

URBAN AND RURAL Umayyad HOUSE ARCHITECTURE IN JORDAN: A COMPREHENSIVE TYPOLOGICAL ANALYSIS AT AL-HALLABAT

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Abstract

The Umayyad period represents one of the most prosperous periods in the history of Jordan. Most of the studies, however, have long been focused on palatial and luxurious architecture. In Jordan, few examples of Umayyad houses have survived in their entirety. However, the new discoveries at al-Hallabat rural houses allow an architectural enrichment of our knowledge for that period, even from a socio-economic point of view. In contrast with the better-known desert palaces that dominate the evidence for this period, they also assist in establishing the houses' typological patterns. This paper attempts to present and discuss the main Umayyad urban and rural house architecture in Jordan, while addressing al-Hallabat Umayyad houses based on recent unpublished reports and preliminary results of excavations. It aims to present a comparative typological pattern analysis of al-Hallabat houses excavated at two phases (1979-1982, 2002-2006) with parallel examples from Bilad al-Sham. The paper defines three typological patterns; nucleus, courtyard, and complex houses. All have at least one courtyard. The study shows that there were continuity and parallelism in Bilad al-Sham between these types and those used at least in early Byzantine and early Islamic period, such as these at ar-Risha and Khirbet al-Askar in Jordan.

Keywords: *Umayyad houses; nomad village; urban and rural settlement; architectural typology; courtyard house; al-Hallabat; desert palace*

INTRODUCTION: Umayyad JORDAN

The debated interpretation and explanation of the process of early Islamic settlement in Bilad al-Sham, based on recent archaeological evidence, is constantly growing, as more dynamic evidence comparing with literary references (Kennedy, 2014: 98). The buildings commissioned by the Umayyad dynasty in Bilad al-Sham, the core of the Umayyad realm illustrate the dynasty's appropriation and adaptation of Hellenistic, Roman, Byzantine, and Sassanian cultural traditions (Haddad, 2009:7; Arce, 2007; Almagro, 1992). Umayyad architecture in Jordan, actually, contains a mixture of eastern and western influences (Warren, 1978: 230; Haddad, 2009:1, 7). In fact, the early Islamic architectural elements were formed to respond effectively to people's physical, environmental, socio-economic and political, as also physiological and religious requirements at their time (Kaptan, 2013:5).

The Umayyad period represents one of the most prosperous periods in the history of Jordan due to its proximity to Damascus and its strategic geographic position which made it an important thoroughfare for pilgrims venturing to the holy Muslim sites in Arabia. Umayyad Jordan has also been the stage for great events that have influenced Islamic history and the Mediterranean region. The land of Jordan hosted the first confrontation between Islam and the Byzantine world in the battle of Mutah near Karak and the decisive battle of Yarmouk.

Perhaps one of the most important events from a political point of view was when the Abbasids launched the movement against the Umayyads using al-Humaymah in southern Jordan as their headquarters to establish their succession in Baghdad. In 750, Umayyad Jordan shifted to the rule of the Abbasids after the revolution that was initiated from al-Humaymah.

Jordan was enriched with some of the finest examples of early Islamic architecture, found anywhere including in caravan stops (caravanserais), bathhouses, and palaces at the eastern Jordanian desert. Interestingly, from a socio-economic point of view, the Umayyad period witnessed an expansion in urban and rural centers illustrated by the castles, the palaces, and the so-called 'Nomad Village', which stretched over great areas of Jordan. According to Kennedy (2014: 96) "there is a rarer site type — a dispersed village, known under various names", which he termed as 'Nomad Village', such as the ruins at Jabal Seys, at Qasr as-Swab, at Ar-Risha, at Hibabiya, and the those at Qasr el-Hallabat, which is the main subject of this paper. Kennedy (2014:107) states that 'Nomad Villages' "are important sites in their own right, revealing evidence for the progressive development of the pre-desert and adjacent desert regions of northern Jordan".

When the Umayyad inhabitants of Jordan were building these 'Nomad Village' complexes on the fringe of the desert/ Badiya, substantial Umayyad large urban towns existed at Jerash, Amman and Tabaqat Fahl (Pella) as also in many other long established towns such as Madaba, Hisban, Umm el Walid, Umm el-Jimal, Umm el-Rasas, and Aqaba (Alhasanat et al, 2012). In fact, the economics of many towns in early Umayyad Jordan became increasingly focused on the manufacture of tradable goods, especially in the eighth century (Walmsley, 2000: 305). In Jordan, the Umayyad achievements are reflected in the ability of the dynamic Muslim culture to expand far beyond urban centres to exploit in a creative management the reward of the agriculture and trade potential of formerly marginal frontier regions.

However, the al-Hallabat settlement provides the opportunity to investigate the rich cultural heritage significance of Umayyad domestic architecture, which is relatively limited in Jordan in comparison to palatial and formal architecture. The 'Nomad Village' settlement at ar-Risha (c. 5ha lies 165 km north-east of the Azraq Oasis and 35 km north of the small Baghdad Highway town of Ruwayshid) also has a collection of minimally preserved structures of individual buildings arranged in parallel lines with a mosque and large formal buildings.

The paper aims to present and discuss the main Umayyad urban and rural house architecture in Jordan, clarifying some socio-economic aspects while addressing al-Hallabat Umayyad houses based on recent unpublished reports and preliminary results of excavations. It attempts to present a comparative typological pattern analysis of al-Hallabat houses excavated at two phases, 1979-1982 and 2002-2006, with parallel examples from Bilad al-Sham.

BACKGROUND TO SECULAR UMAYYAD DESERT PALACE ARCHITECTURE AND PLANNING IN JORDAN: SOCIO-ECONOMIC AND POLITICAL INDICATIONS

Umayyad secular architecture, in fact, is best known from a group of desert palaces (often called Qasr in Arabic sources) constructed of stone and/ or brick in some cases. The so-called desert palaces have developed a unique architectural concept reflected in their location, their density, and their fast spread in a relatively short time (715-750) (Haddad, 2009: 2). Of significance were the events and activities of these early Islamic Umayyad palaces as reflected by their architectural typology while responding to the socio-economic aspects. Their remains were found mainly in the eastern desert of Jordan (Badiya), meanwhile, only a few were built in Syria (Qasr al-Hayr (727- 9), east and west) and a couple in the West Bank (Khirbat al-Mafjar in Palestine).

Such sites in Jordan are distinct from those in Syria; they are comparatively of modest scale and simple construction (Urice, 1987). It is not a mere coincidence that the greater part of the architecture attributed to Jordan corresponds to palaces or private residences and to the new oligarchy who sought to forgo a new image and mark the change of power, as Grabar (1987:

134-135) has pointed out. This peripheral and countryside category was normally the engine of politico-economic activities, and their economic, agricultural and technical innovations were intrinsically linked to urban centers and interregional networks.

These palaces and the other structures of the 'Nomad Villages' from the Umayyad golden age testify to Jordan's identity as a politico-economic center and as a major stop on the caravans' route. They demonstrate a face of the Umayyad life in the Middle East, which is not widely seen elsewhere, and some authenticate a perfect condition of preservation which is quite astonishing taking into account their vast epoch.

Recent results of GIS analysis (Alhasanat, et al, 2012: 343) show that these Umayyad palaces are carefully situated at the routes of transhumance and water sources. The distribution pattern of these prominent structures was strategically placed in the landscape to carefully monitor and protect the routes that led to Damascus. They clustered at the outlet of Wadi Sarhan, and there is, actually, line-of-sight communication between Azraq, Amra, Kharana, Muwaqqar, Umm al Walid, Mushatta, and Qastal. However, Qasr al-Hallabat and Qasr al-Tubah functioned more as two main patrol stations (Alhasanat, et al, 2012: 356-57).

These multi-functional activity structures were imposed by the nature of the emerging early Islamic state to strengthen the power and the economy of the newly established dynasty, but they also demonstrate how deeply the Umayyad culture had penetrated this provincial early Islamic area. Usually, these palaces are square in plan, with semi-circular towers buttressing the exterior walls; meanwhile the flanking entrance portals give the palace a fortified appearance (Fig.1a). The central square courtyard, generally surrounded by porticoes of two stories high, with the upper ground layout following the same guidelines as the lower. In fact, the square layout is not only conceived as a multi-functional space to control all the activities taking place, like trade at the Suqs, religious activities at the mosque, and political functions at the Qasr (Almagro and Arce, 2001: 665), but also as symbol of power, Just as a perfect balanced, stable, clear, and rigid form that reflects the concept of power and strength (Haddad, 2009: 6).

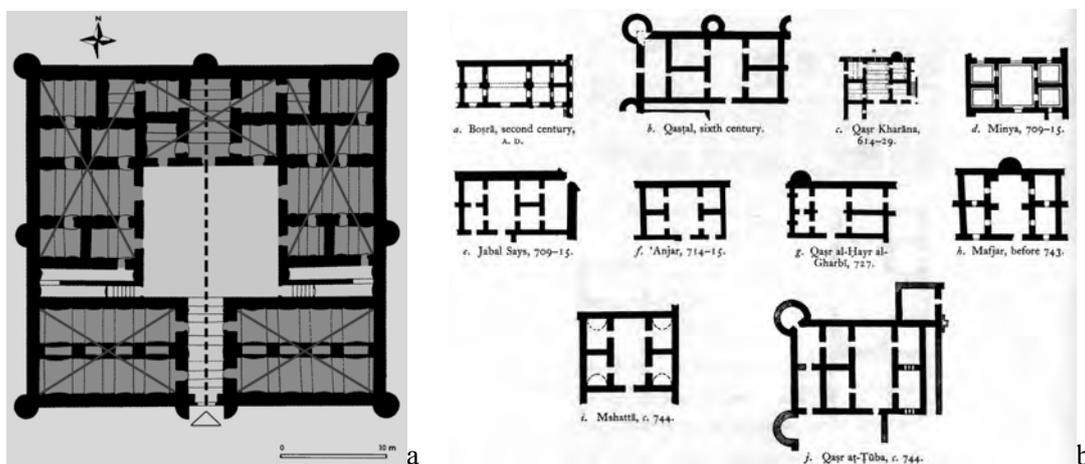


Figure 1. a. Ian of Kharana Umayyad desert palace, as a model illustrating the interior symmetrical layout, space distribution, division and the bayts' units (After Haddad, 2009, Fig.5); b. different bayt units from Umayyad palaces in Bilad al-Sham (Source: After Creswell, 1989, Fig. 565).

