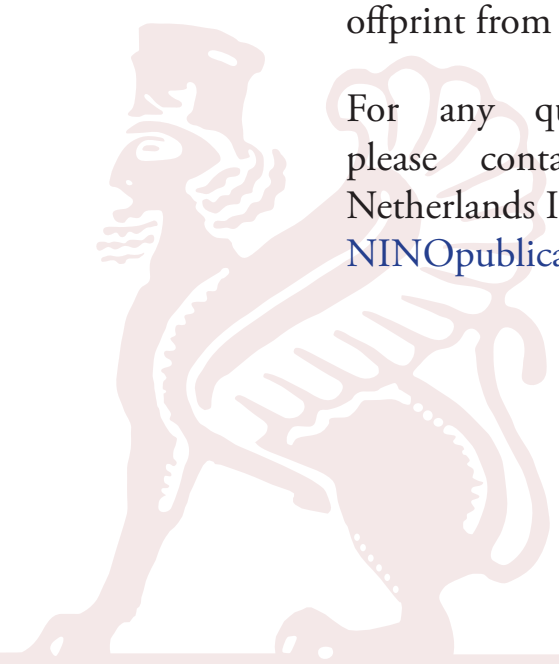
ANATOLICA 41 (2015)
ISSN: 0066-1554
www.nino-leiden.nl/publication/anatolica-xli



No. XLI 2015

ANATOLICA

Annuaire International pour les Civilisations de l'Asie antérieure, publié sous les auspices de l'Institut néerlandais du Proche-Orient à Leiden

Table des matières

ANATOLICA is available online through
Peeters Online Journals
http://poj.peeters-leuven.be/

Information and sales:
Nederlands Instituut voor het Nabije Oosten
Witte Singel 25, P.B. 9515, 2300 RA Leiden – the Netherlands
NINOpublications@hum.leidenuniv.nl
www.nino-leiden.nl

ISSN 0066–1554

Klaas Veenhof in Kültepe, July 2015. Photo by Vanessa Tubiana-Brun (project Kul-Text).

Preface

The Editors of *Anatolica* would like to congratulate Klaas R. Veenhof on the occasion of his eightieth birthday. Accordingly, we offer this special issue of the journal to him, both to mark his long-standing interest in the history and archaeology of Anatolia, and as a token of gratitude for his involvement over many years in the work of the Netherlands Institute for the Near East, in supporting academic research into the civilizations of Western Asia.

During his fruitful career he has made (and continues to make) many important contributions in many fields. We single out three of them in this issue of the *annuaire*. First of all is his research into the Old Assyrian documents discovered at Kültepe-Kanesh and the significance of the Old Assyrian Colony period in Anatolia in all its aspects. Then there is his research on the chronology of the ancient Near East, in particular his identification of the Kültepe Eponym List. We also owe him much for his work on the Old Babylonian period, especially concerning legal and economic affairs.

The articles collected in the first part of this issue address these three fields. May Klaas enjoy them *ina šulmim*!

Jan Gerrit Dercksen, *éditeur spécial*
Jacob Roodenberg, *éditeur responsable*

Anatolica XLI, 2015

THE 2012 TO 2014 EXCAVATION CAMPAIGNS AT SITE LE, SAGALASSOS. The structural remains and general phasing

Jeroen Poblome, Hendrik Uleners, Inge Uytterhoeven, Elena Marinova, and Bea De Cupere

Abstract

In recent years, the Sagalassos Archaeological Research project of the University of Leuven has coordinated a research programme aimed at the community of ancient Sagalassos. Understanding in more detail how the ordinary townsfolk lived and worked in antiquity forms an important aspect of this research. With this aim in mind, archaeological excavations were launched at Site LE in 2012. Here, a dense stratigraphical sequence documenting changes within part of a neighbourhood in the upper parts of the ancient town was documented. An original domestic quarter changed character resulting from the erection of public buildings in Roman Imperial times, such as the Neon Library and the unidentified public building of Site LE. In late Roman times, the structures of Site LE were thoroughly re-organized, possibly including a house and a textile workshop. A very well preserved coroplast workshop formed part of this arrangement too. Upon abandonment of these domestic and artisanal units, Site LE was overhauled one last time. Remains of an early Byzantine professional bakery were identified within the re-organized premises. This paper wishes to present our initial understanding of the site, its phases of architectural and functional organisation as well as the detail of the consecutive structures. As such, the paper represents the framework for continued study and future publication of the at times fairly unique find assemblages, such as the materials found within the late Roman coroplast workshop.

Introduction

The following presents the preliminary report on three years of archaeological excavation at Site LE (Library East) in ancient Sagalassos, for the campaigns of 2012 to 2014. In 2012, a new excavation programme was initiated at Sagalassos with the aim to improve knowledge on how the ordinary townsfolk, the majority of the population of each ancient community, lived, worked and died in antiquity. Site LE is located immediately to the east of the so-called Neon Library, which itself was situated on one of the main streets of Roman Imperial Sagalassos, linking the area of the Upper Agora with that of the Theatre and beyond, into Eastern Suburbia. As small portions of a structure adjoining the Neon Library to the east were already excavated in 1991 and 1993 (Waelkens 1993: 48; Waelkens *et al.* 1995: 59-61), revealing well-preserved remains of what was thought to be a late Roman house, destroyed by fire, Site LE figured prominently in the new thematic approach to the Sagalassos excavation campaigns.

The occupation history of Site LE can be subdivided into four main phases: 1. the earliest interventions and management of the terrain can be dated to around the start of the Com-

mon Era, when this zone was laid out in terraces resulting from a phase of urban expansion, 2. the construction of an unidentified public building around 200 CE and its use, 3. the conversion of the latter structure into smaller units during the later 4th century CE, their use and abandonment around 500 CE, and 4. the redesign and reuse of the area during the 6th century CE.

PHASE 1

When the unidentified public building was constructed against the east side of the Neon Library, around 200 CE, the construction workers partially or completely removed existing features, and cut through older layers. Although the evidence is patchy, the presence of terraces and terrace walls could be reconstructed in the general area, as well as their use in supporting the laying-out of a new domestic quarter, around the start of our era (Fig. 1).

The Terraces

Study and comparison of deposits excavated in 1993 (Waelkens *et al.* 1995: 54-56, for the architecture; Poblome 1999: 189, 253, 287, 311, for the tableware assemblage and chronology) to the north of the library, below the floor level of the unidentified public structure, and in the zone immediately to its NE revealed the contemporaneity of the material and the intent of the operations. The earliest interventions and management of the terrain can be

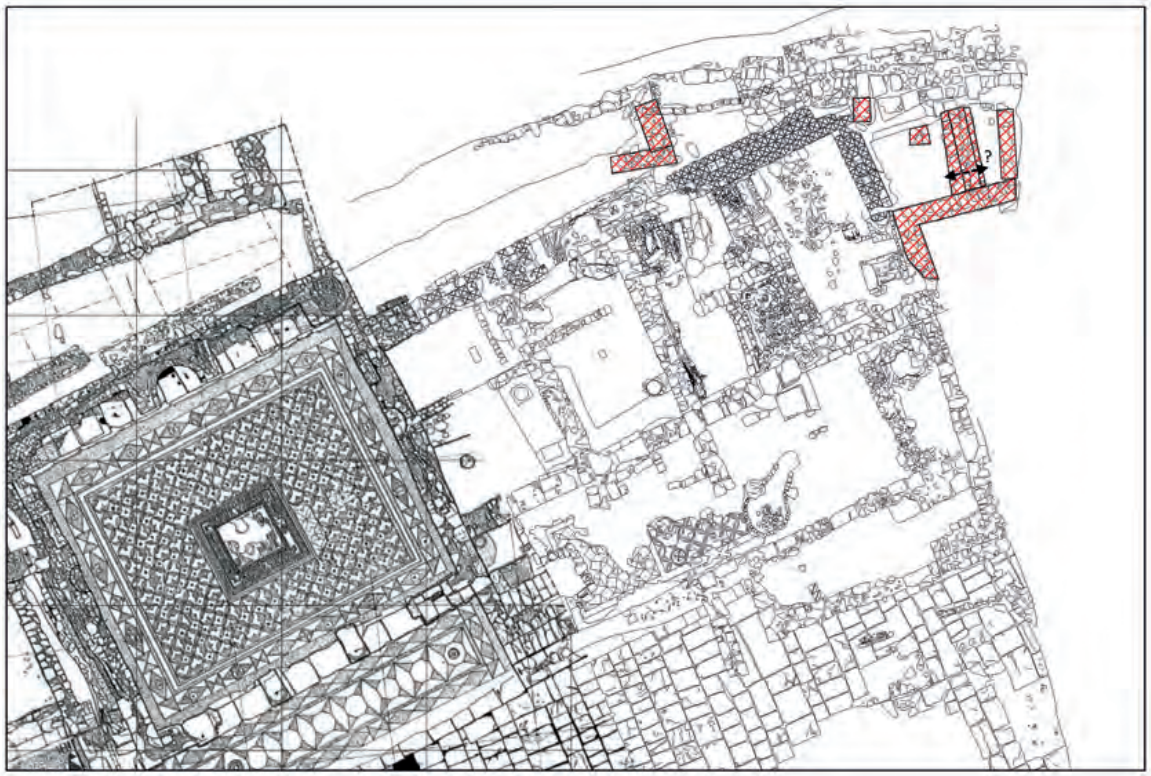


Fig. 1. Overview of the walls and features associated with Phase 1 of Site LE.

dated to around the start of our era, when the area of Site LE was being organized in terraces. A terrace level can be tentatively deduced connecting the partially excavated (terrace) wall in polygonal masonry to the north of the Neon Library, and the upper terrace wall(s) within the recent excavation area of Site LE. The terrace walls, with a SW-NE orientation in the west, gradually bend in the east to a W-E orientation, following the natural curvature of the mountain slope. However, only small parts of the upper terrace were explored in 1993 as well as more recently within the limits of Site LE, invoking caution when making functional and chronological interpretations.

The oldest layers, used to create the original terraces, were preliminary dated to between 50 BCE and 50 CE. Not one layer contained only (late) Hellenistic material or early Roman Imperial pottery, explaining the fairly wide chronological allocation. In general, the terracing fills contained few or no anthropogenic indicators. The layers were mostly a fairly compact, yellow-brown to grey, silty sand, with limestone and some charcoal.

To the north of the back wall of the later public building, two walls formed part of an earlier building and/or terrace wall(s), within the recent excavation area (Fig. 2). A very short stretch of N-S wall was preserved, which had not disappeared when the northern back wall of the later public building was constructed. The other, E-W wall was identified while cleaning the north profile of the trench. Its appearance and construction technique resembled the polygonal (terrace) wall found behind the Neon Library in 1993, and could possibly be its continuation. Because of the orientation and height of the section, this wall could only be traced over a length of 1.5m. The upper 1.2m still held some patches of a plastered substrate of grey mortar containing tile aggregate. The lower 0.4m was covered with 0.03m thick grey plaster.

Fig. 2. (Terrace) walls of the original building phase at Site LE.

What little evidence there is available, seems to indicate that this zone was laid out in terraces in order to support a phase of urban expansion. Remains of possible houses were investigated to the north of the Neon Library (Waelkens *et al.* 1995: 54-56), underneath the unidentified public building, and in the NE part of the recent excavation area, registered as Spaces 6 and 7. The excavated remains confirm earlier observations, made during the intensive urban surveying campaign of 1999, indicating that a new domestic quarter was laid out in this part of Sagalassos around the start of our era (Martens *et al.* 2008: 136-138). Probably, the

construction of the Fountain House *c.* 25 BCE, to the SW of Site LE, formed part of the same urban master-plan, in order to accommodate the increasing urban population.

Room 1

A sounding (0.8m wide and 3.3m long) was dug in Room 1, which was installed within the remains of the unidentified public building, alongside the southern part of its eastern wall, and cutting through its later Roman floor (Fig. 3). Bedrock could not be reached, but may have been close as many ophiolite clay chunks were present in the lowest layer. The entire stratigraphy was considered as fill, as no floor level could be identified. The pottery within the two lower fill packages was dated preliminary to the end of the 1st century BCE/early 1st century CE.

Fig. 3. View of the sounding in Room 1.

The structural remains that could be linked to this phase were the lower part of the northern back wall, the lower part of the partition wall between the later Rooms 1 and 2, and the lower part of the southern façade. The walls were built in the same technique of mortared limestone rubble covered with a smooth mortar coating. These walls join into one another and were preserved up to the same height, on top of which the later phases were constructed. The sondage revealed that the lower 40cm of the partition wall between the later Rooms 1 and 2 had a different construction technique of limestone rubble and an embossed ashlar (0.2 x 0.4m) mortared in a dark grey, coarse mortar and no coating. Probably this was the foundation of the wall.

