparanda
T2/P11	Jar body	Non-fine red	1.3 cm	Handmade	—	—	—
T2/P12	Jar body	Non-fine red	1.5 cm	Handmade	—	Incised parallel and wavy lines	Al-'Umair, 2004, pl. 24.
T1/P13	Flask body	Fine white	3 mm	Wheel	—	—	—
T1/P14	Flask body	Fine white	3 mm	Wheel	—	—	—
T1/P15	Circular flask base	Fine yellow	6 mm	Wheel	—	—	See SP1
T1/P16	Flask neck	Fine yellow	4 mm	Wheel	—	Incised wavy lines	—
T1/P17	Flask neck	Fine yellow	5 mm	Wheel	—	—	—
T2/P18	Flask body	Fine white	3 mm	Wheel	—	—	—
T2/P19	Flask body	Fine yellow	3 mm	Wheel	—	Incised grid of cross-cutting lines	—
T2/P20	Circular flask base	Fine brown	4 mm	Wheel	—	Ribbed lines	See SP1

Table 6. Pottery finds during the excavation.

Number	Fragment Shape	Paste	Thickness	Construction	Glazes	Decoration
T2/P21	Flask body	Fine yellow	3 mm	Wheel	—	—
T2/P22	Flask handle	Fine yellow	1 cm	Wheel	—	—
T1/P23	Vessel neck	Semi-fine pale red	3 mm	Wheel	Olive green lead	Ribbed lines
T1/P24	Vessel body	Semi-fine pale red	5 mm	Wheel	Olive green lead	—
T1/P25	Vessel neck	Semi-fine pale red	9 mm	Wheel	Olive green lead	—
T1/P26	Vessel neck	Semi-fine pale red	7 mm	Wheel	Olive green lead	—
T2/P27	Vessel body	Fine red	4 mm	Wheel	Yellow lead	—
T1/P28	Vessel body	Semi-fine red	5 mm	Wheel	Yellow lead	Incised small circles and lines
T1/P29	Vessel body	Semi-fine red	6 mm	Wheel	Translucent lead	Incised circle and grid of lines
T1/P30	Bowl base	Fine yellow	8 mm	Wheel	White tin	Incised overlapping lines

Table 7. Pottery finds during the excavation.

Number	Fragment Shape	Paste	Thickness	Construction	Decoration
SG1	Bottle base	Semi-transparent white	2 mm	Free blowing	—
SG2	Cub body	Semi-transparent green	2 mm	Free blowing	Incised rectangular shape
SG3	Glassware body	Semi-transparent green	3 mm	Free blowing	Incised two lines
SG4	Glassware body	Semi-transparent dark green	3 mm	Free blowing	Incised two columns
SG5	Glassware body	semi-transparent cyan-blue	3 mm	Free blowing	—
SG6	Glassware body	Semi-transparent dark blue	4 mm	Free blowing	—

Table 8. Glass Finds during the survey.

Number	Fragment Shape	Paste	Thickness	Construction	Decoration
T1/G1	Glassware body	Opaque white	1 mm	Free blowing	—
T1/G2	Dish body	Opaque white	3 mm	Free blowing	Incised small circles
T1/G3	Bottle body	Semi-transparent green	2 mm	Free blowing	—
T1/G4	Bottle body	Semi-transparent white	3 mm	Free blowing	—
T2/G5	Bottle body	Semi-transparent green	3 mm	Free blowing	—

Table 9. Glass Finds during the excavation.

Number	Fragment Shape	Stone Color	Measurement	Construction	Comparanda
SN1	Pot lip of steatite	Dark grey	8 mm thick	Carving	Dhryah (Al-'Utaybi, 2008, pl. 55)
SN2	Volcanic stone for grinding cereals	Grey	14.5 x 9 cm	Carving	—
SN3	Volcanic stone for grinding cereals	Light grey	11.5 x 9.3 cm	Carving	—
SN4	Volcanic stone for grinding cereals	Brown	11 x 7cm	Carving	—

Table 10. Stone Finds during the survey.

Number	Fragment Shape	Stone Color	Measurement	Construction	Decoration	Comparanda
T1/N1	Pot base of steatite	Black	1 cm thick	Carving	—	Dhryah (see SN1)
T1/N2	Volcanic stone for grinding cereals	Grey	10 x 4.50 cm	Carving	—	—
T1/N3	Volcanic stone for grinding cereals	Grey	9 x 4 cm	Carving	—	—
T1/N4	Volcanic stone for grinding cereals	Grey	8 x 3 cm	Carving	—	—
T1/N5	Volcanic stone for sharpening blades	Grey	8 x 2 cm	Carving	Incised hollow grooves	—

Table 11. Stone Finds during the excavation.

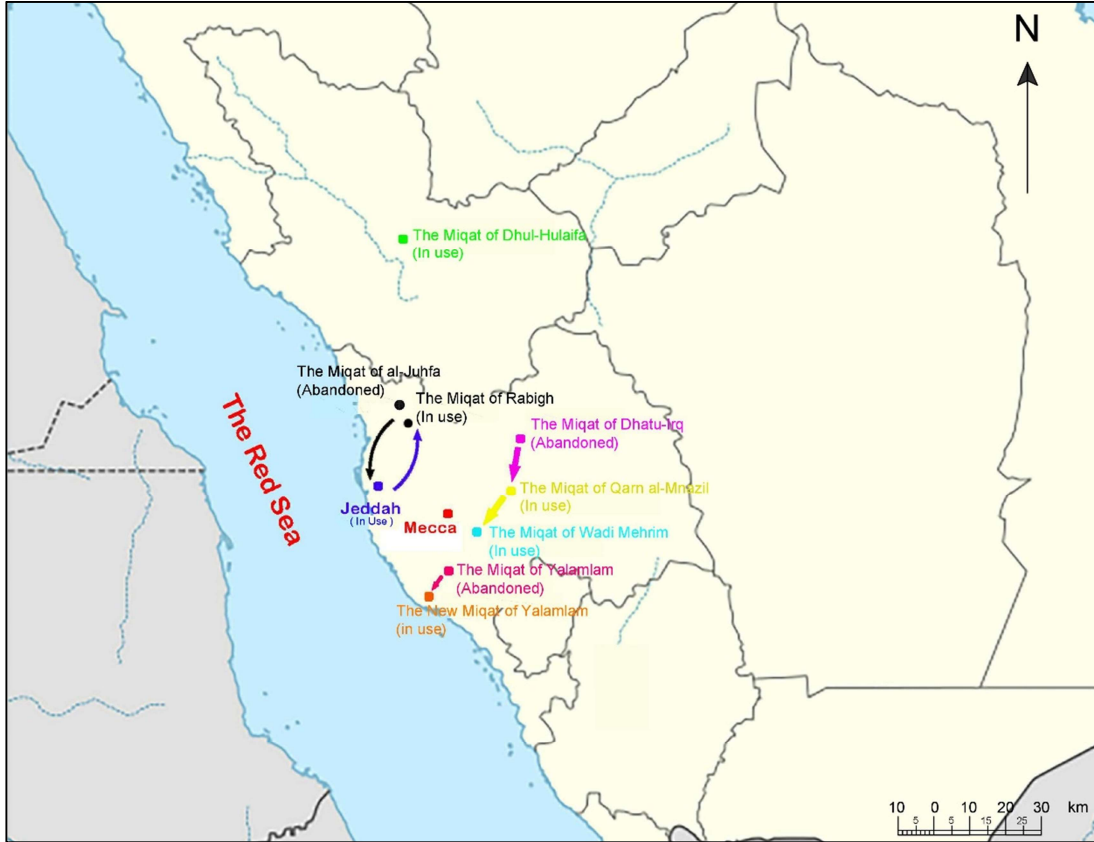
Number	Fragment Shape	Metal Type	Measurement	Glazes	Decoration
T1/M1	Curved handle	Copper	5 mm thick	Green glaze	—
T1/M2	Pointed head	Copper	6.02 x 1 cm	—	—

Table 12. Metal Finds during the excavation.

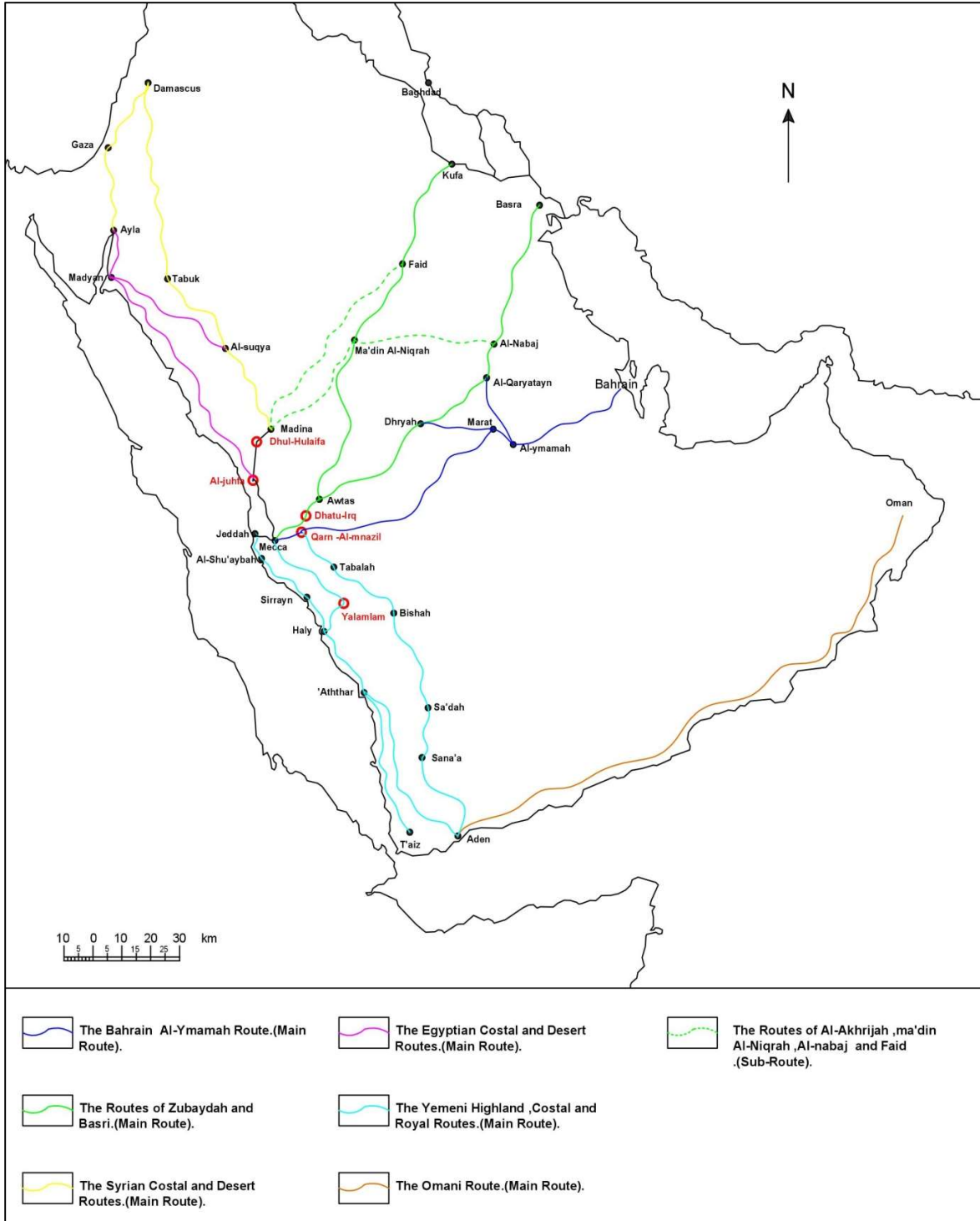
Maps



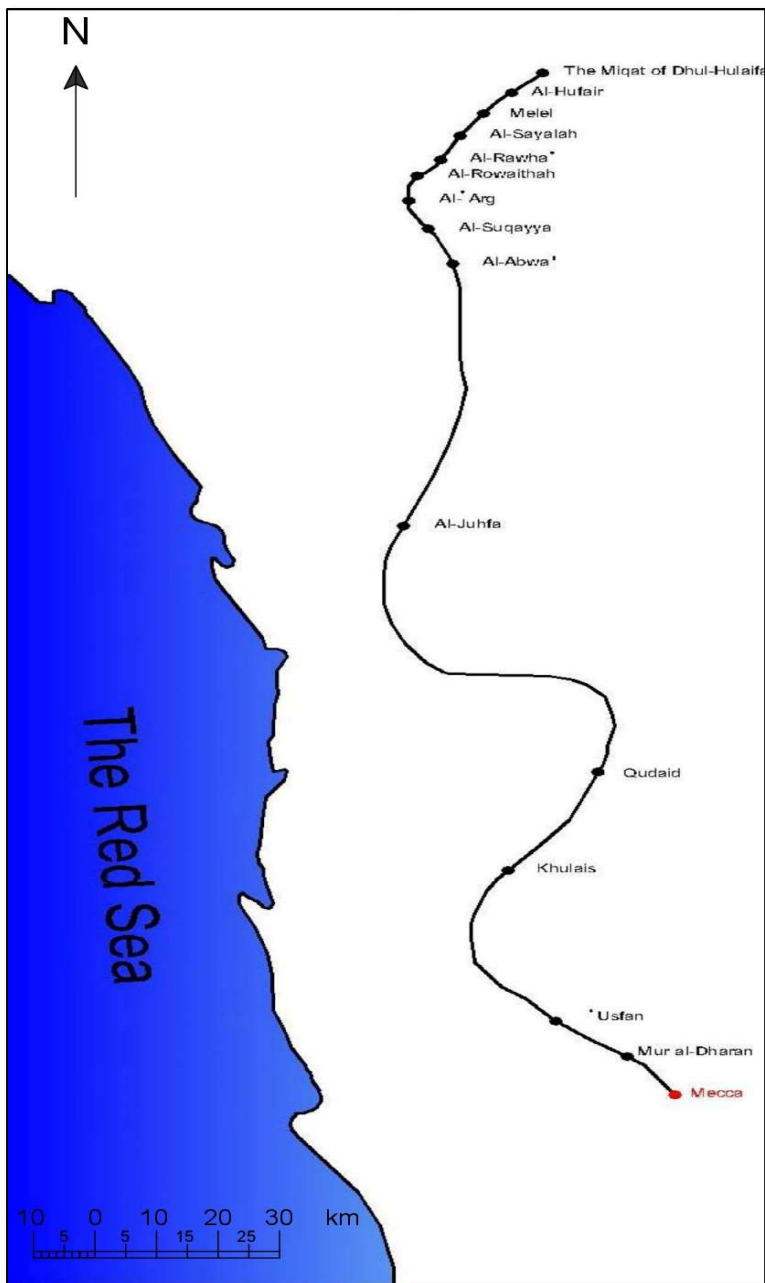
Map 1. The five major *Mawāqīt* of Hajj.



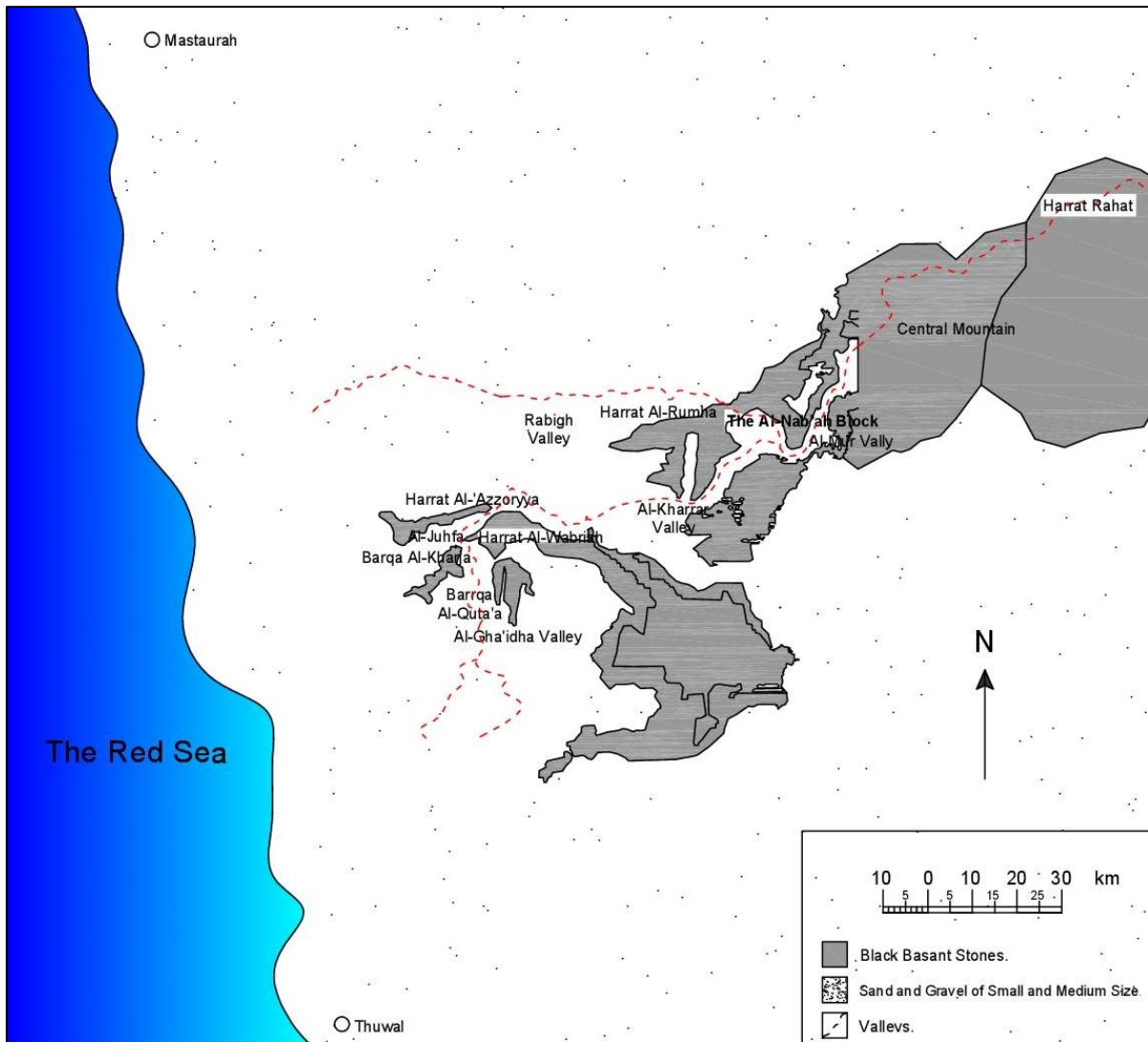
Map 2. The transformation of the five major *Mawāqīt*.



Map 3. The *Mawāqīt* locating on the pilgrimage routes in Arabia.



Map 4. The Medina-Mecca route.



Map 5. Topography of al-Juhfa.