The particularity of these buildings appears from the unity of the internal and external architectural form with the different variation of sizes and scales. They are characterized by clarity, identification, reflecting the image of the power of Islam from the outside, and the luxury from the inside reflecting the new lifestyle of the Umayyad (Haddad, 2009; 1, 7).

The Origin of the Architectural Pattern of the so-called Umayyad 'Bayt': Social Indications

In the early Umayyad architectural context, a bayt (plural buyut) is composed of a central hall flanked by a pair of rooms on either side from which the accessibility is achieved. This is a module frequently repeated in the desert palaces (Creswell, 1989: 516; Almagro, 1987:183; Haddad, 2009: 7) (see Fig. 1).

The bayt of the Umayyad palaces has different typologies that can be established from their architectural patterns; either independent or grouped structures, appearing in more or less compact ensembles. The independent type corresponds to buildings organized around a central square courtyard. Rooms open off the courtyard and are either directly or indirectly connected to it, such as at Qasr at-Tuba. These rooms form secondary spaces arranged around the main hall from which two or four adjacent rooms radiate. For example, at Kharana, other rooms were added to the three or five-room group (Fig. 1a), yet there is no repetition of any particular type of pattern from one case to another (Creswell, 1989).

Socially, this bayt arrangement is considered a more orderly expression of the same pattern seen in the few urban residences. According to Almagro (1992), these structures, which are based on the main hall and two to four smaller-sized adjacent rooms, appear to comprise the simplest type of room-unit, and can be compared to similar 'buyut', not usually found in the urban Umayyad house. Parallels, however, of such a module that resembles a bayt of the Umayyad places were found at the residential structures at Amman citadel, in both households of Building B and the main house over the Museum site (Harding, 1951: 7). This organization is clear in the room that may have functioned as a reception, opening onto two flanked rooms on either side of it, and thus forming a bayt (Fig. 2a).

It has been suggested that the architecture of these 'buyut' may reflect the Bedouin tent, Bayt al-Sha'ar. This theory was adopted by Helms (1990) through his study of the houses at ar-Risha, which was first suggested by Gaube (1979) in terms of a similar development of tents via a circular or square arrangement (dwar), as the design principle underlying the Qusur. However, Ahn (2010) clarified that one could identify the influence of the steppe and reference to the Bedouin tent by the normal Bedouin practice of laying out their tents in staggered rows facing downwind where each is separated from its identical neighbour by an acceptable distance. This scene is still reminiscent of many Bedouin towns today (Kennedy, 2014: 101; Ghrayib and Ronza, 2007: 423). However, only by this frame of Bedouin domestic forms, one can accept that it was derived from the tent, and in this sense, ar-Risha (see Fig. 9c) is a good example of what Bedouins might have built (Kennedy, 2014: 99, Fig. 4).

UMAYYAD HOUSES IN JORDAN: KEY SOCIO-CULTURAL ASPECTS

While the most striking feature of Islamic architecture is the focus on interior space, the most typical expression of this feature is found in the inner space of the Muslim house. However, as the essential value in Islam is the emphasis on the inner aspect of self or thing (Bātin) and the subordination of the external aspect of self or a thing (Zāhir), the courtyard house and its organizational pattern are appropriate for the application of this principle (Hakim, 1986: 95-96). On the other hand, a comparative analysis of Islamic architecture in countries that have different climatic conditions suggests that climate has always been a significant force influencing the design and location of buildings (Toulan, 1980: 75). Therefore, the courtyard type house in Islamic architecture can be considered as a result of the integration of socio-cultural, religious, and climatic factors.

Historically, the courtyard type house, in fact, is a generic domestic form of residence that evolved independently in various ancient and traditional places. It is a product of cultural polygenesis dating at least to the Bronze age, and it has persisted in the Mediterranean area in

the form of the classical atrium and *pastas* house to be adopted by Muslims in the *dār al-Islam* (Petruccioli, 2007:73). It is additive by nature; the severe and austere facades are presented to the outside world, and because of the darkness of the house interior, it provides secluded open space for all family and most domestic activities in the sunlit courtyard area (Ahn, 2010: 106).

It ensures privacy from outside or adjacent areas while providing a level of interdependence between neighbours with regard to the use and rights of shared walls, maintenance of streets, problems related to rain and waste water (Hakim, 1986: 95-96). It also allows the structure to expand with the growing extended families while it is easy to make additions to the original structures. This type can also be arranged as multi-smaller unit houses, containing several living units on one or more levels of the residence with the courtyard as a shared space (Ahn, 2010: 107).

Umayyad Houses within an Urban Context in Jordan

The purpose of this section is to realize if any typological patterns, wherever possible, have survived in the urban context in their entirety in Umayyad Jordan. This will be achieved by reviewing the basic house layout, its relation to the street, and the function of the household in relation to socio-economic conditions. Umayyad Jordan, Amman, Pella, and Jerash are the most representative of urban town centres. These three respective urban sites will be examined briefly before discussing al-Hallabat rural domestic settlement houses.

Jabal al-Qal'a (Citadel) Umayyad houses in Amman

The Umayyad palace complex, at Jabal al-Qal'a (citadel) in Amman, differs in its layout and architecture from the rest of the desert palaces in Jordan. From a political point of view, it was the administrative center and residence for the governor of the region. Still, the main area of the urban reform, undertaken by the Umayyads, was mainly the public space layout with a new urban concept to accommodate the organization of the newly created architectural elements and also the reuse of pre-existing features (Almagro and Arce, 2001: 662). It also included the construction of separate courtyard house units of a variety of sizes, ranging from two rooms and a courtyard to seven rooms, a latrine, and a courtyard. Meanwhile, the residential units of the palace in one structure have ten rooms, a latrine, a staircase, and a courtyard (Northedge, 1992: 157).

Excavations have uncovered a number of upper-class residences from the 7th to 8th centuries contributing to information on the socio-economic aspects. Although the sudden collapse of the buildings was attributed to the earthquake of 749 (Northedge, 1992: 142), a significant house (380 m²) over the Museum site is preserved to a height of about 2.5m, built around a closed inner courtyard (Fig. 2a). The courtyard (8.6m wide) has a cistern with a shaft (Bennett and Northedge, 1976: 176). Plastered drains in the north-east and north-west corners of the courtyard conducted water from the roof to the cistern (Harding, 1951: 7). The cistern appears to have been constructed originally in the early Byzantine period.

Interesting also is the room that faced the courtyard, with the wide entrance. It was considered by the excavators to be a *diwan* (a reception room in the tradition of the Roman-Byzantine triclinium) (Bennett and Northedge, 1976). This possible reception room has a laid clay floor. The other lower-storey rooms apparently served as storerooms and workrooms. According to Harding (1951), parts of a mosaic floor were found on the upper storey, which apparently contained the living quarters.

However, Northedge (1992: 143) assumed that the building was apparently single-storey, as no evidence had survived of the roofing technique of a second storey or of a staircase to the roof. He speculated that the roof may have been barrel-vaulted, similarly to another building in the same area. The rectangular shape of the rooms would have accommodated barrel-vaulting, even at the expense of the regular thickness of the walls.

Tabaqat Fahl (Pella) Complex Houses

From a political point of view, Pella was an administrative district in the military province of Jordan in the early 7th century, serving the link between Damascus and Jerusalem: the two most important centres in southern Bilad al-Sham (Walmsley, 2008: 244; 1988: 144). However, the damage and the partial collapse of the domestic quarter of the main mound from an earthquake in 659-60 is evident, as indicated by the complete site destruction as well as from neighbouring sites.

This led to an urban modification translated by a rebuilding program that produced large houses and encroachment on public areas that continued until the end of the Umayyad period (Watson, 1992: 163-164; McNicoll et al, 1982).

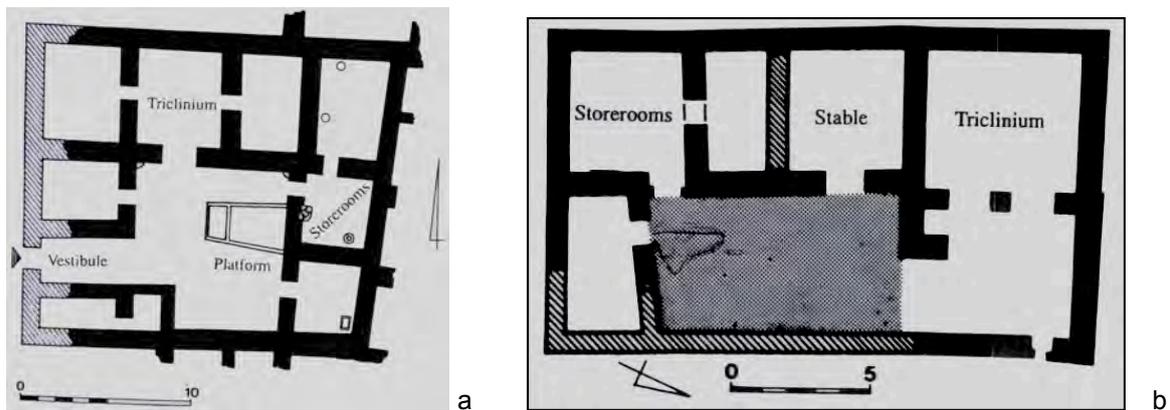


Figure 2. a. plan of the courtyard house under the Archaeological Museum, Amman Citadel (After Harding, 1951; Hirschfeld, 1995: 84, Fig. 60); b. plan of House 'G' at Pella (Source: After McNicoll et al, 1982),

At least six courtyard structures dating to the seventh and eighth centuries were completely destroyed in the 749 earthquake. From a socio-economic aspect, generally, the houses at Pella represent the mixed-use function at ground floor level of the household: living arrangements accommodating animal stables, storage of foods, workshop production, and some aspects of daily living (cooking, transit accommodation). In the upper floor spaces, much of the social activities take place and perhaps three houses at least with roof-top access. (Walmsley, 2007: 131). The upper floor could be reached through the courtyards by means of stone-built staircases (Walmsley, 2008: 251).

In one of the well-preserved examples of these houses, a two-storied courtyard, house 'G' (230 m²) (Hirschfeld, 1995) (Fig. 2b), has a corner entrance leading to a simple rectangular courtyard to the east. The rooms on the lower level were also used as storerooms and stables. The presence of carbonized wooden beams suggests that the roofs were made of matting over oak beams sealed with clay (Walmsley, 2007: 130). The upper storey floors may have been carried on timber joists (McNicoll et al, 1982: 131).