The sounding in Room 1 revealed that the original terrace fill layers were covered by another fill, datable to the first half of the 1st century CE. This fill, together with the top of an ashlar and an upside down Doric column base, created a level of non-deposition or possibly a floor level. There was also a mortared protrusion of 0.1-0.15m visible in the SE corner of the room at more or less the same height. No finds could be related to this level.

In this way, the sounding provided evidence for the earliest building activity in this area, implying the presence of a structure (house?) around the start of the Common Era, on top of which the unidentified public building would be constructed. Considering the relative depth of the walls and the fact that no traces were noticed of a door or other entrance arrangement, possibly these remains could have formed part of a cellar.

Spaces 6 and 7

Almost immediately underneath the topsoil and to the east of the later public building, two rectangular N-S orientated spaces were uncovered (Fig. 4). Space 6 measured *c.* 1.37m in width and Space 7 *c.* 2.5m in width. The northern limit of both spaces, which were probably rooms of a house, could not be determined, due to the later installation of an alley with water channel partially covering the spaces. Presumably Spaces 6 and 7 continued up to the terrace wall, which sustained an upper terrace house, of which Space 5 was partially excavated. Post-abandonment seismic activity or an unknown pressure from the East caused the southern common wall of Spaces 6 and 7 to shift 15 to 30cm to the West, pushing the sidewalls askew.

Fig. 4. Spaces 6 and 7.

The walls of Spaces 6 and 7 were constructed in different techniques and none of these interlock; this could imply pragmatism or a relative building chronology. Not enough of the ground plan was excavated to comprehend its logic or functional layout. The south wall (width: 0.7m, length: 3.35m) continued towards the east, outside the excavation area. Its western end made a 90° angle to the south, continuing for another 1.6m. This segment was to be incorporated into the east wall of the later public building. The south wall displayed three courses: a 0.55m mortar foundation with small to medium sized limestone rubble, a 0.46m course of medium sized limestone rubble finished with a rough mortar coating, and a 0.52m course of medium to large limestone rubble with a smooth mortar coating covering the edges of the stones. A 2-3cm protruding edge between the middle and upper course possibly indicated the presence of a floor, although no stratum could be associated with it. The sidewalls of Spaces 6 and 7 were built against the south wall. These were only partially exposed.

In order to study the phasing of the layers inside both spaces, three profiles were documented: a north profile in Space 7 and an east profile in both spaces. As a result, the terrace fill could be distinguished from a level of non-deposition, and the post-abandonment fill.

Although no actual floor was present in Space 6, a horizontal layer of non-deposition could be distinguished. A 4-8cm beaten earth floor was identified in Space 7, on top of the terracing fill. Strikingly, the floor contained amounts of kiln waste materials, giving it a red patchy colour. The pottery within the floor was preliminary dated to 25 BCE-25 CE. The material immediately on top of the floor was attributed to the first half of the 1st century CE. This floor was situated more or less at the same height as the level of non-deposition in Space 6.

Upon abandonment of the Space 6, fill material seems to have been thrown in from the upper terrace level. The pottery within the dumping fills in Space 6 did not post-date 50 CE, suggesting a fairly short use-life for (this part of) the house. Part of the dumped materials consisted of horn cores – mainly of goat – with traces of chopping and sawing and could therefore be related to horn-working activities. Additionally, experimental shapes of 1st century CE Sagalassos red slip ware, usually associated with the Potters' Quarter, were recognized in the dump material.

Phase 2

Shortly after 120 CE, the Neon Library was inaugurated, adding new functions to this urban quarter. In a next phase, a new public building was constructed at Site LE, further changing the appearance of the neighbourhood. In addition to the installation of the building, the street in front of it seems to have been converted into an esplanade, and new water infrastructure constructed. At the end of this phase, the raised sidewalk in front of the public building was re-modelled (Fig. 5).

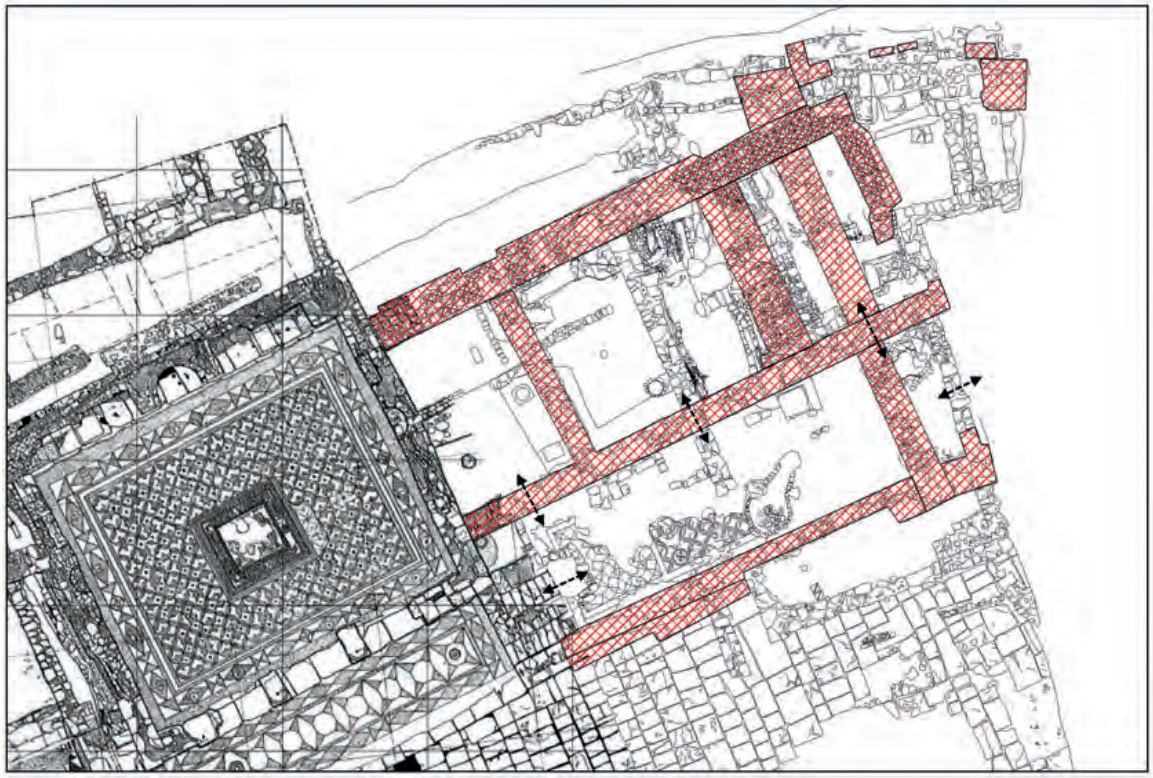


Fig. 5. Overview of the walls and features associated with the Phase 2 public building and water infrastructure.

The Unidentified Public Building

The new building was partially dug into the slope, and erected on top of the walls of the earlier cellar/house(?) as well as against the east wall of the Neon Library. Its façade was aligned with, but placed a little to the back compared to that of the library. As mostly structural remains were preserved and hardly any furnishings or other contemporary material, unfortunately, the building's original function is still unclear. Occupation and/or floor levels were mostly removed by later Roman activities. Mainly the building's size and plan, and its construction and elaboration seem to indicate an original, public function. It measured *c.* 18.15m in length and *c.* 8.25m in width. The inner space was *c.* 17.15m by *c.* 6.5m. The construction technique of the back wall, the northern part of the east wall, and the eastern part of the south wall continued that of the wall shared with the Neon Library: solid and well-preserved *opus vittatum*, or mortared rubble inter-layered with brick (Fig. 6). None of the walls were integrated, though, with the north wall abutting the east wall of the library and the east wall of the public building abutting its northern, back wall. Although extensively modified in its upper parts, the threshold level of the southern façade and two moulded pilaster bases seem to belong to this phase as well. When visible, the lower parts of the outside of the threshold blocks were left roughly worked, possibly indicating the original presence of a single step along the length of the building.

Fig. 6. *Opus vittatum* as used in the unidentified public building.

Presumably during the same building operation, a 4.5 to 4.8m wide sidewalk was constructed in front of the public building. Two to three rows of finely cut ashlars were preserved at the bottom of the southern support wall, aligning the street or esplanade in front (Fig. 7). Although no datable material was associated with the ashlars, this building technique was not used in later Roman times at Sagalassos, suggesting a Roman Imperial chronology for their construction. The raised, open sidewalk continued the line of the one in front of the Neon Library. A flight of seven steps, negotiating the level difference, connected both walkways.

In its conception, the building was divided in three rooms: a large central room of *c.* 7.15m by 6.5m (the later Roman Rooms 2 and 4) and two side rooms of *c.* 4m by 6.5m (the later Roman Rooms 1 and 8). Only the west room (Room 1) kept its original dimensions. The current partition wall between Rooms 4 and 8 is a late Roman addition: the original wall of

Fig. 7. The finely cut ashlars at the bottom of the support wall for the sidewalk in front of the public building.

Phase 2 was located about 1m to the west. Two identical pilaster bases formed part of the southern façade at the point where the division walls between the later Rooms 1 and 2 and the original division wall between later Rooms 4 and 8 join the façade. The finding of a stone wall foundation running north from the eastern pilaster base supports this observation. In this way, the plan of the building was symmetrical. The largest, central room was accessed through a wider door (width: 2.25m), in its axis, flanked by two smaller ones (width W door: 2.05m, width E door: 2.04m). Both side rooms are presumed to have had an external entrance, but later modifications hamper reading the original situation.

In the front part of the central room, about 2.3m east of the eastern wall and 1m north of the southern façade, a round limestone vessel was installed into the floor. Its edge was covered with mortar and lined with tile fragments. The vessel had an outside diameter of 0.46m, was 0.62m high on the outside and 0.48m deep. The inside surface was worked smooth. A sounding was made between the vessel and the southern façade revealing that the stone vessel formed part of the original floor arrangements of the public building (Fig. 8). The vessel itself was cracked, chipped and broken in places, meaning it was given a next use-life as part of the unidentified building.

Fig. 8. The recycled stone vessel inserted into the floor of the central room of the public building.

The importance of the central room was further stressed by its mosaic floor, which was largely removed in later Roman times. Small patches of mosaic were found in the NE corner of the later Room 2 and underneath its partition wall with Room 4 (Fig. 9). The level of the

mosaic floor coincided with that of the bottom of the threshold ashlars in the southern façade, as well as with a 0.1-0.2m mortared rubble protrusion arranged in the west and back walls. The preserved part of the mosaic floor displayed a square, geometrical pattern of black and white *tesserae* (1x1x1cm). As far as visible, the decoration of the pavement seems to have included (rows of?) tangent poised squares, carried out in black on a white background (R 15a1). Unfortunately, neither the entire geometric pattern, nor the figurative scenes the former may have originally been combined with could be reconstructed. Since the preserved figures were geographically and chronologically widespread, these did not provide relevant indications for the construction date of the floor.

Fig. 9. A preserved patch of floor mosaic in the central room of the public building.

In addition to the *in situ* tessellated fragments, sections of the substrate without *tesserae* were preserved in large parts in the northern section of the later Room 2, but were cut and removed in Room 4. Particularly in the area underneath the later eastern wall of Room 2, the substrate can still be followed over a length of 4.06m. The *tesserae* were bedded in a *nucleus* of pink mortar (thickness: 0.04m), on top of a pink mortar *rudus* (thickness: 0.04m) that was supported by a *statumen* consisting of rubble stones (thickness: 0.23m).

Large amounts of loose *tesserae* were found stashed in a niche-like opening, cut in late Roman times in the back wall of Room 2; this operation goes unexplained. No indications were found in either of the side rooms for a mosaic floor, or any other contemporary floor level for that matter.