Figures

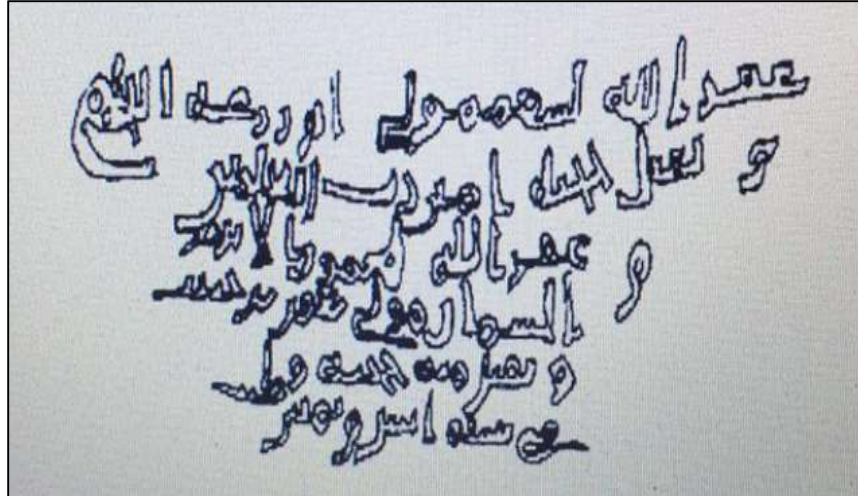


Fig 1. A. An inscription mentioning the Hajj, 82/701-702.

(The Islamic Awareness website)

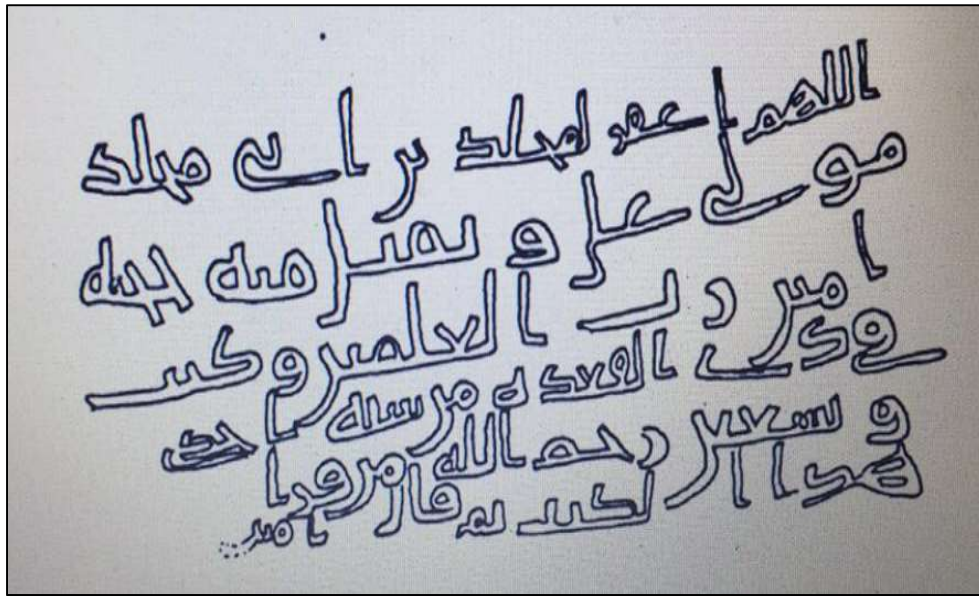


Fig 1. B. An inscription mentioning the Hajj, 91/710. (The Islamic Awareness website)

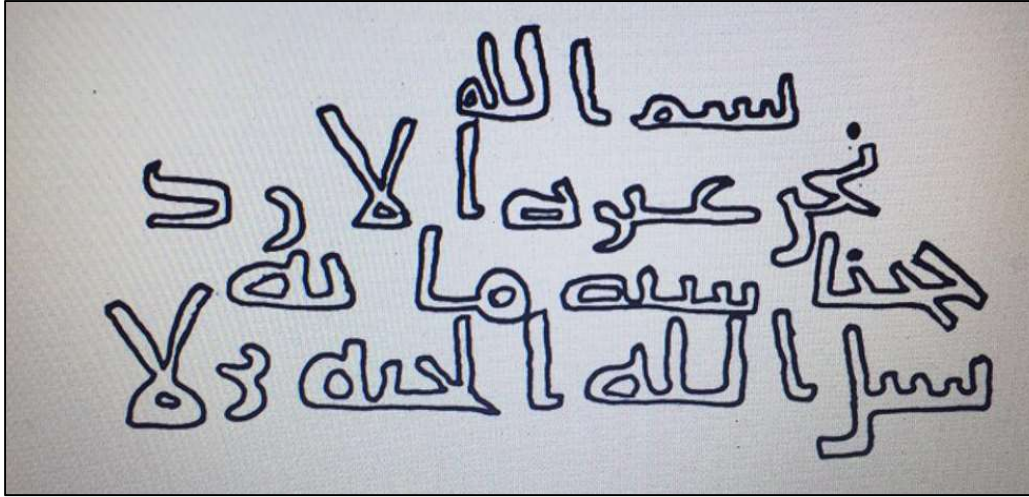


Fig 2. An Inscription mentioning the Hajj, 100/718-719. (The Islamic Awareness website)

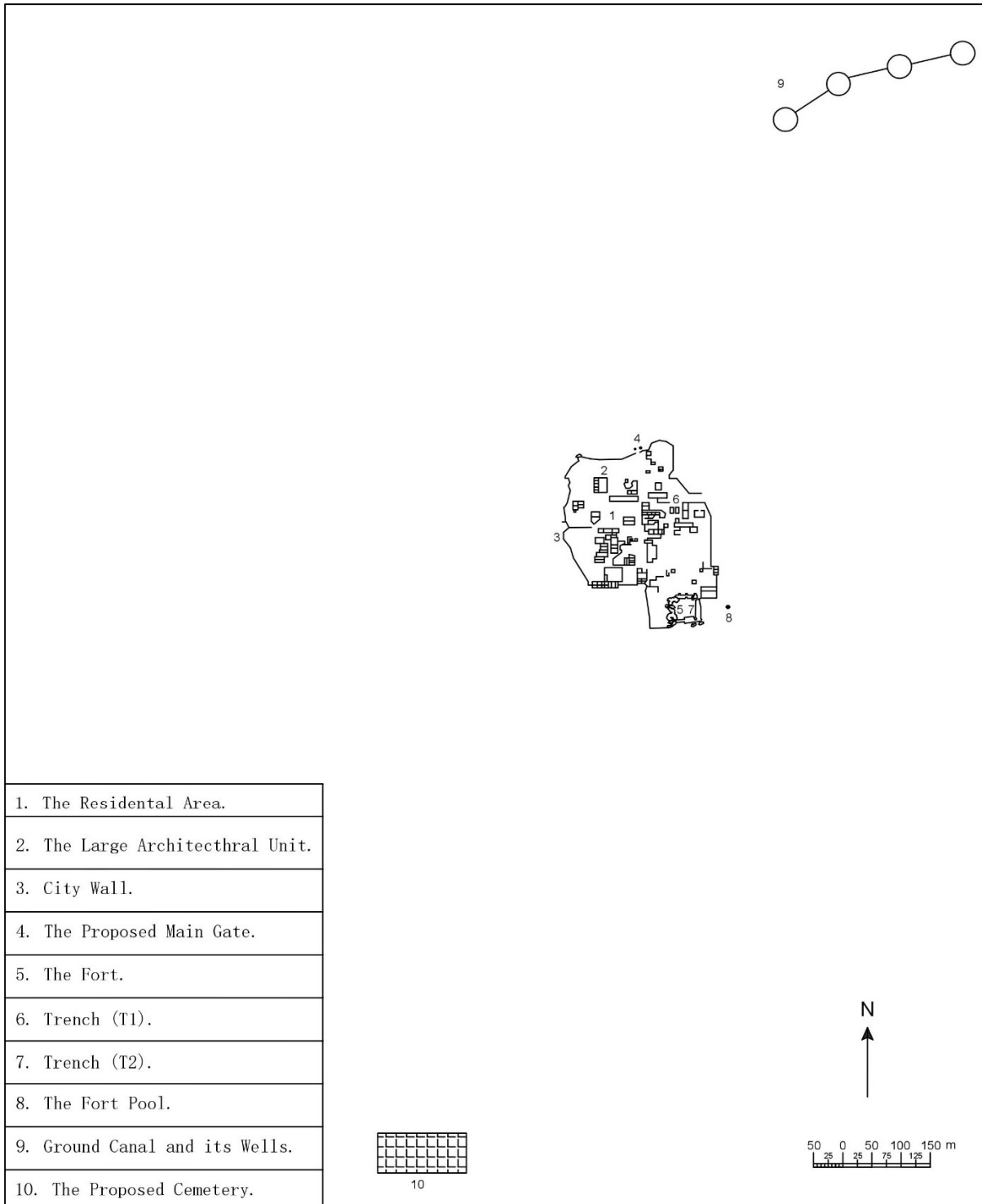


Fig 3. Plan of al-Juhfa site.

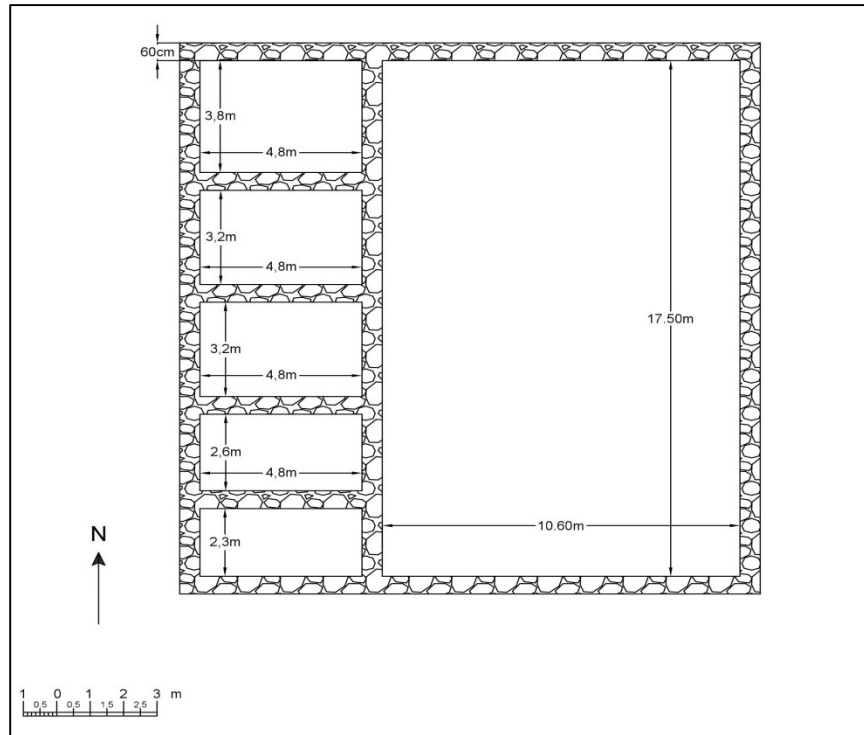


Fig 4. A. The schematic representation of plan in the large architectural unit (north-west of the residential area).

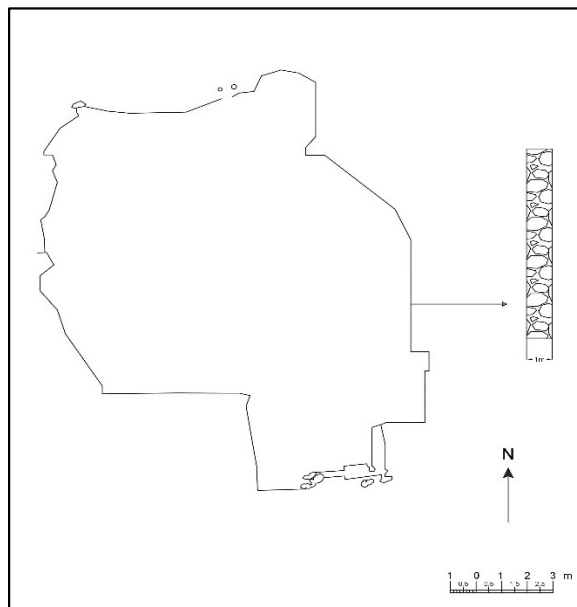


Fig 4. B. The wall city thickness.

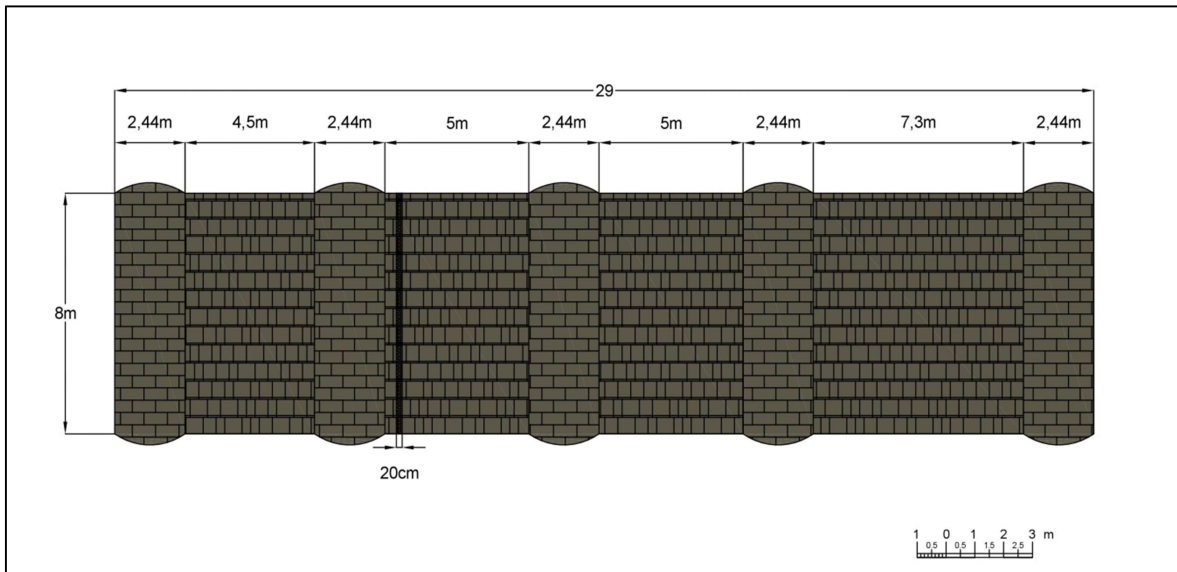


Fig 5. A. The external side of the eastern wall of the fort.

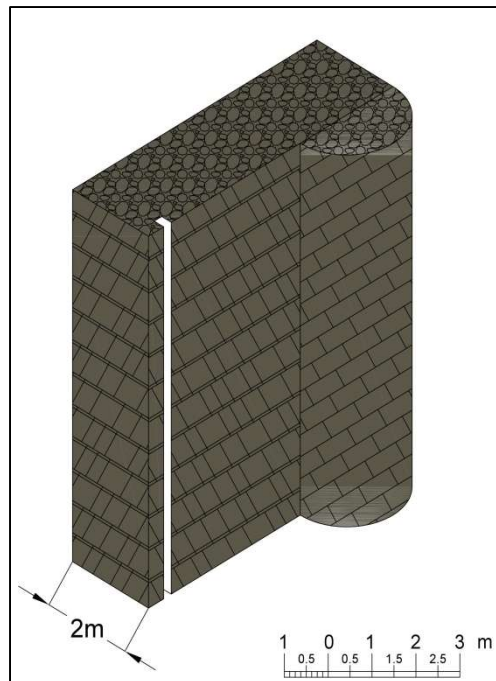


Fig 5. B. The fort eastern wall thickness.

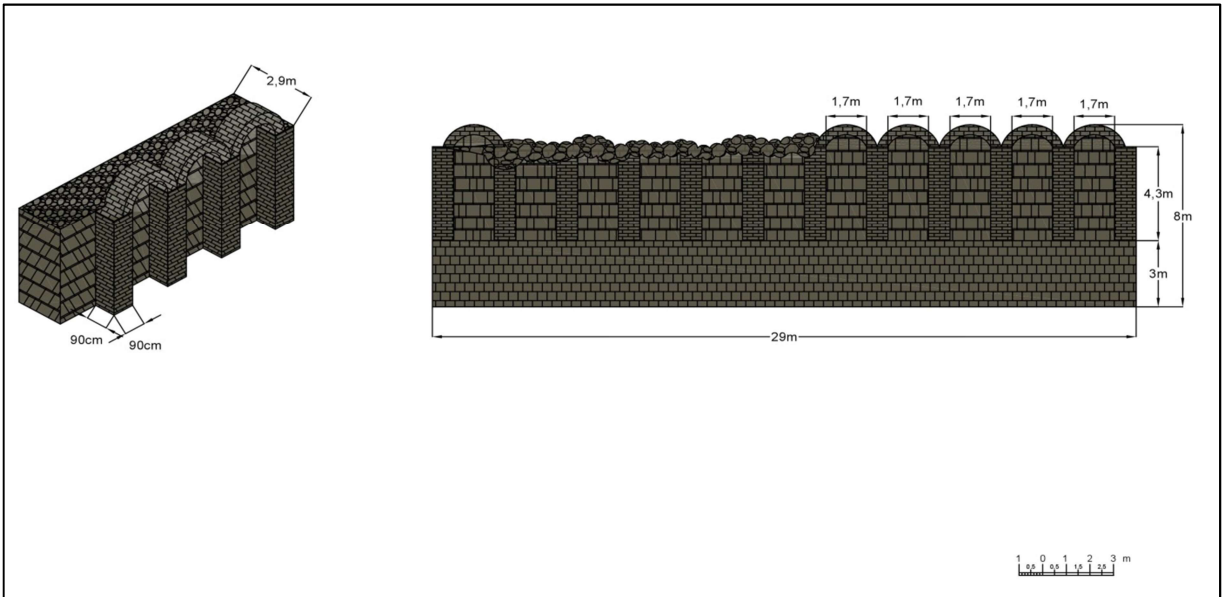


Fig 6. A. The interior side of the eastern wall of the fort.

