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## **Stabian Baths in Pompeii. New Research on the Archaic Defenses of the City**

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## ABSTRACT

### Stabian Baths in Pompeii

#### New Research on the Archaic Defenses of the City

Mark Robinson – Monika Trümper – Clemens Brünenberg – Jens-Arne Dickmann – Domenico Esposito – Antonio F. Ferrandes – Giacomo Pardini – Alessandra Pegurri – Christoph Rummel

The plan of the Archaic city of Pompeii and the existence of a distinct walled *Altstadt* have been much debated in scholarship. The area of the Stabian Baths plays a key role in this debate. Based on a series of excavations in the palaestra of the baths, Heinrich Sulze (1940) and particularly Hans Eschebach (1970s) reconstructed a defensive wall and parallel ditch in this area. Eschebach also identified an Archaic street and city gate in the northern part of the baths. While Eschebach's reconstruction was challenged by later research, the evidence and his interpretation of his trenches have never been systematically reassessed. It is the aim of this paper to fill this crucial gap. Based on the re-exposition of Sulze's and Eschebach's archaeological contexts and new excavations it is shown that no traces of an Archaic wall, robber trench, palisade, or ditch or of any other Archaic features can be securely identified in the area of the Stabian Baths. Focus here is on a key trench in the palaestra (Area III) that had been excavated by both Sulze and Eschebach and provides the most important insights into the development and use of this terrain, from the Bronze Age to A.D. 79. The archaeological contexts are described in detail and interpreted particularly with a view to the early history of Pompeii, and more briefly with a view to the development of the baths.

## KEYWORDS

Pompeii, Stabian Baths, *Altstadt*, Eschebach, stratigraphic excavation

# Stabian Baths in Pompeii

## New Research on the Archaic Defenses of the City

### Introduction

<sup>1</sup> The Stabian Baths in Pompeii are not only of interest for the study of the development of Roman bathing culture, their strategic location means that investigations of the bath complex have played a major role for the reconstruction of the urban development of Pompeii. Sulze had dug several trenches in the palaestra of the baths in 1940, and in 1970, the German architect and town planner Eschebach made use of Sulze's unpublished plans in his monograph on Pompeii's urban development<sup>1</sup>. Subsequently, Eschebach himself made 36 soundings in the Stabian Baths, which led to a partially revised reconstruction of the development of this site, published as a monograph in 1979<sup>2</sup>.

<sup>2</sup> Eschebach presented an intriguing model of urban and cultural development. In the 7<sup>th</sup> century B.C., Pompeii would have been founded as an *urbs quadrata*, occupying only the southwestern corner of the later city (Fig. 1). The locality of the Stabian Baths would have included a street that led to the east gate of the town and continued as the major east-west artery in town; and a subterranean chamber tomb of Etruscan type, located appropriately outside of this city<sup>3</sup>. In the 6<sup>th</sup> century B.C., this nucleus would have been enlarged towards east. A new fortification wall with ditch would have been built about 100 m to the east of the first wall, running right through what later became the palaestra of the baths with a city gate in the area of later ›bathing cells‹ (N1–N5) (Fig. 2. 3. 4)<sup>4</sup>. The east-west oriented street (*decumanus maximus*) would have continued in use. The chamber tomb would now have been located in the inner pomerium, to the south of

