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A Large Courtyard Building from the Byzantine and Umayyad Periods in Front of the Nymphaeum in Jarash (Jordan): First Results of the Eastern Jarash Project

The extensive excavation of the site of Jarash in northern Jordan has documented the organization of the western half of the city during the Umayyad period. Since the 1980s, archaeologists have highlighted a very dense occupation of this city during the Umayyad period that continued until the earthquake that destroyed most of the city in AD 749 (Barghouti 1982; Clark *et al.* 1986; Gawlikowski 1986; Ostrasz 1989; Pierobon 1984; Walmsley 1986; Zayadine 1989). The different teams of the Jarash Archaeological Project (1981–1988) as well as the Islamic Jarash Project (2002–2012), the Danish-German Jarash Northwest Quarter Project (2011–2016), and the Late Antique Jarash Project (2015–2017) have revealed the portrait of an economically flourishing, densely populated Umayyad city, with numerous artisanal centers and an important souk, which was probably predominantly Christian. The discovery of the great mosque and

the souk at the intersection of the *cardo* and the south *decumanus* suggest that this was where the economic and political heart of the city was located. To the west of the *cardo*, a large domestic area extended to west. On the western periphery, craft workshops reoccupied monumental, abandoned Roman buildings.

The town's main mosque, the Congregational Mosque, has been fully excavated and studied (Walmsley and Damgaard 2005; Walmsley 2018). It follows a classical plan with a hypostyle prayer hall, a central mihrab, and a courtyard lined with porticoes. Its builders chose not to transform an earlier church but instead established the mosque in the heart of the city, on the corner formed by the *cardo* and the south *decumanus*. It was built on top of a Roman and Byzantine bathhouse, almost a century after the conquest of the region, around AD 725–735. Another

mosque has been identified east of the *cardo*, south of the north *decumanus*, and has also been dated to the Umayyad period (Naghawi 1982; Zayadine 1986: 18–19), but this identification remains to be confirmed (see below). The city was still densely populated in the Umayyad period. This is evidenced by the discovery of a large residential area to the southwest of the city that extended from the western boundary of the mosque to the Byzantine rampart—the western boundary of the city (Rattenborg and Blanke 2017: 319–323)—probably on either side of the western part of the southern *decumanus*, since a two-story house was discovered to the north of this axis (Gawlikowski 1986). On the other hand, the Abbasid period remains very poorly documented and the fact that a relatively important occupation was maintained in Jarash has only recently come to light. The residential area to the west of the Great Mosque was occupied until the late 9th or early 10th century (Rattenborg and Blanke 2017) and the mosque itself was not abandoned until the 13th century (Walmsley 2018). The southwestern quarter would still have exhibited dense, structured urbanisation in the Abbasid period (Blanke 2018). The decline of the city has often been linked to the AD 749 earthquake and the shift of the empire’s capital from Damascus to Baghdad, but this decline was likely to have taken place later and been more gradual.

The remains testify to the economic transformations brought about by the Arabic conquest, with the development of monumental and polarized artisanal workshops (Bessard and Bonnéric 2013). These workshops were built in abandoned temples or spectacle monuments on the outskirts of the city and were grouped together by specialty. The ceramic industry was of particular

importance in Jarash (Barghouti 1982: 225–226; Schaefer 1986: 419–421). A number of potters’ kilns have been discovered in the north of the city—five in or around the northern theatre (Schaefer 1986; Falkner 1986) and seven in or near the sanctuary of Artemis (Kraeling 1938: 133, 284; Schaefer 1986; Pierobon 1986). To the south of the city, sixteen dyeing workshops have been uncovered in the northern *carceres* of the hippodrome: while some date back to the Byzantine period, these workshops were largely developed in the Umayyad period but were then abandoned following the AD 749 earthquake that led to the collapse of superstructures (final publication in preparation; Bessard and Bonnéric 2013). A lime kiln may also have been discovered near the Temple of Artemis (Schaefer 1986: 421) and the existence of a workshop is assumed west of the *cardo* (Brizzi *et al.* 2010: 358). Commercial activity was also intense in the centre of the city as evidenced by the development of souk shops at the intersection of the *cardo* and the south *decumanus*. In the Umayyad period, stores encroached on the ancient porticoes of these two main streets (Simpson 2008; Walmsley *et al.* 2008: 118–121; Baldoni 2019).

Understanding Jarash in the early Islamic period now requires work to the east of the *cardo maximus*, the main axis dividing the city in two from north to south. The western part of the city has been excavated the most because the monumental remains of its temples and churches were visible there at the time of the site’s rediscovery at the beginning of the 20th century. The eastern part has not been explored very much because it was reoccupied in the modern period and is now very densely urbanized. Therefore, a whole part of the city is almost unknown to us, except for a

monumental bathing complex, called the eastern baths, and a few churches. There is only one strip along the eastern side of the *cardo* that has not been built on yet and is included in the protected archaeological zone. However, so far this area has not been studied very much, even though it is fundamental to determine the urban extension of Jarash in the Umayyad period and whether the city really developed or not, as well as to identify the nature of this occupation in order to understand the economic function and the political role of the city. This aim of exploring the oriental part of the city led J. Bonnéric to create a new archaeological mission, the Eastern Jarash Project (EJP), in 2022. The two main objectives of this project are to determine the nature of the occupation of this area and its chronology. Identifying the commercial, artisanal, or domestic function of the targeted area is important for better understanding the organization of the city, and this will provide an essential indication of the extension of the Umayyad city. How did this sector evolve in Late Antiquity and the early Islamic period? Was the sector still occupied after the earthquake of AD 749, which theoretically marked a reduction in the city's size?