As little or no material could be linked to the original function of the public building, also its chronological allocation is not straightforward. The available relative chronological indicators are structural in nature: part of the walls of the building were erected on top of earlier walls of the Phase 1 house/cellar(?), and the *opus vittatum* back wall was built against the east wall of the Neon Library. As a result, the public building post-dated the construction of the library, or rather the first re-arrangement phase of the latter. During that operation at least the side walls were rebuilt in the mentioned technique and covered with decorated plaster panels. The architectural style of the plaster half-pilasters and mouldings was dated to the later 2nd or early 3rd centuries CE (Waelkens *et al.* 1995: 54), providing a *terminus post quem* for the construction of the unidentified public building. The identical construction technique of the *opus*

vittatum walls, following the technique of the east wall of the library, seems to suggest relative contemporaneity. Another *terminus post quem* was provided by the most recent stratum which was cut by the building of the north back wall of the public building, with material datable to the 2nd century CE. It is an open question whether the same wall building technique and contemporaneity of construction, shared between the Neon Library, Site LE's public building, and the less well documented structure adjoining the library to its west, does not imply some sort of shared original function. Quite often libraries were structures integrated into larger complexes such as sanctuaries, or at least structures composed of different units, which, apart from housing a collection of scrolls, provided accommodation for archives, teaching or learned discussion. The example of Hadrian's Library in Athens comes to mind (Gros 2011: 362-374). Due to lack of proof, related functions for these establishments can be but a suggestion.

The Esplanade

The Neon Library, the unidentified public building and its sidewalk were constructed alongside a street, which ran down from the Theatre in the direction of the upper town (Fig. 10). In the eastern part of the excavated area, the street sloped upwards at an angle of 8-9° and was built by lying down rows of same-sized limestone slabs, alternating between smaller and wider widths of the stone rows.

Upon completion, the street is perhaps better defined as an esplanade, as it reached a width of *c.* 18m in front of Site LE's public building and walkway. The preserved southern edge of the esplanade continued the line of the terrace wall constructed in front of the late Hellenistic Fountain House.

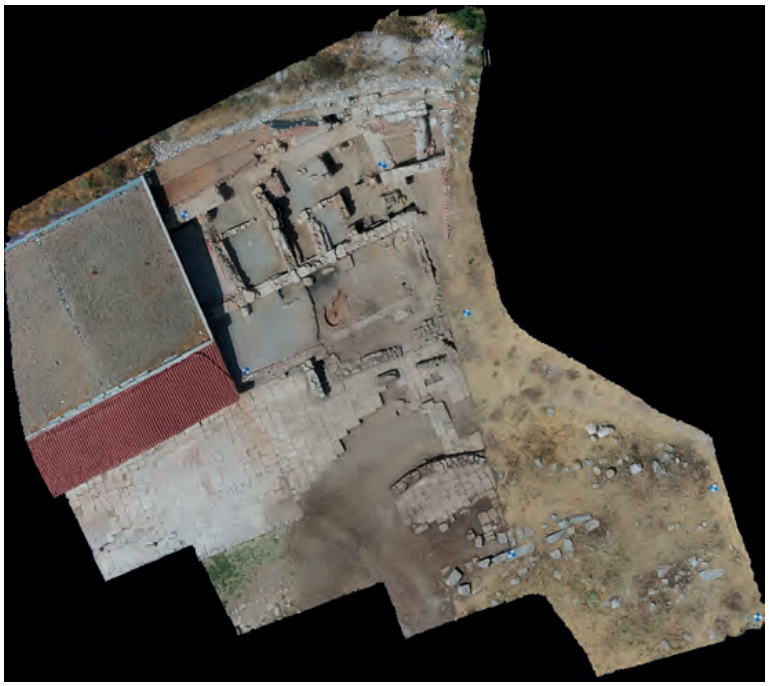


Fig. 10. Georeferenced orthophoto of Site LE, the modern protection construction over the library and the esplanade.

Layers 4-8 excavated to the east of the Fountain House were considered as fill carrying the slabs of the esplanade, which later went missing in this area. The pottery in these layers could be dated to the second half of the 2nd century CE (Poblome 1999: 284). Recent soundings at locations of missing slabs resulted in a more mixed picture, ranging in date between *c.* 100 CE and *c.* 200 CE. More research is required to document the chronological build-up of the street.

The Water Infrastructure

Water infrastructure could be documented in three connected parts: the E-W water channel located in the NE corner of the Site LE excavations, which connected into the vertical shaft, behind the back wall of the public building, which in its turn continued in the NW-SE water channel underneath the eastern side room of the building and its sidewalk. Its further continuation, underneath the esplanade, remains unclear.

Against the south face of the original, upper terrace wall an E-W orientated water channel was built. Only the eastern part of this channel, with a visible length of 1.5m, was still original; the central part (length: 6.3m) was a late Roman re-arrangement. During this operation, the covering of the channel was removed. The channel was constructed on top of an arranged layer of ophiolitic clay. The north wall (width: 0.43m) was made of six layers of mortared brick. Of the south wall (width: 0.6m) only one course of brick was preserved. The channel was partially built on top of the walls of Space 6. The bottom of the water channel (width: 0.43m) consisted of a 6cm thick layer of hydraulic mortar with a single course of mortared brick on top. The bottom made a steep 30° slope for the first 0.8m. After that point, the angle became more moderate, ending at the vertical shaft.

The vertical shaft (Fig. 11) was constructed as one solid and almost square structure from mortared medium-sized limestone rubble and a few brick fragments. Also the shaft was built against the original terrace wall; its other side used the northern back wall of the public building as support, providing a chronological indication. The outside of the structure measured *c.* 1.8 by 1.9m and the inside 0.61 by 0.65m. In a later stage, the top of the shaft was dismantled to the same height as the northern back wall and east wall of the public building. The water would flow in from the east. Here, the remains of an opening were found, which was covered by a 0.53m wide, partially preserved arch of mortared brick. Underneath the arch a concave gutter stone with spout was embedded with hydraulic mortar into the structure in order to guide the water into the centre of the shaft.

Fig. 11. The upper part of the shaft channelling the water to a lower level.

The bottom of the shaft was reached at 4.35m below the top of the gutter stone. The shaft connected here on its SE side into a beehive-shaped water channel, running underneath the east side room of the public building. The fill of the channel was not excavated for safety reasons: the cover was damaged or had collapsed at several points. Near the start it was possible to expose a small part of its intact floor. Here, the floor had a slope of

11°. It was constructed of mortared brick, of the same dimension as the water channel discussed previously. The sidewalls were made of medium to large-sized mortared limestone rubble. The arching cover used mostly large limestone rubble and was mortared. The channel was 0.69m wide and 0.78m high. The channel could be followed for *c.* 13.7m up to the edge of the esplanade. At that point it was closed off in the 6th century CE, resulting from the southern extension of the sidewalk, over the esplanade. The northern back wall of the public building and the channel were integrated into each other and therefore part of the same construction phase (Fig. 6).

Comparison to similar channels, partially excavated at Sagalassos, for instance underneath the slabs of the esplanade to the north of the Fountain House, the water infrastructure at Site LE was originally designed to form part of the water supply/drainage system of this part of the town (Martens 2004: 489-496/496-500).

The Raised Sidewalk

The upper part of the southern support wall of the sidewalk was re-arranged in mortared rubble and spolia, on top of the original courses of ashlar. The front part of the new section was finished smooth, as if to receive a type of veneering.

As was the case with the walkway in front of the Neon Library, the one in front of Site LE's large building also received a mosaic floor at this stage (Fig. 12). Both mosaics were stylistically comparable, but the one of Site LE was not so well preserved as a result of continued occupation and use of the space offered by the sidewalk.

Fig. 12. The mosaic floor panels of the sidewalk.

The latter mosaic pavement was executed in white and black, irregularly cut stone *tesserae* of rather large dimensions, including mainly rectangular, but also some triangular mosaic stones. The *tesserae* were inserted in a *nucleus* of pinkish mortar (thickness: 0.03m) that covered a grey *rudus*, visible in the areas where the *tesserae* were no longer in place. The underlying *statumen* remained covered.

Only in the western half of the sidewalk, the composition of the mosaic bedding was still recognisable. In the south and west the mosaic was bordered by a fragmentarily preserved broad band of irregularly placed white *tesserae* (R 1y). Within this frame a less broad band of black mosaic stones (R 1y – 6 *tesserae* wide: 0.20m) enclosed the central pavement area on all sides (partly preserved in the north, west and south), while a similar band subdivided the zone into separate

panels (south part preserved). The eastern panel (2.9xmin. 3.3m – southern part preserved) had an orthogonal pattern of intersecting circles (diameter: 0.53m), which formed saltires of four quasi-tangent solid spindles in black, creating the effect of quatrefoils, and white poised concave squares (R 237a). At the centre of the saltires a square of four *tesserae* was added (as in R 237d). The – smaller – western panel (2.9x2.9m – western and southern parts preserved) was decorated with staggered rows of superposed groups of three adjacent lozenges, which were either completely white-coloured or composed of a black and white triangle (triangles: 0.35x 0.35x0.25m) and formed squares (laid out in black – 0.3x0.3m) (variation of R 161f).Both preserved panels were bordered by a black frame of 0.2m wide. Both panels were not complete, as important parts went missing along the front wall of the Site LE's main building. This already happened in antiquity as patches of lost mosaic floor were levelled with layers containing pottery datable between the 2nd and 5th centuries CE.

The appearance of a mosaic floor in the architectural context of a sidewalk at Sagalassos is in line with developments that took place in several Late Antique cities in the Eastern Mediterranean. From the 4th century CE onwards, mosaics started to take a more prominent role in the cityscape and appeared, for instance, in porticoes flanking streets and public buildings (Dunbabin 1999: 225, 304; Scheibelreiter-Gail 2011: 108). Mosaic-paved sidewalks are, for instance, attested at Ephesos, Sardis, Perge, Side and Laodikeia (Quatember *et al.* 2009: 129-132). The stylistic characteristics of the mosaic of Site LE's raised sidewalk follow general trends of the 4th and 5th centuries CE, often including interloped and interlaced designs combined in panels into a long carpet-like pavement, as applied in public and private contexts.

Phase 3

A range of changes was noticed at Site LE, affecting the unidentified public building. Somewhat later than the refurbishing of the raised sidewalk, the unidentified building lost its public character. Whether or not at the same time, the internal space of the building was re-arranged from three to four units (Fig. 13).

These changes may have been caused by the effects of the intentional destruction of the Neon Library, mainly by setting the edifice on fire (Waelkens *et al.* 2000; Poblome *et al.* 2008). Considering the fact that the roof and parts of the superstructure of the library came down during the fire, and that the back wall of the adjacent building at Site LE still stands higher than the east and back wall of the library, makes it difficult to imagine that at least the adjoining part of the unidentified building would not have seen some degree of damage. This disaster possibly caused the make-over of the latter building and the end of its unknown public character. Resolving the damage in function of the make-over possibly involved systematically lowering the back and east *opus vittatum* walls, by dismantling the masonry up to the same level, i.e. the lowest layer of mortar which held the next band of brick (Fig. 14). This would have created a workable level to construct a new roof over the re-arranged rooms. The central part of the back wall was dismantled up to an even lower band of bricks leaving a 1.10m deep and 3.70m wide gap in the wall, behind Rooms 2 and 4. The gap was bordered by 0.56m high and 0.30m wide ridge on the north side. Admittedly, this reasoning is but a hypothesis, as no chronological criteria are available in support.

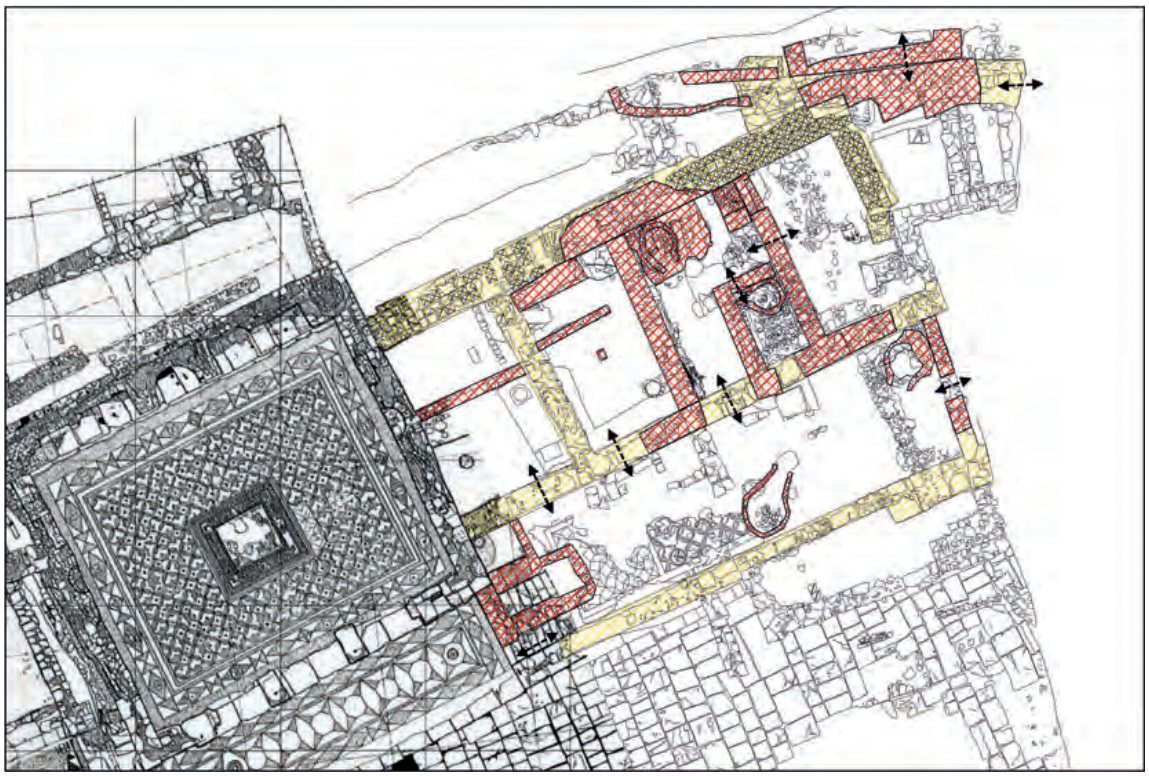


Fig. 13. Overview of the walls and features associated with Phase 3.