An out of the ordinary house dating back to the late 7th century, destroyed by the severe earthquake of 749, represents a fine example of an urban, but not primarily residential complex. The complete ground plan remains unknown. It was a large complex (560 m²) with two courtyards. The front façade of the house has three doorways opening directly onto the street (Fig. 3a). The group of living rooms in the west side of the house has accessibility from the main entrance through a small entrance hall. The eastern entrance was used to connect the two courtyards, while in the western side, a separate space was probably also used as a shop (McNicoll et al, 1982).

Socially, the excavators explain the parallel existence of the two courtyards due to the extended family's daily life activities that occupied the house, of which the closest courtyard to the street belongs to the men's wing. The large room built in the outer courtyard was a guest room while the inner courtyard and the rooms surrounding it might have served as the women's wing.

The "Umayyad House" in Jerash

An Umayyad residential quarter was found recently on the north side of the South Decumanus inhabited from 660 to 800 AD (Gawlikowski, 1986: 107-136). Socially, this also large Umayyad structure of about 600 m², coexists as 5-6 separate units, belonging to families that shared the same courtyard. The dwelling units laid around a courtyard are with one main entrance through a passageway from the colonnaded street in front of the house, which remains were in use, serving its original purpose along the lines of the shops.

The complex, however, extends northwards behind three shops that directly faced the street south of *decumanus* and formed the façade. The complex does not appropriate the shop space for its residential use (Gawlikowski, 1986: 111, 113). The shops were entirely restored, including the upper foundation courses found in the fill of a cistern without any major change in layout (Fig. 3 b and Fig. c).

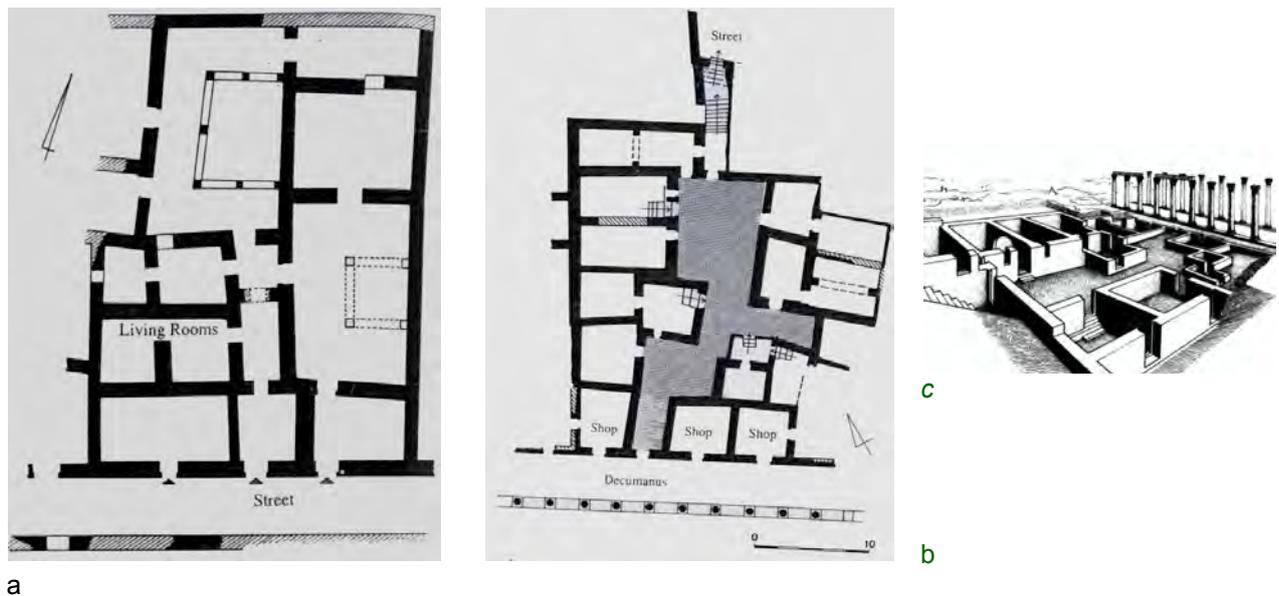


Figure 3 a. plan of the apartment house at Pella, seventh-eighth centuries (After McNicoll et al, 1992; Hirschfeld, 1995: 49, Fig: 25); b. plan of the Umayyad apartment house at Jerash (After Hirschfeld, 1995: 50, Fig. 26), c. 3D restitution views of existing state after restoration (Source: After Gawlikowski, 1986: Fig. 2).

The entrance passage led directly from the street to an irregularly shaped courtyard. In the back of the courtyard, there was another opening that led through a staircase to the street north of the complex. The courtyard's irregular shape was the result of the intersection of the Roman period foundations' walls with the Umayyad period, as it is clear by the room that intrudes into the middle courtyard space (Gawlikowski, 1986: 113).

In this complex, there is no indication of the so-called bayt layout. The rooms are arranged into two wings, to the east and west of the courtyard, where the depths of the rooms of the west wing vary according to the pre-existing conditions that the builders encountered in the area. The eastern wing also is not arranged symmetrically and many rooms are not aligned on the same

axis. The arrangement reflects the concept of the 'day and night' use of the living quarters as rooms are grouped in pairs; there are three sets of two-room suites (Gawlikowski, 1986: 114, 419). The front room earmarked for daily use and the back darker one used for sleeping. The layout of the units/ apartments, however, reflects a homogeneous pattern.

A sewage drain extends from the end of the courtyard to beneath the entrance (Gawlikowski, 1986: 113). This serves as the only sanitary facility in the household. An earlier sewage drain runs from the end of the courtyard and beneath the entrance. Some walls are preserved up to 3m above the floor, though the ceiling could not be lower than about 3.5m. The walls were probably mud-plastered while the roof is supported by wooden beams. An upper storey may have existed, but no evidence of it was found (Gawlikowski, 1986: 114).

In conclusion, comparing the main architectural features of the three previous houses reflecting the different socio-economic and political associations, we can note that the Amman complex example bears several significant differences and has only one main common feature with those of Jerash and Pella: the main façade entrance, which in this case is strongly connected to the courtyard through a vestibule. Also, according to Almagro (1992, 351), in each of these "Umayyad houses", several constants are apparent. He concluded that each has a courtyard, generally irregular in form, which functions as an element of distribution. All of the rooms to the house have either direct or indirect access to the courtyard, where at least one of the main rooms opens to the courtyard directly. Access from outside the house or from the street is gained through one sole exterior door and a series of hallways and small vestibules. However, in the Amman house case, the entrance from the outside to the courtyard is direct, since no L-shaped passages are used to obstruct the vision of the visitor. Another common feature is the hierarchal arrangement in the remaining rooms, of which many are only indirectly connected to the courtyard by way of other rooms.

However, the main difference with the Amman example is that there is a bayt layout at the main unit. According to Northedge (1992, 157), the bayt layout arrangement is directly paralleled by the proto-bayts at Khirbat al-Bayḍā, and the addition of a bayt in both households at Amman may be explained by the fact that these houses correspond to a part of the Umayyad political citadel project, which represents a single planned unit whose elements include the palace, the rebuilding of the fortification circuit, the open cistern, the Stratum V buildings of Areas B, C, and the Museum site. Whatever form and internal arrangements it may have had, it was in substantial use in the seventh and eighth centuries. At the same time, it reflects some socio-economic conditions and relationship with urban domestic architectural traditions of the late Antiquity era of Bilad al-Sham.

Another difference, probably in relation to the extended family's needs, can be seen from their size: at Amman is 380 m², at Tabaqat Fahl 560 m², and at Jerash about 600 m². The Tabaqat Fahl example, in fact, has many features in common with the one at Jerash: façade entrance between shops, no indication of the bayt layout, the ratio of the length of the façade to the length of the house is about 1:1.5, and the main architectural concept layout is the outcome of two units separated also by a forced earlier phase.

On the other hand, the "Umayyad house" in Jerash, given its irregularity, shows that the Umayyads dealt in a creative respectful approach to the potentiality of pre-existing features, achieving the basic religious, socio-cultural, and economic conditions and requirements. All of the windows face the courtyard suggest an inward orientation to maximize privacy, as also the design of the main entrance to a passageway, which turns at a right angle, obstructing direct view into the courtyard space from the street (Ahn, 2010: 106).

The main layout reflected in the architectural concept, in fact, is the result of two opposite approximately triangle-shaped units separated by an irregular forced courtyard. Comparing the Tabaqat Fahl house, which is not primarily residential, to the "Umayyad house" in Jerash given its

irregularity, we can assume that there is a possibility that it might also have not been designed solely a residential house.

Basically, the then present socio-economic conditions played a major role in these urban sites, for there are no modifications in the region's urban living style during the Umayyad period given the eminent sense of religious tolerance inherent to the Islamic faith (Piccirillo, 1984).

THE AL-HALLABAT ARCHAEOLOGICAL COMPLEX AND THE AGRICULTURAL ENCLOSURE

The al-Hallabat archaeological site (Fig. 4) within the complex of the Qasr is located 60km northeast of Amman (Arce, 2007: 325), 25km to the northeast of the city of al-Zarqa on the southeast edge of the modern town of al-Hallabat al-Gharbiyya (Ghrayib, 2003: 65), and about 16km from the Via Nova Traiana (Kennedy, 2000: 90). Al-Hallabat was built on a gently sloping ground dissected by shallow rainwater gullies that drain the land to the south. The site lies on the top of a mound situated in a semi-arid zone with an annual precipitation rate of less than 100mm (Bisheh, 1985: 265).

This unique site was a Roman fortress with a *probable* Nabataean predecessor converted into a desert palace, and was rebuilt several times as attested by several identified phases of development (Kennedy, 2014; Kennedy and Riley: 1990; Bisheh, 1985; Arce, 2007). More analytically, the Qasr history goes back to the Nabataean period when it was a station on the trade routes. During the Roman period, it was a Roman fort constructed in the second or third century AD, as a military station on the road between Bosra and Aqaba (Harding, 1984). Built from black basalt and honey-colored limestone (Kennedy, 2000: 90), it dominated the site to monitor and control a broad area to the southeast towards 'Azraq from which travellers would be observable for many kilometers while approaching the plateau along the Amman-Busra-Damascus route (Ghrayib, 2003; Jalboosh, 2009).

An Umayyad mosque also dominates the site from the top of the mound and several Umayyad houses remains are still visible on the slopes of the mound and in the valley. The impressive architecture of the Qasr, the mosque and houses, which belong to the same period are unique examples of Umayyad rural Jordan.