In the coming years, the Eastern Jarash Project aims to focus on a large area (*ca.* 400 m N/S and max. 100 m E/W) bounded to the west by the Roman *cardo*—which still constituted one of the city's main traffic axes in Umayyad times—to the south and north by the two *decumani*, and to the east by the Chrysorhoas River (FIG. 1). A reoccupied Roman portico corner to the north of the Propyleum church, which was excavated in 1981, has been interpreted as a small mosque, possibly from the Umayyad period, but the publication resulting from this excavation is not very

detailed and this identification needs to be confirmed. Italian excavations (2002–2009) attest to a well-preserved Umayyad occupation that was probably characterized by commercial and artisanal facilities. In addition, in 2001 DoA excavations uncovered a large building that is likely a Byzantine building that was transformed in the Umayyad period.

In the absence of any documentation from the previous excavations, or archives or publications, it seemed pointless to undertake new excavations in this area without first understanding and documenting this building. The 2022 campaign was therefore devoted to the study of this building that was designated as building A, which is the main focus of the first program. The EJP also initially aimed to complete the mapping and study of the “small mosque”, but this project had to be postponed. The choice was made to devote the first program to the study of building A for several reasons. This building had the advantage of being visibly occupied in the Umayyad period although it had Byzantine origins and was occupied during an earlier period, allowing the area to be studied on the *longue durée*. Its location near the *cardo* and its layout, which appears to be unique in Jarash, also made it a singular object to study. The fact that the entire building had not been excavated allowed the stratigraphy to be documented through new soundings and the creation of scientific documentation. Although it had been excavated and appeared on the general site map, no interpretation of this building was available. The EJP was able to carry out a field campaign in spring 2022, followed by three post-excavation missions (recording objects, studying ceramics, and architectural

analysis).¹ This allowed the team to gain an initial understanding of building A's organization and chronology.

The aim of this first year focusing on building A was to document the previous excavations in the absence of archives and publications, to carry out new soundings in virgin areas to provide lost stratigraphic information, and to complete the plan of the building, to provide a first interpretation of the function and chronology of this building. In order to do this, the whole excavated area was cleaned during the first week and three excavation sectors were opened in the eastern part of the building, on the aisle of the wing of rooms that had been most excavated by the previous team. The three sectors were located in the north-east corner (area 1), including room R1;

¹ The excavation and study campaign were funded by the French Institute for the Near East (Ifpo), the CNRS (special funding "Appel d'offre Jordanie" and research unit Ciham UMR 5648), and the Cultural Service of the French Embassy. We would like to express our gratitude to these institutions. The 2022 fieldwork campaign was conducted in close collaboration with the DoA and in particular with the local office in Jarash. We would like to thank our colleagues from the Department, in particular Pr. F. Balaawi, A. Oweidi, Dr. M. Shalabi, and M. Altoom. The EJP's first campaign took place from March 14 to April 14, 2022, with a team composed of three archaeologists (T. Awwad, Dr. J. Bonnéric, and A. Thaher), an architect (arch. E. Devaux), two representatives from the Antiquities Authority (M. Altoom then M. Al Kharabshe), nine excavation technicians (A. Abu Rijl, H. Abas, I. Abdallah, J. Ettoum, M. Abu Ayeshe, M. Otoum, O. Almanasreh, Y. Makableh, and Y. Taha), and one intendent (Gh. Hijazi). This was followed by a study campaign focusing on the recording of objects by a trainee (C. Etienne) from June 15 to July 16, 2022, and a preliminary study of the ceramics by a pottery specialist (Dr. R. Pappallardo) from August 1 to 12, 2022. The pottery pictures of the diagnostic sherds were produced by A. Al-Hebashan. The last campaign that was carried out was an architectural study by two architects (arch. E. Devaux and arch. S. Cunin) and a trainee architect (A. Moumneh) from July 9 to August 13, 2022. The project also benefited from the assistance of the Ifpo's administrative team, in particular L. El Jechi and Ch. Dessoude.

in one of the southern rooms of the eastern aisle (room R4); in the southeast corner (area 2), including room R5.² The architectural study consisted of drawing the structures that were discovered during the campaign, drawing part of the structures that had been previously excavated, mapping the ground plan of building A, doing two architectural sections (N/S, E/W) of the whole area, analysing the building techniques, and suggesting numerous graphic renderings of the building. The stone-by-stone plan of the building should be finished next year, but the ground plan was already completed.³ Not all the pottery that was found has been processed yet, as we focused on the more significant layers for dating first. The first scientific results of this campaign concern the understanding of the building at the time of the AD 749 earthquake and these will be presented in this article, as well as the relative chronology of the area.

The observation of the remains uncovered by the DoA team has allowed us to formulate hypotheses, which will have to be verified by excavations, about the occupation chronology of the building A area. In the current state of the study and excavation, six phases

² Each archaeological layer (SU), structure (ST) and wall (W) was documented, numbered, and described in a database (FileMaker). The numeration of the levels, structures and walls is continuous (from W1 to ST78) and the type is characterized only by SU/ST/W. All significant sections were drawn. Detailed and general pictures were taken in JPEG and raw format, with a continuous numeration. The metadata was registered for each picture in an Excel file. We were able to get aerial pictures taken for documentary films using drones.

³ The plan and the soundings are located in a local system because we did not have the topographic coordinates of the points that are visible on the site. They were not available at the DoA, but we are in contact with teams that used to work at Jarash, so we should be able to very quickly integrate the plan into the Jordanian reference system.