Fig. 14. The dismantled masonry of the northern back wall of Site LE.

The excavations at Site LE provisionally confirmed the identification of a house in the westernmost of these units (Room 1), while to its east a textile workshop was presumably installed (Room 2). Inside the two easternmost rooms of the building (Rooms 4 and 8) and partially onto the sidewalk to their south, a coroplast workshop was organized.

Room 1

Room 1 (width: 4.5m and length: 6.5m) was accessed from the south, through a simple door accessing the walkway. The room was divided into two parts. The low division wall (max. height: 1.1m) was constructed with one row of rubble and a mortar coating on the north side. It was placed perpendicular against the eastern wall of the library and the partition wall between Rooms 1 and 2. While the level of the floor in the north part of Room 1 (length: 2.6m) was kept more or less the same as in Phase 2, the southern part of the room (length: 3.4m) was elevated for about 0.5m.

The pottery from this fill was mixed, with a portion of 1st century CE material and another one of the 4th century CE. On top of this fill in the southern part of Room 1, a 0.05 to 0.10m thick floor level of compact grey mortar and beaten earth was laid out. No ceramics were associated with this locus. On top of it, a very compact 0.05m thick layer of beaten earth, consisting of light brown, silty sand and clay with disintegrated mortar, limestone pebbles and charcoal, contained ceramics from the 5th century CE, and possibly some late 4th century CE material as well. On this walking level, the lower half of a *pithos* was found, stowed into the SE corner of the room. Underneath this storage vessel, two ceramic loom weights were located. In the NE corner of the southern part of Room 1, two more loom weights were discovered. In 1993, when the western part of this space was excavated, two other *pithoi* were registered.

The northern part of Room 1 had a 0.05-0.1m thick grey, beaten earth floor containing disintegrated mortar and charcoal fragments. A second, upper floor level was distinguished of grey, silty-clayish material with mortar and charcoal particles, *c.* 0.3m in thickness. Both floor levels contained late 4th century CE pottery. Patches of plaster were preserved on the lower parts of the walls of the space. In front of the east and west wall, a single row of tiles, set on their sides, was fixed into the floor. Behind these, but also elsewhere in the space, 7 *pithoi* and 2 *lekanai* were found partially broken, but *in situ*. The *pithoi* were either dug a little into the floor, or fixed on the floor with tile fragments and rubble. The original content was still present in some of the vessels: both *lekanai* contained red grog (pulverized tile) and one of the storage vessels was filled with fine ash and charcoal chunks. Two *pithoi* along the west wall were partly filled with the same material as the upper floor level. Another 5 *pithoi* were identified in the western part of this space in 1993. Some of the storage vessels were lidded, as broken lids were found next to the sherds of the vessels. A special find was collected behind and below the *pithos* in the NW corner of the space. Here, a small concentration of animal bone was found, against the bottom of the vessel, containing a duck/goose sternum worked into a small mask and the paw of a hare.

At some point, Room 1 was destroyed by fire. The floor of the northern space was partially covered by a 0.05-0.1m thick, rather compact, black layer with some disintegrated mortar and a large amount of charcoal particles and chunks. The eastern part of the floor was covered by a 0.05-0.2m thick, loose, light brown to yellow layer with clay chunks, limestone rubble,

disintegrated mortar, a lot charcoal particles and some tile fragments. Both layers were in their turn covered by a 0.3-0.5m thick, loose, yellow/red/black layer with a lot of charcoal chunks (of wooden beams), some tile fragments, limestone rubble and mortar chunks. At this height, the level of the higher floor of the front part of Room 1 was reached. A final fire debris layer over the northern space was a 0.2-0.4m thick, loose, brown-grey layer with a lot of disintegrated mortar, limestone rubble, tile and large charcoal chunks. The floor of the southern part of Room 1 was covered by a 0.05-0.4m thick, loose, black layer with mortar chunks, limestone rubble, tile and a lot of large charcoal chunks. Taken together, the entire Room 1, including its roof was caught in the fire and collapsed.

Especially in the northern, back space most if not all (remaining) content was consumed by the flames, and was found partly broken or affected by the fire within the debris layers resulting from the fire. A collection of bowls, dishes, trays, jugs and cups was broken but reconstructable. Some vessels were discoloured as a result of the fire. Considering the position of the fragments in the debris, the set of tableware vessels possibly was stored on shelves. Not all the pottery from these layers has been quantified yet and the material of the recent excavations still needs to be matched with that excavated in 1993. The same shapes as discussed in J. Poblome (1999: 193-194, 258-259, 287) were represented (mainly Sagalassos red slip ware types 1A140-3, 1B130, 1C140, 1C180 and 1F160), suggesting a preliminary date during the second half of the 5th century CE for this collection of material, implying a *terminus post quem* for the fire to have wreaked havoc.

Other small finds retrieved from the debris layers in the northern part of Room 1 were, in iron: a collection of small decorative nails (footwear?), some chisels, two *styli*, a knife blade, a spearhead (tools), a lock, a key, rivets, pins, and various sizes of iron nails (appliances possibly indicating the presence of shelving, boxes or chests?); in bronze: a bell, and a handle (of a box?); in wood: a brush; in fired clay: loom weights, a potter's rib, and two complete oil lamps; in worked bone: several pins, and a ring; and a concentration of coins (a money pouch?) with all issues datable to the end of the fourth/early fifth centuries CE, up to a century before the fire.

Apart from the presence of a collection of tableware and some cooking ware, the available archaeo-zoological and macro-botanical evidence possibly indicates food storage and preparation related to Room 1. The soil samples collected from the walking level immediately south of the room, over the parts where the mosaic floor had worn out in the walkway, contained annual crops such as cereals (barley and free threshing wheat) and pulses (mainly lentil), together with their weeds. These most probably represented staple crop storage. Also, in almost all of the samples remains of fruits/nuts were identified, apparently also stored in the room. Numerous needles of fir (*Abies cilicica*) were present too. The richest archaeo-botanical finds were made in the floor levels and fire debris layers in the southern part of Room 1. In all of these strata whole fruits or fragments of almonds (Prunus dulcis) were found. Their biggest concentration was found associated with two *pithoi*. Besides almonds, also fragments of apple/pear fruits (*Malus/Pyrus*), *Vitis vinifera* fruits, and seeds of pomegranate (*Punica granatum*) were present. The debris layer contained a quantity of hulled barley (*Hordeum vulgare* var. *vulgare*), together with remains of chaff and a diversity of weeds. A high amount of needles of fir (over 60 fragments) was noted, accompanied with those of cedar in the floor level. Also the tops of cedar twigs and fragments of conifer twigs with different diameters were identified. Two flotation samples collected near

one of the *pithoi* in the northern part of Room 1 was dominated by lentil (*Lens culinaris*). The wooden brush mentioned above and found within this space, was actually identified as a result of the macro-botanical analysis. Closer examination of the fragments of worked wood identified a wooden plate with holes drilled close to one another (diameter *c.* 0.5-0.6cm). The holes were filled with long and thin hairs of plant origin (*c.* 1-1.3mm in diameter). The brush's hairs had traces of branching, possibly representing tiny plant stems. The attested collection of archaeo-botanical finds corresponds in general terms to plant remains deposited in occupational layers resulting from food storage (a combination of main staple foods – cereals, pulses and fruits/nuts) and other activities, such as plant materials which could be used in domestic fires.

Also meat was stored or prepared in the northern part of Room 1, as some animal bones – interpreted as consumption refuse – were discoloured as a result of the fire. It concerned chicken bones, and also some sheep/goat, pig and cattle bones. The majority of the animal remains, found in the debris layers, showed no traces of fire and should be considered as domestic consumption refuse and possible butchery waste, alongside animal cadavers, discarded when the site was accessible for a while after the fire. Notably, the proportion of sheep/goat bones did not dominate, as usual in contemporary deposits in Sagalassos, but was more or less equal to that of cattle and pig remains. For sheep/goat, all skeletal elements were represented, except for the horn cores, and among the pig remains many cranial fragments and ribs were counted. In the case of cattle, mainly rib fragments, vertebra, metapodalia (from which one complete), and phalanges were identified. The metapodalia and phalanges can be indicative of butchery waste, thrown in upon the abandonment of Room 1. Finally, remains of at least two donkeys were registered, possibly indicating the dumping of cadavers.

Although no hearth, cooking set or kitchen was present in Room 1, food was apparently present and consumed here, possibly using portable appliances. The quantity and quality of the food remains, together with the collection of tableware, are the best indications for the preliminary identification of Room 1 as a family house, with living space in the front and a larder in the back. Further study of the arte- and ecofacts should confirm this hypothesis. The presumed house was installed by the end of the fourth century CE, when the damaged former public building of Site LE was re-arranged in separate units, and abandoned by *c.* 500 CE following a devastating fire. When the house lay in ruins waste was dumped on the premises and recyclable material looted, such as more or less complete roof tiles, of which very few were actually found in the debris layers; mostly only fragments.

Fig. 15. General view of Room 2.

Room 2

Room 2 (6.5m by 3.7m) (Fig. 15) was created by the addition of a division wall, built on top of the mosaic substrate in the former central room of the unidentified public building, in the course of the 5th century CE, or possibly already late in the previous one. The wall consisted of mortared limestone rubble with a coating of mortar, and some grey plaster patches near the bottom. The room was accessed from the south, through a reduced door opening of 1.1m wide, created by the addition of a dry wall of limestone rubble and spolia, including an architrave/frieze block, on top of the threshold of the façade of the former public building.

Inside, a 0.35m high, dry rubble division wall was constructed on top of the mosaic floor substrate. The wall was built perpendicular against the partition wall of Rooms 1 and 2 and was 2.7m long, leaving an opening at its eastern end. As was the case in Room 1, also this room consisted of two parts of respectively 1.9m and 4.20m deep. The low, internal division wall was built on top of a compact 0.04m thick, yellow layer containing some small 4th century CE sherds. This layer was deposited on the mosaic substrate, implying that the *tesserae* of the mosaic floor were already at least partially missing.

Another feature was a rubble stone (0.34x0.24m and 0.15m above the floor) with a flat upper surface situated more or less the middle of the room, and set within the floor substrate. This base could have carried a support for the superstructure over Room 2.

The original mosaic floor had already seen extensive weathering and damage. Most of the *tesserae* were missing, requiring the levelling out of the southern half of the room with a fill of very compact, dark grey, silty sand with some disintegrated mortar, pebbles and charcoal. This walking level contained 5th century CE pottery. The stone vessel installed in the mosaic floor was filled up as well. This fill held more pottery datable to the 5th century CE.

An unexplained niche-like opening was cut in the northern *opus vittatum* back wall. The semi-circular cut (height: 1.12m, width: 1.28m, depth: 1.11m) took the new eastern wall into account, and its bottom coincided with the mosaic floor. On the bottom of this man-made feature a large amount of *tesserae* was deposited, in a layer of up to 0.2m thick. These *tesserae* were the same as the ones in the few preserved patches of the mosaic floor in the former central room of the public building, suggesting a cleaning effort.