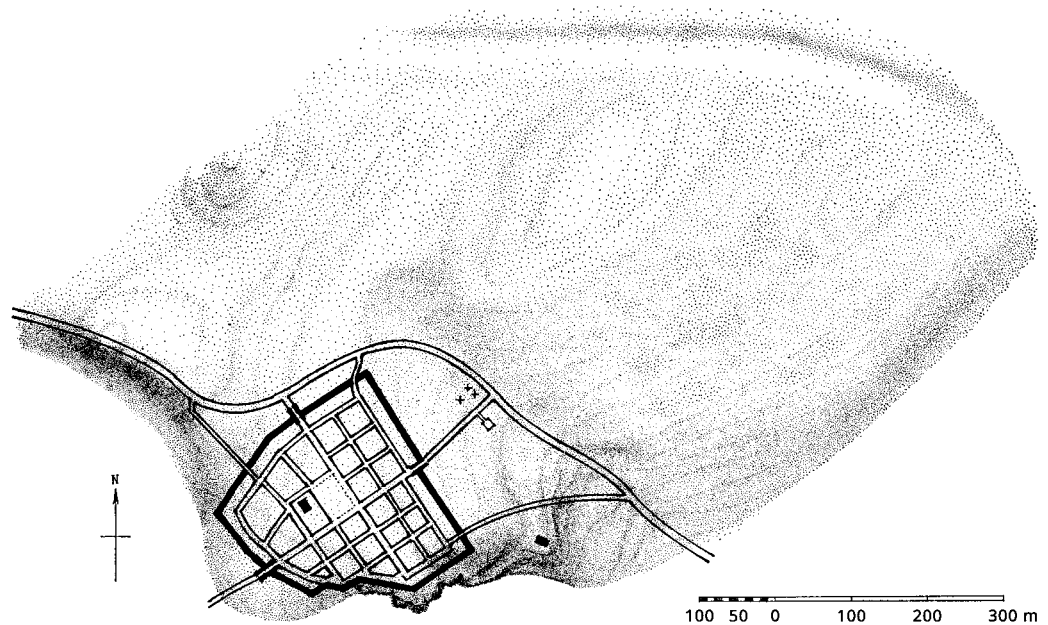
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<sup>1</sup> Eschebach 1970, 41–45 suppl. 4–6. Sulze's documentation was destroyed during the bombing of Dresden in 1943, see Eschebach 1979, VII. The trenches made in 1940 are briefly described in an unpublished Italian excavation notebook: »Giornale dei saggi di scavo stratigrafico eseguiti nelle Terme Stabiane« from September 1940, which includes 13 typed pages and a plan that shows the trenches numbered I–X in the palaestra and rooms G, Q and R.

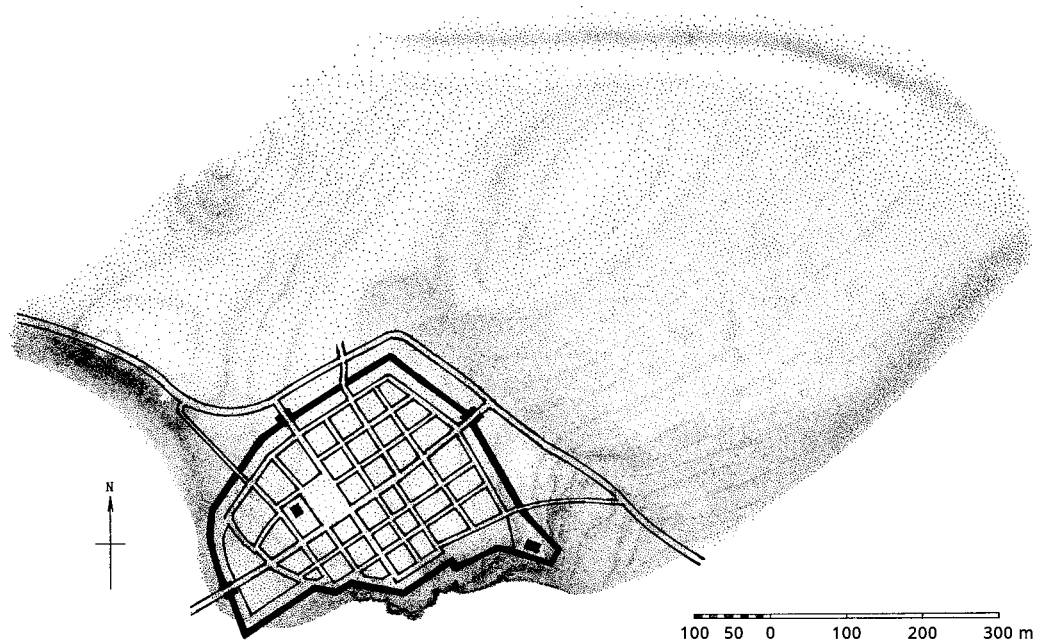
<sup>2</sup> Eschebach 1979; cf. particularly the phase plans in Eschebach 1970, suppl. 4–6 with those in Eschebach 1979, pls. 34. 36. 37.

<sup>3</sup> Eschebach 1970, 17–24.

<sup>4</sup> Eschebach 1970, 24–40 figs. 8. 11 suppl. 4.



1



2

Fig. 1: Pompeii, *Altstadt* Phase 1 (urbs quadrata) according to Eschebach (scale 1 : 10 000)

Fig. 2: Pompeii, *Altstadt* Phase 2 according to Eschebach (scale 1 : 10 000)

the decumanus, and a deep well would have been built to the north of the decumanus, in convenient vicinity of the gate.