appear, but these are still to be dated. In the earliest currently known phase of occupation, phase 1, the area was a quarry (FIG. 2). In the western part of the courtyard, which was not paved or where the paving has not been preserved, the natural rock outcrops show traces of extraction. Two cavities also appear (see below) but, for the moment, it is difficult to establish a chronological relationship between the cavity and the quarry. They may have been contemporaneous. This phase could have been related to Hellenistic or Roman periods. The evidence for phase 2 is scattered across the area. Two walls and one column base are earlier than building A's courtyard pavement. The base is partially visible on the level of the southern baulk, in a section excavated by the previous team. A slab from the courtyard pavement lies against the base, attesting to the fact that the building existed before the courtyard. Other bases could be aligned with the visible one, but this needs to be confirmed during the next campaign. This could have been a colonnade in a street or a building portico, but this cannot be confirmed at present. This phase could have been Roman, but no dating elements have been brought to light yet. Phase 3 consists of the construction and first use of the large courtyard building A (FIG. 3). Because it had been excavated by the previous team, we do not yet have any dating elements in its stratigraphy. However, Roman architectural elements (capitals, bases, and drums) have been reused for its construction. The courtyard paving seems to be characteristic of the Byzantine period. In phase 4, building A underwent modifications, notably with the subdivision of the portico. These modifications appear in the already excavated and undocumented part and cannot be dated for the moment. They were probably related to

building A's last phase of use during the Umayyad period. The new excavation uncovered artifacts from the Umayyad period, in particular pottery in layers prior to the earthquake that can be dated to AD 749. During phase 5, which occurred after the AD 749 earthquake, the area underwent limited reconstruction. Unfortunately, most of the walls and related occupation layers were dismantled by the previous team and so their interpretation is almost impossible. This phase has not been dated yet, but it could have been Abbasid or later. These new walls seem to link portions of earlier walls that were still standing at this time. They can be seen in the northeastern area where a corner (W67) has been built to connect walls W9—the eastern aisle's west wall—and W2—the northern portico's north wall (FIG. 4a–b). Both walls were probably partially destroyed by the earthquake. The parts that are above the collapse layers are only 1.10 m long for W9 and 1.20 m for W2. A new construction, that was different from building A, was probably built by reusing parts of building A's walls that were still standing after it had been destroyed by the earthquake. The area was then scarcely occupied during a period, phase 6, that has not yet been defined (Ottoman? Modern?). This is attested in the northeastern area by a fireplace (41) located between two later walls: the northern wall W45 is preserved over 1.80 m and the eastern wall W66 over 1.10 m. This structure was excavated and removed by the previous excavations and no documentation about it is available yet. Dating back to the same phase, or the previous one (phase 5), is a double-facing wall that has been discovered in the southeastern area (W33, 1.5 m long).

The archaeological and architectural studies allow us to make the first

hypotheses concerning the shape and function of central courtyard building A (FIGS. 5–6) at the time of the AD 749 earthquake, in the area's 4th occupation phase. Although only the eastern aisle was excavated during the 2022 campaign, the entire western part was nevertheless observed at length and we have also begun to document it. The eastern wing and its portico were built on two longitudinal vaults, that are built along the hillside to form a platform that compensated for the natural slope. The vault under the eastern wing was at least 3 m high. In the absence of a survey at the base or foundation of the walls, it is not yet known whether the vaults were built to support building A or whether it was erected earlier. An earlier phase of occupation cannot be excluded.

The Courtyard

When it was destroyed by the earthquake, the building was larger than 650 m² and organized around a courtyard (min. 240 m²) that was paved on its eastern part. These slabs were probably recovered blocks that had been recut and sawn; there is notably an element from a cornice. This practice is characteristic of the Byzantine period, and a hydraulic sawmill from the 6th century was found nearby, on the other side of the *cardo*, and has been restored and published by the French Archaeological Mission in Jarash (Seignes and Morin 2007). The slabs are from medium- and large-sized stones. They are aligned and seem to be organized, at least in the eastern part, into two rows of blocks with longer transverse blocks. The slabs' width varies, probably because they are not laid on a flat and homogenous structure, but it is *ca.* 20–30 cm on average. The surface of the pavement is irregular in its current state, probably because some areas have sunk. To the east, the preserved slabs

seem placed on the bedrock but, in the southwest of the courtyard, a layer of pebbles on top of a layer of earth could have been a filling added to support the slabs. The bedrock in the western part may have been used as a circulation surface, since it had already been cut and levelled by an earlier quarry (1st phase of the area, see below). However, to the west, the bedrock is irregular and does not seem very strong. So, it is difficult to believe that it was used as a circulation floor, and it seems more probable that it was covered by a stone pavement like the one in the eastern part of the courtyard. The courtyard floor was probably the only floor that was accessible after the earthquake, and the stones may have been partially retrieved.

In the courtyard, there are two cavities carved into the bedrock. These have not been surveyed yet and only their longest axes were measured. The western and larger one is a concave cavity. It is 1.90 m long to the south, 2.10 m to the north, and 0.80 m wide to the west and 0.92 m to the east. It is *ca.* 1.85 m deep. The opening measures 1.95 m E/W over 0.902 m N/S. The second one, in the southeast of the courtyard, is visible only through its small, circular opening, which has a diameter of 0.58 m. The cavity gets wider towards its base, but it is not possible to determine the dimensions or the shape of the cavity. It is at least 2.5 m deep. Both were cleared by the previous team, and we have no stratigraphical information about them. The larger cavity is probably not related to building A but we have no way of knowing if it was filled in for the construction of the pavement or if it was reused as a cellar.

The Portico

The edifice opened onto the large courtyard building through a portico

that bordered it on at least three sides, to the east, north, and south. The western part has not been excavated at all, so the existence of a portico and a fourth aisle there cannot be excluded yet. All three aisles of the portico that are currently visible were excavated in 2001. To the east, and probably to the north and south, aisles were accessible from the portico, and possibly from the outside. The space between the columns was filled, during a period that cannot be determined yet because it was excavated in 2001, by double-facing low walls over two to three courses (W12 for the northern portico, W10 for the eastern portico, and W15 for the southern portico). The columns are still visible in the northern portico while only the bases are preserved in the eastern portico. In the eastern portico, there is a distance of 2 to 2.25 m between each column.