In the southern part of Room 2, three *pithoi* were uncovered, broken but more or less preserved *in situ*. One of these storage vats was placed against the west wall, the other two along the south side of the low, internal division wall. In the SE corner of Room 2, some kind of heating infrastructure was installed (Fig. 16). The feature was small and contained some charcoal/ash. It had heated sides, made of ophiolite clay (height: 0.11m) and also its bottom (width: 0.5m) consisted of the same clay. The feature was surrounded and supported by dark-grey, silty sand mixed with red and green ophiolitic clay, regular, cut volcanic tuff blocks (the largest one: 0.58x0.40x0.11m) and limestone rubble, installed on top of the 5th century CE walking level.

In the northern part of the room, two rectangular pits were dug through the mosaic floor substrate against the northern back wall. These two pits respectively measured 0.27x0.59x0.84m and 0.3x0.65x0.78m, and were positioned 1.9m apart. The sides of both pits and the channel connecting them (1.9x0.15x0.2m) were lined with mortar preserving the negative imprint of

Fig. 16. The heating infrastructure in the southern part of Room 2.

wooden beams. Clearly, the channel and the pits originally contained large beams of a heavy installation (Fig. 17). The fill of the western pit contained mostly large charcoal chunks, and also a 0.34m long stepped iron rod with a curled hook. Nine holes were discerned in the northern wall above the pits, of which three still contained fragments of iron, presumably to fix the upper parts of the installation. Four of these holes formed a frame of 1.2m by 0.95m. Understanding this installation is imperative to establish the function of Room 2.

Next to the eastern beam of the installation and in front of the niche-like cut in the northern wall, a circular negative trace (0.38m in diameter) was visible in the preserved *tesserae* of the mosaic floor. Soft friction marks implied regular twisting or moving motions, possibly of a vat or vessel of some kind.

Room 2 is preliminary considered as a small-scale production unit. The wooden installation in the back space could have been a vertical loom, for heavy items such as curtains or carpets. Alternatively, it could also have been a standing press, to fold washed garments and textile. Visual depictions of looms and frames related to textile working come to mind, as documented by L. Larsson Lovén (2001: 48-49) and P. Walton Rogers (2001: 158-161). In any case, the amount and variety of arte- and ecofacts within Room 2 is very limited, which seems to exclude its functioning as a house, but which, at the same time, hampers further interpretation. Finding parallels for the wooden installation will prove crucial. Possibly, the vats and the heat installation in the front space could also be related to textile washing (and/or dying?), facilitating the rinsing of stains (and the fixation of pigment?). These would not have been large enough for the worker to stand in them, but pieces of textile could be manipulated in these nonetheless. Vats are also a regular feature in tanning (van Driel-Murray 2001). On the whole, this workshop is not equipped as the much discussed *fullonica* of Pompeii, for instance (Flohr 2013: 96-180),

Fig. 17. Negative traces of the wooden installation against the back wall of Room 2.

but its equipment, plus the presence of running water and basins in the late Hellenistic Fountain House across the esplanade, and the traces of wear on the fountain's basins' parapets resulting from to and fro movement associated with textile washing, possibly could have catered for cleaning, rinsing, drying (and pressing?) cloth.

Room 2 seems to have been installed in the same period as the presumed house next door, by the end of the 4th century CE or a little later. In contrast to Room 1, the presumed textile workshop was not destroyed in a fire. No structural collapse or debris layers were noted in Room 2. Nothing could be related to the fire next door or any other disaster for that matter. Presumably, in such circumstances, the occupants of Room 2 had the opportunity to abandon their workplace in an orderly and organized way. There is no direct evidence available to place the abandonment process in time, but the fact that a later walking level covered the remains of Phase 3 and that the same layer was excavated over the ruin of Room 1, seems to suggest general contemporaneity of events.

The Coroplast Workshop

Room 4 (width: 4.3m, length: 6.5m), Room 8 (width: 3.5m, length: 6.5m) and the area in front of both rooms on the sidewalk could without doubt be identified as a coroplast workshop. In this workshop mould-made and decorated pottery, oil lamps and figurines were manufactured.

Room 4

Room 4 was created within the former central room of the public building by cutting and removing the mosaic floor and substratum, beyond the eastern wall of Room 2. In addition, the original partition wall with the eastern side room of the public building was taken down up to its mortared stone foundation. About 1m to the east, a new wall was erected, *c.* 0.7m wide, separating Rooms 4 and 8. As the original, southern doorway into Room 8, providing access from the sidewalk, was blocked, internal access to Room 8 was arranged by creating a door opening (width: 1.26m) in the new division wall.

The northern section of the new division wall was constructed differently from the southern part. In fact, only a lower course of *c.* 0.4m high and 1.2m long, in mortared limestone rubble topped with mortared brick fragments was built. This low wall was flanked on its northern side by a brick jamb/pilaster (9 bricks preserved of 30x30x4cm) mortared against the back wall of Room 4, and on its other side by the northern doorjamb of the door opening between Rooms 4 and 8, constructed of recycled limestone ashlars and rubble, completed and levelled with brick. In this way, an opening or recess was created in the northern section of the division wall between Rooms 4 and 8 (Fig. 18).

The southern doorjamb of the door opening between Rooms 4 and 8 equalled to the northern corner of the southern section of the new division wall between both rooms. The corner was strengthened with a spoliated ashlar and selected limestone rubble. The wall was constructed with limestone rubble, with bigger stone in the lower course and medium to small

Fig. 18. The recess in the northern part of the east wall of Room 4.

sized material on top. A second opening or recess of 0.56m wide was created in this wall section, at *c.* 0.68m north of the south wall. The northern edge of the recess was rudimentarily lined with various sized mortared brick fragments. The southern end of the division wall was integrated with the new southern façade wall, and constructed of recycled limestone ashlar and rubble, completed and levelled with brick

The entrance to Room 4 was a 1.53m wide door opening, flanked by rubble and spolia walls placed on top of the southern threshold. In contrast to Room 8, which was a potters working space and did not change function, the relative chronology and functions of Room 4 turned out to be much more complicated.

In a first period, a limekiln was constructed over the foundation of the removed internal wall of the former public building. The limekiln was located to the NW of the door opening between Rooms 4 and 8 (Fig. 19). It could only be partially exposed, as, in a later stage, a floor of brick fragments and a wall were constructed over its badly preserved remains. Only the lowest part of the structure was preserved, being its bowl-shaped floor (width: *c.* 1.3m, preserved depth: *c.* 0.38m), smeared with a layer of clay, which had turned red-brown as a result of the kiln's heat. The kiln opened towards the SW, sloping into a pit. The clay floor was partially lined with lime (max. thickness 0.07m). This feature was no recycled potters' kiln, as attested elsewhere at Sagalassos and also at Site LE, but purpose-built (for comparable structures and *modus operandi*, see Uschmann 2006 and Adam 1994: 65-73). The pit into which the limekiln opened also held a 0.03m thick layer of lime, and could have been used to hydrate or slake the

Fig. 19. The limekiln in the northern part of Room 4.

quicklime. This pit (length: *c.* 2m, width: *c.* 2.67m, max. depth: *c.* 0.84m) was bordered by a large stone (with lime attached) in the south, the foundation of the removed internal wall in the east, the northern back wall in the north, and continuing up to and beyond the west wall of Room 4. A small wall, of mortared, medium-sized limestone rubble and tuff blocks, was built in the bottom of the pit, connecting the northern back wall with the large stone in the south (length: *c.* 1.9m, width: 0.1-0.2m, height: 0.54m). The bottom of the pit was hard with small limestone fragments and lime. Only a small area was available to expose the pit as, in a later stage, a potters' kiln was built into it. The fact that the division wall between Rooms 2 and 4 was partially built over the pit, indicated that it was built relatively later. The western edge of the pit was located underneath the wall, as it was not visible in Room 2. Possibly, in the earliest stage of the re-arrangement of former public building, its central room was still used as such for a while. On the other hand, the limekiln could possibly also be related to the renovation process itself, producing lime for mortars and wall plasters, and the new division wall built as one of the final interventions.

One of the earliest actions in Room 4, once finished, was the construction of a potters' kiln (Fig. 20). The remains of this kiln were discovered to the SW of the door opening between Rooms 4 and 8. Here, a circular kiln was installed directly on top of the mentioned mortared stone foundation. Only the lower part of the firing chamber (inner diameter: *c.* 0.9m) and the central support (diameter: 0.17m) were preserved, with a flue opening (inner width: 0.48m) orientated towards the west and sloping down for *c.* 0.15m. The remains of the updraft kiln were lined with 3 layers of brick fragments (height: 0.15m, width: 0.05-0.15m). The bricks and outside were smeared with mud plaster, which had turned red-brown due to the kiln's heat. In its final stage, the kiln was recycled as a limekiln. A *c.* 0.05m thick, white-grey slaked lime layer with some limestone chunks remained on the bottom. The kiln could not be fully excavated as its opening was situated underneath a younger wall.

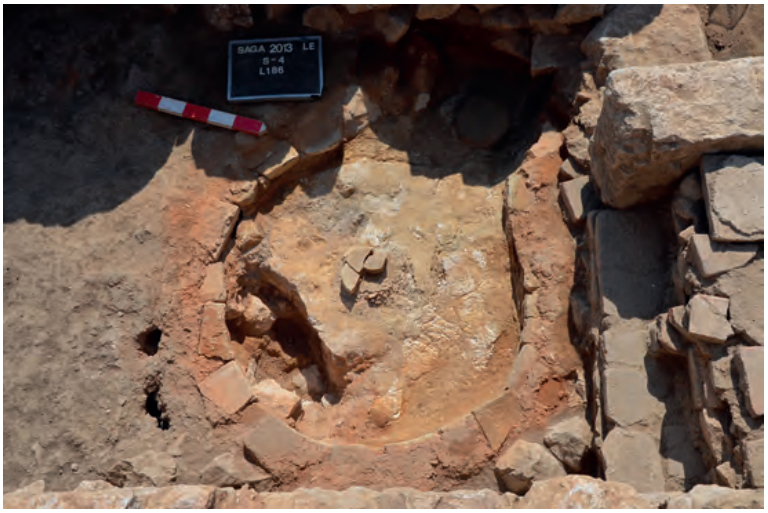


Fig. 20. The potters' kiln in the eastern part of Room 4.

Additionally, a sequence of floor levels was excavated in this area. The lowest floor was a compact layer, covering the mortared stone foundation of the former division wall between the central and east rooms of the public building and a levelling fill. The pottery in this floor level was preliminary dated to the second half of the 5th century CE. On top of this walking level, another beaten earth floor was installed, covering most if not all of Room 4, and containing

material which was preliminarily dated to the late 5th/early 6th centuries CE. This second floor level was a witness to most activities in Room 4. On the one hand, it was partially discoloured reddish from heat radiation when the previously discussed potters' kiln (or recycled limekiln?) in the central eastern part of the room was active. On the other hand, when the latter kiln was dismantled, part of its waste material was spread across the SW and central part of the room, partially covering the floor level. Furthermore, limestone rubble, brick fragments, patches of potter's clay and potting tools and moulds were registered on top of the second floor's surface, testifying to its use and abandonment.

The latter floor was not found in the central area of the northern part of the room, corresponding to the front side of two kilns in this location. The first potters' kiln was constructed into and over the lime slaking pit, in the NW corner of Room 4 (Fig. 21). The backfill inside the pit, on top of which the kiln was erected, could be dated to the late 5th/early 6th centuries CE, suggesting that this and the previously discussed potters' kiln were most probably sequentially and not contemporaneously in operation. Only the lower part of the firing chamber of the circular kiln in the northern part of the room was preserved, with an opening (inner width: 0.37m) oriented towards the southeast, and a bottom of light grey (volcanic) sand with small limestone pebbles. A quarter of the kiln could be studied, as a younger rectangular oven was built on top of it, obstructing further excavation. The updraft kiln was lined with 10 layers of brick fragments (preserved height: 0.38m) and had an inner diameter of *c.* 0.9m. The bricks and outside were smeared with mud which had turned red-brown from heat radiation. Small to medium-sized limestone rubble was used as outer shell. The kiln showed no evidence of final re-use as a lime kiln.

Fig. 21. The potters' kiln in the NW part of Room 4.