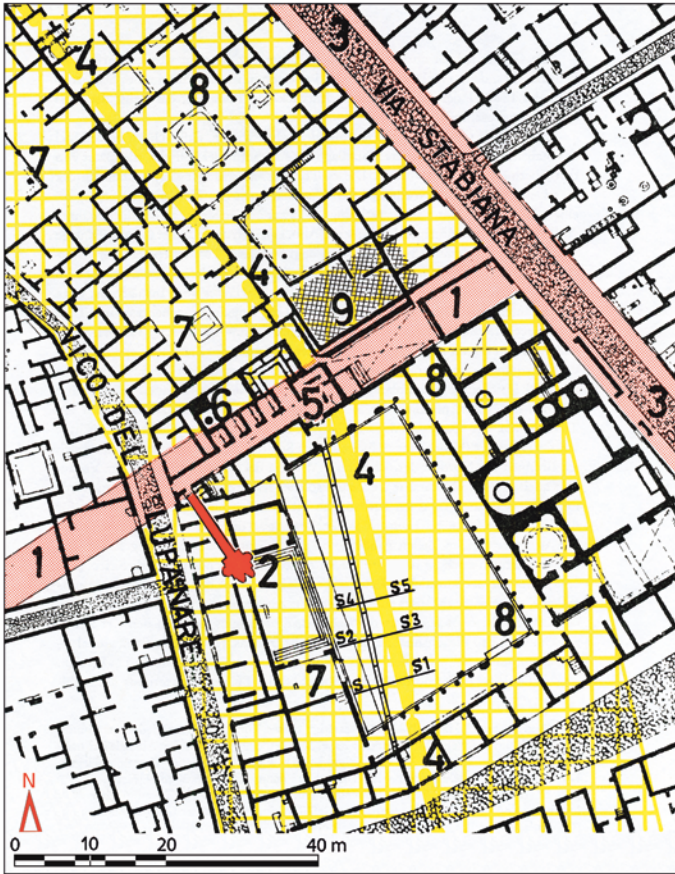
3 When the fortification in its current extension was built, the *Altstadt* wall would have been razed and a Greek palaestra with a Greek bath would have been built on the terrain of the Stabian Baths in the 5<sup>th</sup> century B.C. from which developed the Roman thermal complex that was buried by Vesuvius in A.D. 79 (Fig. 5)<sup>5</sup>.

4 Eschebach's developmental model has been repeatedly criticized for the urban development of Pompeii, notably the reconstruction of the *Altstadt*, but his arguments and evidence have never been systematically reassessed<sup>6</sup>. A research project

5 In Eschebach 1970, 41 this transformation is still dated to the 4<sup>th</sup> century B.C.; in Eschebach 1979, 64, however, to the 5<sup>th</sup> century B.C.

6 For the urban development, see e. g.: Lauter 1973; Kockel 1982, 180; De Caro 1985; De Caro 1992; Richardson 1988, 36–50; Dickmann – Pirson 2002; Dickmann – Pirson 2005; Bonghi Jovino 2011; Giglio 2016; Avagliano 2018; Osanna – Giletti 2020, 9–11



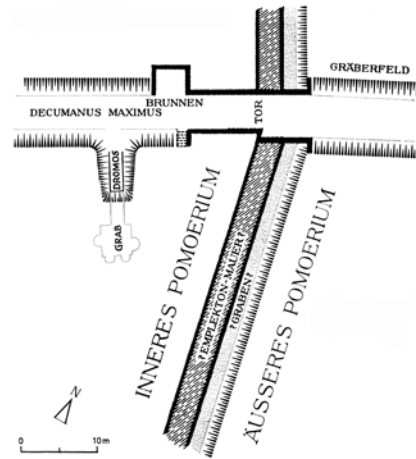


3

Fig. 3: Area of the Stabian Baths, reconstruction of Archaic features. Red: chamber tomb; pink: original decumanus maximus (1) with city gate (5) and old commercial road (Via Stabiana, 3); yellow: Altstadt wall (4); checkered: inner (7) and outer (8) pomerium of Altstadt; black dot: deep well (6); black checkered: house of insula type; S-S5: Sulze's trenches in the palaestra (scale 1 : 1000)