According to the remains that are currently visible, the portico was paved with stone, although this is only preserved in the southern part of the eastern portico. The eastern portico was divided by at least three low E/W walls (W18, W19, and W22). The southern portico was divided by at least two N/S walls (W16 and W17) and the northern portico by at least one wall (W14, as W11's phasing is unclear at present). It should be noted that, contrary to the eastern portico, the northern portico does not seem to give access to a series of rooms. Wall W2, the building's northern wall, is solid and shows no door opening leading to a northern aisle, but its western part has not been excavated yet. The southern portico's southern wall is not visible for the moment. There is a large number of column drums stored on the courtyard pavement, along the eastern portico. No information about their origin is available yet. The comparison between their diameter and the base

diameters could help to determine if they originally came from the portico.

The Eastern Aisle

During the 2022 campaign, the excavation focused on the building's eastern aisle. In the northeastern and southeastern areas, which were expected to be the northeastern and southeastern corners of the building, it appeared that building A's eastern wall (W1) continued under the baulks, to the north and the south. To the north, an E/W wall (W60) lies perpendicular to the eastern wall W1. It cannot be excluded that the north wall (W60) corresponds to a late subdivision of the room into two spaces, as the link with the east (W1) and west (W9) walls is not yet certain. To the south, wall W1 continues under the baulk, so for the moment it is impossible to know whether the southern room that is visible (R6) is actually the most southern room or not. The eastern wing was composed of at least six rooms, probably seven, of varying sizes which all opened onto the portico. The rooms were numbered from the north to the south, according to our current knowledge of the site: room R1 is 4.50 m E/W to the north but 5 m E/W to the south, and currently 4.50 m N/S; room R2 is 5 m E/W and 3 m N/S; room R3 is 5.10 m E/W over 4 m N/S; room R4 is 5.30 m E/W to the north but 4.90 m E/W to the south over 5.35 m N/S; room R5 is 4.95 E/W over 2.60 m N/S; room R6 is 4.95 E/W and more than 2.60 m N/S since its southern wall is unknown yet. Each room opened onto the portico through doorways that were around 0.80–0.85 m wide, except for room R1 where the western doorway is smaller than the others with a width of 0.55 m. There was also a doorway in the eastern wall that was larger than the other (2.20 m). This is the only doorway leading towards the east that is known

for now.

The walls show two building techniques that do not seem to be related to two different phases: masonry with regular courses of large square blocks and masonry with large square block courses mixed with thin courses of small rubble stones. Our first intuition was that each technique was related to a separate building phase. However, different techniques have been seen on each of the facings of the same wall (for instance, W9), and there are examples of walls built with different techniques that are linked (for instance, W1 and W6). This means two possibilities can be considered: either the masons used two techniques at the same time or the facing of some walls was entirely rebuilt, maybe after an earthquake earlier to AD 749. In the case of the second possibility, this would mean that the regular courses were the earlier technique, since they are the most frequent, whereas the thin courses of rubble would have been added later. Two walls are perpendicular to the eastern wall W1 but located on what seems to be the outside of the building. The northern one (W8) was clearly built against the eastern facing of W1, and the southern one (W44) could be linked to W1. Between these two walls, there is a kind of stone pavement that may also be the upper part of a third vault. So, it is unclear yet whether this part is outside of the building or if there were other rooms to the east. Wall W1 is also unclear: it seems to have been built in one go, but its shape and width are irregular. To the north, the wall is 1.05 m thick, but it is only 0.90 m wide at its centre and 0.98 m to the south. Its southern part lies parallel to the eastern aisle's western wall (W9) but not its northern part, the largest, which is orientated slightly more to the west. There is no *cesura* in the wall, but the change

of orientation is located at the level of room R1's eastern door, the only door in the eastern wall. This door is different, larger, and better built. There is also another change in the orientation in the middle part of the wall, between the corners with walls W3 and W5, where the inner (western) facing goes towards the west while the outer (eastern) facing is in line with the orientation of its southern part.

The Upper Story

According to the stratigraphy of the layers accumulated in rooms R4 and R5, there was an upper story: it was supported by longitudinal arches that rested on the pillars or corbelled imposts that are still partially visible (FIG. 7). The shape and organization of the layers match the destruction of the upper story's floor, followed by the walls (FIG. 8). The collapse layers (SU26, 27, 39, and 52 in room R4) of this story include numerous rough stone tesserae (white, brown, and red) and painted coating fragments which suggest that the second floor's walls were protected and decorated with painted plaster and that its floor was a mosaic pavement, at least above room R4. The walls of the ground floor were uncoated, and a beaten earth floor is visible, at least in rooms R4 (SU56) and R5 (SU69). The upper story was probably accessible via a stairway, part of which is still visible in the southeastern corner of the portico. It was excavated by the previous team. It currently consists of 5 steps and measures 1.80 m high. At its base it is 1.70 m wide but it is 1.10 m wide at its summit. Each step is 0.35 m deep.

Functions of Rooms R4 and R5

The architecture of these rooms and the artifacts that we discovered allow us to suggest some initial interpretations about the function of these rooms when

the building collapsed. According to the discoveries in the southeastern rooms in this wing, there was a difference in function between the second floor and the ground floor. To the north, the function of room R1, excavated to the northeast of the building, is completely unknown because the collapsed material (SU53; SU59) has not yet been removed. Room R4 (FIG. 9), one of the largest rooms in the eastern wing of building A, was probably a stable, while the second floor seems to correspond more to the domestic part of the building. Most of the room was previously excavated in 2001, but the excavation of the N/S baulk (FIG. 8) remaining in the eastern part of the room produced significant discoveries. On the ground level, two structures were built on the earthen floor: a pottery basin is set in stone masonry (ST77, 1.60 N/S x 1.35 m E/W, FIG. 10) in the northeastern corner of the room, while a two-course wall (2 m long) was placed between the eastern wall and the southern pillar in the southeast corner of the room, parallel to the southern wall (ST78, FIG. 9). The first structure can be interpreted as a drinking trough and the second as a feeding trough. A sediment (SU55) strongly resembling burnt dung was found at the foot of the basin and should be analysed.