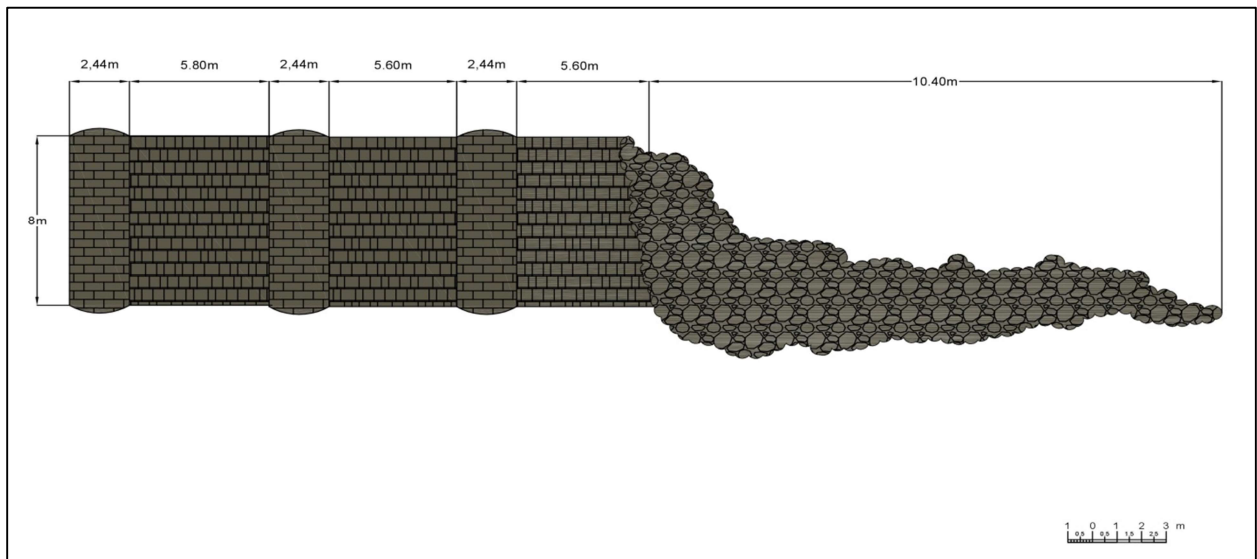


Fig 6. B. The external side of the northern wall of the fort.

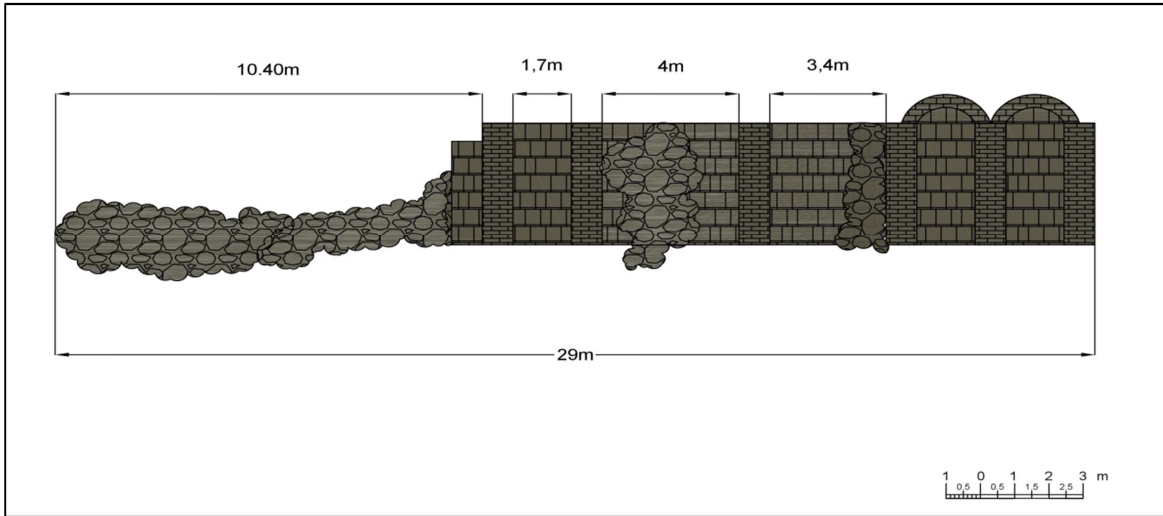


Fig 7. A. The interior side of the northern wall of the fort.

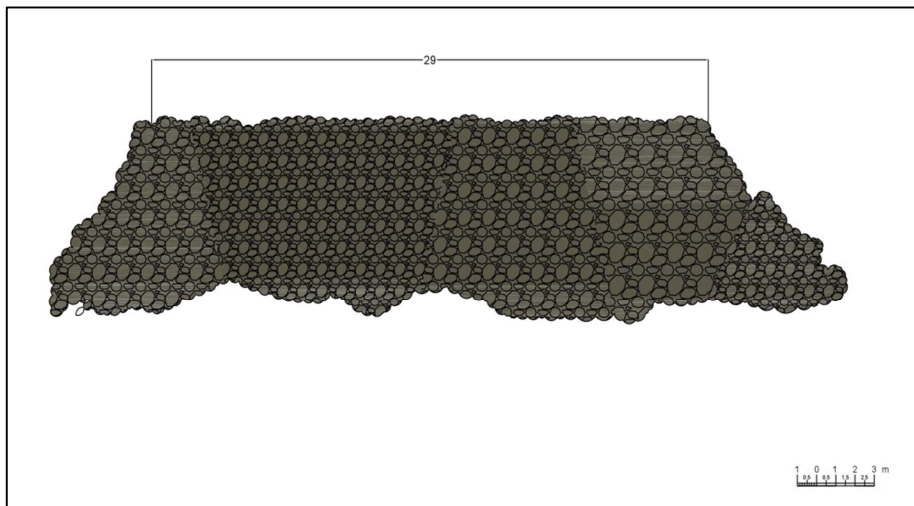


Fig 7. B. The external side of the western wall of the fort.

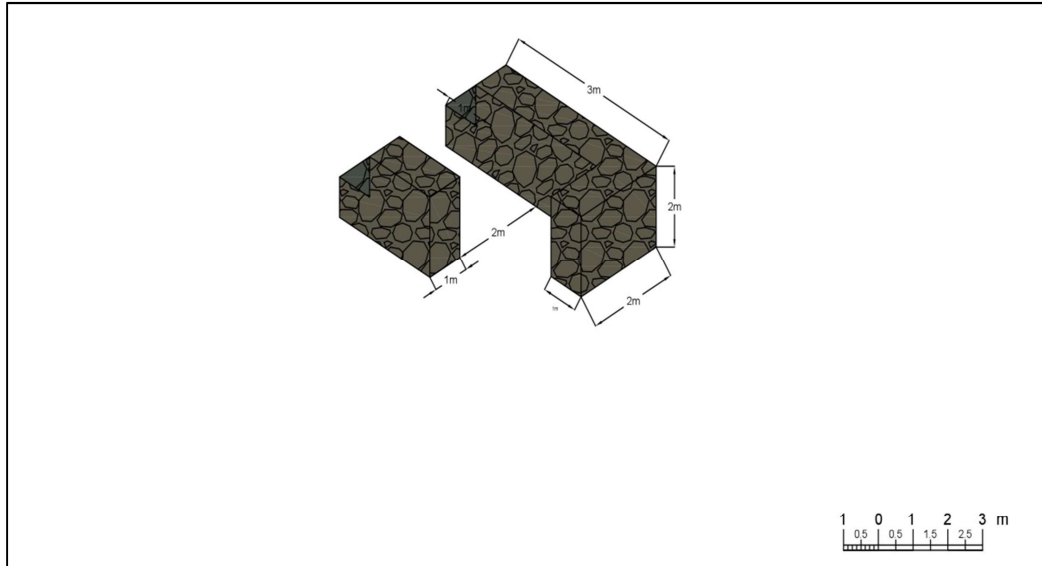


Fig 8. A. The stair thresholds ascending and descending in the western wall of the fort.

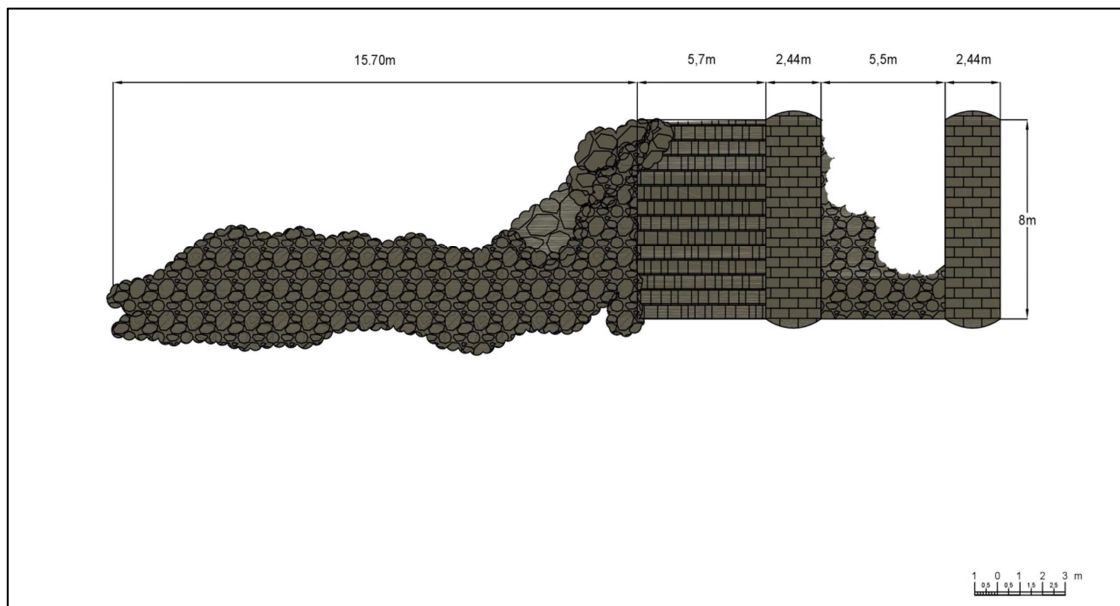


Fig 8. B. The external side of the southern wall of the fort.

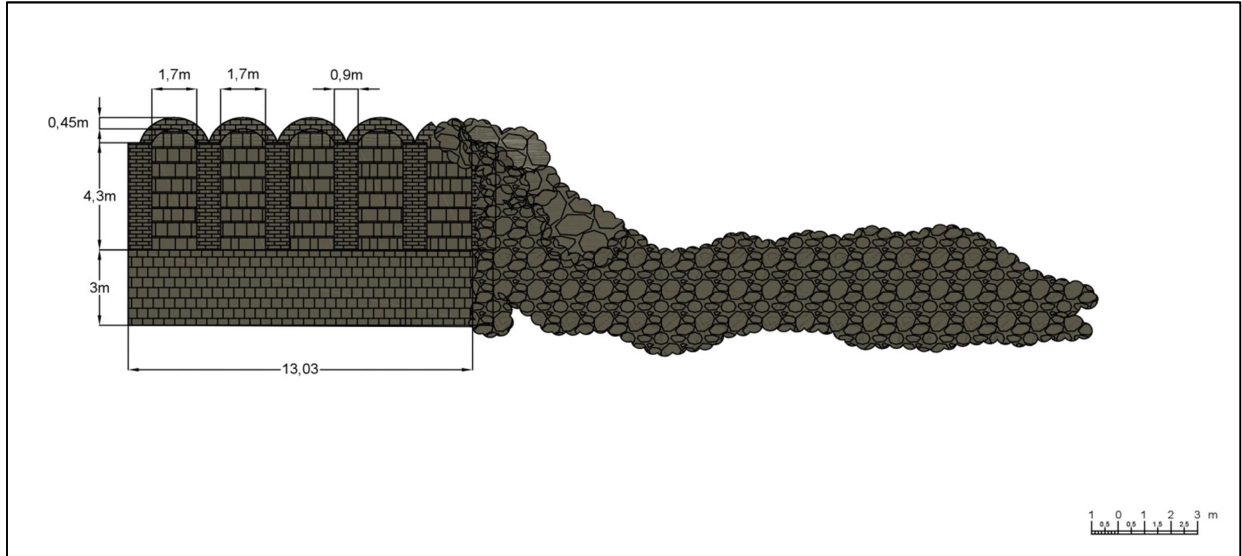


Fig 9. A. The interior side of the southern wall of the fort.

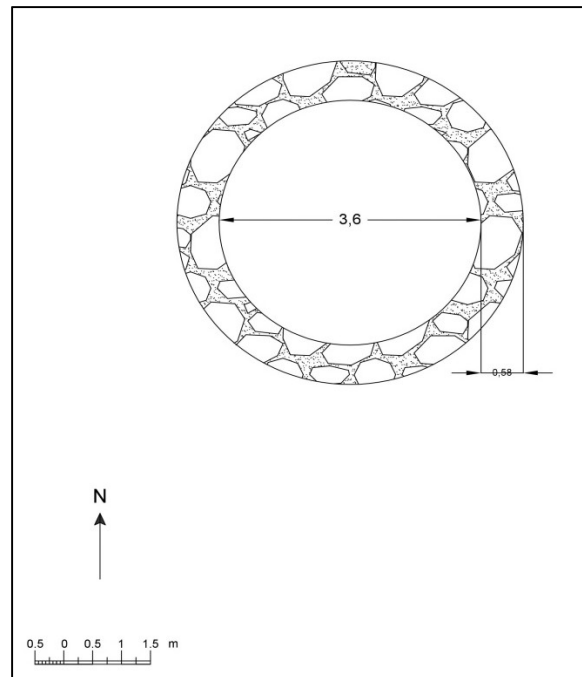


Fig 9. B. The fort pool.

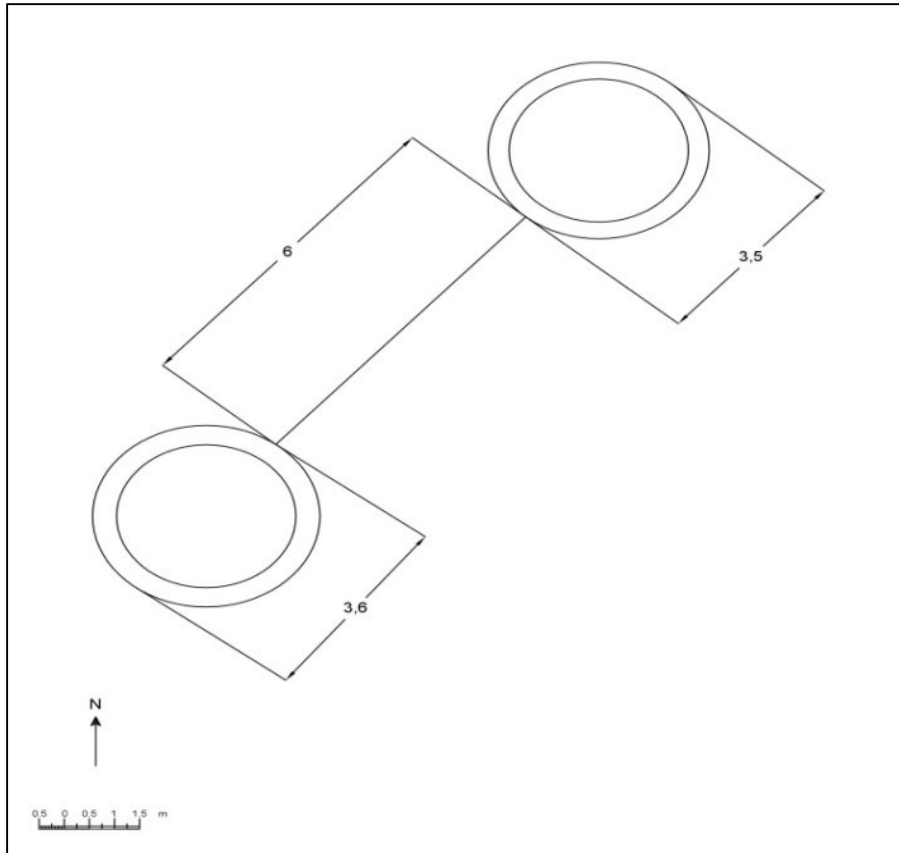


Fig 10. Two wells built above the canal.

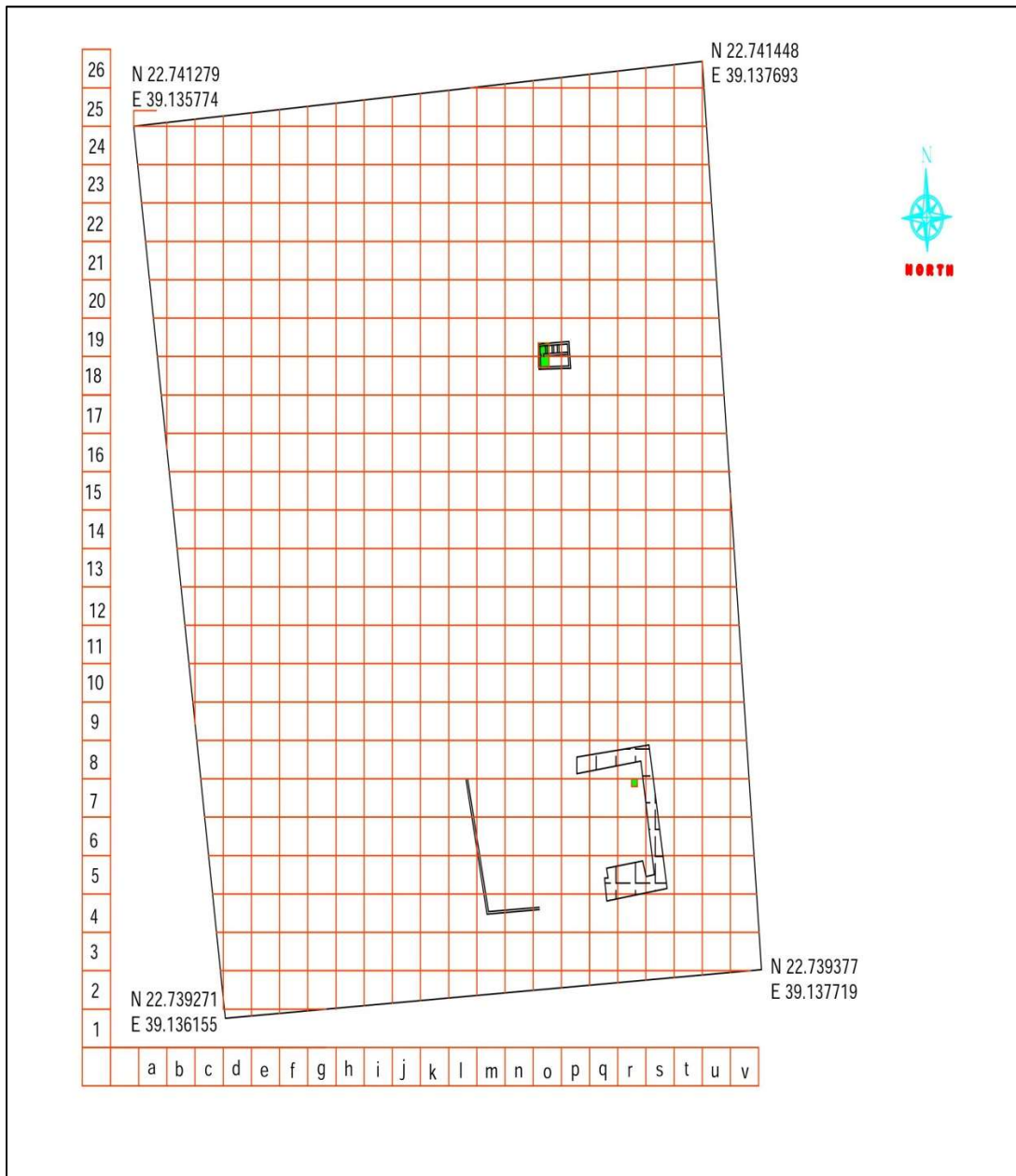


Fig 11. The squares grid of the two excavated trenches.