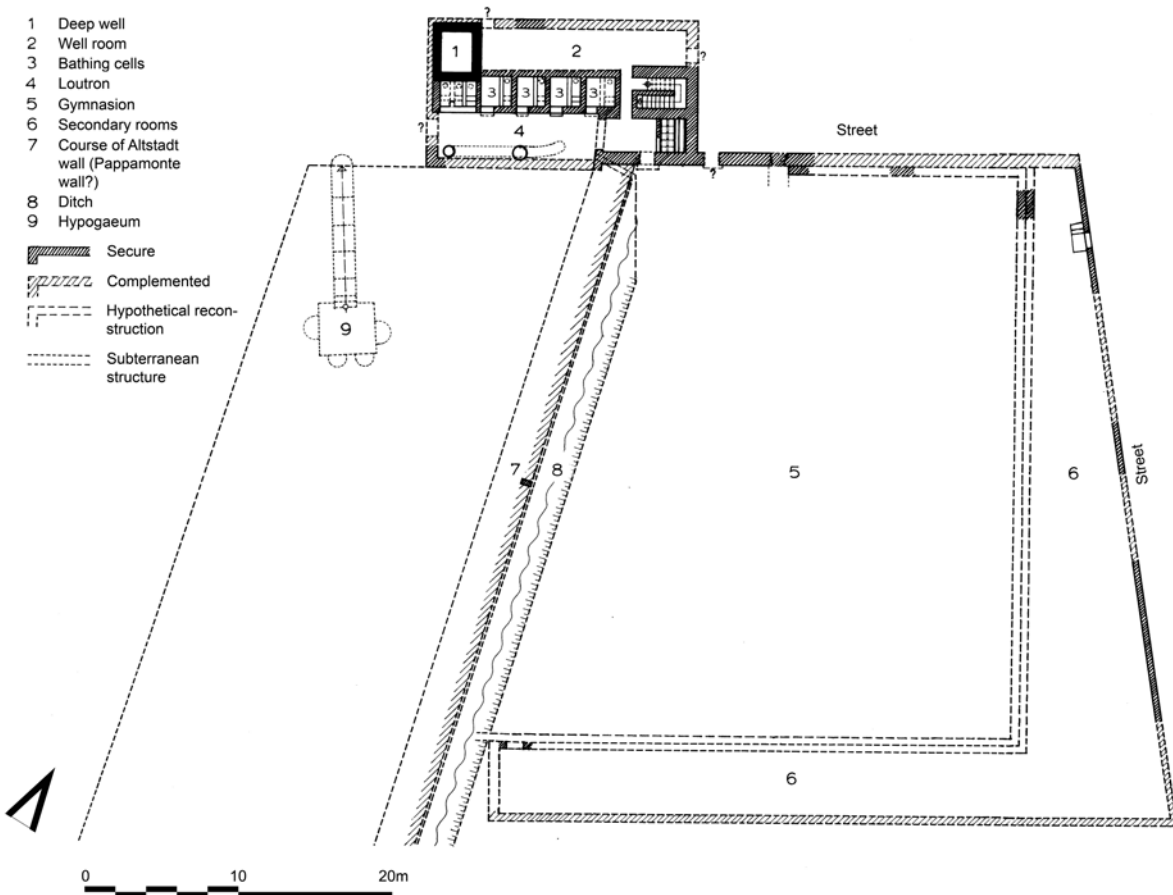
Fig. 4: Reconstruction of the Altstadt defenses according to Eschebach (scale 1 : 1000)

Fig. 5: Eschebach's reconstruction of the first phase of the Stabian Baths locating the pappamonte block in an Altstadt wall (scale 1 : 500)



4

- 1 Deep well
  - 2 Well room
  - 3 Bathing cells
  - 4 Loutron
  - 5 Gymnasion
  - 6 Secondary rooms
  - 7 Course of Altstadt wall (Pappamonte wall?)
  - 8 Ditch
  - 9 Hypogaeum
- Secure
  - Complemented
  - Hypothetical reconstruction
  - Subterranean structure