Room R5 was previously excavated by the DoA, but only on its western part. The excavation of the eastern part revealed an assemblage of sixteen complete or nearly complete ceramic artifacts, mainly storage jars and amphorae, and one Jarash Light Grey Handmade Ware modelled basin (FIG. 11). Their stratigraphic location in the collapse shows that they were stored upstairs. The near absence of tesserae and the types of ceramics present suggest that room R5 was topped by a storage room. A complete copper pot was dis-

covered on the earthen floor (SU69) of the ground floor, in the southwestern part of the room. It has broken iron handles and an iron ring. It seems to have been preserved *in situ*, wedged under the collapse of the second story. This was discovered on the last days of the excavation and was removed, along with its container, before the whole extent of the floor was excavated. It would have been preferable to excavate the entire room before moving this exceptionally well-preserved object, but we were afraid that, if it stayed in the sounding, it could be damaged or looted. It has not been possible to identify the function of the ground floor room yet; this would require more excavation.

The Function of the Building

Building A offers a great opportunity to study the daily life of Jarash's inhabitants during the Umayyad period and the evolution of living spaces and habits from the Byzantine to the Umayyad period. Indeed, it was most probably a residential building, and its collapsed walls have sealed structures and objects in context at the time of the AD 749 earthquake. It might be possible, after more excavations, to understand the function of the different rooms of this building. We do not know very much about urban residences from the Umayyad period, mainly because of the lack of a complete overview and documentation about them. One of the pieces of information that is lacking for this urban residence is the identification of the function of each of its rooms and the understanding of its upper story, mainly attested thanks to the discovery of a stairway. In building A, the careful excavation of the stratigraphic layers has allowed us to identify and characterize (mosaic, painted coating, storage jars) an upper story above the

eastern aisle. The evolution of building A seems to be quite similar to the evolution of the “Maison aux consoles” that was excavated in Apamea (Balty 1997), this also shows a portico that was later closed with walls between its columns and small walls that were built in the portico’s width. It also shows the presence of stables on the ground floor level and the presence of living spaces on the upper floor (Walmsley 2007; Vernet 2016, 2018). This building seems characteristic of the urban housing evolutions that took place during the 7th and beginning of the 8th centuries. The complete excavation of this building would be an opportunity to gain a general understanding of all these elements, in one building, with good documentation.

In Jarash, the most extensively known house opens onto the southern decumanus and was excavated by the Polish team in 1982–1983 (Gawlikowski 1986). Opening onto the southern decumanus, this two-story building is quite different from building A: its courtyard is small and irregular, its rooms are not strictly aligned, and it is organized in two wings; the second story is accessible through a corridor-like stairway. It is not the same kind of dwelling as building A and it does not seem to be based on a Byzantine building. Two residential areas have been surveyed and excavated since then, one to the northwest (Danish-German Jarash North-West Quarter Project) and the other to the southwest (Late Antique Jarash Project). In the southwest, the excavation of a residential building has been started but it is not the same type of building as building A: its courtyard building is smaller (*ca.* 500 m²) and it does not appear to have an upper story (Blanke *et al.* 2021). The buildings in the northwest part of the city and the house that has been exca-

vated near the mosque also seem to be different from building A. The latter is probably a huge residence similar to the “Maison aux consoles” (4500 m²) that has been excavated in Apamea (Balty 1997).

The monumental nature of building A could be related to its location and is particularly interesting for trying to understand the function of the building. It was built no more than 33 m from the *cardo* (FIG. 12), the central axis of the Roman city and probably of the Byzantine and Umayyad cities. Little is known about the occupation of the *cardo* during these two periods, as it was emptied in the 1970s by the DoA. The Roman *cardo* was bordered to the east and west, along its entire length, by a portico giving access to stores. In the area of building A, these stores appear to have been occupied at least until the Byzantine period (Baltoni 2019). In the southern part of the *cardo*, at the intersection of the *cardo* and the southern decumanus, their use is clearly attested until the Umayyad period, before the AD 749 earthquake (Simpson 2008; Walmsley *et al.* 2008: 118–121). New shops would have encroached on the public space even farther. Building A was probably separated from the row of shops only by a passage (street, stairway?) and its function could have been related to the souk’s exchange activities. This huge building was not just a simple house: could it have been a merchant’s house?

The Dating of Building A’s Last Occupation

The study of the pottery has just begun as it involves the processing of 16 archaeological layers and the identification of 484 diagnostic sherds. Priority has been given to the contexts sealed by the collapsed walls in rooms R4 and R5,

as well as to other layers from the north-eastern sounding. These diagnostic sherds are quite homogenous and date back to the end of the Umayyad period and the beginning of the Abbasid period. The handmade Jarash Light Grey Handmade Ware (JLGHW) basins are very well attested in every context in Jarash starting from the Byzantine period until the late Umayyad and even the early Abbasid period (Uscatescu 1996: Group XXXVI, 145). However, the two basins that were discovered in rooms R4 and R5 (FIGS. 10 and 11.1) can be dated back to the late Umayyad period in the mid-8th century (Pierobon 1984: fig. D6; Uscatescu 1996: figura 110 n. 781; Walmsley 1995: fig. 8,8). The Jarash Light Grey Ware jug, with a carinated body and external rounded rim (FIG. 11.3), was also very common in Jarash in the late Umayyad destruction levels in its “non-reduction” version (Walmsley 1986: fig. 2 n. 2; Falkner 1986: fig. 21 n. 10; Gawlikowski 1986: Pl. XI). Another important vessel is a Red Painted Orange Ware (RPOW) jar which is nearly intact (FIG. 11.2). RPOW has been attested in Jarash and in other sites in the region in destruction levels linked to the 749 AD earthquake and later in early Abbasid contexts (Walmsley 1995: 661; Pappalardo forthcoming). Two jars with very pale and poorly fired fabric can be identified as Pale Ware (FIG. 11.4) that has been attested—in other contexts in Jarash—in sealed early Abbasid contexts and less often associated with late Umayyad types (Pappalardo forthcoming). Some vessels show a poor firing fabric which has a flaky, fragile, or even soapy surface. This “peculiarity” has already been observed in other contexts in Jarash’s southwestern district and has been dated specifically to the early Abbasid period (Pappalardo 2019: 219–223; Pappalardo forthcoming).