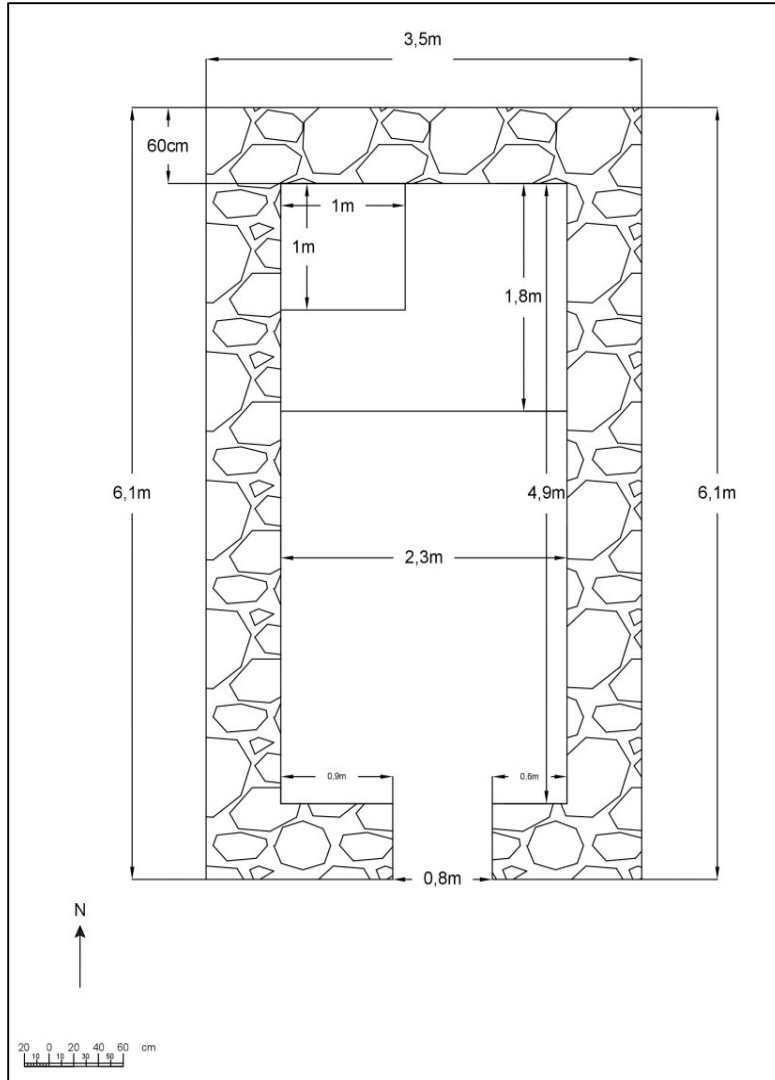


Fig 12. The schematic representation of plan in the trench T1.

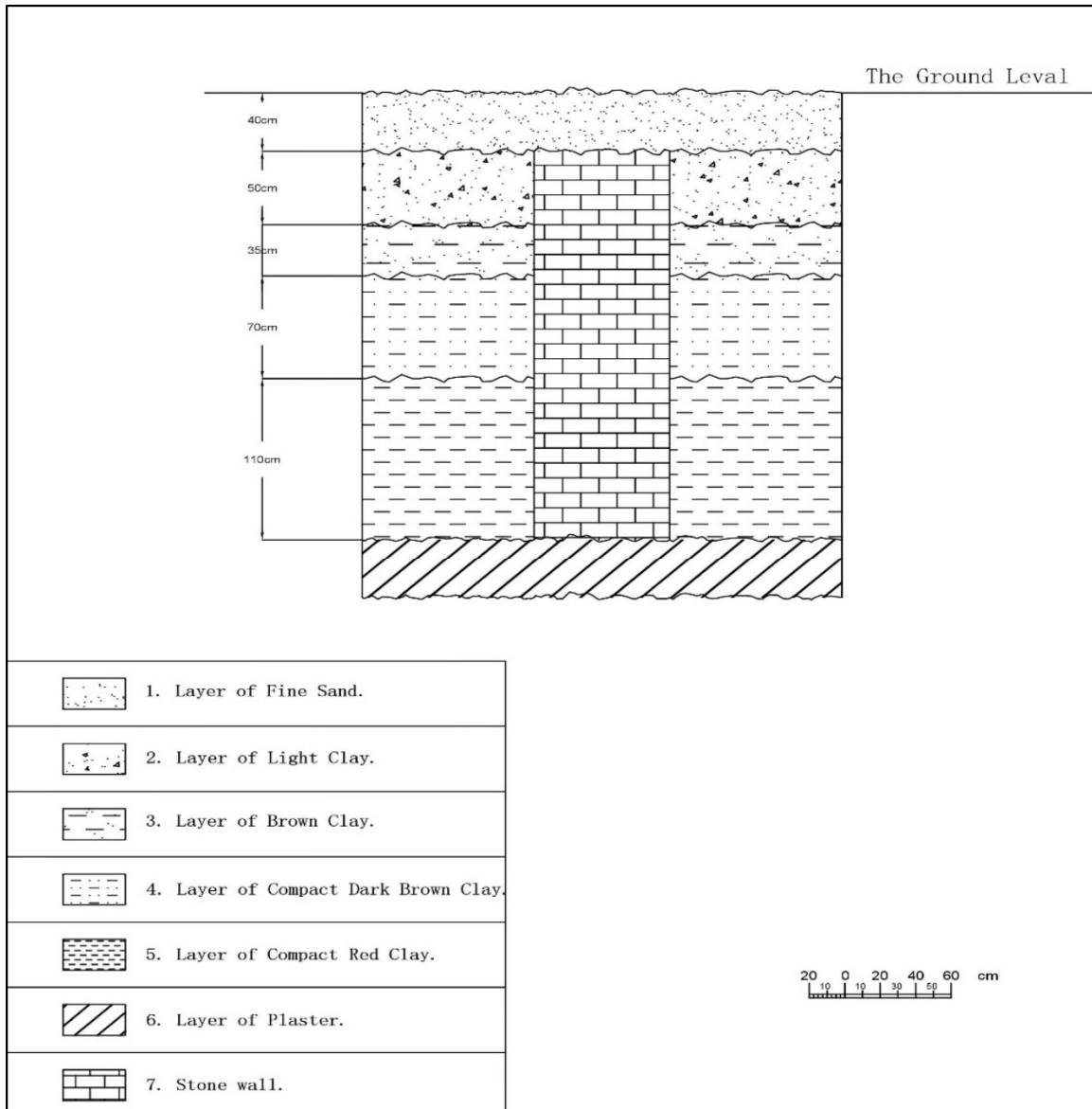


Fig 13. The schematic representation of the layers types in the trench T1.

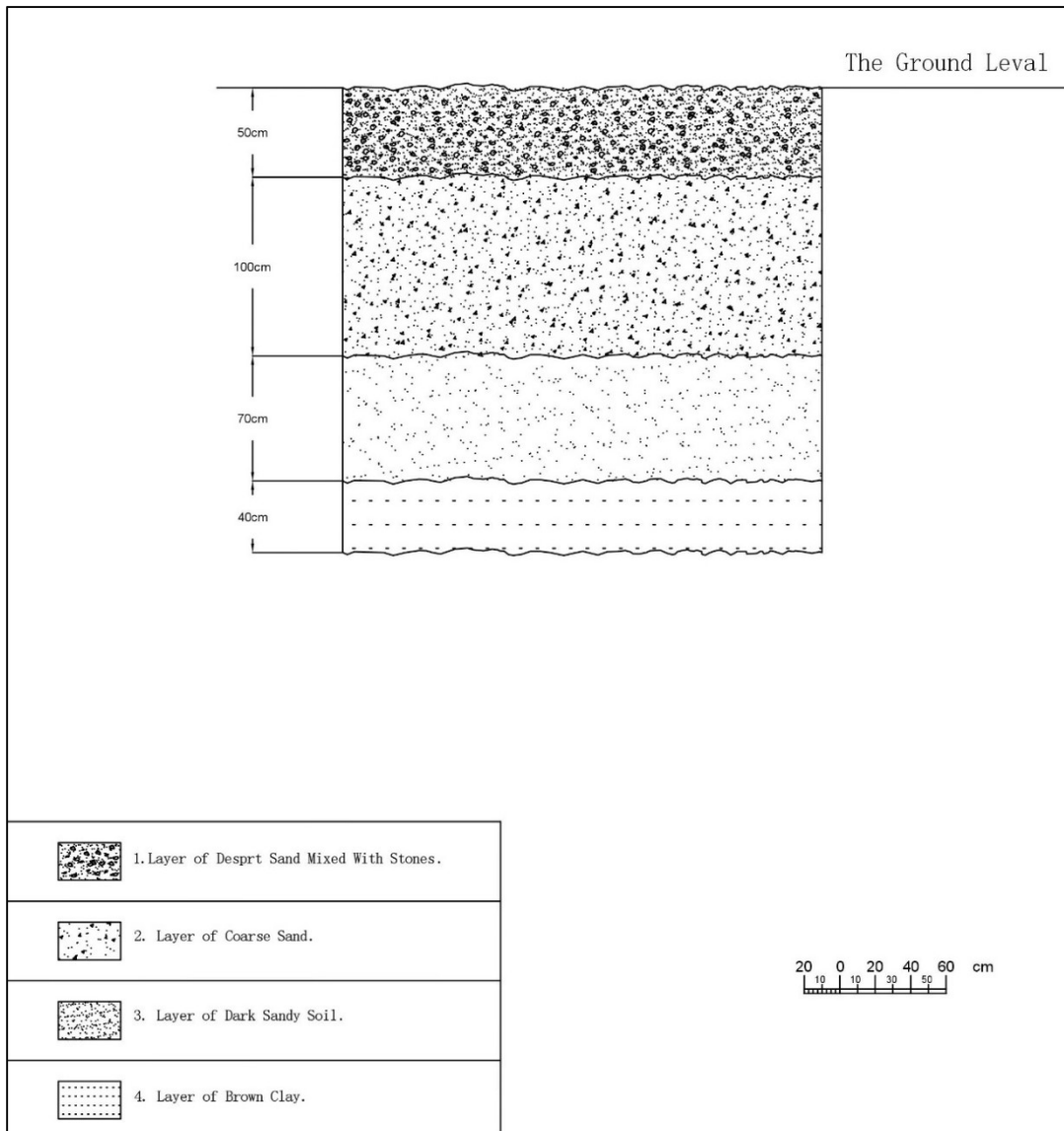


Fig 14. The schematic representation of the layers types in the north side of the trench T2.

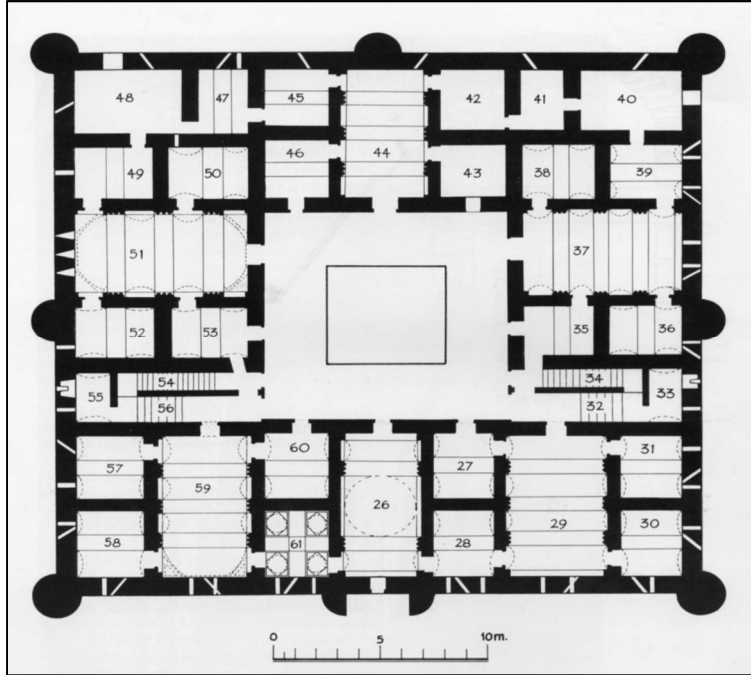


Fig 15. A. Plan of Qasr al-Kharana in in Jordan, 8th century (Creswell, Fig. 61).

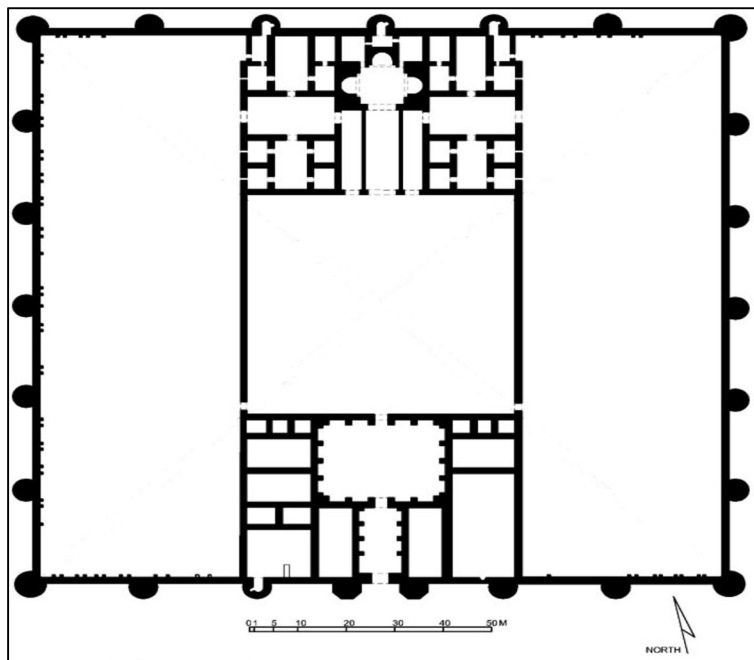


Fig 15. B. Plan of Qasr al-Mshatta in Jordan, 8th century (Creswell, Fig. 177).

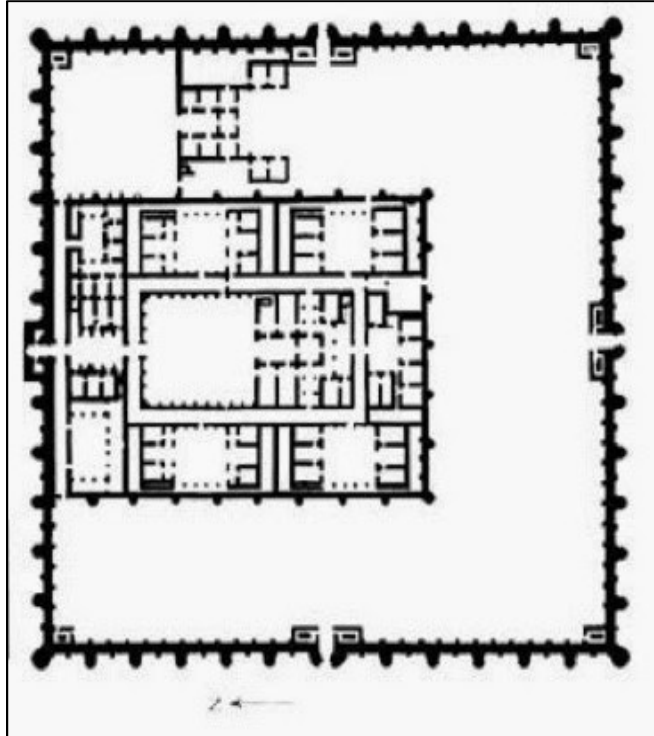


Fig 16. A. Plan of Qasr al-Ukhaidir in Iraq, 8th century. (Shafi'i, Fig. 176).

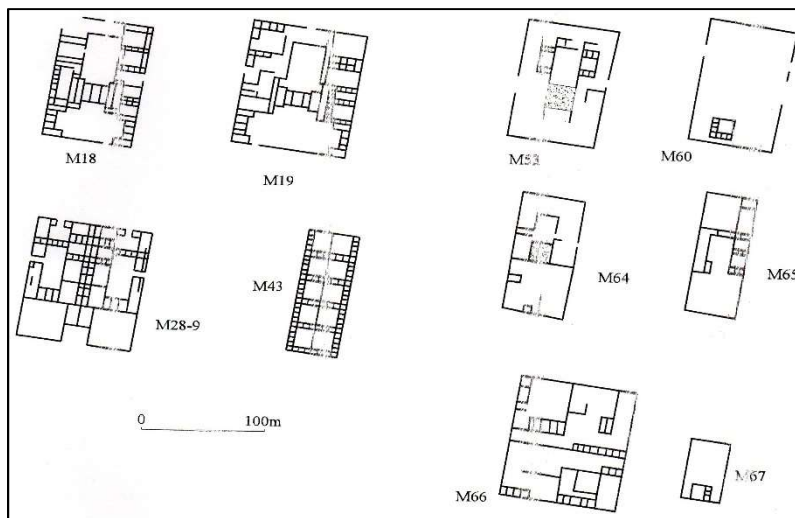


Fig 16. B. Houses types at al-Istablat, Samarra, 9th century. (Northedge, Fig. 87).

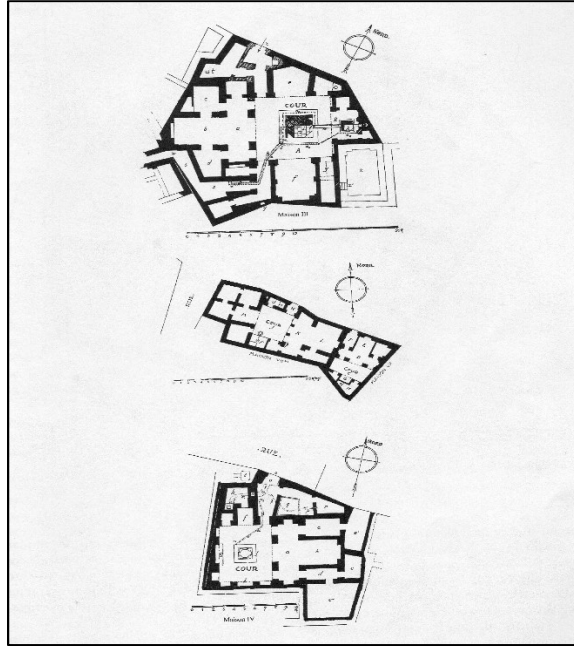


Fig 17. A. Family house in Fustat, 9th century. (Whitcomb, Fig. 2.12).