Adjoining the latter kiln to the east, the very badly preserved remains of another potters' kiln were identified (Fig. 22). Apart from the typical discoloured zones outlining the silhouette of the kiln (diameter: 0.55m, length: 1.2m), the only structural evidence was a stretch of six consecutive brick fragments lining the lower part of the firing chamber on the east side, and the fact that a cut was made in the northern back wall of the room to accommodate the back of the kiln. The opening of the kiln (width: 0.3m) was oriented towards the southeast. Below the 0.01m thick, volcanic sand floor of the kiln a stratum of small limestone rubble was excavated. A dark grey/black, silty sand layer with plaster and charcoal outlined the structure. The kiln was installed into the mentioned second floor level, covering most of Room 4. Although

Fig. 22. The badly preserved remains of the potters' kiln in the northern part of Room 4.

this fact suggests general contemporaneity of both kilns in the northern part of the room, their area saw many changes, resulting in a very partial and compact stratigraphical record, disallowing the detailed reconstruction of the sequence of events. In any case, this last kiln was thoroughly dismantled when Room 4 was still in use.

With the installation of the kilns in the northern part of Room 4, a new functional zone was created. Probably at the same time, the southern part of the room was also re-organized. A low wall divided the area into two rectangular zones, while the SE section was separated from the rest of the space and conceived as a room, with a door opening and shelving unit along its north side (inner width: 1.86-2m, inner length: *c.* 2.85m) (Fig. 23). A new beaten earth floor level covered this SE room, which did not extend beyond the space's boundaries, implying contemporaneity between walls and floor. The walls were partially built into underlying floor levels and their NW corner covered the dismantled flue of the original kiln of the workshop.

The west wall of the SE chamber (length: 3.25m) had a foundation of medium-sized limestone rubble. On top of that a narrow wall (*c.* 0.25m) of large spolia, brick fragments and small to medium-sized limestone rubble was placed. The wall was preserved to a height of 0.64m which is also considered as its original height. A doorjamb fragment was placed flat on top of the southern threshold of the former public building, continuing the line of this west wall. The SE room could be entered on the north side, via a door opening flanked by two rectangular limestone blocks. The threshold was made of small and medium-sized limestone rubble (width: 0.8m). Two

Fig. 23. General view of the re-arranged Room 4.

collapsed blocks found nearby could be related to the door opening. Between the door opening and the east wall of Room 4 a shelving unit was found (width: 0.89m, length: 0.53m, height: 0.45m). This unit of mortared, recycled brick fragments was partially constructed on top of the older foundation of the former public building. Up to eight brick layers were preserved. From the south side a specific build is recognizable. First, two layers of mortared brick fragments were placed, on top of which a more narrow section of mortared brick was placed. Upright brick fragments were also mortared against the south side of the upper part and a protruding support was created in the centre of the wall. We interpret this feature as a shelving unit, with two collapsed large tile fragments found just south of the unit perhaps representing the actual shelves. Another opening of 0.56m wide was noted in the east wall, which probably contained shelves as well. This shelving unit was accessible from both Rooms 4 and 8.

In the NE corner of Room 4, in between the north wall, the recess in the east wall and a new, short south wall, a floor section (width: 0.95m, length: 0.85m) was laid out in broken brick (Fig. 24). Its western limit was less regular and stopped where the cut in the northern back wall started. The new low south wall (width: 0.5m, length: 0.88m, height: 0.32m) consisted of two rows of large limestone blocks. The function of this feature was possibly related to the new partition wall inserted in the recess of the northern section of the division wall between Rooms 4 and 8. The new partition (width: 0.93m, preserved height: 0.9m) was actually more like a thin screen, consisting of a 0.15m thick brick wall, of loose build, creating a 0.4m deep niche or shelf. The wall was constructed of up to 15 layers of various sized half-bricks. Lightly baked clay was found in the interstices. In the centre, 0.13m above the bottom of the shelf, was a rectangular opening of 0.16x0.23m, closed off with a brick fragment. The softly baked clay, the brittleness of the bricks and the soot on these indicated that this wall came in contact with heat and smoke. Some regular tuff blocks were found in the soil that filled this niche afterwards. These blocks were likely part of this installation. From the other side, in Room 8, a similar soot-marked built was visible. On this side no floor section was found. In case the floor section and this screen should not be chronologically related, the brick wall could possibly have belonged to Phase 4 too.

Fig. 24. The broken brick floor in the NE corner of Room 4.

To be sure, the finding of three potters' kilns inside Room 4 is sufficient proof for its identification as part of a potters' workshop. Additional evidence was available, however, such

as the admixture of green potting in especially the upper floor levels of Room 4. This green clay, used for Sagalassos red slip ware and related coroplast products, was also found concentrated in particular areas of the room, such as the central western part of the room on top of the floor. However, the presence of most clay patches could be associated with the last phase of activity of the coroplast workshop, and was mainly dispersed in the northern part of Room 4. A 3 to 4cm thick, green clay layer was found in the cut in the northern back wall, and on top of the floor section in broken brick. This clay was also stuck to the lower 0.3m of the walls in the NE-corner of the room. As a matter of fact, most piles of clay and the largest quantity of green clay on and in the floor were found in the northern section of the room. At some stage, both kilns in this part of the room were put beyond use, dismantled and covered with floor material, including important amounts of green clay. At that stage, this part of the room could have been devoted to working the wet, green clay into the coroplast moulds. A small column base (diam. 0.34m), turned upside down, was positioned on top of the youngest floor of the coroplast workshop (Fig. 25), which covered and extended beyond the brick floor section. In this context, the column base can be presumed to have been recycled as a turnable potting table. Next to it, a small rectangular marble wall veneer fragment, with circular twisting and turning marks, was found.

Fig. 25. Potter's turntable in Room 4.

Other concentrations of less homogenous, green clay were documented in zones preliminary identified as shelving units: near the doorway into Room 8, in the southern half of the SE room, and in the open niche in the wall between Rooms 4 and 8.

Resulting from the activities in the workshop, the floor level slowly accumulated. Materials such as clay, charcoal, kiln fragments, potters' tools and moulds, and objects were trampled into the floor or fell on top of it. Various such accumulations were identified, but the discussion of the find material is beyond the scope of this contribution. Moreover, most of it still needs to be studied in detail and related to the phases of use and abandonment of the coroplast workshop. In general, the finds were datable to the 5th century CE and the early decade(s) of the next.

Room 8

Room 8 was a large working space for the potters, and seems to have been used as such during the entire activity span of the workshop. The room measured 6.5 by 3.5m, with a vault-

ed extension in the southeast corner of 1.7 by 2.2m, and no internal divisions (Fig. 26). Its only point of entry was through Room 4. The room was abandoned with a lot of potting equipment still present. While Room 4 contained mostly oinophoros and oil lamp moulds, the excavation of Room 8 produced mostly stamps and several mould making tools in ceramic and metal. The bulk of these objects were retrieved near the edges of the room on top of the floor level related to the last phase of the workshop. Moreover, similar to Room 4, several objects were also found in the later fills/slope deposits, as though these finds only found their "final" position after Phase 4 or during the final abandonment and gradual collapse of the area. The green potting clay, and also a small amount leather-hard pottery, was found trampled into the floor, and also in larger piles near the corners of the room. This room also contained patches of the clay used for the slip covering the vessels in two locations: in the northwest corner and inside a broken vessel in the south central section of the room. Two more recycled column bases/potting tables were discovered: one on the floor next to the central part of the west wall and the other inside the partially collapsed water channel which ran underneath this room.

Fig. 26. General view of Room 8.

A small sounding of 1x0.8m in the southwest corner of Room 8, dug below the oldest 5th century CE floor level of the coroplast workshop, revealed a burned layer containing late 4th century CE pottery with fire-damaged 5th century CE material. Further research is required to establish the extent and nature of these layers, as these may hold the key to understanding the beginning of Phase 3.

In contrast to Room 4 only one floor level could be identified and attributed to the 5th century CE. This very compact, beaten earth, brown-grey 0.05-0.15m thick floor with small mortar chunks, charcoal and red baked clay spots also incorporated the top of the water channel running underneath the room. The limestone spine of the channel had a distinct shine/smoothness which is considered to result from continuous (foot-)traffic. While the water channel was open at three locations in Room 8, only one of the openings seemed intentional in order to provide the potters access to water. The top of the channel was incorporated into the *opus vittatum* north back wall at 1.85m, below its dismantled top.

Only one installation, or rather the silhouette of one, could be related to this phase. Against the central section of the east wall and near the northwest corner of the niche, a circular

reddish heat-radiated imprint (of a dismantled kiln?) was visible. The area had a diameter of *c.* 1.25m. No further details were observed, making it difficult to relate this feature to a specific pattern of activity or chronology.

The Raised Sidewalk

Only a few patches of the late Roman mosaic floor remained in the part of the walkway in front of Rooms 4 and 8. Actually, the remains of two potters' kilns were uncovered (Fig. 27), of which one was partially worked into the mosaic substrate. The kilns were presumably installed after the ones in the north part of Room 4 were put beyond use. A first circular kiln was installed in the southwest corner of the sidewalk area, directly into the mosaic substrate. Only the lower part of the firing chamber (inner diameter: *c.* 1.4m) and the central support of cut brick (height: 4 bricks, 0.17m) were preserved, with the flue (inner width: 0.7-0.4m, length: 0.71m) oriented towards the northeast. The remains of the updraft kiln were lined with 8 layers of brick fragments (height: 0.37m, width: 0.1-0.13m). The bricks and outer side were smeared with mud plaster, which had turned red-brown due to the kiln's heat. In its final stage, the kiln was dismantled, levelled and filled with a small pottery collection datable to the 5th century CE. A part of the kiln waste material was used to create a small ramp up to the threshold of Room 4.

Fig. 27. The two youngest kilns of the coroplast workshop, installed on the sidewalk.

The second circular kiln was installed partly on top of the water channel in the northwest corner of the sidewalk area. Only the lower part of the firing chamber (inner diameter: *c.* 1.58m) was preserved. The remains of the updraft kiln were lined with 8 layers of brick fragments (height: 0.36m, width: 0.1-0.13m). Although the flue opening was not preserved, its reddish silhouette could be recognized (maximum width: 0.66m, maximum length: 1.08m). The opening was oriented towards the southeast. In its final stage, the kiln was recycled as a limekiln.

The activity area of the workshop was delimited in the south by the support wall of the sidewalk. A western limit could not be clearly defined. However, no evidence was found to establish that the workshop extended beyond the boundary of Room 4. In order to create an eastern border a wall was added in this phase (width: 0.72m, length: 4.23m), possibly partly on top of an already existing ashlar wall. This wall, made of ashlars, brick, rubble and tuff-blocks,

contained a doorway (width: 0.98m), granting access towards the east. The doorway was located just south of the kiln in the northwest corner of the walkway. The opening was barred by medium and large sized rubble at a certain point (in Phase 3 or 4?). To the south, a gap of *c.* 2m remained between the east wall and the edge of the walkway. This opening constituted another passage to the east, using the ashlars of the older wall below as a threshold.

While no clear floor level could be distinguished over the western half of the sidewalk in front of the workshop, a 0.05-0.1m thick, grey, compact beaten earth level containing small mortar chunks was noticed, covering the water channel in the eastern half of the area. In front of the threshold to Room 4, some evidence of metalworking (metal slag) could be related to this phase.

The style of the coroplast products produced in the workshop could be generally dated to the fifth century CE. The available evidence provided little clues to attribute the origin of the workshop, however. In contrast to Room 1, but in line with the presumed textile workshop, the coroplast workshop was not destroyed in a fire, nor could its abandonment be related to another disaster for that matter. Presumably, in such circumstances, the potters had the opportunity to abandon their workplace in an orderly and organized way. There is no direct evidence available to place the abandonment process in time. The latest stages of occupation were provisionally attributed to the early years of the 6th century CE. In contrast to the presumed textile workshop in Room 2, the content of which was largely curated, the potters of the coroplast workshop left hundreds of moulds, stamps, tools and their potting raw materials behind. The fact that occasionally green clay was still found drying inside moulds, that tools were retrieved as if in working sequence, and that the moulds in places seem to have fallen just in front of the shelves on which they were kept, does seem to suggest a sudden decision to abandon all.

The Water Infrastructure

For this phase, changes were also noted in the NE part of Site LE, affecting the water channel coming from the east and leading into the shaft. The middle section of the channel was replaced and pavement slabs were laid out on top of it. This space could be interpreted as an alley, providing access to the upper terraces. Its origins probably dated back at least to the original installation of the water infrastructure in this area. The repairs or modifications to the water infrastructure proved difficult to date, due to lack of associated material. The new middle section of the channel (inner width: 0.32m, inner height: 0.4m) with a length of *c.* 6.3m was slightly shifted in orientation and its construction method differed from the previous phase. The channel used the terrace wall as its north wall and its south wall consisted of limestone rubble, lined with brick fragments on the inside. These fragments were wedged dry on top of each other. An outer shell of small to medium-sized limestone rubble in a soft crumbly mortar bordered the channel. The bottom of the water channel had a 0.05m thick mortar layer on which a single row of brick of 3x3x3.5cm was placed. Dry medium to large-sized limestone rubble and spolia formed the roof of the channel.