5

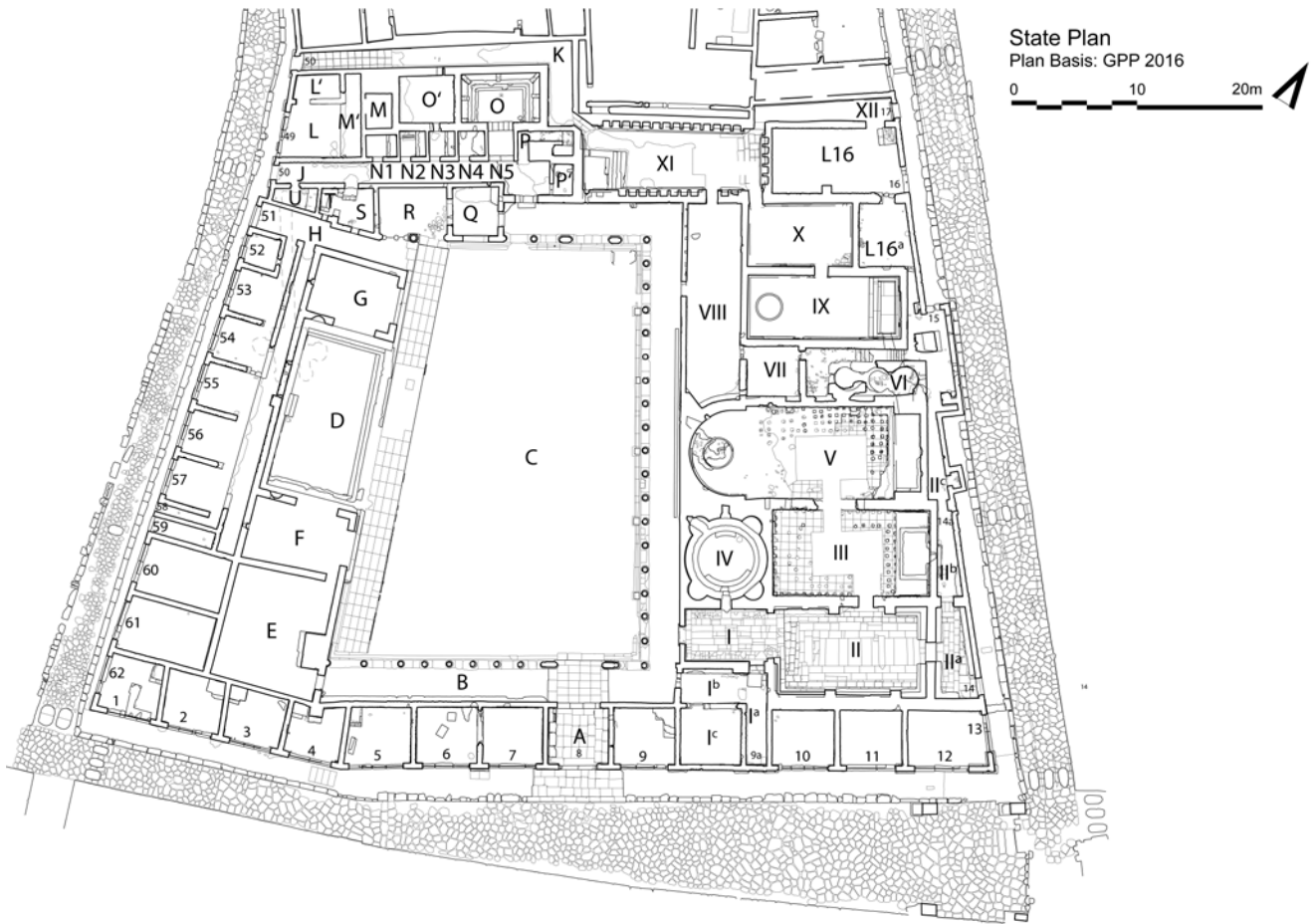


Fig. 6: State plan (scale 1 : 600)