The archaeological site covers an area of 50 acres (202342.821m²) (Ghrayib, 2003: 65; Jalboosh, 2009). However, according to Kennedy (2014: 107, Table 1) the area of the 26 structures is about c.35 hectares (350000m²) and with dimensions c.850m x 550m= 467500m². An agricultural enclosure is located about 400m to the west of the Qasr. The enclosure of about 270m x 220m = 59400m² collected the water that reached it from two wadis (Bisheh, 1982: 142). It is irregular and gradually narrows to the lowest point of the ground elevation on the north, the walls of which only one course of stones remains, were built of rubble core of field stones without a foundation trench (Bisheh, 1982: 138).

This Umayyad 'Nomad Village', according to Kennedy (2014: 108), seems to have been placed in a good region for cultivation and probably remained largely based on animal herding. Excavations of a number of sluices and water deflectors, however, confirmed that this was an agricultural settlement (Bisheh, 1980: 70).

The agricultural enclosure associated with the site has an elaborate system of sluices regulating the distribution of water to its plots (Bisheh, 1985: 264-265). It is described by the present inhabitants of al-Hallabat as 'Huwaytah' (diminutive of Hait) (Creswell, 1989). 'Hait' is a word used in medieval texts to denote cultivated areas or gardens around a town (Grabar et al, 1978). In addition, the evidence of the stone and the basalt objects used for grinding and processing seeds and vegetables attests that the inhabitants of the area were depending on agriculture. The existence of two stones in one of the ruined buildings, to the west of the water reservoir, also suggests that the enclosure was devoted to the cultivation of orchards, containing

mainly olive trees and vines. Actually, agricultural improvements instigated by the Umayyads resulted in the spread of agricultural settlements (Ahn, 2010: 102).

The site is also located in an area of numerous springs and water sources and includes a complex water system with channels; at least five large cisterns and a big reservoir cut in the bedrock down in the valley (Arce, 2007: 325) and an elaborate bath complex (Hammam as-Sarah) display the Umayyad celebration of their water infrastructure and their control over water resources (Alhasanat et al, 2012: 357).

The reservoir (2060m², volume of 8000m³) lies a few hundred meters to the south and the numerous cisterns in the wadi to the north and west and the channels system were probably connected in order to store the water and distribute it to the Qasr, the houses, and the agricultural land (Ghrayib, 2003: 68; Bisheh, 1989: 246; Harding, 1984). These various structures seem to be randomly scattered around the Qasr (44x44m), for the most part facing south and /or east, while the houses were built along very ordinary, seasonally-flooded wadis in an essentially featureless landscape.

The particularity of al-Hallabat settlement is that it has a pre-existing Qasr, located on the top of the mound, and later on was surrounded by the houses and hydraulic system. Looking to other Umayyad settlements in the region, mostly the Umayyad palaces were built on a flat area, without houses surrounding them, such as Qasr Kharana and Mushatta, or we can find a small flat settlement without a palace such as at ar-Risha.

On the other hand, the unexcavated Khirbet al-Askar (c. 33km south-east of Karak and 10km east of Muhai), according to Kennedy (2014: 107, Table 1), has the same area (c.35ha) with dimensions (c. 1100mx350m=385000m²), but with 45 structures.

An analogous situation, until now, to our case is found at the al-Qastal south of Amman, and Jabal Seys in Syria where the Qasr is surrounded by houses and other installations.

As noted by Kennedy (2014: 99), contradictory to ar-Risha ruins (with an area of c. 5ha, and with dimensions of c. 400x180 m=72000 m² (Kennedy, 2014: 107, Table 1) (Fig. 9c), where "some buildings are arranged in short lines and are roughly parallel" and fairly compact, while at al-Hallabat (Fig.4) as also at Jabal Seys, Qasr as-Swab, and Khirbet al-Askar, there "is no order in the layout, and structures are seldom aligned, even with a neighbouring building, and they are widely dispersed" across the site, and in all these three cases shape "an elongated settlement — long and narrow and covering a considerable area" (Kennedy, 2014: 107).

This phenomenon of covering a considerable area at both sites of al-Hallabat and Khirbet al-Askar might be explained due to the similarities of the socio-economic existing conditions at that time. Small farms and garden areas between the houses were the main characteristic feature of the land use formation, similar to that of the farmhouse at Nahal Mitnan (Haiman, 1995, Plan 3) (Fig. 8c). In Nahal Mitnan, a 4km long wadi channel was intensively cultivated by means of agricultural terraces and about two km upstream from its confluence with Nahal Horsha (Haiman, 1995: a:1). The Nahal Mitnan farm consists of the main farmhouse, an agricultural installation, a threshing floor, and a section of the terraced wadi-channel, enclosed by a stone fence (Ahn, 2010: Fig. 44 and Fig. 45).

This might also suggest that we should accept that the two sites of al-Hallabat and Khirbet al-Askar are more suited and specialized for large cultivation centres, but are also more of organized centres compared to ar-Risha (Kennedy, 2014: 101), even as clarified before that al-Hallabat site is a far more developed site than ar-Risha.

Socio-economically, this might also suggest that Bisheh's (1985: 264) identification, that probably those houses were the residences of servants working in the Qasr, was overestimated. One cannot accept that such complex houses, with considerable sizes, such as the well-planned house no. 1 (724m²) of al-Hallabat, which is far away about 400m of the Qasr, belonged to servants. Furthermore, this house is directly connected to an agricultural enclosure (see fig. 4).

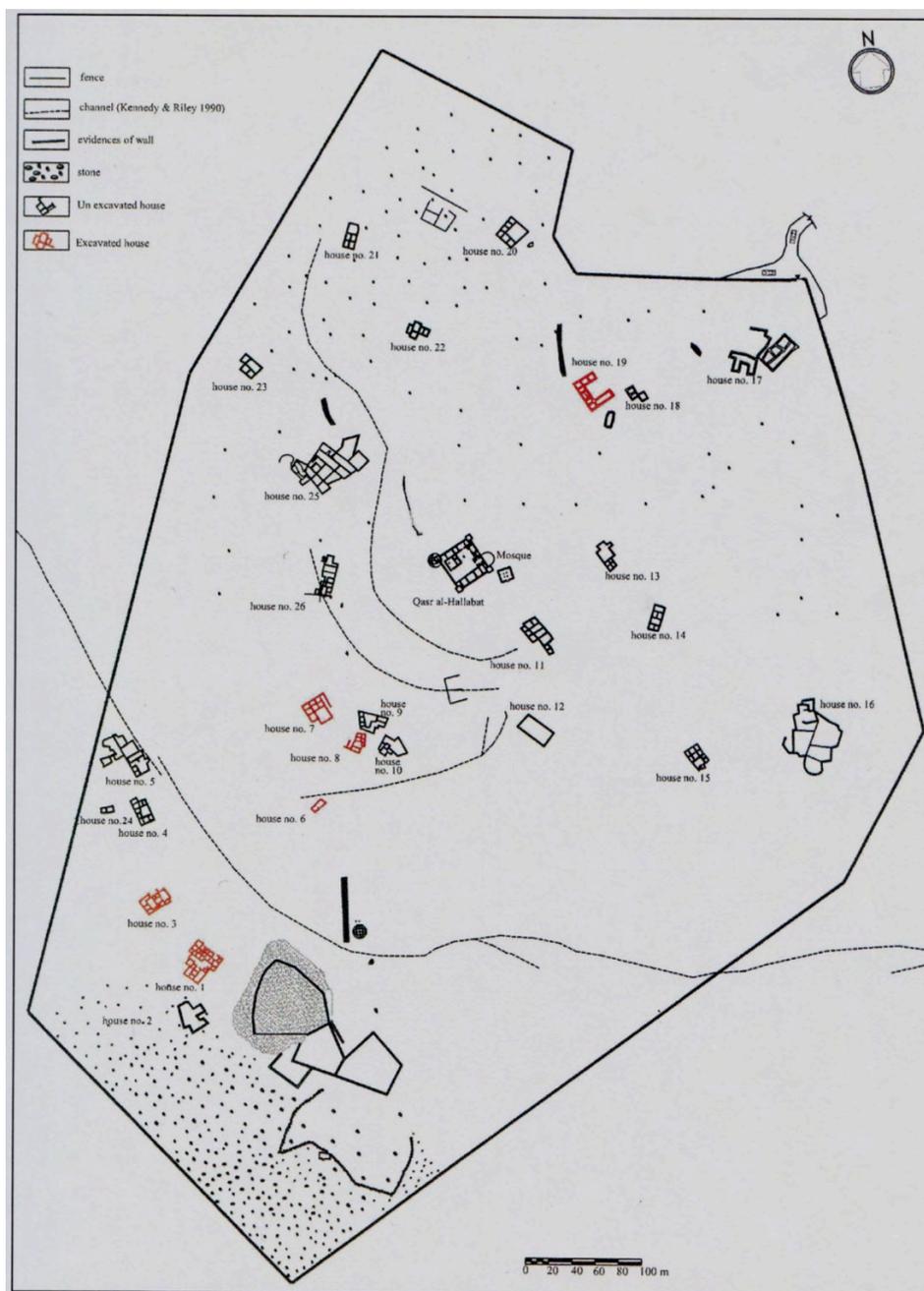


Figure 4. Site plan of the Umayyad houses around the Qasr at al-Hallabat (Source: Authors).

THE Umayyad Houses at al-Hallabat Settlement Archaeological Site: Socio-Economic Conditions

The twenty six Umayyad houses/ structures (Table 1, Fig. 5), of which six houses have been recently excavated and the other twenty surveyed, can provide valuable data for establishing some of the socio-economic conditions and needs based on their typological patterns and classifications in relation to the various Umayyad Jordan house-types. The study of pottery confirmed that these belong to the Umayyad period and were built in a limited period of time as proven by the type of vessels, which were reserved for domestic purposes, like cooking pots,

jars, bowls, casseroles, and storage jars (Ghrayib, 2003: 67; Jalboosh, 2009). The following presented data was organized based on unpublished and published reports of these houses, in addition to preliminary excavation results. The twenty six houses have been identified and numbered (Table 1).

In all of these houses built according to the site topography, we can find many similar architectural features. The majority consist of a group of rooms surrounding the open courtyard (Fig. 5) with a well-planned water distribution system, which served the entire settlement. However, many houses had been transformed through the times, since evidence of enlargements has been observed (Ghrayib, 2003; Jalboosh, 2009).

Although they are better built than at ar-Risha (Kennedy, 2014: 101), the layout is almost little randomly scattered on the slopes around the palace and beside the large reservoir, and the well-planned water distribution system served the entire settlement by a thorough network of channels. However, every house had a cistern or a well nearby. Bell-shaped cisterns had been dug into the bedrock and were completely plastered. Meanwhile, the water supply was irregular during the rainy season and where the flow of water was abundant, several protective structures, such as wells and an earthbound, were built around the reservoir to collect the surplus water (Fig. 4).