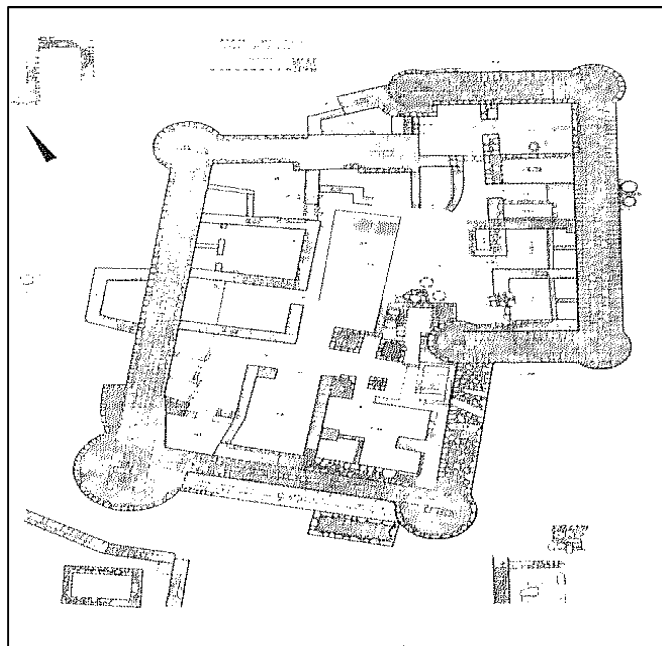


Fig 17. B. Plan of a residential unit in al-Rabadhah, 9th century. (Al-Rashid, Fig. 219).

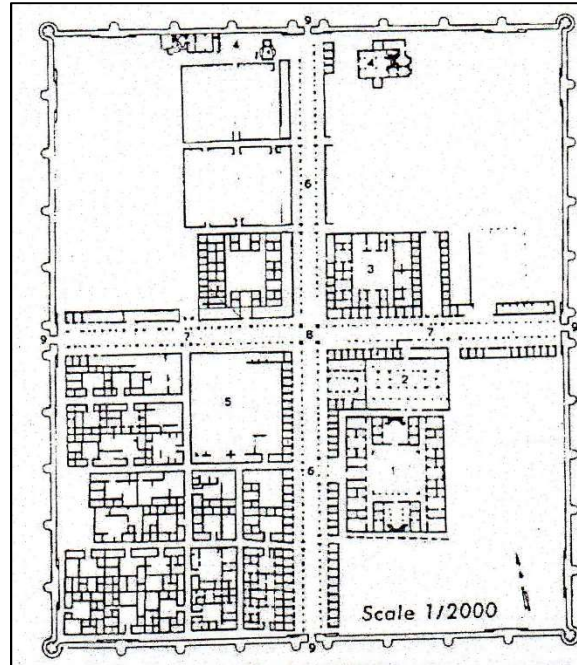


Fig 18. A. Plan of 'Anjar, 8th century. (Foot, Fig. 5).

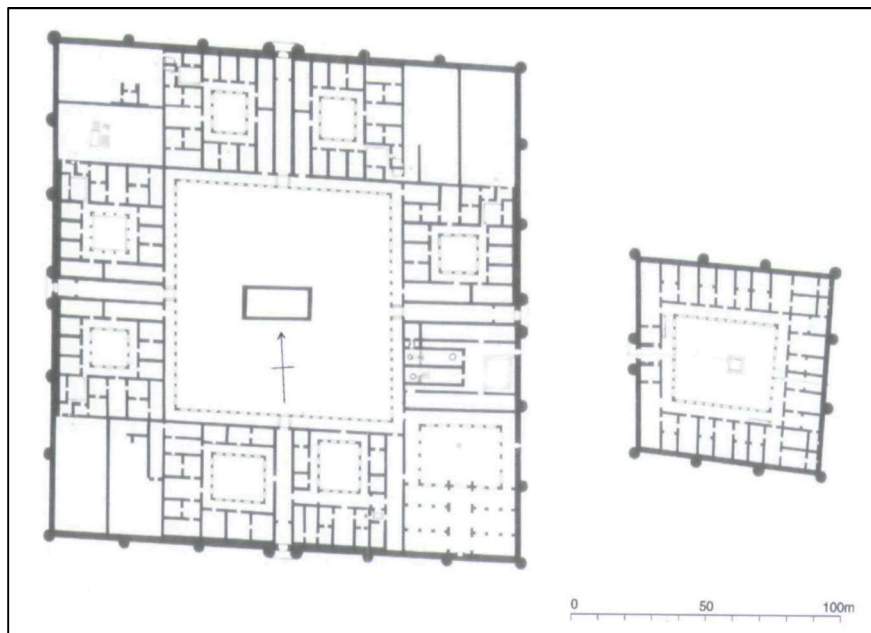


Fig 18. B. Plan of Qasr al-Hayr al-Sharqi, the Large and Small enclosures, 8th century. (Genequand, Fig. 2)

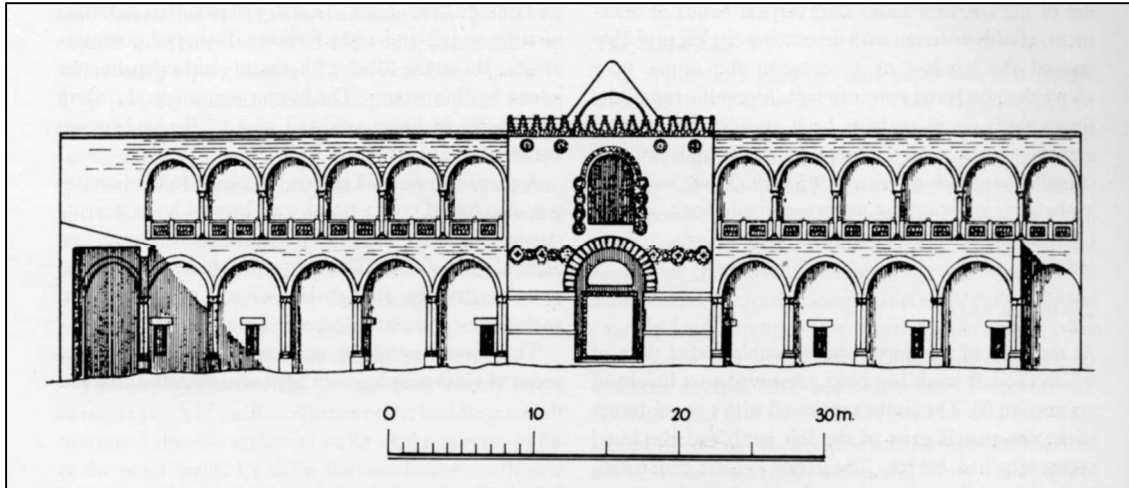


Fig 19. A. large semicircular arches in Khirbet al-Mafjar, 8th century. (Creswell, Fig. 101).

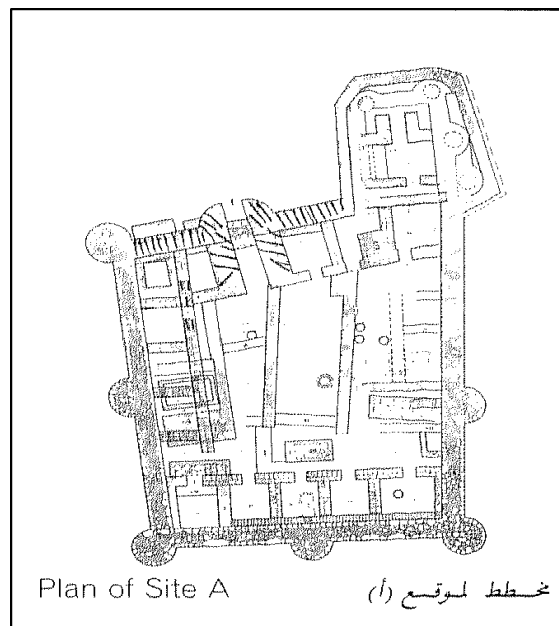


Fig 19. B. Plan of the fortress of al-Rabadhah, 9th century. (Al-Rashid, Fig. 223).



Fig 20. A. Plan of the fortress of Faid, 9th century. (Al-Hawas, Fig. 11).

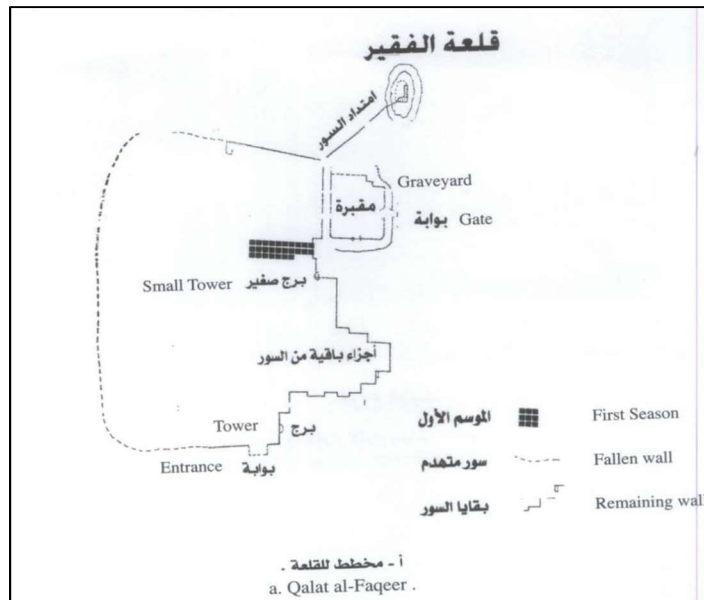


Fig 20. B. Plan of the fortress of al-Mabiyat, 9th century. (Mu'ayqal Fig. 10.21).

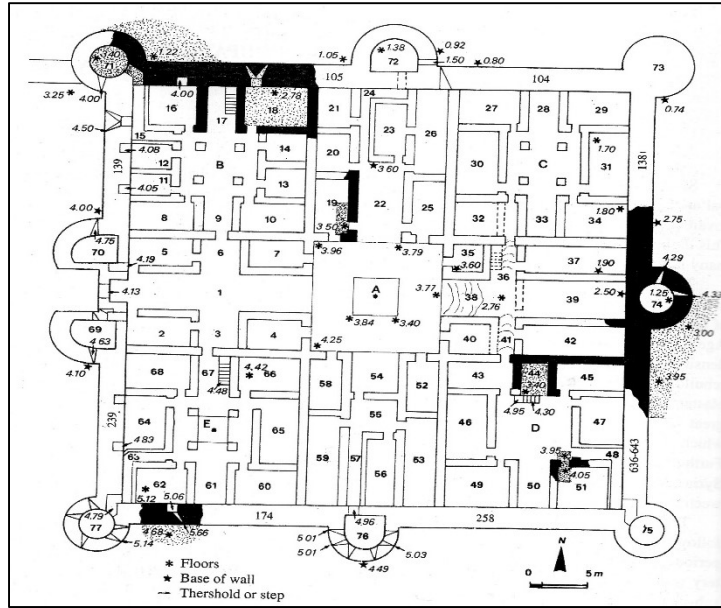


Fig 21. A. Plan of Tylos fortress, (3rd-13th century). (Kervran, Fig 63).

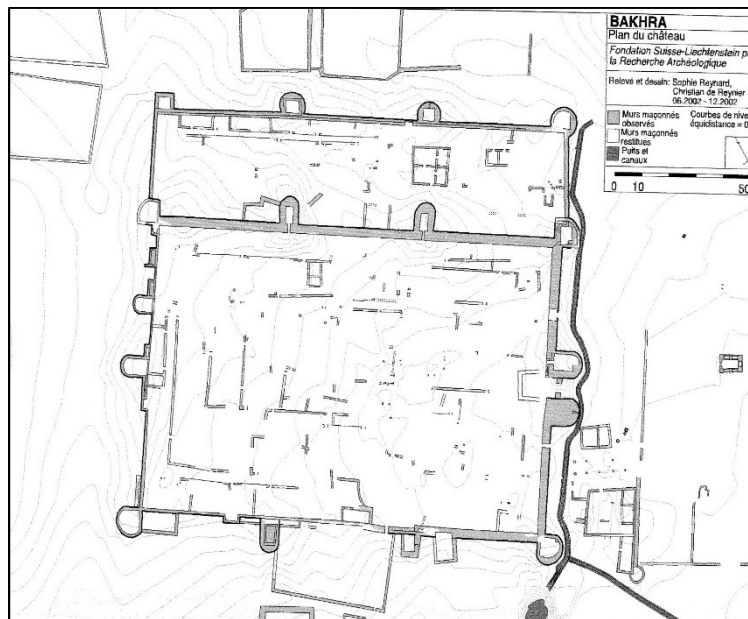


Fig 21. B. Plan of Qasr Al-Bakhra', (293-305). (Genequand, Fig. 2.).

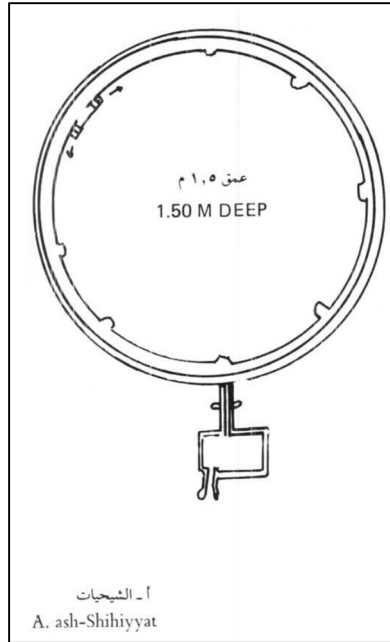


Fig 22. A. Plan of Shihiyat pool. Pre-Islamic period. (Al-Rashid, Fig. 40).

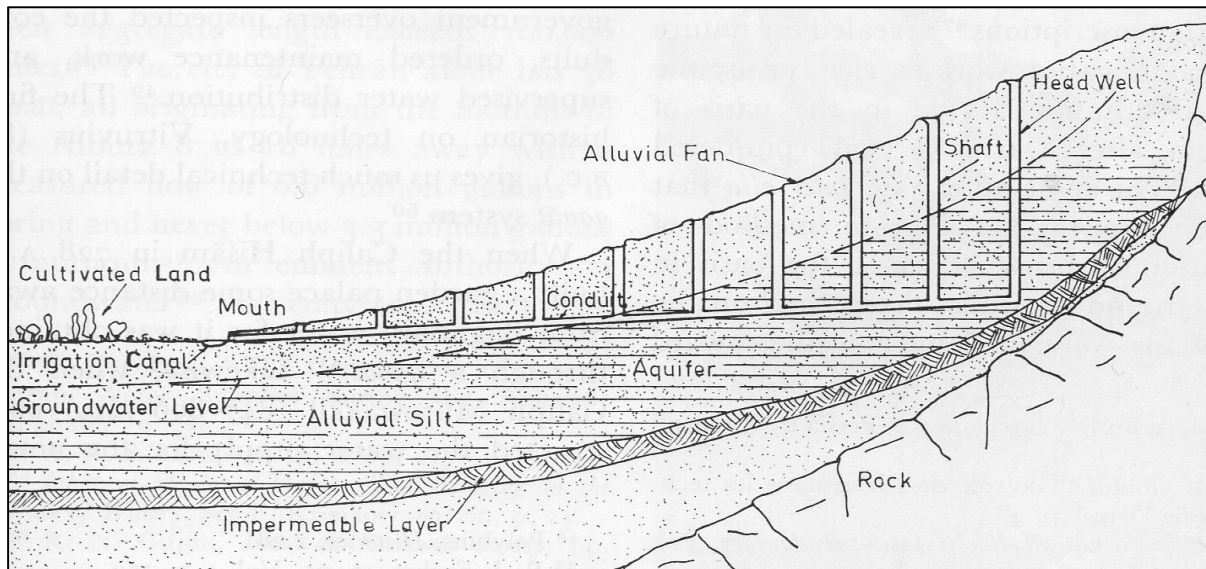


Fig 22. B. Sectional view of the ground canal to the ground surface. (Wulff, Fig 334).

Archaeological Finds of the Surface Survey (Fig. 23-29)

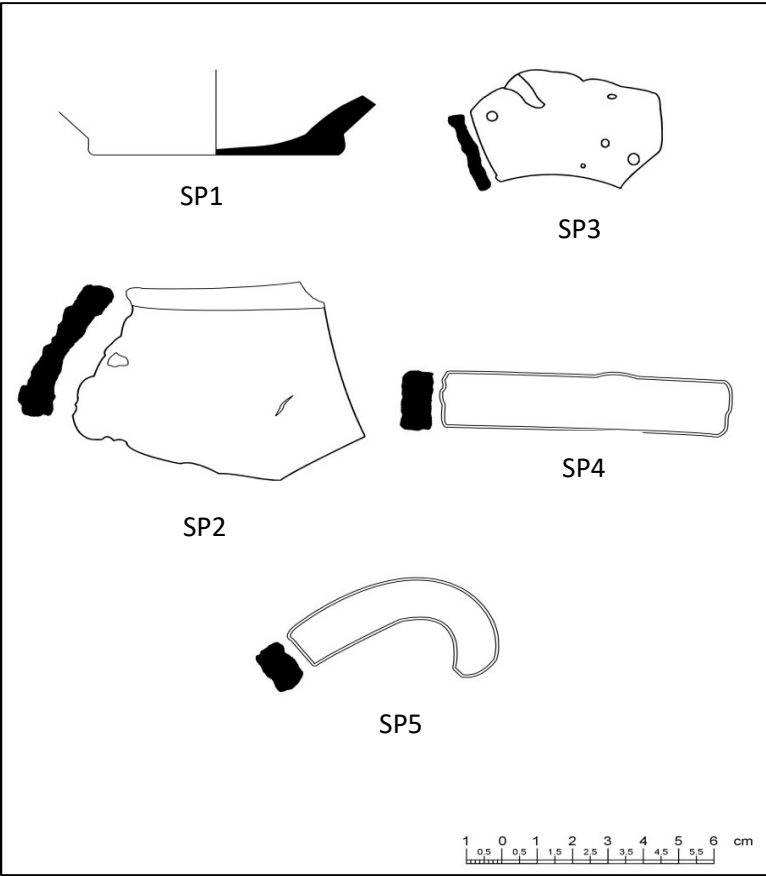


Fig 23. Shards of egg-shell ware type.

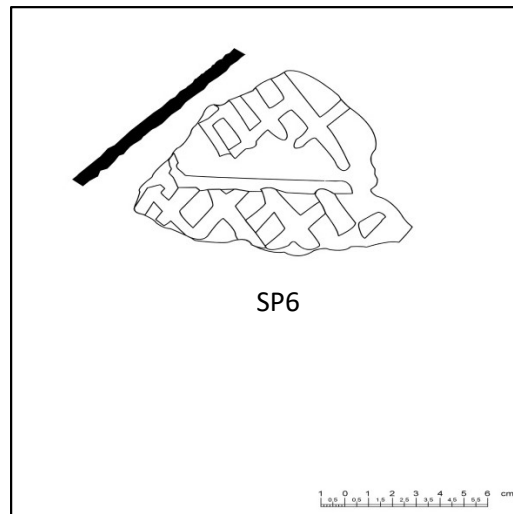


Fig 24. A. Shard of yellow-bodied pottery type.