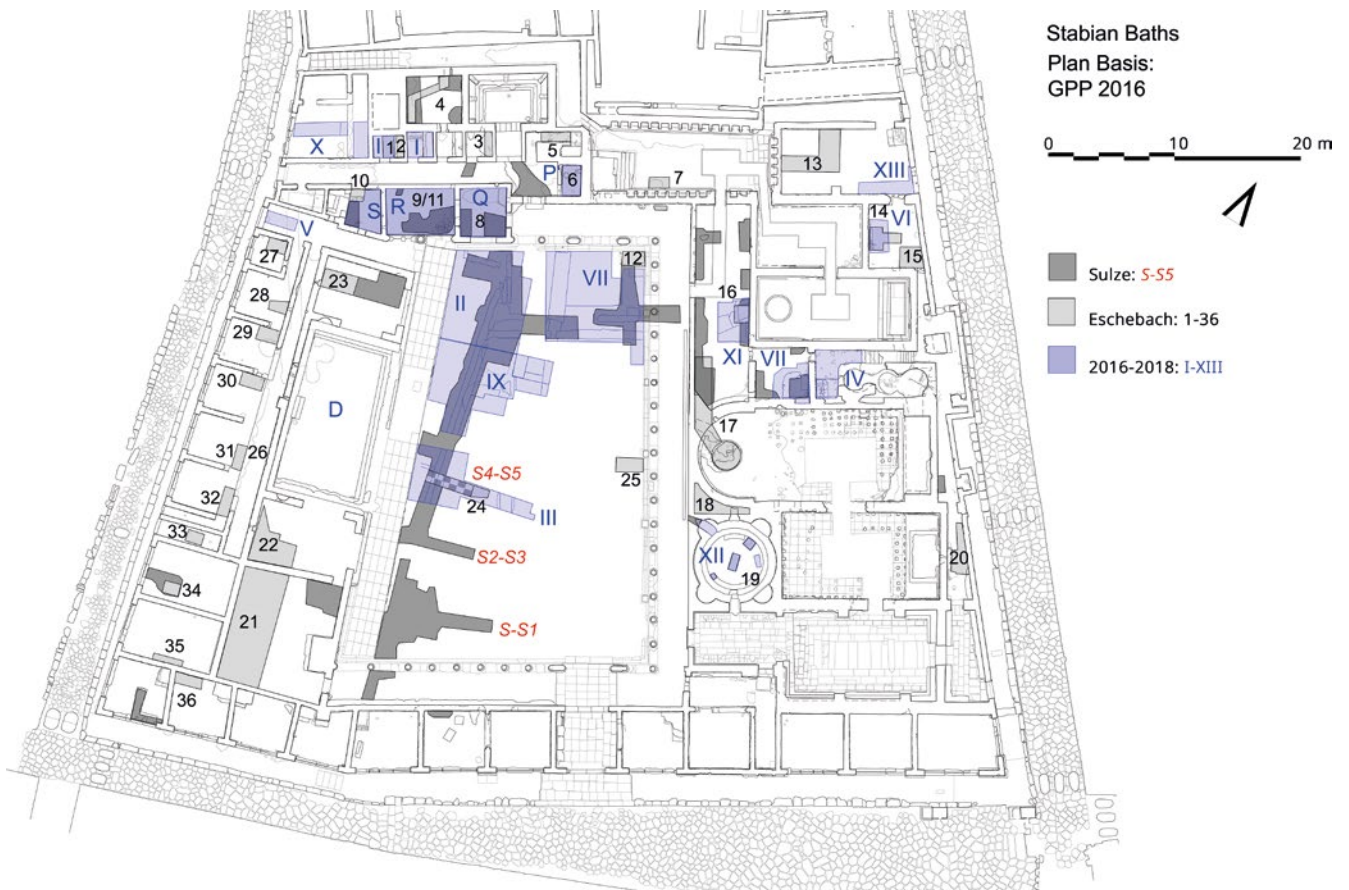
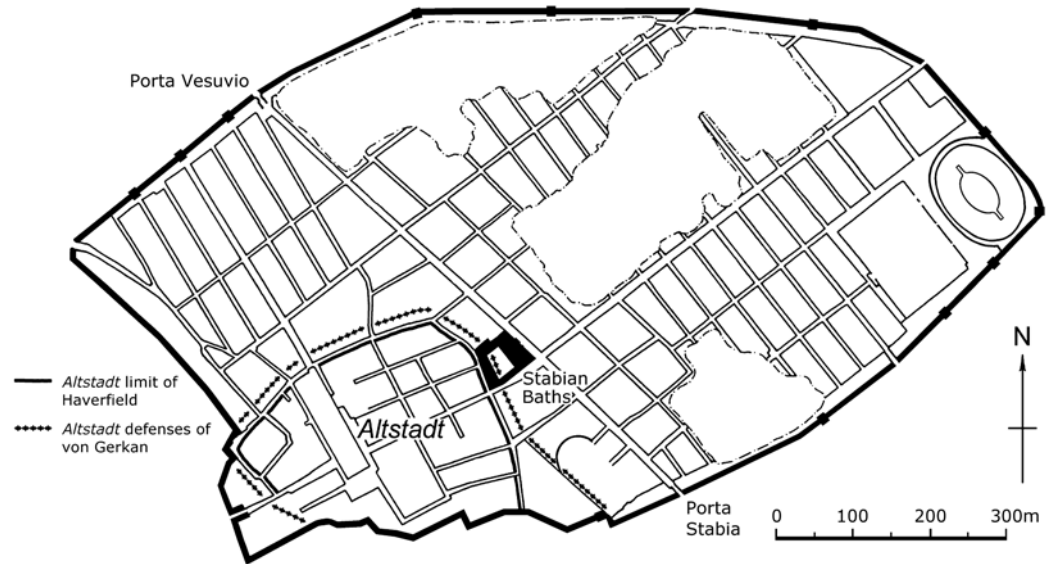


Fig. 7: Excavation areas (scale 1 : 600)





8

begun in 2015 and dedicated to *Bathing Culture and the Development of Urban Space in Pompeii* aims to fill this gap by including a detailed study of the Stabian Baths. In a cooperation between the Freie Universität Berlin and Oxford University, seven campaigns were executed between 2015 and 2019<sup>7</sup>.