Table 1: Classification and typological patterns of houses at al-Hallabat settlement.

House No	Area (m ²)	State	Type	Room No	Courtyard No	Function
1	724	excavated	Complex	24	3	Residential
2	517	Un excavated	Complex	23	3	?
3	362	excavated	Complex	11	2	Residential
4	280	Un excavated	Courtyard	9	1	?
5	721	Un excavated	Complex	11	3	?
6	72	excavated	Nucleus	1	1	Storage
7	290	excavated	Nucleus	7	1	Workshops
8	229	excavated	Nucleus	6	2	Residential
9	322	Un excavated	Courtyard?	?	1	?
10	375	Un excavated	Nucleus	?	1	?
11	430	Un excavated	?	9	?	?
12	440	Un excavated	?	?	?	?
13	279	Un excavated	Nucleus	?	?	?
14	222	Un excavated	Nucleus	4	2	?
15	269	Un excavated	Nucleus	8	1	?
16	2200	Un excavated	Complex	25	2	?
17	1435	Un excavated	Complex	8	1	?
18	190	Un excavated	Nucleus	3	1	?
19	633	excavated	Courtyard	8	1	Khan
20	420	Un excavated	Nucleus	6	1	?
21	220	Un excavated	Nucleus	4	1	?
22	190	Un excavated	?	4	2	?
23	230	Un excavated	Nucleus	3	1	?
24	61	Un excavated	Nucleus	1	1	?
25	1558	Un excavated	Complex	27	4	?
26	465	Un excavated	Complex	24	3	?

Al-Hallabat houses were built without foundation trenches, directly on bedrock and gravel surfaces that sloped gently. The building material is a stone of different kinds, mainly limestone and re-used basalt blocks and fieldstone. The most common floor type is compact earth in both

rooms and courtyards. Most of the houses had flat roofs provided with drain pipes and drainage channels dug parallel to the walls of the houses, but archaeological finds suggest also the use of tiles in few houses.

Staircases, actually, to the upper stories were common in the Umayyad period. They formed a vital element in the ordinary house tradition of Hauran. No constructed stone staircase was found, but wooden stairs and ladders may have given access from the courtyards to the roofs, and even to the second storey of living rooms, as will be discussed.

No signs of directing surface runoff were also observed on the ground, although certain structural expediciencies in some of the buildings' details suggest that the foundations may have been protected from erosion. All structures were built on about the same absolute level. No building stood any higher, or on remarkably better grounds than another except building no. (19), built in front of the Qasr façade. However, this house has a totally different scale and typology, as shall be shown.

According to Ghayib (2003), the houses can be divided into two types: residential complex and simple houses. Their typology, however, is featured by two main schemes reflected in their architectural layout; complex houses and isolated houses. The houses, however, reveal primary differentiation between dwellings, ranging from relatively simple one-room structures to complex multi-family dwellings. The rooms include working areas with *tabuns* and other installations, which might have been small open courtyards. The rooms are aligned along an open space that may have provided access to more than one familial unit.

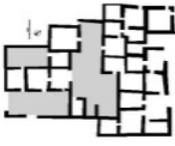
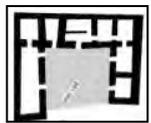
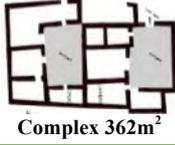
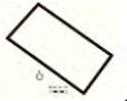
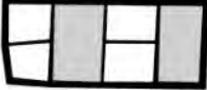
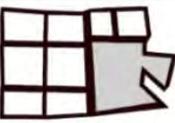
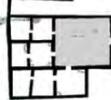
House	Layout /plan & Type	House	Layout /plan & Type	House	Layout /plan & Type
1	 Complex 724 m ²	8	 Nucleus 229 m ²	19	 Courtyard 633m ²
3	 Complex 362m ²	11	 Nucleus 430m ²	20	 Nucleus 420 m ²
4	 Courtyard 280m ²	14	 Nucleus 222m ²	21	 Nucleus 220 m ²
6	 Nucleus 72 m ²	15	 Nucleus 269 m ²	23	 Nucleus 230 m ²
7	 Nucleus 290 m ²	18	 Nucleus 190 m ²	24	 Nucleus 61 m ²

Figure 5. General plans of most of the Umayyad houses around the Qasr at al-Hallabat (Source: Authors).

DISCUSSION AND RESULTS: TYPOLOGICAL STUDY OF AL-HALLABAT HOUSES IN RELATION TO SOCIO-ECONOMIC INDICATORS

According to Petruccioli (2007), the meaning of a rural house can be defined as an expression of a vital, useful realistic architecture that responds to everyday, practical needs, such as shelter, warmth, storage of food, in addition to protection of domesticated animals. He (2007: 68) states that "it avoids gratuitous innovations, uses the simplest techniques to ensure a certain stability, and efficiently meets the most basic of family needs". From a socio-economic aspect, Petruccioli (2007: 68) assumes that, in the early Islamic period, there were many pieces of evidence for a process in which urban houses become ruralized. However, according to Ahn (2010: 101), "the relationship between dwelling and place is first established in a rural setting, though, the first urban building systems are influenced by their rural counterpart".

However, with types of buildings already known in a rural context progressively introduced into the city, Polci (2003: 101) also argued that the rural areas' vitality may have contributed to urban space becoming ruralized. For example, some house unit layouts of rural settings especially in Umm el-Jimal, Subaytah and Msayké features many common elements such as the flanked by rooms central private courtyard used for a variety of functions, with upstairs living quarters reached only by a courtyard staircase (Walmsley 2007:132). Many of al-Hallabat rural settlement complex houses can also sustain this suggested process model as will be shown. Actually, the socio-economic conditions of the Umayyad rural settlement expansion, as can be seen from the al-Hallabat agricultural settlement, may have also created an atmosphere conducive to a process of ruralization of urban space.

On the other hand, the interior courtyard house is an expression of notions of privacy dictated by religious and social norms (Ahn, 2010: 107). According to Hakim (1986: 95-96), the courtyard house creates a physical setting suitable for the religious and social requirements of Islam: privacy, interdependence, and *Bātin* vs. *Zāhir*. However, both natural and cultural factors affected directly or indirectly the design layout of these houses. So this section will summarize our understanding of these houses' basic design components: entrance, interior arrangement, and courtyard location.

Based on the architectural layout, the discussed houses at Amman, Jerash, and Pella's urban centers, as also the mentioned early Islamic "Nomad Village" settlement at ar-Risha, in which fifteen buildings extended for some 300m (Kennedy 2014: 99) and al-Hallabat complex archaeological site shall be discussed in the following section. These can be broadly divided into two main categories: the complex house and the courtyard house.

The complex house can be divided into two sub-groups: a) the urban complex house, such as the houses at Pella and Jerash, created by the construction of adjoining dwelling units around a common courtyard with shops, and b) the rural farmhouse, consisting of several dwelling units and wings composed around at least one courtyard. However, these types of houses were mainly found at ar-Risha, Khirbet al-Askar, and at al-Hallabat settlement, as will be illustrated later on. For the complex house of both sub-groups, it is difficult to determine whether the compound was formed gradually or was originally planned as a single complex.

For the courtyard house type, such as in the citadel of Amman, the central courtyard is without pillars, a feature that characterized the domestic urban buildings of Umayyad Jordan. This type provides links to the early Byzantine architectural traditions of the region where the local courtyard type continued up to relatively recent times. However, in Jordan, both the Umayyad courtyard and complex house have several common features. Each has a courtyard which functions as an element of distribution. While all of the house's rooms have either direct or indirect access to the courtyard, at least one main room opens directly to the courtyard.

Accessibility to al-Hallabat houses was usually through a single entrance. This entrance was a vital link between the courtyard and the other spaces of the house, as also a source of light and air. Because of the need to leave the house entrance open sometimes during the day (for light

and ventilation as also for the nature of agricultural works), the entrance to the courtyard was usually positioned at a different axis from that of the main entrance to the units. This arrangement prevented a glimpse by passers-by into the private areas of the house interior. So, in light of the prominence of the house entrance, builders usually took great care in constructing the doorframe. The threshold, doorposts, and lintel formed a sturdy structural unit intended to enhance not only the stability of the house as a whole but also the socio-economic class of the household.

The mixed function of households is also evident in al-Hallabat houses, where living arrangements could also accommodate animals. In particular, the significant evidence for troughs and managers in both urban and rural houses suggest the prevalence of animal stabling in the early Islamic period, as in the main house over the Museum site at Amman, where rectangular and circular limestone troughs were found (Harding, 1951: 9). However, there is little evidence of manufacturing activities taking place in al-Hallabat structures in relation to the evidence of agricultural activities.

In addition, the sewage drains, open drains, and the cisterns of the al-Hallabat houses are concentrated mainly in the area of the courtyard, as can be seen in the urban houses of Amman and Jerash. The courtyard space in the internal organization of most of these houses is corroborated by the layout of the rooms around the courtyard; most of the rooms open directly onto the courtyard. This arrangement is exemplified also by household 'G' at Pella, which is organized around an internal courtyard with five doorways around the courtyard giving access to surrounding rooms (Fig.2 b). The courtyard as the nucleus of the house also dictates that the main entrance leads from the outside to the courtyard.

Table 2. Rooms size classification at al-Hallabat settlement.

House No.	Rooms No.	Large rooms No. (7-10 m length)	Medium rooms No. (5-7 m length)	Small rooms No. (3-5 m length)
Complex no.1	24	4	10	10
Complex no.3	11	2	4	5
House no.6	1	0	1	0
House no.7	7	7	0	0
House no.8	6	1	3	2
Structure no.19	8	8	0	0
Total	57	22	18	17

Generally, the rooms' width from the six excavated al-Hallabat houses range from 2.5-4.5m due to the limited availability of wooden beams for roofing, meanwhile their length range from 3-10m (see Table 2). On average, the rooms are relatively of medium size (3x4m). This is a characteristic element of the Umayyad houses at al-Hallabat. Based on Table 1, which presents the 26 structures' classification, their layout and their courtyard location (Fig. 4 and Fig. 5), we can categorize them into three main types that might also reflect the socio-economic conditions of the settlement householders: nucleus, complex, and courtyard type. The following are their typological features' and characteristics:

The nucleus type (60m² - 430 m²): The common house

Twelve nucleus structures out of the 26 were identified. These are no. (6, 7, 8, 10, 13, 14, 15, 18, 20, 21, 23, 24) (Table 1). However, out of the 26 structures, 3 were not classified. These are no. (11, 12, 22). The five structures (7, 15, 18, 20, and 23) (Figs. 5, 7a, 8a, 8b, 9a) are similar in their (L) shape layout and lies on a different alignment. It is noted that the two buildings (14 and 21) are characterized by the same layout, based on the room numbers (4 rooms), location, and dimensions (220m²). Another two are with irregular shapes (8 and 10), each with a different

layout built near to each other. Structure no. (8) ($12.68\text{m} \times 18.05\text{m} = 229\text{m}^2$) consists of 6 rooms and 2 courtyards (Fig. 8a), located on the south slope mound where the Qasr is located. This building was used for habitation. However, it seems that this house was used in two phases. This, while the west side was built better than the east, in which a new door was opened at the north wall and later was closed, in addition, the east side is higher than the west. Two marble columns were discovered inside the house and could have been brought from the Qasr (Jalboosh, 2009; Ghrayib, 2003). There are also two rectangular stone platforms divided into two squares by a wall in the middle of the two other nucleus structures (6 and 24), with the same approximate dimensions, now preserved as heaps of rubble, but their original function is unclear.