Even though there is the presence of some transitional/early Abbasid ware, it is more likely that the contexts of rooms R4 and R5 are related to a building collapse during the AD 749 earthquake, due to the complete lack of early Abbasid ceramic markers. More research in the area will clarify this aspect.

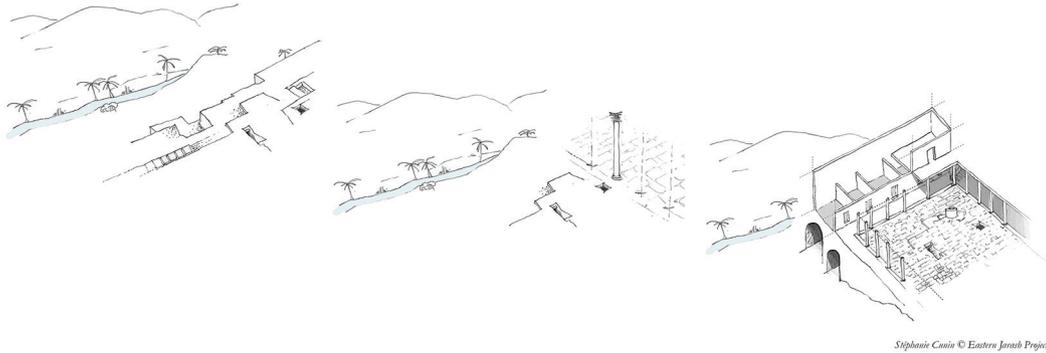
Conclusion

The excavation, the architectural analysis, and the pottery study carried out in 2022 for building A, which had already been partially excavated by the DoA in 2001, has provided significant data about a unique type of building in Jarash: a large, two-story residential dwelling with a huge courtyard. It was probably built during the Byzantine period on the bedrock and a vaulting system and was certainly reorganized during the Umayyad period before it was destroyed by the AD 749 earthquake. The area was occupied before building A’s construction and after its collapse. The comparison of building A with other urban habitats in the Bilād al-Shām region (*e.g.*, Apamea, Palmyra, Pella, Jarash, Amman, and Jerusalem, *etc.*) allows us to link it to a little-known type of large courtyard dwelling that modified the structure and spatial organization of a pre-existing Byzantine building. In Apamea, the “Maison aux consoles”—a 4500m² house with twenty-two rooms organized around a courtyard—is a very good comparison, but there is little documentation about its occupation during the Umayyad period. Continuing the excavation of building A could offer an exceptional opportunity to identify the function of the different spaces in these houses through the *in situ* conservation of material culture and, thus, allow us to observe the transition between the domestic habits of the Byzantine and Umayyad periods.

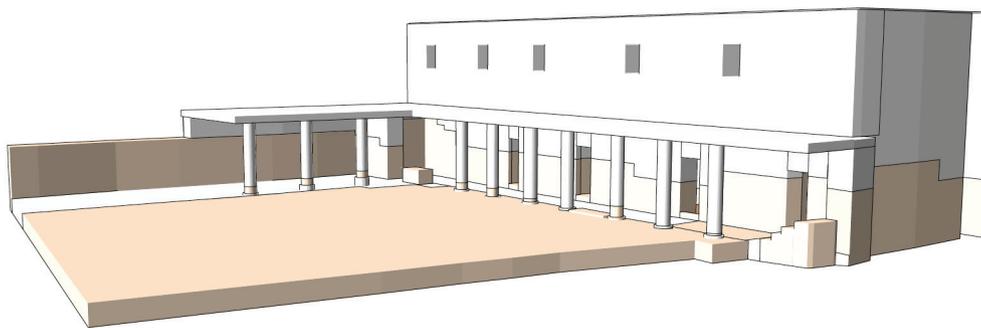


1. Map of the main buildings in Jarash in 2015 on an orthophoto produced by RGJC with the study area of the Eastern Jarash Project shown in pink. To the north is building A, previously excavated by the DoA and studied in 2022 by the EJP (image by G. Pontitcelli, 2022, Eastern Jarash Project).

A LARGE COURTYARD BUILDING FROM THE BYZANTINE AND Umayyad PERIODS



2. Tentative renderings for phase 1 (quarry), phase 2 (colonnade?) and phase 3 (courtyard building A) (drawn by arch. S. Cunin, 2022, Eastern Jarash Project).



3. First proposal (work in progress) for a 3-D rendering of building A in its first phase of occupation (phase 3 of the area), before the reorganization of the porticoes (image by A. Moumneh, 2022, Eastern Jarash Project).