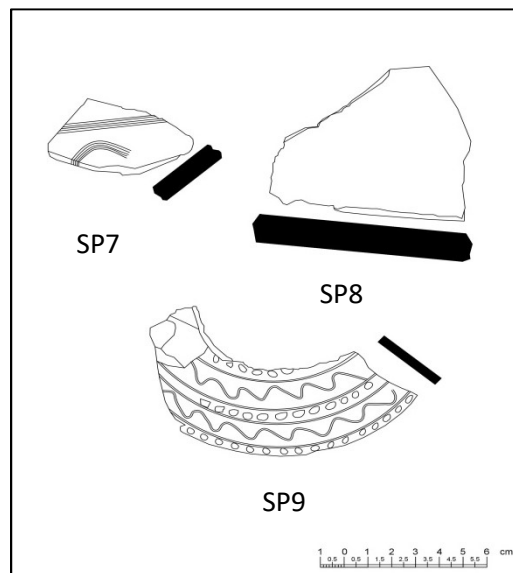


Fig 24. B. Shards of red-bodied pottery type.

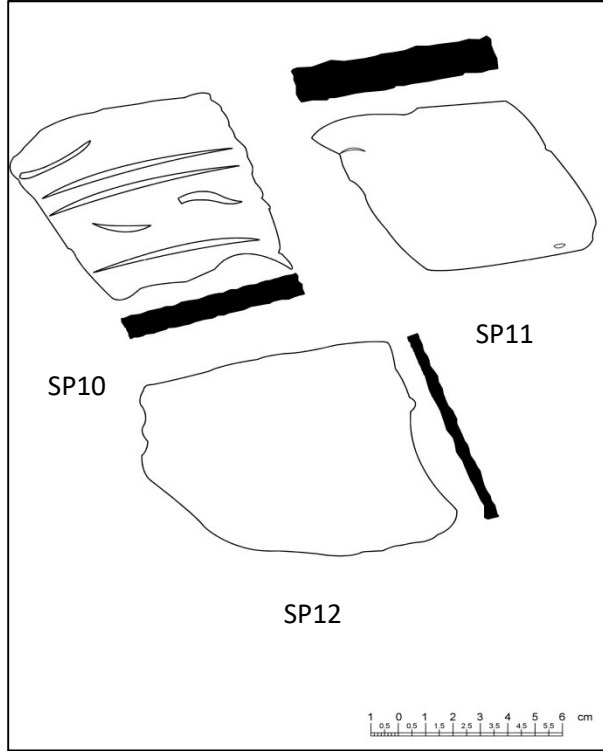


Fig 25. A. Shards of handmade pottery type.

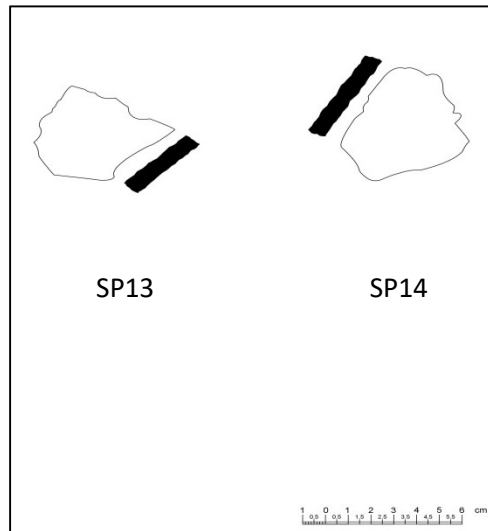


Fig 25. B. Shards of monochrome, alkaline-glazed ware type.

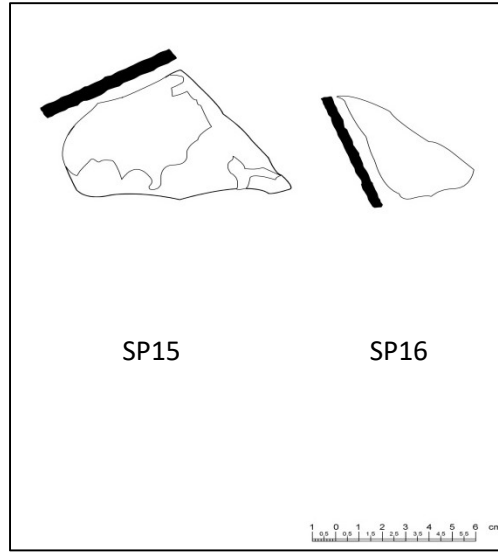


Fig 26. A. Shards of monochrome, alkaline-glazed ware type (cyan-blue glaze).

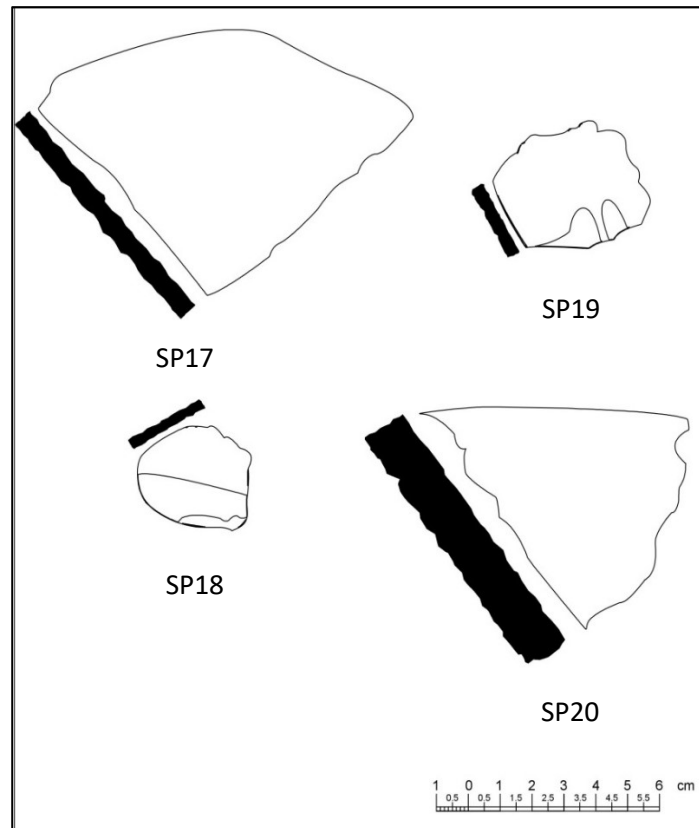


Fig 26. B. Shards of monochrome, lead-glazed ware type (olive-green, yellow, and light-green glaze).

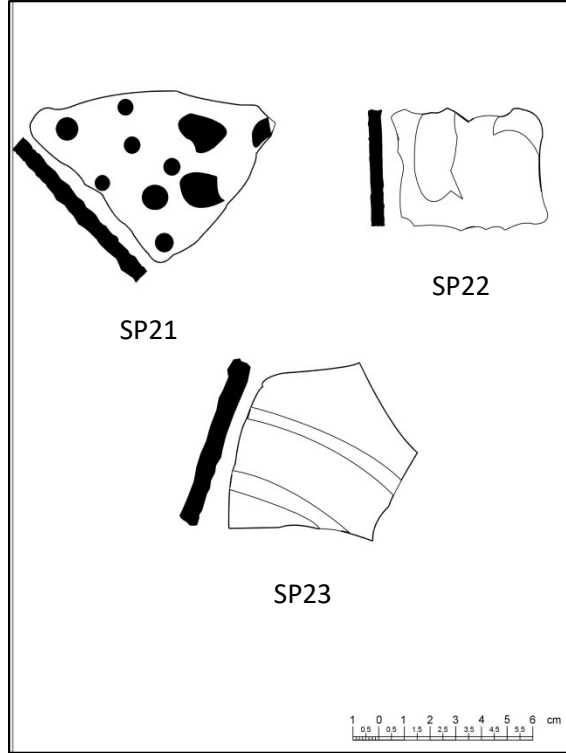


Fig 27. A. Shards of lead-glazed splashed ware type (yellow, green, yellow, and black glaze).

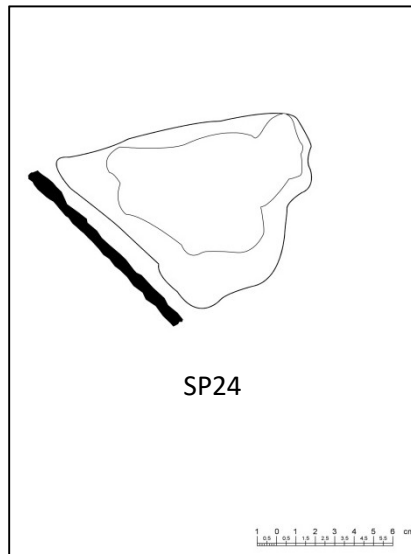


Fig 27. B. Shard of tin-glazed ware type.

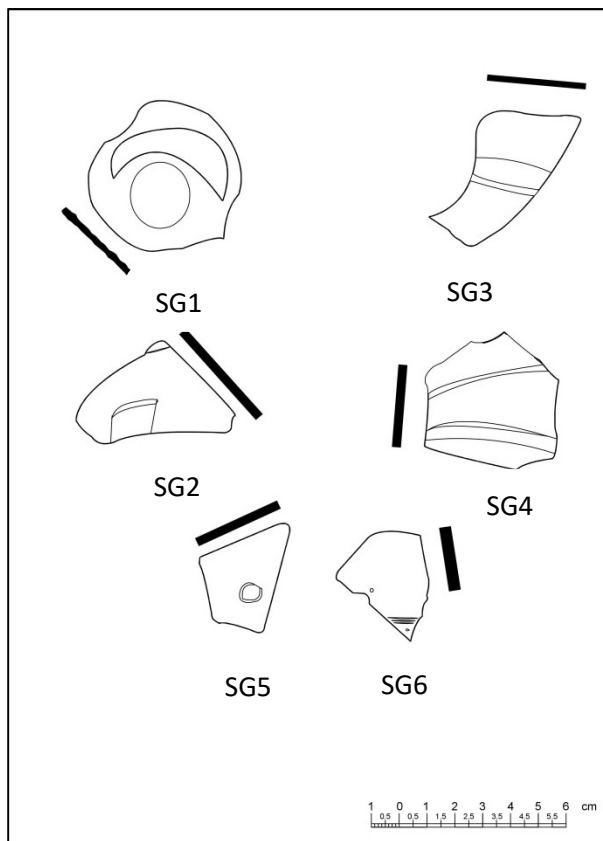


Fig 28. A. Shards of different glasswares.

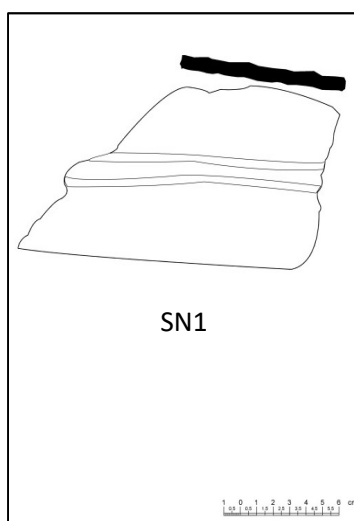


Fig 28. B. Pot shard of steatite.

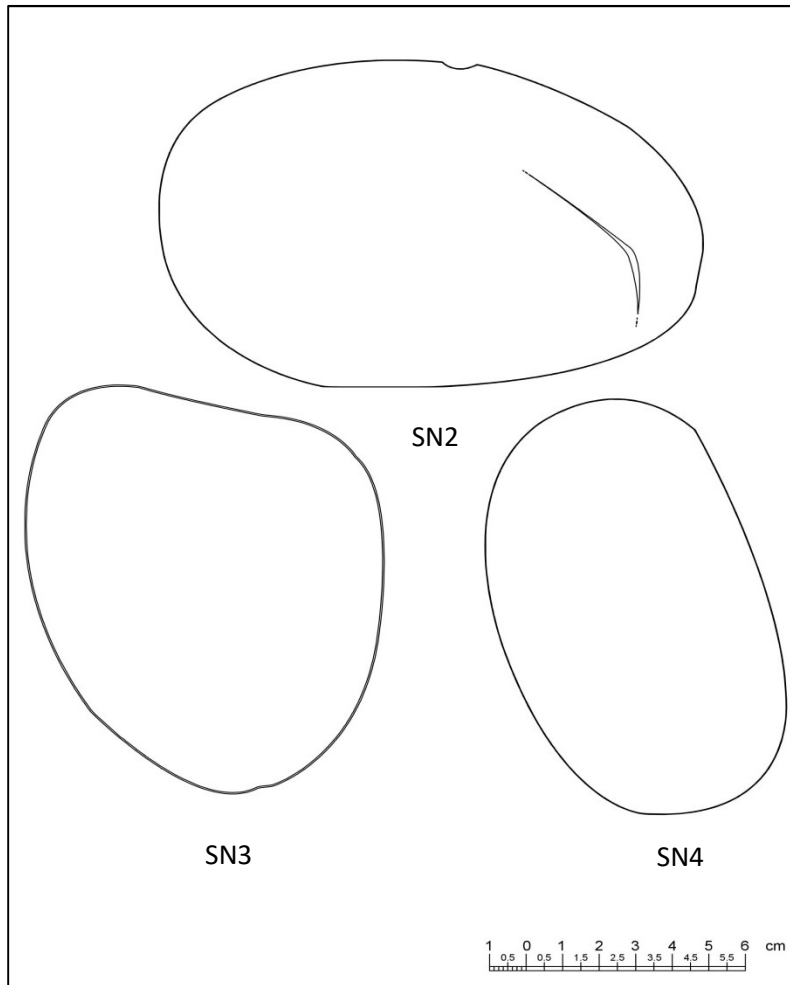


Fig 29. Pieces of volcanic stones.

Archaeological Finds of the Excavation (Fig. 30. A-38. B)

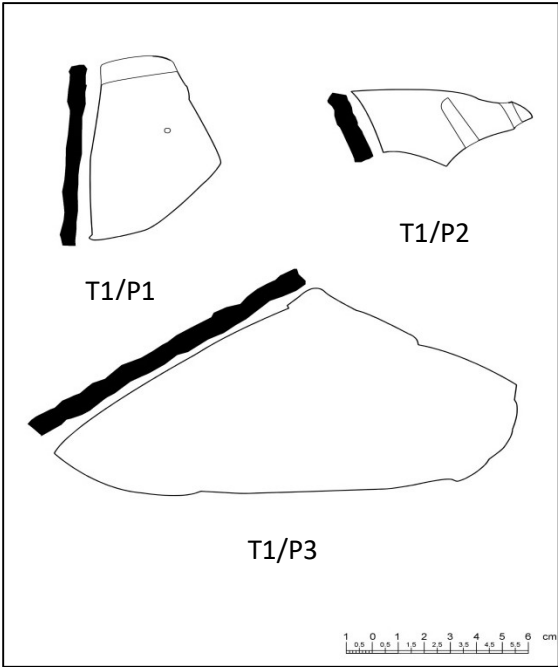


Fig 30. A. Jars shards of red-bodied pottery type.

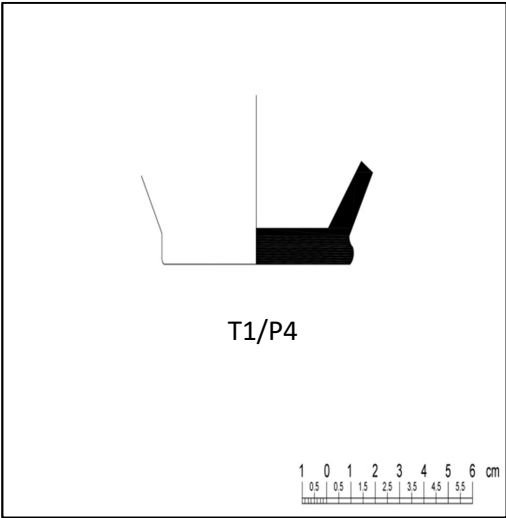


Fig 30. B. Jar base shard of red-bodied pottery type.

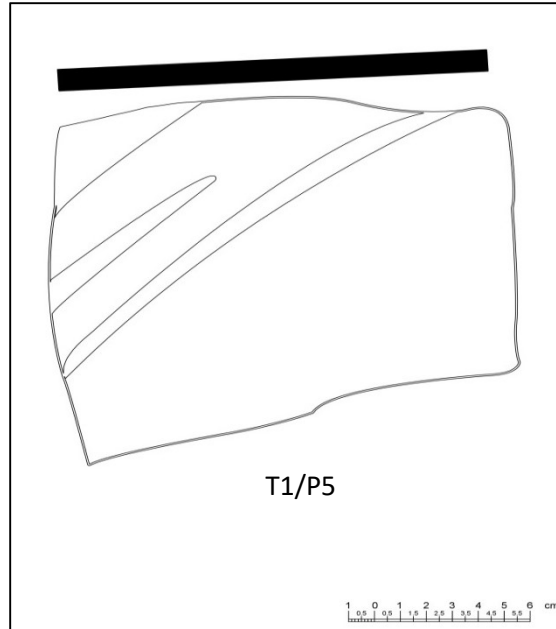


Fig 31. A. Vessel body shard of red-bodied pottery type.

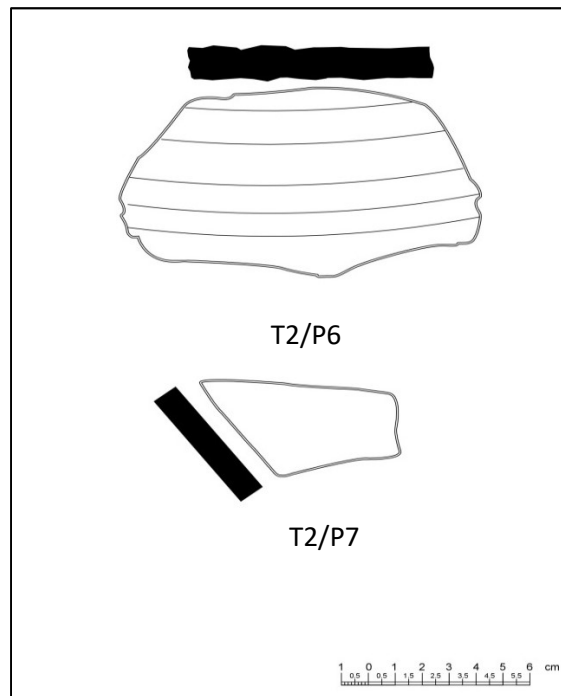


Fig 31. B. Jars bodies shards of red-bodied pottery type.

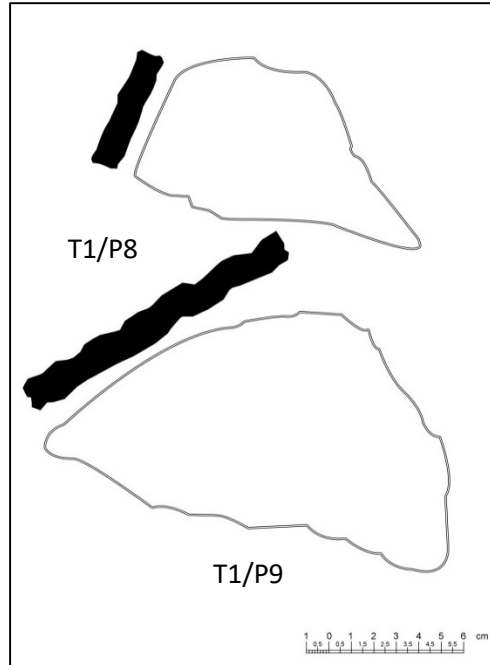


Fig 32. A. Vessels bodies shards of handmade pottery type.