This type is the most basic and is commonly used by the vast majority of the settlement inhabitants. These are generally isolated houses. The basic simple type consists of one-roomed structure or side-by-side units, built either behind or in front of an open courtyard, thus the courtyard is alongside the house.

The floors are of beaten earth and the walls are constructed of stone on the bedrock. The courtyard adjacent to the house was generally spacious and open to light and air. Sometimes, especially in houses built on a slope, the courtyards were placed together between the closely built houses.

From a socio-economic point of view, its advantages are obvious, since the courtyard both created a convenient barrier between the public and private domains and provided an additional out-of-doors working area, usable for much of the year in the generally high temperate climate of the site. A variant of the simple type is the two-wing house. This sub-type has two perpendicular wings, usually built in the northern and western part of the courtyard.

The complex type ($360\text{m}^2 - 2200\text{m}^2$): The extended family house

Eight buildings, each with a different layout no. (1, 2, 3, 5, 16, 17, 25, and 26) were identified as complex house types (Fig. 5, 10a, 11a). They can be divided into two groups: a) the so-called "urban apartment house", including several units around a common courtyard, or around several (2-4) courtyards, and b) the estate house, including several units and various wings arranged around a spacious central courtyard. In both cases, the original houses were clearly enlarged to suit the needs of the extended family. They have more than one courtyard and used by multi families and built on the site edges. The main features of these houses can be found in house complex no. (1) (724m^2) (Fig. 10a) located about 30m to the north-west side of the reservoir, and the rectangular complex no. (3) (362m^2) (Fig. 11a) located about 80m west of the complex no. (1), which contains two residential units west and east, in which the east one is built much better than the west. This type is an expansion of the simple nucleus house. It includes several units and various wings. It consists of rows of single rooms and sometimes a pair of rooms, one behind the other as in the urban houses. The units are clustered around three or more sides of series of courtyards, or common open spaces. The units are aligned according to the topography, running roughly north-south along the slope of the mound.

The courtyard type ($250\text{m}^2 - 400\text{m}^2$): The public building

Three courtyard structures were identified (4, 9, and 19) (Fig. 5, 12a, 12b). The structures (4 and 9) have different layouts, but with courtyards surrounded by series of rooms from three sides. The building no. (19) (633m^2) (Fig. 12b), located in front of the main façade of the Qasr is also characterized by a (U) shape courtyard, but based on its large size compared with the other houses, we can assume that it is of a special type and had a different function than the others; it could have been used for a public activity of a khan, as will be shown.

COMPREHENSIVE TYPOLOGICAL PATTERNS' CLASSIFICATION ANALYSIS OF AL-HALLABAT HOUSES WITH BILAD AL-SHAM EXAMPLES

The purpose of this section is to identify, based on the comparative study of al-Hallabat houses and other houses, whether there were common typological patterns in the region of Bilad al-Sham, according to their layout, size, and room arrangement around the courtyard. This analysis will also provide a more holistic picture of the socio-economic conditions based on the three housing types at al-Hallabat.

Nucleus House

It should be noted that this type was not always small in scale and in the architectural sense while many are impressive in their size and quality of construction. Such houses measured between 61m² (house no. 24) and 375m² (house no. 10). Characteristic examples are houses no. (6, 21, 20, 18, and 23).

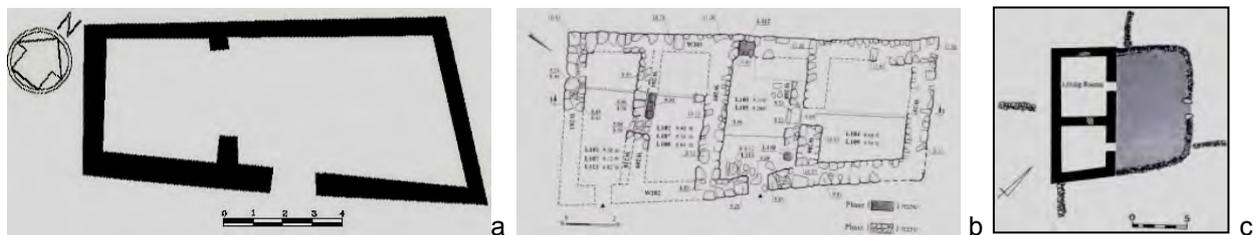


Figure 6. (a) plan of house no. (6) at al-Hallabat,(b) plan of building at Ein 'Aneva (After Magness, 2004) (c) plan of a simple farmhouse at Nahal ha-'Etz (Source: After Hirschfeld, 1995: 38, Fig.14).

House no. (6) is a rectangular building (12x6 m) with one room and threshold door made from compacted clay (Fig. 6a). The walls (0.76m) are made from large and medium field lime- stones. Analogous exterior shape and size with this house was found in a small rectangular house (6x15.5m) built near Ein 'Aneva (Fig. 6b) at Nahal Zeelim (Wadi Seiyal) about 4km north of Masada. However, it is with two habitation units aligned on the same axis oriented north-south. The floors were made of packed earth, laid over a fill (Magness, 2004).

Interesting enough, there were earlier similar but simple examples of a farmhouse, dated back to the Byzantine period (5th - 6th centuries), found at Nahal ha-'Etz in southern Palestine. The structure is rectangular (67m²) with two wings used as living rooms (Fig. 7c). Its walls and fence surrounding the courtyard were integrated with the agricultural terraces preserved in the streambed.

Such architectural units often became the core of later enlarged farmhouses of the complex type (Hirschfeld, 1995). An analogous example of house no. (21) (Fig. 7a) was found at Horvat Susiya, southeast of Hebron, dated to the 6th century, and continued in use until the end of the 7th century (Fig. 7b). The structure (160m²) had one storey with a courtyard (244m²). It is divided into two symmetrical wings: a northern wing with three living rooms, and a southern wing with one large spacious room. The latter most likely served as the triclinium for family meals and entertainment. Two small shops were built at the back, facing the alley west of the house (Hirschfeld, 1995: 36).

From a socio-economic perspective, the Horvat Susiya and the structure no. (21) at al-Hallabat might suggest that these rural structures were provided with shops for direct goods and trade, as in the case of the Urban houses at both of the Urban centres at Jerash and Pella.

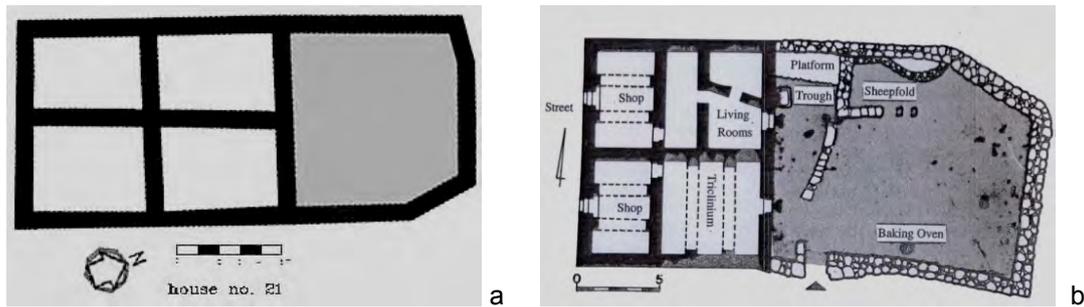


Figure 7. (a) plan of House no.(21) at al-Hallabat, (b) plan of the house at Horvat Susiya (Source: After Hirschfeld, 1995: 3, Fig. 13).

Similar room arrangements in houses no. (18 and 23) (Fig. 8a and 8b) can be seen in the farmhouse at Nahal Mitnan (Fig. 8c). Archaeological evidence suggests that the establishment and occupation of the farms was a process that continued through the sixth, seventh, and eighth centuries (Magness, 2003: 137). The agricultural system includes an extensive network of terraced wadis, numerous farmhouses, and various agricultural installations (Ahn, 2010: 41).

This farmhouse complex (15x33 m) is composed of three dwelling units, each consisting of one to three rooms and a small courtyard (Haiman, 1995a: 3). However, one can note that there is even less of a physical division between the living quarters and the area for agricultural and stabling activities of the household (Ahn, 2010: 90). The outer courtyards may have been utilized for activities related to the collection of crops before storage or transport, as well as for animals. The two main rooms containing raised beaten-earth platforms, used as beds, functioned as the sleeping quarters. Nevertheless, they constitute one structure farmhouse presumably inhabited by three nucleus families (Haiman, 1995a: 3-4).

Analogous earlier but in a more organized structured layout was found also in the Nahal ha-Ro'a (Fig. 8d), a two-winged farmhouse (270m²) dated to the Byzantine period (5th-7th centuries) including six rooms surrounding the courtyard from two sides. According to Haiman (1995b: 45), and as we can assume the same for al-Hallabat settlement, during the Umayyad period, the agricultural settlement in the Negev desert was motivated by two reasons: imperial policy that aimed towards protecting the frontiers by encouraging the establishment of agricultural settlements, and state-sponsored settlement of semi-nomads.

Finally, an analogous structure to the house no. (20) (Fig. 9a) seems to be in large use at Khirbet al-Askar, as can be identified from the many structures, such as KS 2, KS 9, KS 10, and KS 38 and others (Kennedy 2014:104-05, Fig. 8,10).