5 The aim of this article is to discuss one of the two central debated questions arising from the work of Sulze and Eschebach: the existence, date, and course of the *Altstadt* fortification on the building lot of the Stabian Baths. The results of stratigraphic excavations provide a clear answer to this question and show that long-held notions about the development of Pompeii must, once and for all, be significantly revised. The other central question, that of the origin and early development of the Stabian Baths has already been covered in another paper<sup>8</sup>.

6 In order to reassess Sulze's and Eschebach's arguments and evidence, the new project systematically re-excavated Sulze's and Eschebach's most important trenches, in order to fully document and understand them. Wherever possible, trenches were enlarged with the aim of gaining undisturbed findings and stratigraphies (Fig. 6. 7).

## History of Research

7 The debate about the *Altstadt* or original city of Pompeii, from which developed the larger town buried by the great eruption of Vesuvius, predates the involvement of Eschebach in the archaeology of the city. As the excavations of the 19<sup>th</sup> century gradually revealed the street grid of Pompeii, it was initially thought that the town had been laid out to a single plan<sup>9</sup>. However, in 1913 Haverfield observed that in the SW corner of the walled town there is a small network of streets, about 300 by 350 m across, which harmonizes ill with the streets of the rest of the town (Fig. 8)<sup>10</sup>. This area includes the Forum but not, he noted, the earliest building yet excavated at Pompeii, the Doric

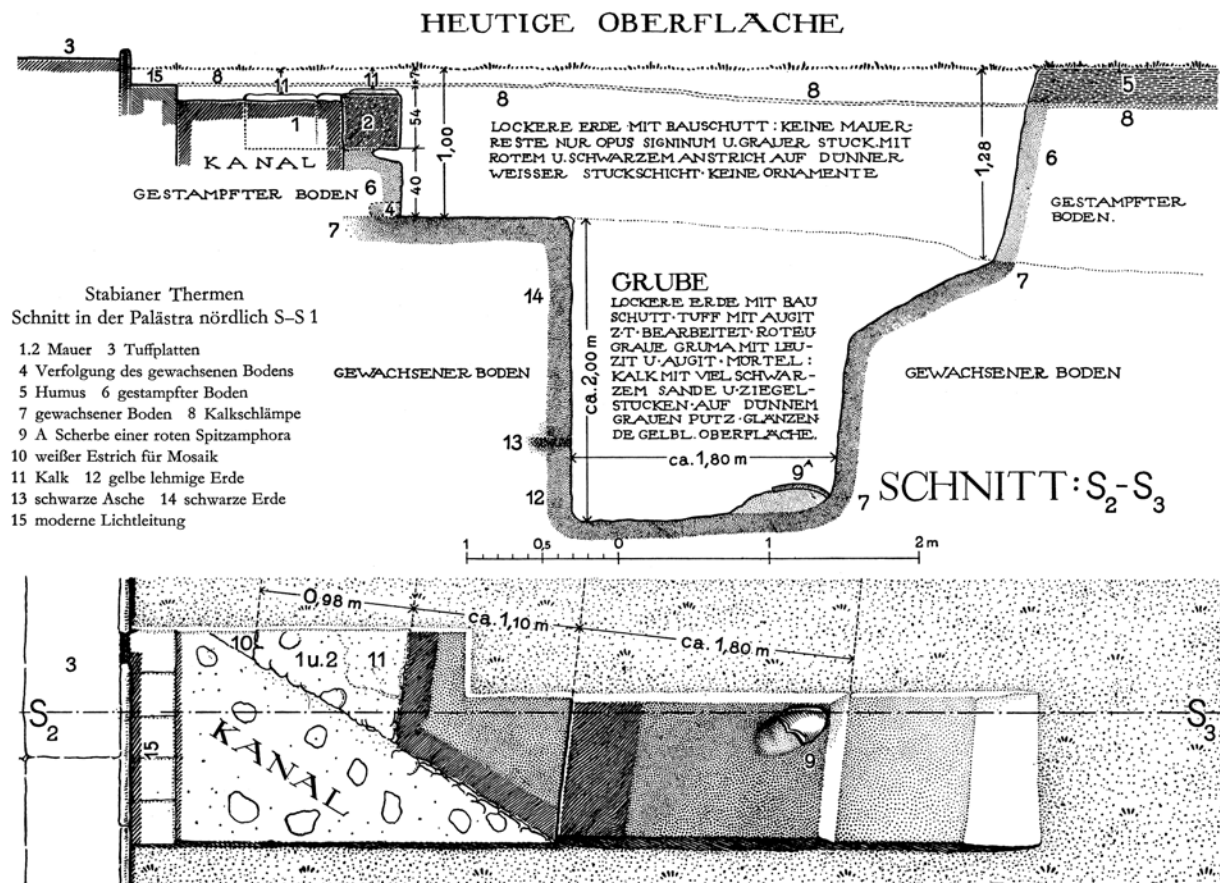
Fig. 8: Different reconstructions of the *Altstadt* (scale 1 : 10 000)