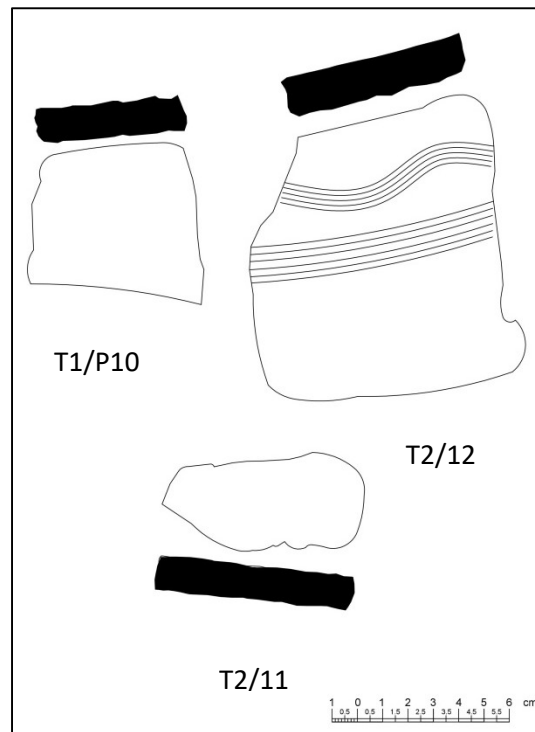


Fig 32. B. Other vessels bodies shards of handmade pottery type.

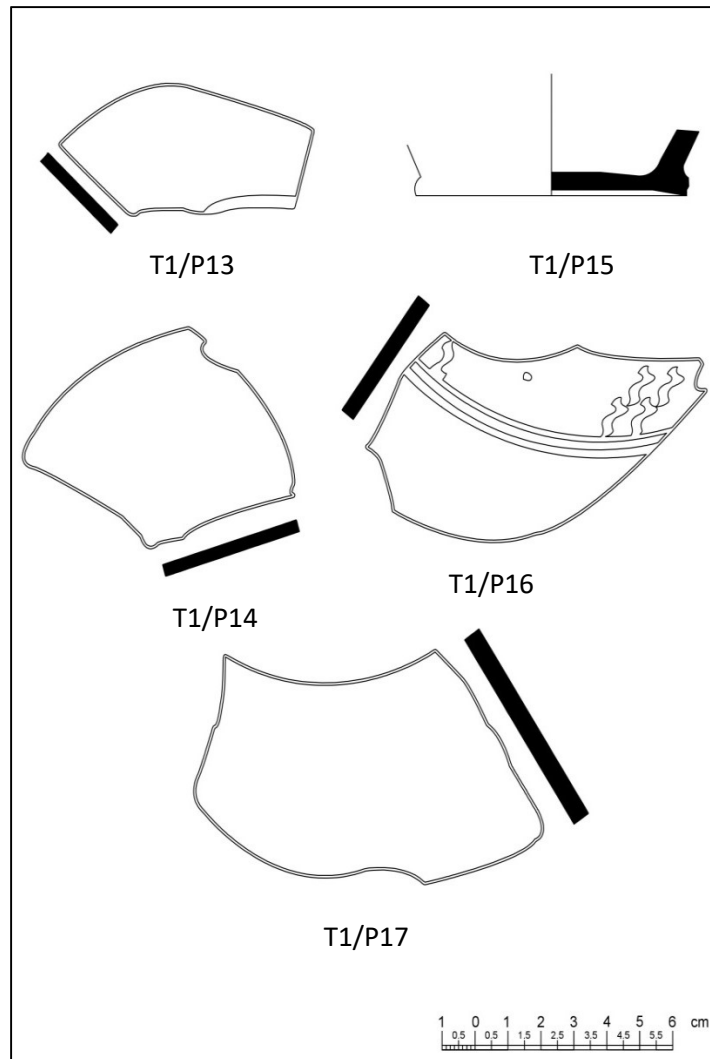


Fig 33. Shards of egg-shell ware type.

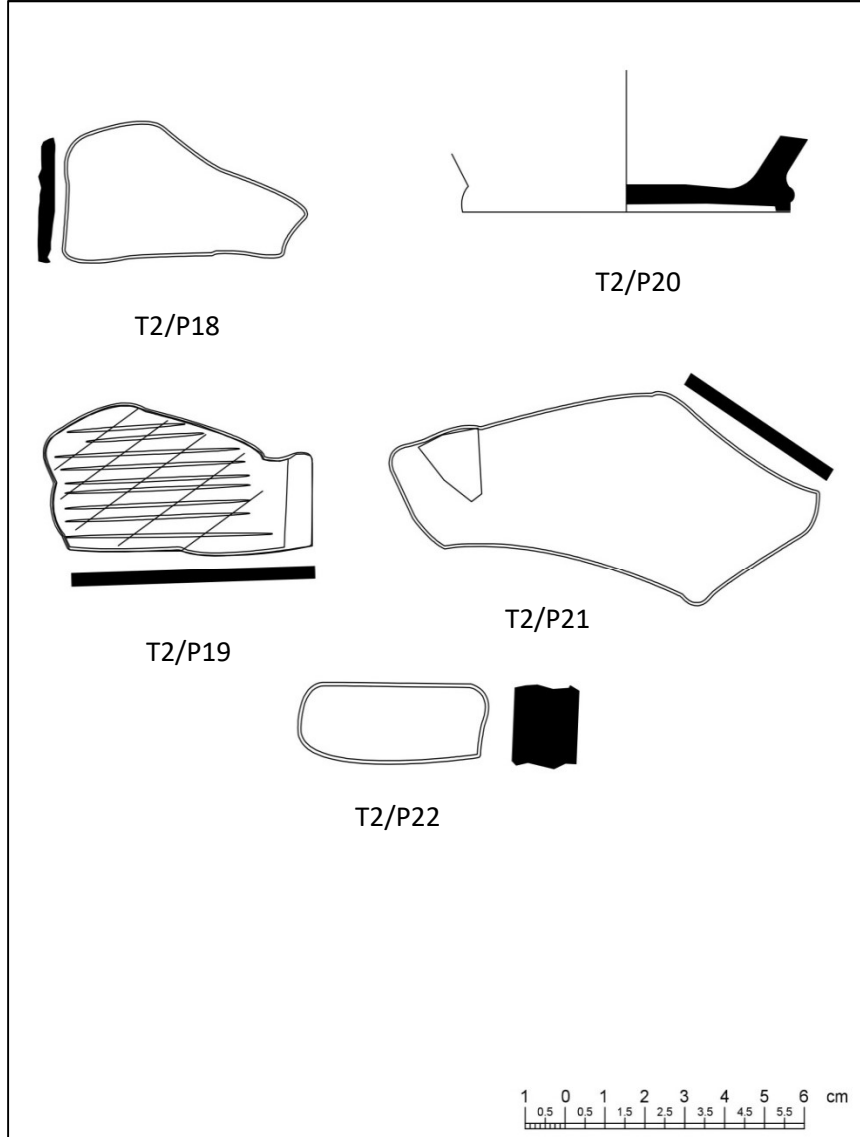


Fig 34. Other shards of egg-shell ware type.

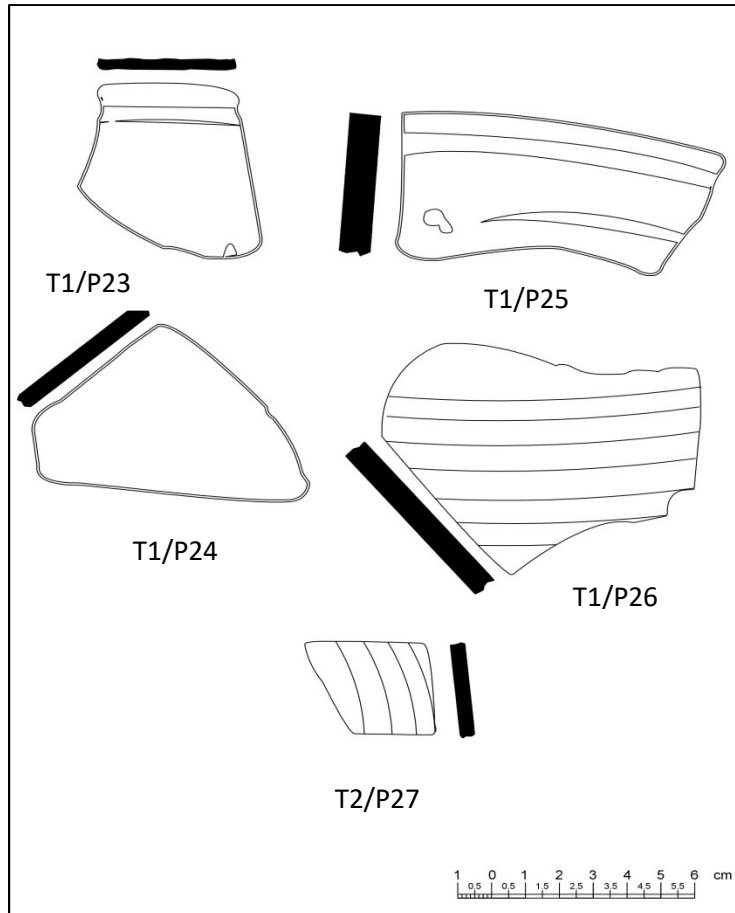


Fig 35. Shards of monochrome, lead-glazed ware type.

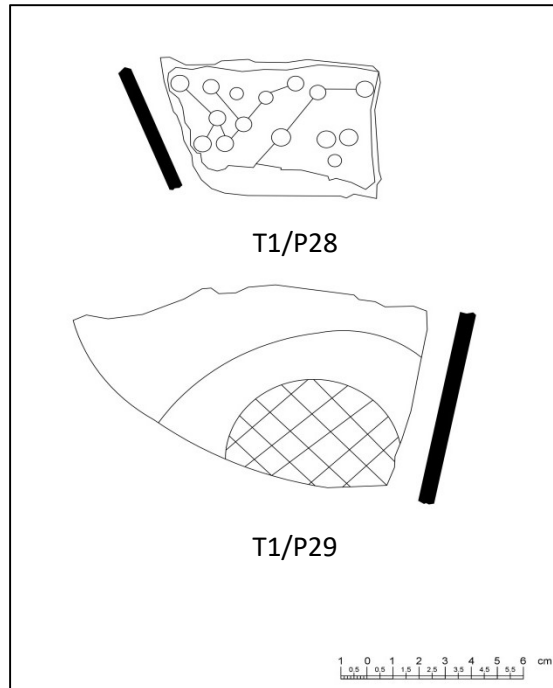


Fig 36. A. Shards of lead-glazed splashed ware type.

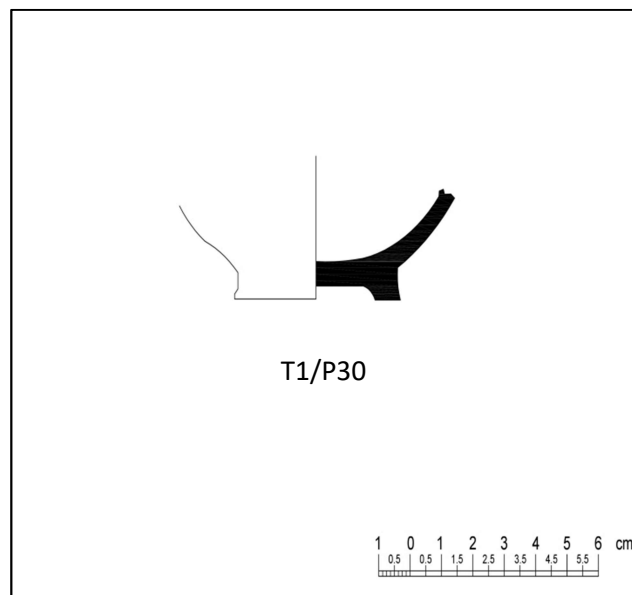


Fig 36. B. Bowl base shard of tin-glazed ware type.

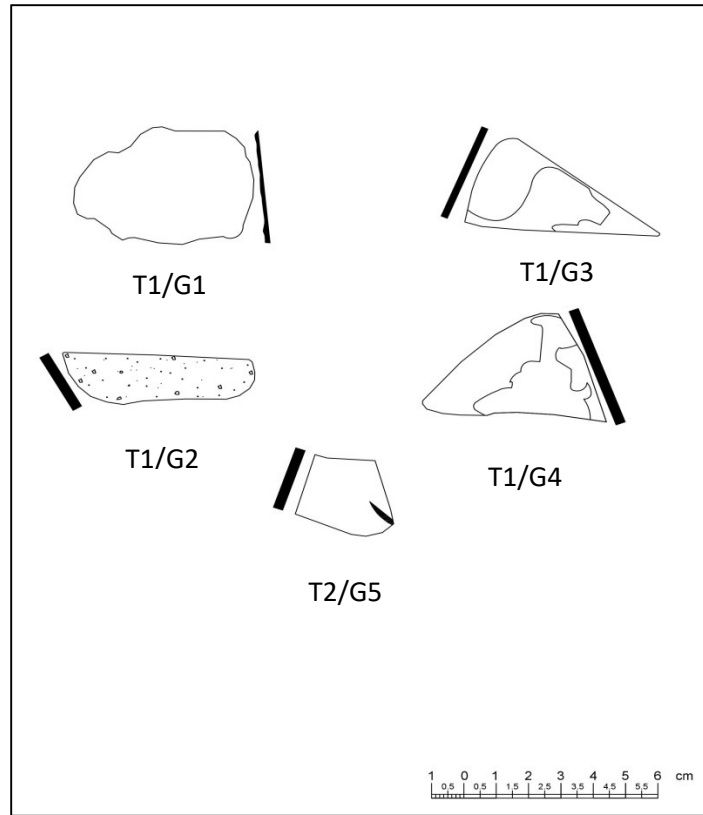


Fig 37. A. Shards of different glasswares.

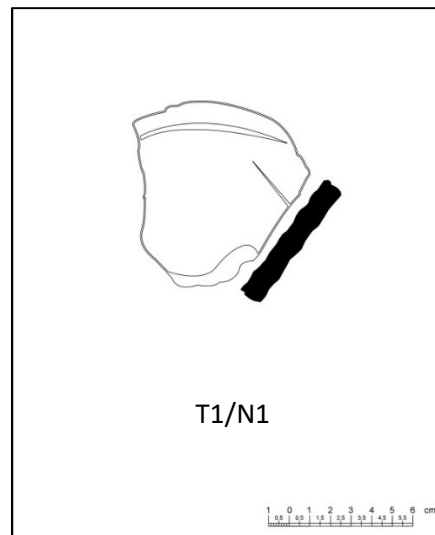


Fig 37. B. Pot shard of steatite.

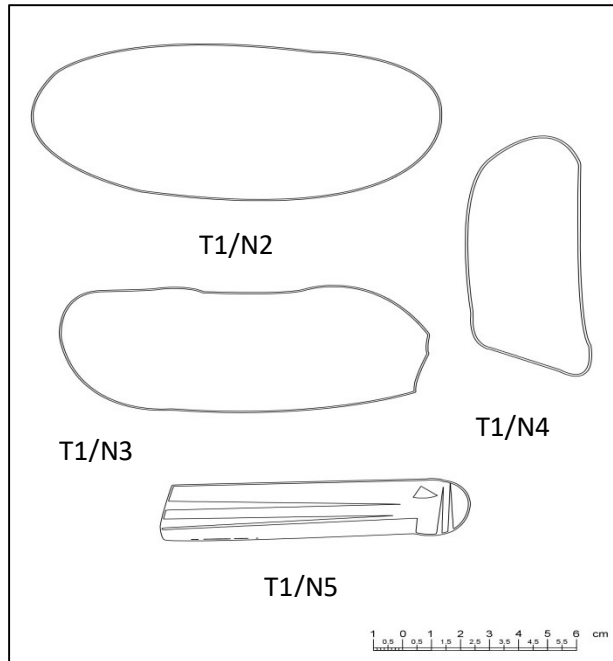


Fig 38. A. Pieces of volcanic stones.

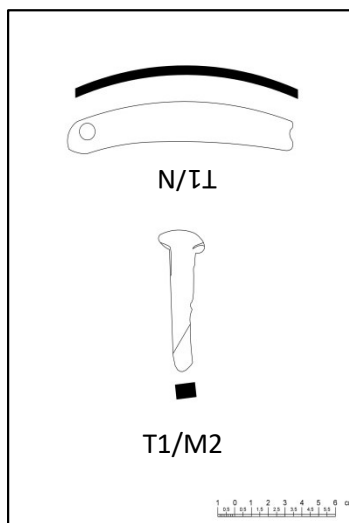
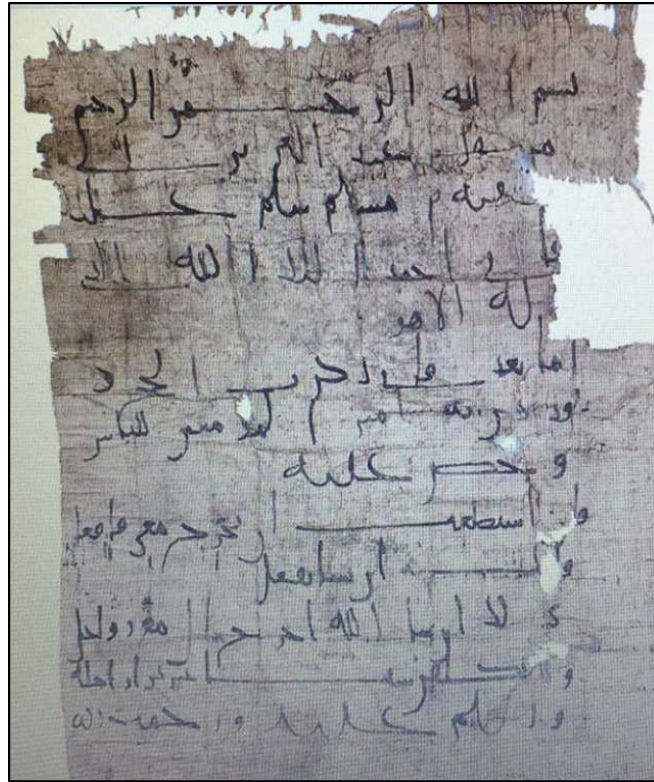
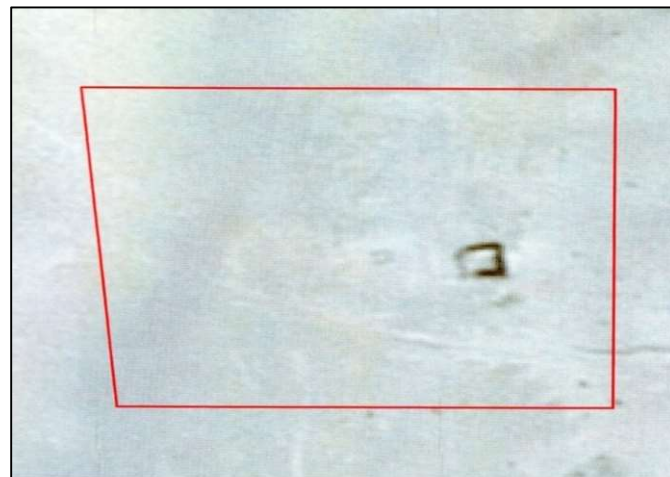


Fig 38. B. Metal Pieces.