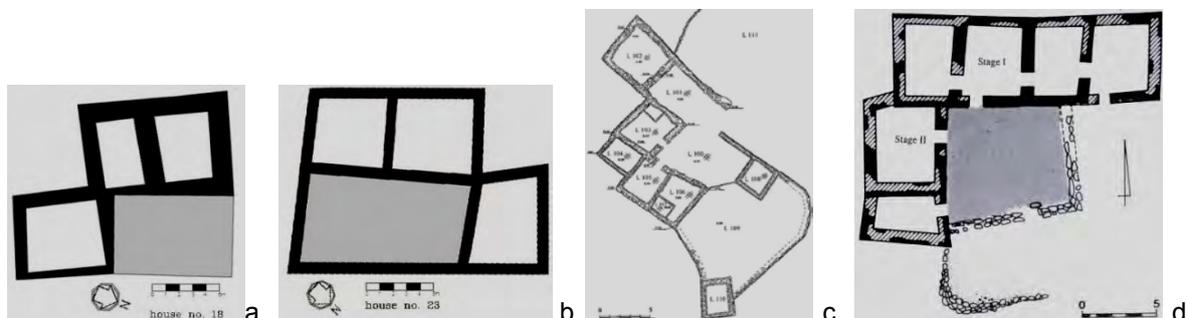


Figure 8. (a) plan of house no. (18) at al-Hallabat,(b) plan of house no. (23) at al-Hallabat, (c) plan of Nahal Mitnan the farmhouse (After Haiman, 1995, plan 3), (d) plan of farmhouse at Nahal ha-Ro'a (Source: After Hirschfeld, 1995: 39, Fig. 15).

Similar to no. (20), which was also found in Structure J at ar-Risha (Fig. 9 b, c), is a two-wing house with a series of rooms built on the north and west flanks, where the courtyard (16x18m) was enclosed by a mud brick wall (average 0.7 m wide) at the east and south. However, no clear entry was visible, but since the east wall is unbroken, almost up to the north-east corner, the doorways into the courtyard must be located on the south (Helms, 1990).

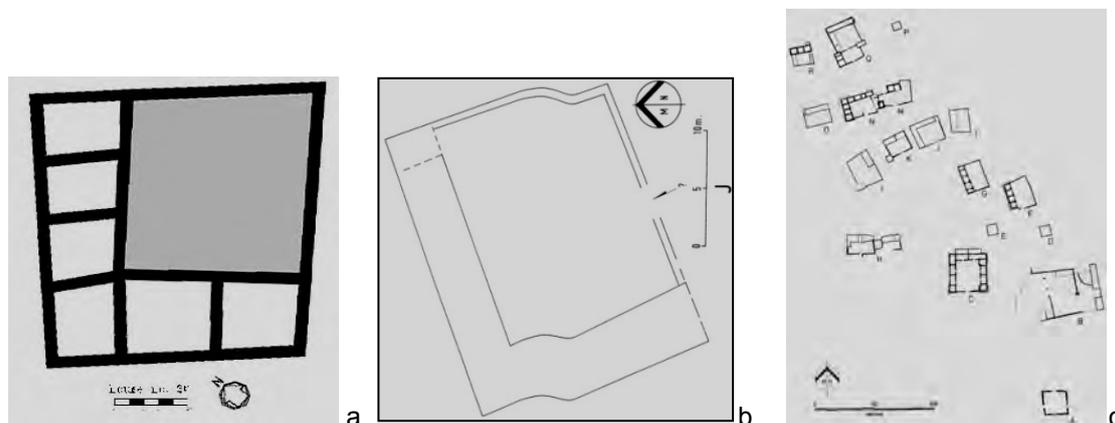


Figure 9. (a) plan of house no.(20) at al-Hallabat, (b) restoration plan of structure J at ar-Risha (After Helms, 1990: 115, Fig. 55), (c) site plan of structures at ar-Risha (Source: After Helms, 1990: 129, Fig. 71 and 129).

Complex House

This house-type, from a socio-economic point of view, whether built to accommodate the members of a growing extended family or built as a result of the enlargement of the owner's property, offered greater privacy and protection for the activities conducted by the inhabitants, mainly in the courtyard. It also offered direct access from the courtyard to the adjoining public area. A characteristic example of this type is complex no. (1) with 24 rooms and three courtyards (Fig.10a), where the external walls (0.6-0.7 m) are made from large fieldstones well set and filled with smaller stones. This house (724m²) has two residential units west and east. An analogous layout to this complex was found at the domestic houses XII and XIII at Umm el-Jimal (Fig.10b), located almost in the middle of the town, east of the "Cathedral", and west of the Roman reservoir which is also the case of al-Hallabat complex no. (1).

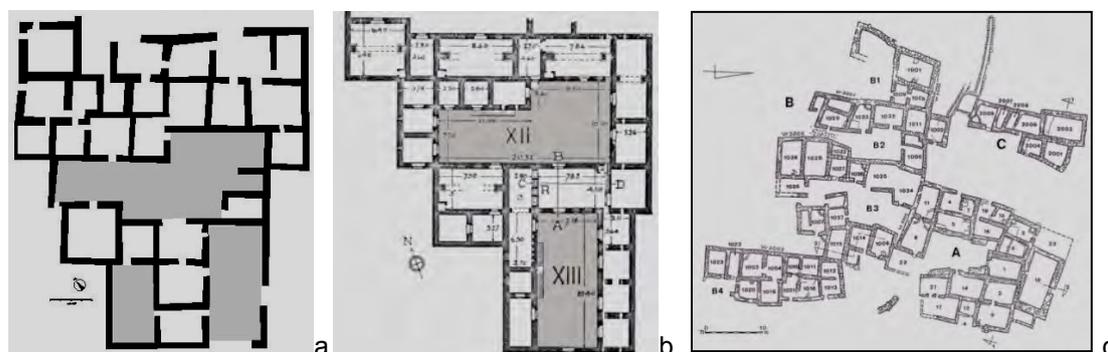


Figure 10. (a) plan of complex no.(1) at al-Hallabat, (b) plans of houses XII and XIII at Umm el-Jimal (after Butler, 1919: 203, Fig. III.182), (c) plan of Khirbet Abu Suwwana (Source: Magness, 2004).

In general, at Umm el-Jimal houses, much of the ground floor space is devoted to the agricultural activity, animals, stables, shops, and domestic activity, as indicated by the presence of the

kitchen. The ground floor often contains wells, cisterns, and in some cases, a room provided with a basic drainage system. Living quarters are situated on the upper floor (De Vries, 1981: 63). According to De Vries (1998: 109), this arrangement of domestic space is not necessarily motivated by the separation of people from animals. The building layouts indicate an intimate sharing of space, with people and animals in constant contact with one another. This seems to be the case of al-Hallabat resident complex no. (1). The same can be said for the courtyard houses at Pella, which resemble the domestic units found at Umm el-Jimal.

On the other hand, to achieve the needed privacy at Umm el-Jimal and Pella, the stairs leading to the upper living quarters were located in the courtyards. This emphasizes the courtyard as a private rather than public space. The ground floor area of the houses at Pella (Walmsley, 2007: 131), as at al-Hallabat, focuses on the central internal courtyard, where much of the interactive daily life of the household takes place (like cooking and care for domesticated animals). This may also lead to an assumption that many houses at al-Hallabat had a second floor, such as in complex no. (1).

Actually, there are many other analogous structures to complex no. (1), such as what was found at Khirbet Abu Suwwana (Fig. 10c), an early Islamic village located near Ma'aleh Adumim, east of Jerusalem. The excavation revealed two types of residential units; one of them has a crowded system of residential units and a mosque, and the second has six residential units of high quality. The mosque could have accommodated up to fifty-four worshipers (Magness, 2004). Somehow, we can also observe similar applications to these houses and at al-Hallabat, such as walls covered sometimes with plaster (house no. 1 and 19). They were also built directly on the bedrock along the topography and most of the floors were of packed dirt and lime. Essentially, the excavations of complex no. (1) is not yet completed, and if further excavation reveals more walls extended from complex no. (1) to complex no. (3) (Fig. 11a), then we might have analogous structure layouts such as those found in Khirbet Abu Suwwana.

Rather like complex no. (3), similar conditions can also be observed at the structure N/M located at ar-Risha. It consists of two parts: the western wing (N), and eastern wing (M) connected by the courtyard walls composing one complex (Fig. 11b). The western wing consists of two adjoining cell blocks, but it is more regularly set out, containing four cells each about 4x4m, in which the northern section is with four cells of irregular dimensions (3x3m - 5x5m) built against the western one. Wing M is integrated with wing N, but it is much simpler in the layout. The single cell block (4x4m) was accessed through a narrow door (0.75m wide) from a roofed vestibule (4x5m), which was apparently opening towards the courtyard (Helms, 1990).

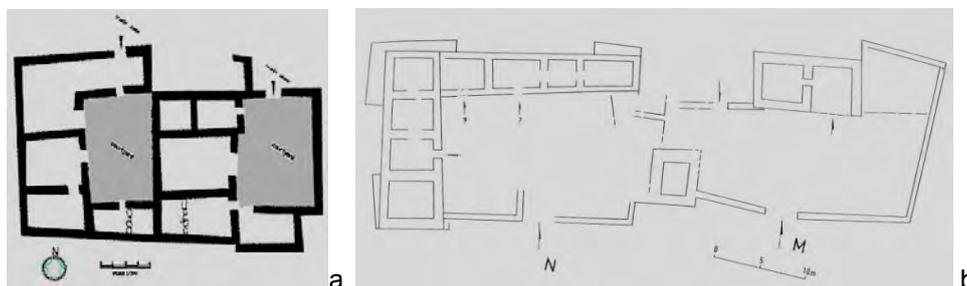


Figure 11. (a) plan of complex no. (3) at al-Hallabat, (b): Reconstruction plan of Structure N & M at ar-Risha (Source: Helms, 1990: 120, Fig. 61).

Courtyard House

This type is distinguished by the fact that the courtyard is surrounded on the three sides by the dwelling structures, and it is without a portico supported by pillars or columns as in the case of the palaces and some urban structures. It offers complete privacy for the inhabitants' courtyard activities as well as protection from the wind and the sun. In view of the socio-economic

conditions of the investment required in the planning and size, this house-type seems to have been used exclusively by wealthy families. These were relatively spacious houses (Table 1). However, houses of this type in urban settings, not only protected the occupants from the dirt and noise of the street, but also utilized the limited urban space to the maximum.

Analogous structure to house no. (4) (Fig. 12a) was found in Structure K at ar-Risha (Helms, 1990: 117, Fig. 57). It has a symmetrical layout and consists of a courtyard with the entrance on the north-south axis. One wing of rooms/ cells was set into the north flank, bounded by a stone wall visible in the north and west. A rectangular wing or block of rooms (5x12m) lay on the north flank. The rectangular courtyard (12x19m) has a simple doorway in the south.