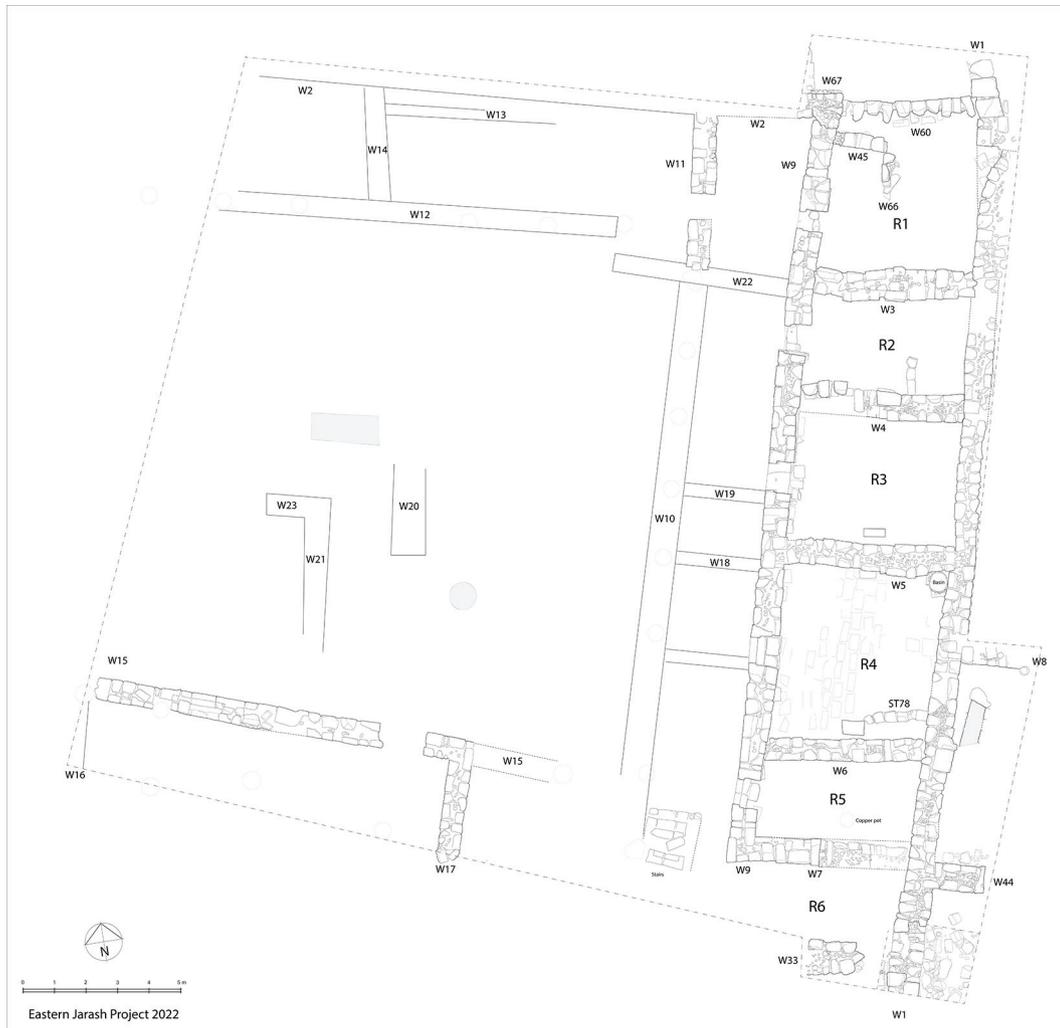
a



b

4. Later occupation of building A's northeastern area, after the AD 749 earthquake: a. the corner W67 between walls W9 and W2 (phase 5); b. the ashy layer (41) of a fireplace at the foot of two walls (photos by T. Awwad, 2022, Eastern Jarash Project).

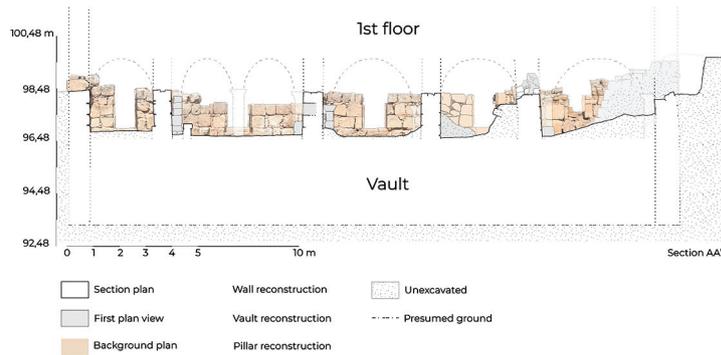
A LARGE COURTYARD BUILDING FROM THE BYZANTINE AND Umayyad PERIODS



5. Plan of building A in progress (stone-by-stone and ground floor) (plan by E. Devaux, 2022, Eastern Jarash Project).



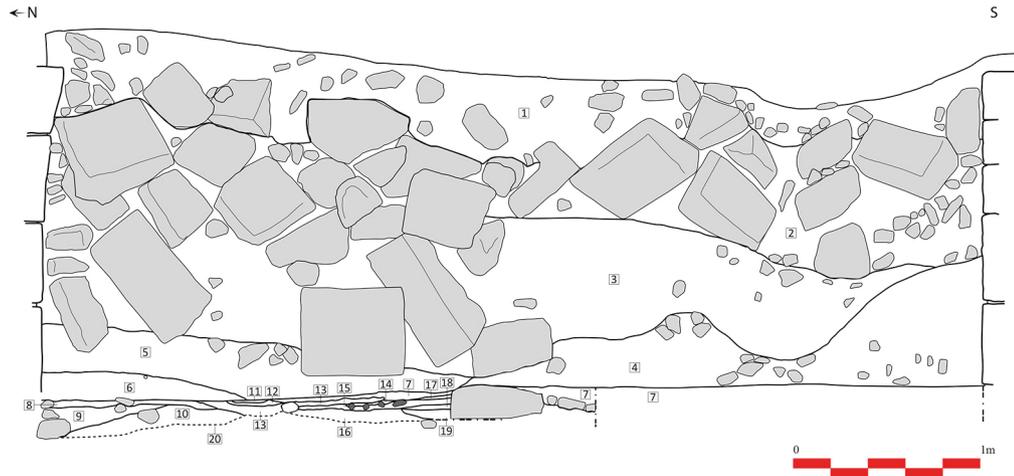
6. Aerial view of building A during the excavation (drone photo by Terra Incognita s.r.l., 2022, Eastern Jarash Project).



7. N/S architectural section of the eastern wing, with a rendering of the vault and the floor (image by E. Devaux and A. Moumneh, 2022, Eastern Jarash Project.)