Plates



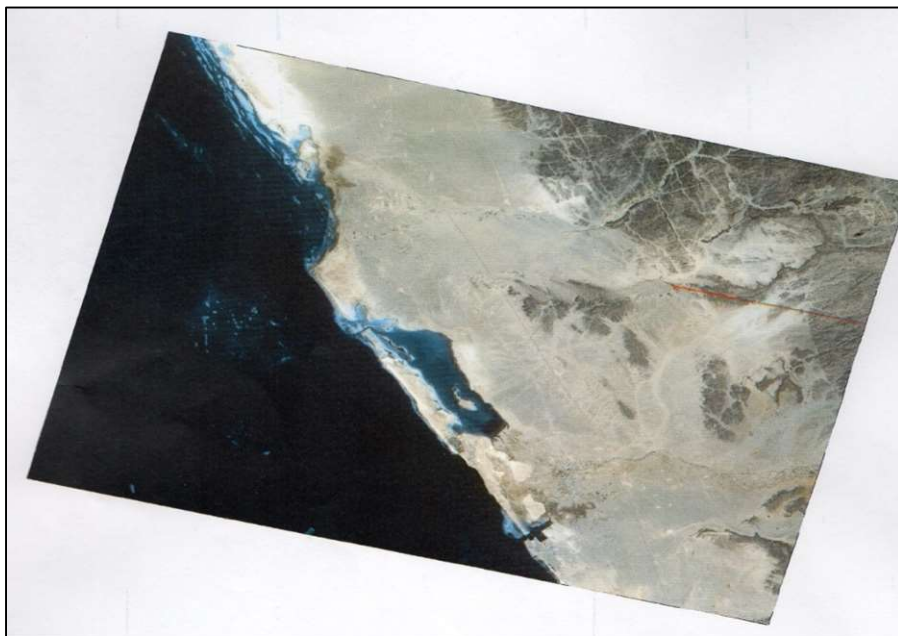
Pl 1. A. A papyrus mentioning invitation for the Hajj, 86-99/705-717.
 (The Islamic Awareness website)



Pl 1. B. Satellite imagery of al-Juhfa taken by Landsat satellite in 2004.
 (King Abdulaziz City for Science and Technology in Saudi Arabia).



Pl 2. A. Satellite imagery of al-Juhfa taken by Geo-Eye satellite in 2004. (King Abdulaziz City for Science and Technology in Saudi Arabia).



Pl 2. B. Satellite imagery of al-Juhfa taken by Geo-Eye satellite in 2004. (King Abdulaziz City for Science and Technology in Saudi Arabia).



Pl 3. A. Google Earth imagery of al-Juhfa.



Pl 3. B. Google Earth imagery of al-Juhfa canal.



Pl 4. A. General view of the residential area in al-Juhfa.



Pl 4. B. Foundations of some architectural units in the residential area.



Pl 5. A. Layer of plaster covered some walls from inside.



Pl 5. B. Picture showing five rooms overlook a courtyard, constituting a large architectural unit.



Pl 6. A. City wall and the protruding stone block on the path of the wall, which may represent the main gateway.



Pl 6. B. The external side of the eastern wall of the fort.



Pl 7. A. The cavity in the southern part of the eastern wall of the fort.



Pl 7. B. Picture showing the eastern wall thickness of the fort.



Pl 8. A. The interior side of the eastern wall of the fort.



Pl 8. B. The external side of the northern wall of the fort.



Pl 9. A. The interior side of the northern wall of the fort.



Pl 9. B. The external side of the western wall of the fort.



Pl 10. A. Stair thresholds ascending to the fort.



Pl 10. B. Picture showing the ending of ascending stair thresholds.



Pl 11. A. The stair thresholds descending.



Pl 11. B. Another view of the descending stair thresholds.



Pl 12. A. The stair wall thickness.



Pl 12. B. The interior side of the western wall of the fort.



Pl 13. A. The external side of the southern wall of the fort.



Pl 13. B. The interior side of the southern wall of the fort.



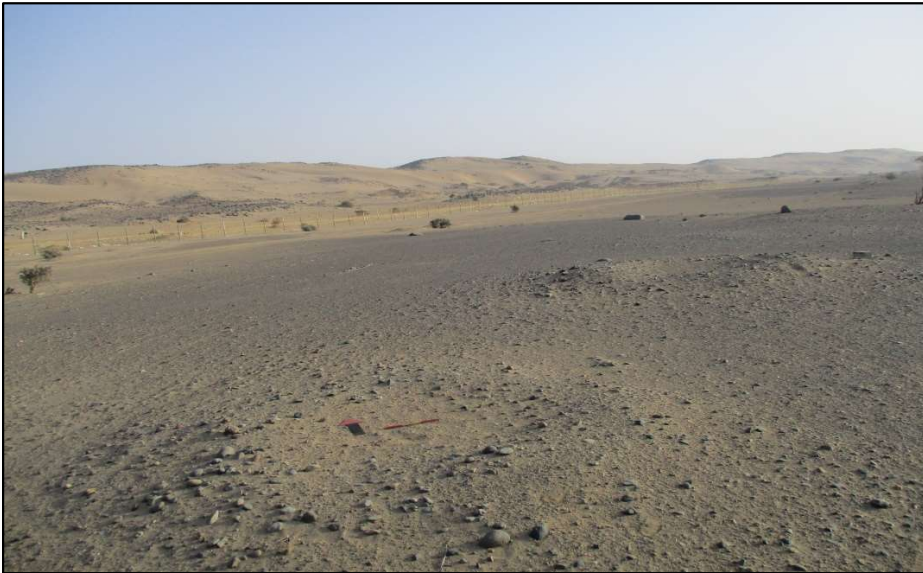
Pl 14. A. The fort pool.



Pl 14. B. The pool wall thickness.



Pl 15. A. On the right side, the surface canal of the pool.



Pl 15. B. The wells built above the canal.



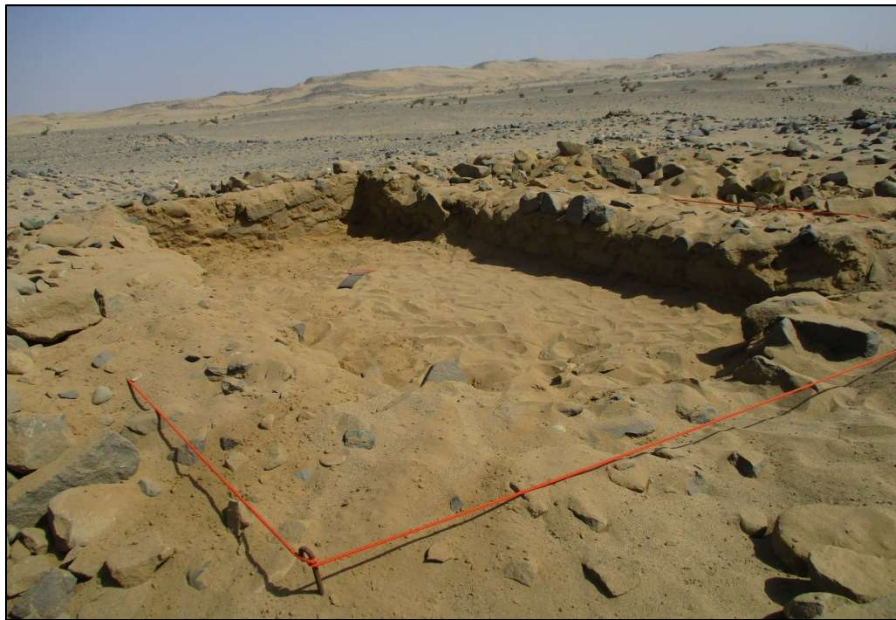
Pl 16. A. The proposed cemetery site.



Pl 16. B. One of unread Islamic inscriptions.



Pl 17. A. Trench T1 before the drilling process.



Pl 17. B. The walls of the rectangular architectural unit in Trench T1.



Pl 18. A. The unit wall thickness.



Pl 18. B. The unit door.



Pl 19. A. The beginning of the second step of excavation on the northern side of the trench.



Pl 19. B. The north side of the trench after excavation and the small square trench appears on the northwest angle.



P1 20. A. The plaster floor at the small square trench.



P1 20. B. The wall height of the architectural unit after the excavation is completed.



Pl 21. A. The whole trench T1 after the completion of excavation.



Pl 21. B. Trench T2 before the drilling process.



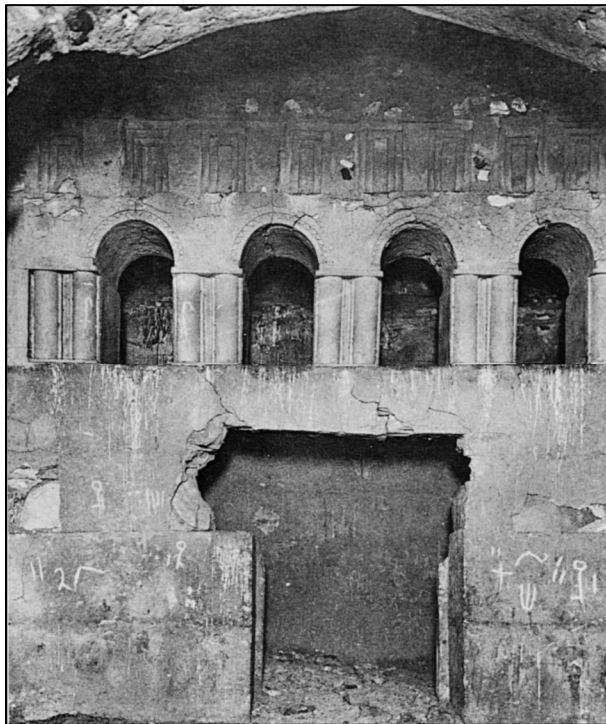
Pl 22. A. The virgin soil of the trench T2.



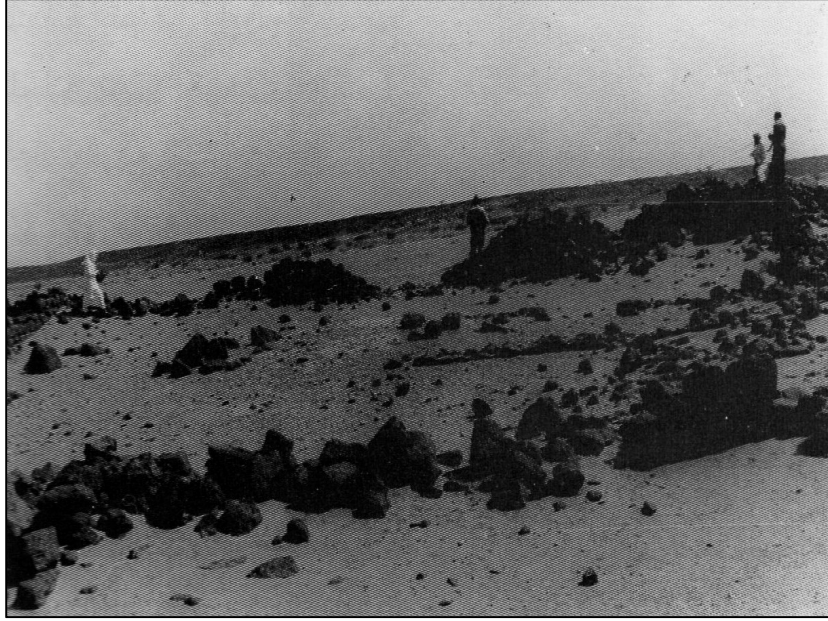
Pl 22. B. The whole trench T2 after the completion of excavation.



Pl 23. A. Residential unit with curved door in al-Mabiyat, 9th century. (Mu'ayqal , Pl. 3.8).



Pl 23. B. Small semicircular arches in Qasr al-Kharana, 8th century. (Creswell, Fig. 64).



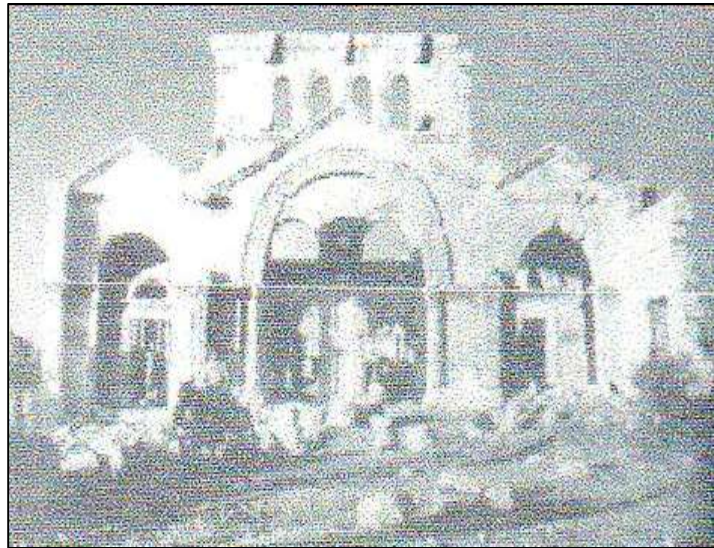
Pl 24. A. The fortress of al-Kara⁶, 9th century. (Al-Rashid, p. 266).



Pl 24. B. Semicircular arches in Qasr al-Ukhaidir, 8th century. (Shafi'i, Pl. 177).



Pl 25. A. Abbasid pointed arches in Qasr al-Ukhaidir, 8th century. (Shafi'i, Pl. 178).



Pl 25. B. Semicircular Roman arch in the Church of Saint Simeon Stylites, Syria, 5th century. (Wadah, Pl. 1).



Pl 26. A. Circular pool in Yemen. Pre-Islamic period. (Al-Rashid, p. 364).



Pl 26. B. Square pool in Jordan. Pre-Islamic period. (Al-Rashid, p. 372).



Pl 27. The mountain that used as a major source of basalt stone for al-Juhfa construction, about 500 m. south of the fort.

Archaeological Finds of the Surface Survey (Pl. 28-34)



Pl 28. Shards of egg-shell ware type.



Pl 29. A. Shard of yellow-bodied pottery type.



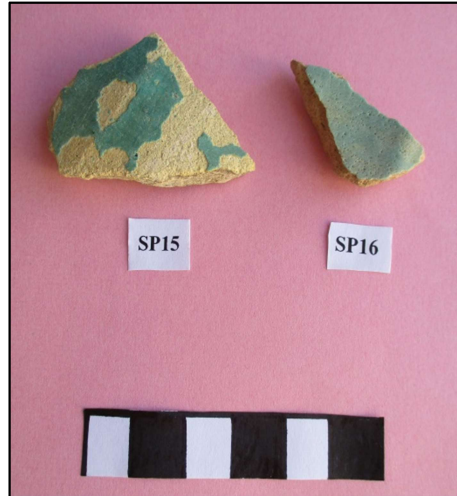
Pl 29. B. Shards of red-bodied pottery type.



Pl 30. A. Shard of handmade pottery type.



Pl 30. B. Shards of monochrome, alkaline-glazed ware type.



Pl 31. A. Shards of monochrome, alkaline-glazed ware type.



Pl 31. B. Shards of monochrome, lead-glazed ware type.



Pl 32. A. Shards of lead-glazed splashed ware type.



Pl 32. B. Shard of tin-glazed ware type.



Pl 33. A. Shards of different glasswares.



Pl 33. B. Pot shard of steatite.



Pl 34. Pieces of volcanic stones.

Archaeological Finds of the Excavation (Pl. 35. A-43. B)



Pl 35. A. Jars shards of red-bodied pottery type.



Pl 35. B. Jar base shard of red-bodied pottery type.



Pl 36. A. Vessel body shard of red-bodied pottery type.



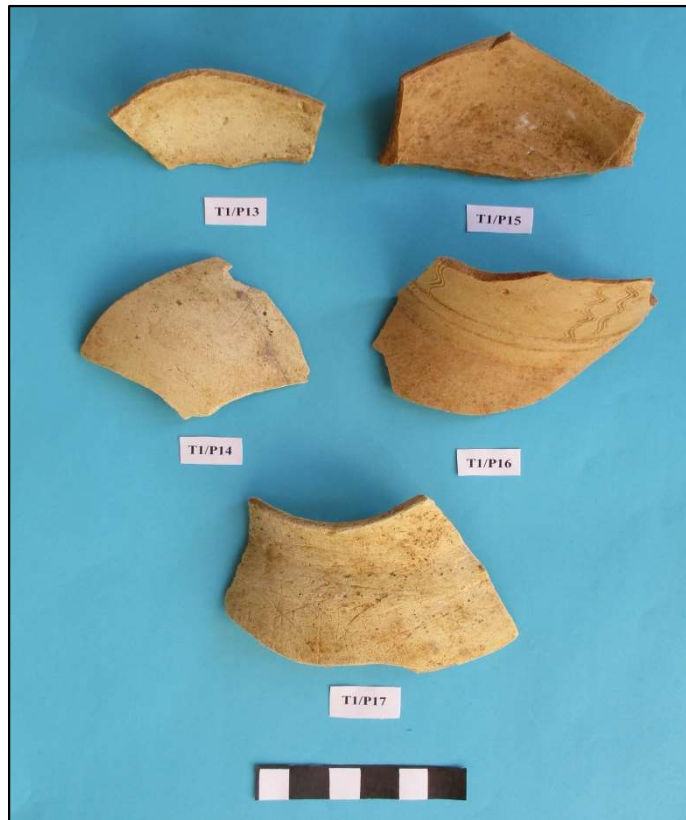
Pl 36. B. Jars bodies shards of red-bodied pottery type.



Pl 37. A. Vessels bodies shards of handmade pottery type.



Pl 37. B. Other vessels bodies shards of handmade pottery type.



Pl 38. Shards of egg-shell ware type.



Pl 39. Other shards of egg-shell ware type.



Pl 40. Shards of monochrome, lead- glazed ware type.



Pl 41. A. Shards of lead-glazed splashed ware type.



Pl 41. B. Bowl base shard of tin-glazed ware type.



Pl 42. A. Shards of different glasswares.



Pl 42. B. Pot shard of steatite.



Pl 43. A. Pieces of volcanic stones.



Pl 43. B. Metal Pieces.