Regarding structure no. (19), one of the best constructed and most formal of all al-Hallabat houses (fig.12 b) which lies in front of the main façade of the Qasr, it represents an architectural type which fits into the much-debated category of palace, caravanserai (Khan), and castle (Qasr), with a possible early date (7th or early 8th century). Its large size (633m²), the thickness of the walls (0.90m) made of large field stones, and location within the overall layout of the site, makes the building a potentially significant one. It has only 8 rooms and an extensive central courtyard (256m²), with one huge room/ hall on the southeast side without any indication of internal partitions. Some walls were covered by marble and two plastered floor surfaces similar to that in the Qasr were uncovered. Also, the discovery of some glazed tesserae indicates that there was a mosaic pavement. It was probably roof-tiled as indicated by several roof tiles found around and inside the structure. The oval-shape structure located beside it might have been used for storage or animal pen.

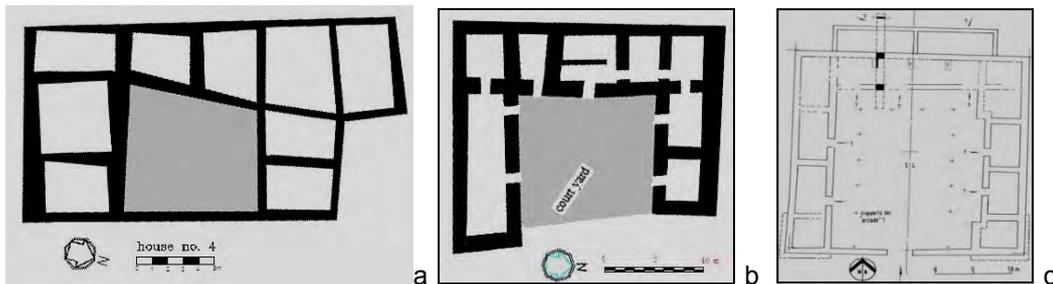


Figure 12. (a) plan of house no. (4) at al-Hallabat, (b) plan of house no. (19) at al-Hallabat, (c) plan of structure C at ar-Risha (Source: Helms, 1990: 85, Fig. 31).

An analogous example for structure no. (19) was also found in the Umayyad structure C (31.90mx31.30m) at ar-Risha (Fig. 12c). Helms believed that structure C is one of the best constructions and the most formal of all structures at the site, because of its square layout and relation with the mosque. The external stone base walls are made of also large field stones, well set and filled with smaller stones. The average width is between 0.80 and 1.20 meters. The building has only one entrance (3.38m wide) on the south side with series of rooms/ cells (4.2m on the east and west, and more irregularly from (4.2m to 3.8m) in the north. A good plaster floor was also found (Helms, 1990). It has also been suggested that while structure C at ar-Risha (Figs. 10c and 13c) may derive from an urban module, the houses at the same site stem partly from more rural origins, much as do the houses of today's recently settled bedouins and long-settled *fallahin* (Ahn, 2010).

The close layout and construction features of structure no. (19) and structure C is similar to the Khan at Qasr al-Hair al-Gharbi, which was originally made of mud brick on a stone base, dating back to about 727 AD. In the Khan at Qasr al-Hair al-Gharbi, however, there are six rooms of varying dimensions and a vestibule at the entrance side. Immediately to the right, while entering the courtyard, there is a block of masonry that served as the staircase to the roof (Creswell, 1989: 136). So probably structure no. (19) and structure C also had two floors, based

on their relatively huge wall thicknesses. An analogous structure to house no. (19) can also be identified by some structures at Khirbet al-Askar, such as KS 3, KS 16, KS 17, KS 20, KS 23, and others (Kennedy, 2014: 104-05, Fig. 8 and Fig. 10). Other analogous parallel and related to ar-Risha structure C and structure no. (19) are found at Qasr al-Sawb (51x51m) at Dawqi/ ura (44x44m), at Jabal Seys/ Building F and G (34x35m), and perhaps also at structure KS10 at al-Risha.

All of these sites were possibly connected by ancient roads, with similar socio-economic conditions. All these examples also shared common features: a central square courtyard with only one entrance (doorway) on the central axis opening to the courtyard. However, the overall dimensions of the not dated Qasr al-Swab, which has an attached outer enclosure, are larger than at al-Hallabat and the other close parallels.

Finally, as mentioned before in all of these rural settlements, having similar socio-economic and political conditions, we can argue that the vibrancy of rural areas may have contributed to urban space becoming ruralized, with types of buildings already known in a rural context gradually introduced into the city (Polci, 2003: 101). At al-Hallabat rural area, some houses, such as house no. 1 and no. 3 can support this argument.

SUMMARY AND CONCLUDING REMARKS

The architecture of the so-called Umayyad desert palaces featured by a central square courtyard formed part of more extensive communities that engaged in a combination of agricultural activities and trade. These also demonstrate how the Umayyad patrons adapted and re-interpreted in a creative approach the military and domestic architectural traditions of late antiquity. Significantly, most of these buildings were abandoned soon after the fall of the Umayyad regime but they remain as evidence of the wealthy achievements of their dynasty.

However, the main architectural characteristic of early Umayyad domestic structures of the so-called rural 'Nomad Villages' and urban setting are also based on enclosing courtyard structures. Each of these Umayyad houses/ structures examined in this study has a courtyard, which functions as the nucleus and as an element of distribution, where most of the rooms have either direct or indirect access to the courtyard.

Al-Hallabat, the Umayyad so-called 'Nomad Village' houses represent and disseminate the nature and solidity of the high status of the socio-economic conditions of the early Umayyad Islamic occupation in Jordan. They might be considered as immediate predecessors of the wealthy rural houses of late antiquity, whatever form of their layout variety, scale, accessibility, and function arrangements.

However, it was possible to reveal a primary differentiation between the dwellings at al-Hallabat, ranging from relatively simple one-room structures to complex multi-family dwellings (Table 1, Fig. 5). Each type consists of at least one courtyard surrounded by a series of rooms or units in different arrangements and typological features, thus reflecting the socio-economic status of the householder. Three typological patterns were identified: nucleus house, courtyard house, and complex house. These types were then used to examine the position of the socio-economic conditions of al-Hallabat settlement in a tentative effort to map other analogous architectural examples based mainly on layout design and scale. In the simple nucleus house, the courtyard is alongside the house. The courtyard house was built around a courtyard from three sides to give greater privacy. The complex house is an expansion of the simple nucleus type, to which additional residential units and courtyards are attached according to the extended family needs.

For the identification of these three type patterns, a general classification rather than a detailed regional approach was adopted. Although it was occasionally dealing with the distinctive characteristics of these buildings of Bilad al-Sham, there are not yet enough systematically excavated houses in other parts of the region to make a workable regional typological pattern of

the domestic Umayyad architecture. However, these three types/ patterns have provided helpful data for creating a general classification of the various socio-economic Umayyad house-types.

An important questioning of the veracity of the term “Nomad Village”, even though it was used in this research, reveals that one should re-examine this term for al-Hallabat settlement. While, as shown, they confirm the continuation of the house types’ used in the early Byzantine period in Bilad al-Sham, the study shows that meanwhile there are many similarities between al-Hallabat houses’ layout and many other Umayyad houses in Jordan, still their main typology occurred in earlier examples found in the region.

What is of interest here is how the socio-economic conditions reflected at al-Hallabat typological patterns can be compared to other patterns found in more luxurious rural settlements, such as Um-el Jimal, and how these patterns evolved to the more distinctive forms that clearly define the attribution of these architectural arrangements to the Umayyad culture. The obvious mixture of urban and rural and rich and poor house architecture in al-Hallabat settlements might suggest that there were association and integration between urban and rural styles, rather than a departure to the countryside or to the city, where a more reciprocal exchange was in progress. Thus obscuring the distinction between the so-called 'Nomad Village' and town.

According to the comparative analytical study between Umayyad urban and rural Jordan, including other early Byzantine and Umayyad sites in the region, and al-Hallabat houses, the following conclusions can be drawn:

- The socio-economic conditions based on the general typological patterns at al-Hallabat layout seem to be very close to that at ar-Risha and Khirbet al-Askar, where their peak was also during the Umayyad period. Therefore, al-Hallabat and the building clusters at ar-Risha and Khirbet al-Askar need further research in relation to their location, space arrangement, typological pattern layout, landscape, and planning. Comparative studies between these sites can enrich our knowledge about the cultural significance for Umayyad Jordan and assist in establishing more accurate socio-economic typological patterns.
- There is an absence of the so-called ‘bayt’ unit in the residential structures of the houses presented in this study, with the exception of the houses at Amman citadel. None of the simple and direct relationship between tent (Bayt al-Sha‘ar) and ‘bayt’ is evident at the early Islamic so-called 'Nomad Villages', such as ar-Risha and al-Hallabat until now. As previously suggested, it seems that the ‘bayt’ as a module is reserved primarily for palatial structures, as its main evidence is mostly found in the so-called desert palaces in Bilad al-Sham.
- None of the main architectural elements and related features of these houses, as also at al-Hallabat, can be considered to be totally new nor inventions of the period. The courtyard house is one of the oldest known architectural forms, particularly prevalent in the Mediterranean area and surrounding regions. The main layout of most of al-Hallabat’s Umayyad modest houses is an inheritance from the early Byzantine and earlier periods. Many houses’ layouts can be found during the early Byzantine period and continued to be used with slight changes at al-Hallabat during the Umayyad period. For example, the complex no. (1) at al-Hallabat has the analogous layout with the house at Umm el-Jimal (houses 7 and 8).
- At al-Hallabat agricultural settlement, the architecture of the complex and multi-unit living arrangement reflects a socio-economic aspect conducive to interdependence, with families functioning cooperatively in terms of land ownership, a division of labour and may be sharing working animals. The house layout arrangement is more advanced to what was exemplified at the early Islamic period farm in Nahal Mitnan, as evident from the courtyard type house at al-Hallabat. This farmhouse type has only three dwelling units, each consisting of one to three rooms and a small courtyard.

Finally, it should be emphasized that the domestic architecture of only these examined sites cannot provide a sufficient basis for reaching comprehensive conclusions about the domestic Umayyad architecture of Jordan. Further detailed studies are required to reconstruct an exhaustive catalogue of housing in both urban and rural sites. Further archaeological research would reveal more convincing facts about how people lived and how they interacted socially and economically. The outcomes can subsequently be linked to the typological and architectural research. The outcome of such examination would also assist to develop a better understanding regarding the planning and the architectural design concepts of the so-called 'Nomad Villages' of the early Islamic period. Given the lack of Umayyad domestic architectural analytical studies, there is a vast need for further research within this area.

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