A LARGE COURTYARD BUILDING FROM THE BYZANTINE AND Umayyad PERIODS

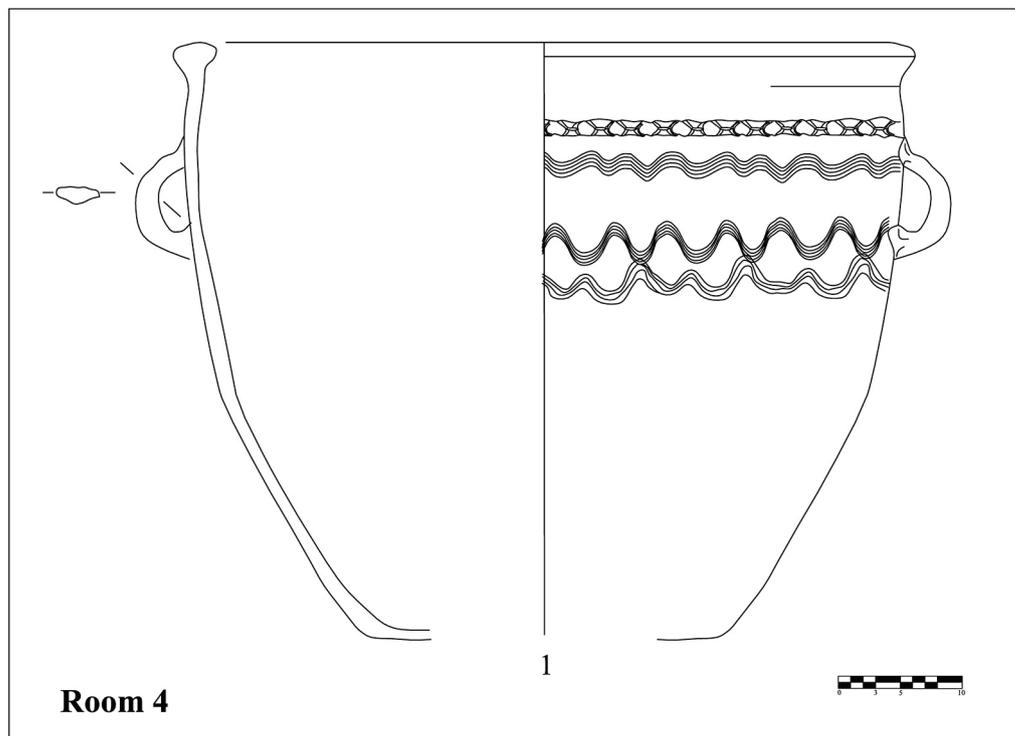
EJP 2022
Building A, Room 4
Inside section N-E/S-W
Section n°4
(19.03.2022)
Scale 1:20



8. N/S cross-section in room R4 of the baulk from the previous excavation (section drawing by J. Bonnéric, 2022, Eastern Jarash Project).

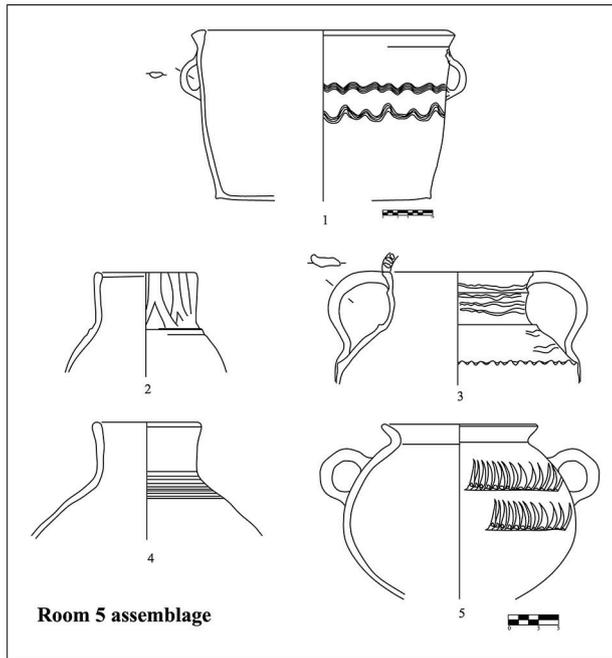


9. General view of room R4 (photo by J. Bonnéric, 2022, Eastern Jarash Project).

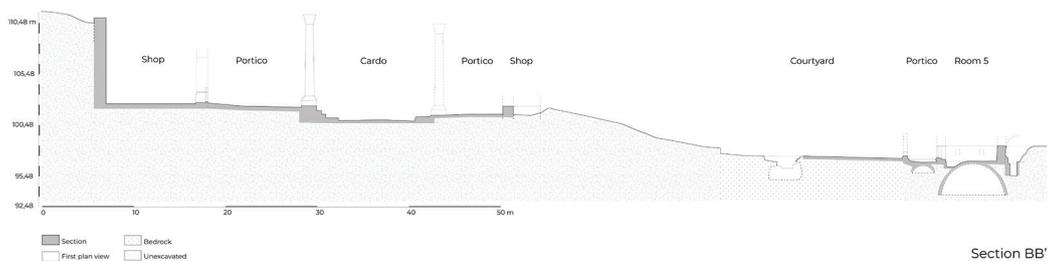


10. Complete basin (Jarash Light Grey Handmade Ware) placed in a stone massif in the northeast corner of room R4 (drawing by R. Pappalardo, 2022 , Eastern Jarash Project.)

A LARGE COURTYARD BUILDING FROM THE BYZANTINE AND Umayyad PERIODS



11. To the left, part of the pottery assemblage that was discovered in the collapse of room R5's upper story and, to the left, a copper pot with iron handles and an iron ring that was discovered under this collapsed story, on the ground floor (drawings by R. Pappalardo and photos by A. Thaher, 2022, Eastern Jarash Project).



12. E-W architectural section from the cardo to building A (image by E. Devaux and A. Moumneh, 2022, Eastern Jarash Project).

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