The E-W water channel was covered by a partially preserved pavement of flat limestone and spolia (width: 1.52-1.63m, length: *c.* 4.3m), providing access to Space 5. A 0.3m

thick substrate of brown-grey silty sand with limestone rubble and mortar chunks was used to stabilize the alley slabs. Steps bordered the east end of the pavement.

The southern upper part and the arched east opening of the vertical shaft were broken or collapsed. Mortared limestone rubble and spolia were added in a repair attempt. A new terracotta water pipe was also fixed into the western side of the shaft. Possibly, the concave, pierced stone lid, originally covering the shaft, was found in the later colluvium layers, downslope.

The water infrastructure lost its function when it was intentionally blocked with soil and debris. The soil that filled the water channel contained pottery that ranged in date between the second half of the 1st and the early 6th centuries CE. The shaft was completely filled with soil and then filled with limestone rubble and mortar chunks to create a sort of platform. The filling of the shaft was probably one single operation. The ceramics from these layers were dated to between the late Hellenistic period and the second half of the 5th century CE. The fill(s) of the N-S water channel underneath Room 8 could not be excavated for safety reasons. Some material was collected from the top, however, and dated to the second half of the 5th century CE.

Space 5

To the north of the E-W water channel, an upper terrace and housing level was uncovered close to the surface. Only a small area was excavated within Site LE's boundaries. The southern edge of an E-W orientated building was found: Space 5 (inner width: 4.75m). The end of the structure was considered to be late Roman, as the last excavated layer starting at threshold level contained mainly 5th century CE material. The history and origin of Space 5 remain unknown. However, Space 5 still followed the orientation of the houses dating from Phase 1 and an older terrace wall was used as the foundation for the southern entrance. Chronological attribution remains difficult, as the SW corner of Space 5 was partially built on top of the NE corner of the vertical water shaft, built during Phase 2.

The visible part of the south wall of Space 5 was made of mortared limestone rubble and brick fragments (height: 0.8m). This wall interlocked with an east wall which could not be studied in detail. Space 5 had an entrance with brick threshold (width: 2.28m), leading into the alley. At some stage the door opening was narrowed by 0.69m and divided into two openings of 0.76m and 0.86m.

Organized Abandonment?

As with the original installation of the house in Room 1, the textile workshop and the coroplast workshop, seemingly the end of these patterns of activity at Site LE also happened more or less at the same time, at some point around *c.* 500 CE or in the early decade(s) of the 6th century CE. The question should be raised whether or not some scenario was being played out? The blocking of the water infrastructure was intentional, for instance, and this operation must have affected the water provisioning in the wider neighbourhood. No contemporary signals of change were picked in the wider area during the intensive urban survey programme, however.

Unfortunately it was impossible to determine whether the fire destruction of the presumed house in Room 1 was planned or not, but the absence of fire damage in Room 2 did seem to suggest some level of control over the fire. Was this fire the cause of the abandonment of the entire facility, or rather a consequence of the closing of the facility, following the blocking of the water infrastructure? The latter scenario would have allowed for content curation, in the presumed house as well as in the adjoining workshops.

Apart from the general contemporaneity of the end of these textile and coroplast workshops, the fact that their abandonment seemed sudden should be taken into account, provoking the open question whether these actions were deliberate and, to a certain degree, planned. At least, the abandonment of a functional coroplast workshop was conscious, even if the reasons remain unknown. In general, the 6th century CE coroplast iconography and typology had changed compared to the material at Site LE, making this collection somewhat old-fashioned by the time of abandonment? Potter's tool kits were proven to be personal in the case of the craftsmen of Sagalassos (Murphy and Poblome 2012), suggesting it was less likely for such tool sets to be recycled elsewhere. Notwithstanding their abandonment, the structure of both workshops did not seem to have been affected, as indicated by the lack of roofing materials and collapse or destruction debris in the stratigraphical record, creating the opportunity for continued use of Site LE's infrastructure.

Phase 4

During the final phase of occupation at Site LE, another thorough re-organisation of the structures was carried out (Fig. 28). Due to slope erosion processes, unfortunately, most structures were badly preserved and most walls only stood to a very limited height.

Rooms 1 and 2, and the Western Part of the Sidewalk

Both former rooms were connected with one another, by breaching their division wall. The rooms were still accessible from the sidewalk to their south, while the staircase connecting the latter with the lower sidewalk in front of the former Neon Library was narrowed by a simple limestone rubble wall. In this way, a new unit of three rooms was created (Fig. 29), connecting into one another, and with a wide (door?) opening on the east side, connecting with the newly arranged space extending over the east half of the former sidewalk. A small room was separated in the NE corner of the space created over the sidewalk. Due to slope erosion processes, most features were fairly badly preserved, disallowing, for instance, to conclude whether this new unit, or parts thereof, was still roofed or open.

After the fire in the presumed house of Room 1, no efforts were made to clean the room. Instead, two fills were arranged on top of the collapse. The lower fill was a 0.5-0.6m thick, loose, dark brown, silty sand fill with some mortar chunks, limestone rubble and tile fragments. The stratum contained a lot of large fragments of table ware. The upper fill was 0.1-0.2m thick and a very compact, dark grey, silty sand fill with limestone and charcoal spots on top. The pottery in this layer showed breakage patterns resulting from trampling, typically

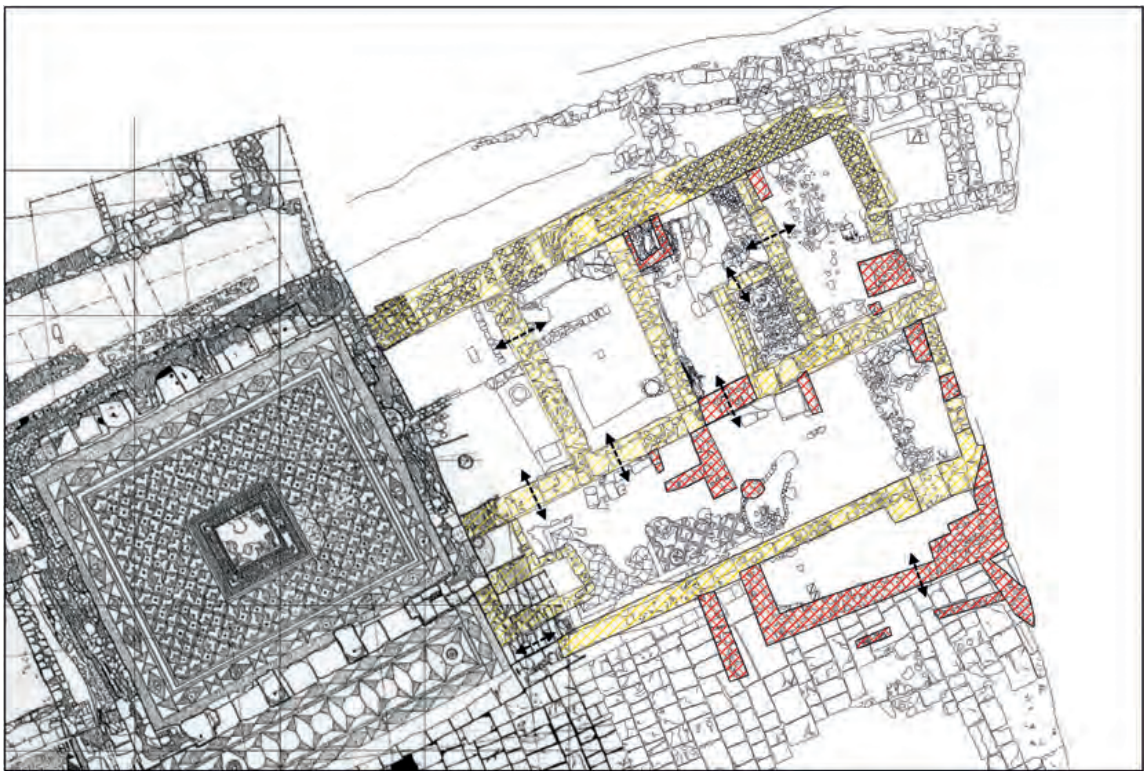


Fig. 28. Overview of the walls and features associated with Phase 4.

Fig. 29. General view of Rooms 1 and 2, Phase 4.

associated with walking levels. The new floor level reached up to the height of the threshold in the southern façade. The ceramics in both levelling fills were dated to the 6th century CE. No finds could be directly linked to the floor level.

An opening of 0.75m was created in the partition wall between Rooms 1 and 2, in order to combine both spaces. A segment of mortared small limestone and tile rubble was added on top of the southern part of the doorway. On top of the east wall of Room 2, a section was added as well (height: 0.82m): a course of tile fragments was used to fit large limestone rubble and spolia on top. Only one fill of 0.3-0.4m thickness was added inside Room 2, reaching up to the height of the threshold in the southern façade. This layer was datable to the 6th century CE and consisted of fairly compact, dark brown-grey, silty sand with a lot of red and green ophiolite stone and clay chunks. In the SE corner of Room 2, an irregular dry wall of limestone rubble (length: 1.6m, height: 0.35m) was built on top of the fill, perpendicular to the eastern wall, at about 1.99m from the southern wall. The top part of the wall partitioning off the northern part of the room was still visible as well. A step (height: 0.3m) of several flat spolia was added in front of the threshold of Room 2, providing easier access. The step was flanked by a short extension of the division wall between Rooms 1 and 2.

The new space created over the sidewalk in front of Rooms 1 and 2 was covered with a 0.05 to 0.1m thick layer, attributable to the 6th century CE. On top of that fairly compact, dark to light brown, silty sand and clayey layer, with some limestone, a couple of black coloured areas was visible, related to open fires or hearths. A rectangular Olynthian, upper millstone (0.46x0.37x0.13m) was found on top of it as well. Olynthian milling installations have been registered in a couple of other excavation areas within Sagalassos, and are normally not associated with private, household processing of grain. Considering the quantities such mills could process, their use by professional millers/bakers can be postulated. Sampling for macro-botanical analysis of the walking level on top of sidewalk confirmed the processing of grain, in the area where the milling stone was found. The samples were dominated by free threshing wheat grains (*Triticum aestivum/durum*), and also contained remains of plums (*Prunus* sp.) and walnut (*Juglans regia*), and weed seeds/fruits and needles of fir (*Abies cilicica*). The archaeobotanical finds are indicative of food preparation/consumption and the presence of fires or hearths.

In the NE corner of the new space over the sidewalk a small room (length: 1.21m, width: 1.45m) was built. It was delimited by a wall of cut tuff blocks in the west (length: 0.72m, height: 0.46m), the south wall of Room 2 in the north, a dry wall of limestone rubble in the south (length: 1.43m, height: 0.43m), and a dry wall of limestone rubble, tile and spolia in the east (length: 2.39m, height: 0.35m). The latter wall was a continuation of the division wall between Rooms 2 and 4. In the SW corner of this small space, an opening of 0.49m was arranged. A large deposit of fragmented tile was found inside this space. The pottery retrieved from this locus was 6th century CE in date.

The remodelling of the spaces of this unit, as well as their use and eventual abandonment can be attributed to the 6th century CE. The mill stone and the macro-botanical evidence are indicative of grain processing and milling activities, at a higher than household level. It is unclear whether and how the fairly large collection of local tablewares in Room 1 can be associated with these activities, as much of this material formed part of fills. It is also unclear

whether these spaces were originally roofed. The milling activity would suggest as much, while the presence of open fires invokes caution, even if not making a roof of some kind impossible.

Rooms 4 and 8, and the Eastern Part of the Sidewalk

In similar terms, Rooms 4 and 8 and the part of the sidewalk in front of both rooms, was re-organized as one or two new units.

After the coroplast workshop was abandoned, no new floor levels were created in Rooms 4, as had happened in Rooms 1 and 2. Various loci were identified, however, which contained mostly large fragments of the local Sagalassos table ware, datable to the 6th century CE. Upon abandonment, the entrance to Room 4 was barred with limestone rubble and brick fragments. During this phase, this had been the only entrance into Rooms 4 and 8.

In the same period, a rectangular oven (Fig. 30) was built over the remains of the potters' kiln in the NW corner of Room 4 and its backfill. Only the lower ash chamber was preserved (inner width: 0.87m, inner length: *c.* 1.22m, height: 0.74m). The oven used the northern wall of Room 4 as its back wall. The other walls were constructed with up to 13 layers of stacked half-bricks of various sizes. The sidewalls partially rested on top of the lower circular potters' kiln. The west wall was built against the division wall between Rooms 2 and 4. The trapezoidal opening of the ash chamber (width: *c.* 0.4m) in the southern wall was covered by a recycled doorsill (77x40x13cm). Charcoal was attested in the area of the opening. These remains were considered to originally have formed part of a bread kiln, of which the oven floor and arched superstructure were not preserved. Unfortunately, Roman bread kilns are not that well known, apart from the textbook examples of the reliefs on the tomb of M. Vergilius Eurysaces in Rome, the House of the Oven in Pompeii or the mosaic panel from Saint-Romain-en-Gal (Curtis 2001: 366, Thurmond 2006: 68-71, Blanc and Nercessian 1992: 85, Pirson 2007: 460-463), and their functioning is mostly deduced from general similarities with other pre-industrial baker's ovens.

Fig. 30. The preserved lower part of the rectangular oven in Room 4.

The upper part of the oven had been dismantled in a controlled manner, thus creating a level top. Its southern opening was also closed off by a marble flat slab (47x40x8cm) and the ash chamber was backfilled, containing 6th century CE material in the top levels. A concentra-

tion of similar bricks, with soot marks, was noticed to the east of the structure, forming part of the upper fill of the north section of Room 4. Taken together, this evidence is indicative of conscious abandonment behaviour, putting the oven out of use.

In Room 8 a new floor level was arranged, containing material which was preliminary dated to the second half of the 6th century CE. The new floor substrate ranged in thickness from 0.05 to 0.3m in thickness, related to the arching of the former water channel. The substrate was rather compact, dark brown grey and contained limestone and brick fragments, green clay chunks, charcoal and mortar chunks.

The SE part of Room 8 was converted into a kitchen, featuring a stone mortar and a well preserved cooking set, partly installed in the arched niche in this corner of the room (Fig. 31). In order to create a level surface for the cooking set the green clay was re-arranged and more or less evenly spread in the area of the niche (thickness: 0.05-0.1m). In the area to the south of the feature (max. width: 0.9m), which is considered behind it, a considerable amount of mostly large fragments of the local table ware, datable to the second half 6th century CE, was found. A short N-S wall, made of brick fragments and spolia, contained a narrow doorway (width: 0.42m) from which this pantry(?) could be entered. In the area in front of the cooking set (max. width: 0.8m) nearly no finds were registered, while the soil was very compact (thickness: 3-5cm) and contained stratified ashes and charcoal, resulting from repeated cleaning operations.

Fig. 31. The cooking set in Room 8.

The cooking set itself was made of regular medium-sized limestone rubble at the corners and backside and brick and tile fragments as the main body, kept together by mud plaster (length: 1.35m, width: 0.7m, height: 0.35m). Heat radiation caused the mud plaster to bake and turn reddish. The centre of the stove contained the stoking chamber, which opened to the north and was covered by an arched tuff block fragment (width: 0.25m, height: 0.17m) with clear soot marks. A *pithos* rim fragment was installed in front of the stoking chamber. The top of the stove contained three round depressions that were connected to the stoking chamber. While the central depression was located immediately above the latter, the other two were connected to the chamber by a small funnel (diameter of the depressions from east to west: 0.32m, 0.1m and 0.12m). On its west side a large stone slab was integrated into the feature (0.96 x 0.46 x 0.1-014m).

The aforementioned stone mortar was found round the corner, in the main room. It was in fact a re-used cylindrical late Hellenistic/early Roman Imperial decorated stone funerary urn (preserved height: 0.58m, outer diameter: 0.51m). The mortar was lined on its south side by a single course of three medium-sized tuff blocks.

Although food preparation seems to have been the main occupation in Room 8, it may not have been the only one: a lime kiln and two lime settling basins were registered in the area as well. A lime settling basin (1.07x0.57x0.34m) was found in the northwest corner of the room. Its fill was preliminary dated the 6th century CE, while the floor it was dug into was 5th century CE in date. Another basin was found in the central area of the former(?) walkway, installed against the threshold ashlars of the southern façade (left unexcavated). The circular molten base of a lime kiln (diameter: 0.7-0.8m) was noted, partially dug into the north side of the potter's kiln in the southwest corner of the walkway. It remains difficult to establish whether these activities took place at the end of Phase 3 or rather in Phase 4, however.

What other activities took place in the eastern half of the raised sidewalk is still unclear. The floor level remained more or less the same as during Phase 3, while the area in front of Rooms 4 and 8 was extended to the south, claiming a section of the street (max. inner width: 8.06m, max. inner length: 2.52m). In this way, a new square space or room of roughly 8 by 8m was created, opening into the western unit. This extension was built by first adding a fill, preliminary dated to the 6th century CE. The platform was bordered by dry built walls (width: *c.* 0.7m) made of spolia, rubble and brick and tile fragments. An entrance was created near the southeast corner of the platform (width: *c.* 1m). In the southeast corner, east of the doorway, the podium wall thickened to *c.* 1.60m.

The intensive urban survey campaign of 1999 indicated that the surface finds in the general area of the east slope towards the Theatre petered out after the middle of the 6th century CE (Martens 2004: 215). The eastern unit or units, and Phase 4 of Site LE for that matter, can be considered largely compatible with this evolution. The activities at Site LE lasted into the second half of the 6th century CE, but possibly stopped before the end of that century. The dismantling of the bread kiln as well as the blocking of the entrance into Room 4 and 8 seem to suggest a scenario of orderly and planned abandonment, not resulting from a sudden or disastrous event. The functional indications of the eastern unit(s) were related to food preparation. The well-preserved kitchen in Room 8 was a fortuitous find, related to household activities. The bread kiln, on the other hand, was in line with the Olynthian mill stone found in front of Room 2, suggesting the presence of a professional bakery during the final phase of occupation of Site LE.

The detailed find processing of all phases of occupation at Site LE shall hopefully provide further insights into the chronology and nature of the many activity patterns the site and its features witnessed during more than half a millennium.

Acknowledgements

This research was supported by the Belgian Programme on Interuniversity Poles of Attraction (http://iap-cores.be/), the Research Fund of the University of Leuven (GOA 13/04), and Projects G.0562.11 and G. 0637.15 of the Research Foundation Flanders (FWO) (http://sagalassos.be/en/projects). We would like to thank the Ministry of Culture and Tourism of the Republic of Turkey, its Kültür Varlıkları ve Müzeler Genel Müdürlüğü and its annual representatives (Tevfik Göktürk, Ankara Anadolu Medeniyetleti Müzesi – Yalçın Yılmazer, Bergama Müzesi – Arif Küçükçoban, Burdur Müzesi) for the excavation permissions, support and most appreciated aid during the 2012, 2013 and 2014 fieldwork campaigns. Each year we enjoyed the quality of collaboration between the excavation team, the architectural conservation and recording teams, the finds lab, the finds specialists, the illustrators, and the photographers. We are most grateful to Hasan Uzunoğlu, Joke Somers, Joëlle van den Akker, Sam Cleymans, Gizem Uygun, Dave Geerts, Göze Üner, Özge Başağaç, prof. Hande Kökten, Emine Kocak, Nerina Da Silva, Emre Yaman, Ansje Cools, Başak Kıroğlu, Daniele Malfitana, Giovanni Fragalà, Nalan Fırat, Philip Bes, Carla Swerts, Merel Baeyens, Bruno Vandermeulen, Danny Veys, and Joeri Theelen. The 2012 and 2013 seasons were directed by prof. Marc Waelkens, the 2014 one by prof. Jeroen Poblome, assisted in each of these seasons by Arch. Ebru Torun.

Bibliography

Adam, J.-P., 1994 — Roman building. Materials and techniques. Bloomington: Indiana University Press.

Balmelle, C., M. Blanchard-Lemée, and J. Christophe, 1985 — Le décor géométrique de la mosaïque romaine. Répertoire graphique et descriptif des compositions linéaires et isotropes. Paris: A. et J. Picard.

Dunbabin, K.M.D., 1999 — Mosaics of the Greek and Roman World. Cambridge: Cambridge University Press.

Flohr, M., 2013 — The world of the *fullo*. Work, economy, and society in Roman Italy. Oxford: Oxford University Press.

Larsson Lovén, L., 2001 — Images of textile manufacture in funerary iconography, In: M. Polfer (ed.), L'artisanat romain: évolutions, continuités et ruptures (Italie et provinces occidentales). Monographies Instrumentum 20, 43-53. Montagnac: Editions Monique Mergoil.

Martens, F., H. Vanhaverbeke, and M. Waelkens, 2008 — Town and suburbium at Sagalassos. An interaction investigated through survey, In: H. Vanhaverbeke, J. Poblome, F. Vermeulen, M. Waelkens, and R. Brulet (eds.), Thinking about space. The potential of surface survey and contextual analysis in the definition of space in Roman times. Studies in Eastern Mediterranean Archaeology 8, 127-149. Turnhout: Brepols.

Murphy, E.A., and J. Poblome, 2012 — Technical and social considerations of tools from Roman period ceramic workshops at Sagalassos (Southwest Turkey): not just tools of the trade? *Journal of Mediterranean Archaeology* 25(2): 71-91.

Poblome, J., 1999 — Sagalassos Red Slip Ware. Typology and Chronology. Studies in Eastern Mediterranean Archaeology 2, Turnhout: Brepols.

Poblome, J., M. Corremans, P. Bes, K. Romanus, and P. Degryse, 2008 — It is never too late… The Late Roman initiation of amphora produc-

tion in the territory of Sagalassos, In: I. Delemen, S. Çokay-Kepçe, A. Özdizbay, and Ö Turak (eds.), Euergetes. Festschrift für Prof. Dr. Haluk Abbasoğlu zum 65. Geburtstag, 1001-1012. Antalya, Suna & İnan Kıraç Research Institute on Mediterranean Civilizations.

Quatember, U., V. Scheibelreiter, and A. Sokolicek, 2009 — Die sogenannten Alytarchenstoa an der Kuretenstraße von Ephesos, In: S. Ladstätter (ed.), Neue Forschungen zur Kuretenstraße von Ephesos. Archäologische Forschungen 15, 111-154. Vienna: Österreichischen Akademie der Wissenschaften.

Scheibelreiter-Gail, V., 2011 — Die Mosaiken Westkleinasiens. Tessellate des 2. Jahrhunderts v. Chr. bis Anfang des 7. Jahrhunderts n. Chr. Sonderschriften des Österreichischen Archäologischen Institutes 46, Vienna: Phoibos Verlag.

Uschmann, K.-U., 2006 — Kalkbrennöfen der Eisen- und römischen Kaiserzeit zwischen Weser und Weichsel. Befunde-Analysen-Experimente. Berliner Archäologische Forschungen 3, Rahden/Westf.: Verlag Marie Leidorf.

Van Driel-Murray, C., 2001 — Technology transfer: the introduction and loss of tanning technology during the Roman period, In: M. Polfer (ed.), L'artisanat romain: évolutions, continuités et ruptures (Italie et provinces occidentales). Monographies Instrumentum 20, 55-67. Montagnac: Editions Monique Mergoil.

Waelkens, M., 1993 — Sagalassos. History and archaeology. In: M. Waelkens (ed.), Sagalassos I. First general report on the survey (1986-1989) and excavations (1990-1991), 37-81. Leuven: Leuven University Press.

Waelkens, M., E. Paulissen, E. Owens, B. Arıkan, L. Gijsen, M. Martens, V. Mataoucheck, and K. Vandaele, 1995 — The 1993 excavations in the Fountain House-Library area, In: M. Waelkens and J. Poblome (eds.), Sagalassos III. Report on the fourth excavation campaign of 1993, 47-89. Leuven: Leuven University Press.

Waelkens, M., H. Kökten Ersoy, K. Severson, F. Martens, and S. Sener, 2000 — The Sagalassos Neon Library mosaic and its conservation, In: M. Waelkens and L. Loots (eds.), Sagalassos V. Report on the survey and excavation campaigns of 1996 and 1997, 419-447. Leuven: Leuven University Press.

Walton Rogers, P., 2001 — The re-appearance of an old Roman loom in medieval England, In: P. Walton Rogers, L. Bende Jørgensen, and A. Rast-Eicher (eds.), The Roman textile industry and its influence. A birthday tribute to John Peter Wild, 158-171. Oxford: Oxbow Books.