7 For preliminary results see: Trümper 2017a; Trümper 2017b; Trümper 2018; Trümper 2020; Trümper et al. 2019. From 2015 to 2018, the project was carried out within the frame of the Excellence Cluster »Topoi. The Formation and Transformation of Space and Knowledge in Ancient Civilizations«, research group C-6 on Cityscaping.

8 Trümper et al. 2019.

9 Geertman 2007, 82 f.

10 Haverfield 1913, 63–66.



9

Fig. 9: Sulze's trench S2-S3 at the Stabian Baths (scale 1 : 50)

Temple of the Triangular Forum. He suggested that this temple could either have been located just within the first town wall or just outside it, protected by the precipice on which it stands. Haverfield regarded the entire area as having the appearance of an *Altstadt*, possibly of Oscan date from which grew up the greater city of Pompeii.

8 The area of the *Altstadt* was strategically located on a slight promontory of the lava edifice of Pompeii, its western and southern limits being defined by the cliff edge to the lava flow, overlooking the Bay of Naples to the west and the valley of the river Sarno to the south. Although the ground gently rose to the north, it sloped down to what became the Large Theater and the Via Stabiana along the eastern side.

9 Von Gerkan postulated the existence of a defended Archaic *Altstadt* from which the larger walled area of settlement, the *Neustadt*, developed<sup>11</sup>. He suggested the expansion to have been Samnite, placing the event towards the end of the 5<sup>th</sup> century B.C. From the 1930s onwards, the stratigraphic investigations of Maiuri were discovering Archaic structures and artefacts of the 6<sup>th</sup> century B.C. within (and indeed beyond) the area of the *Altstadt*<sup>12</sup>. Maiuri excavated many remains of the Archaic period but ignored their implications because this phase was problematic for him<sup>13</sup>.

10 The first claim to have located the defenses of the *Altstadt* was made by Eschebach who had assisted Sulze with his excavations in the palaestra of the Stabian Baths. In 1939 Sulze found a NS-oriented double wall, which marked the former boundary to the western side of the palaestra of the baths and a house now largely beneath the buildings of the western side of the baths. Two trenches, Schnitt S2-S3

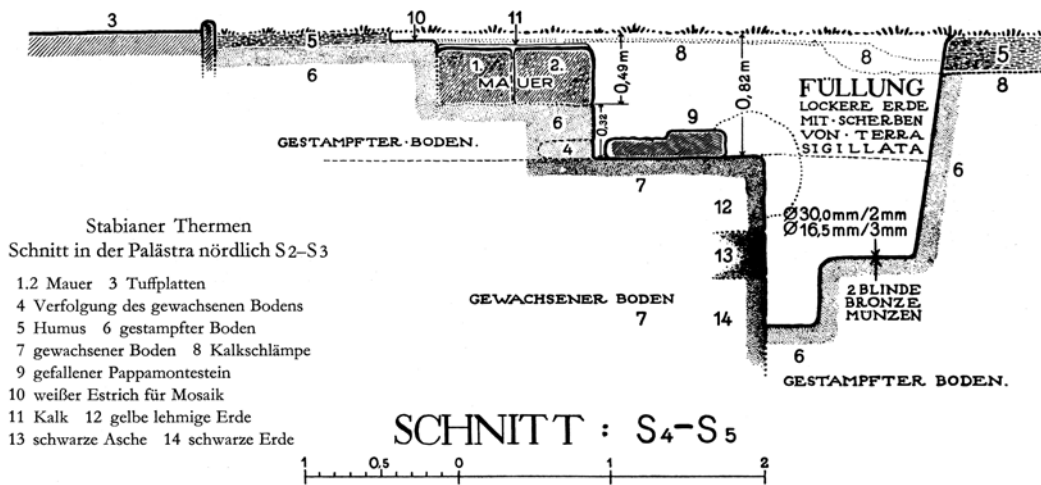
11 von Gerkan 1924, 1940.

12 For the history of research on Pre-Roman Pompeii, see Bonghi Jovino 2011; Giglio 2016; Avagliano 2018, 5-18; Osanna - Giletti 2020, 9-11

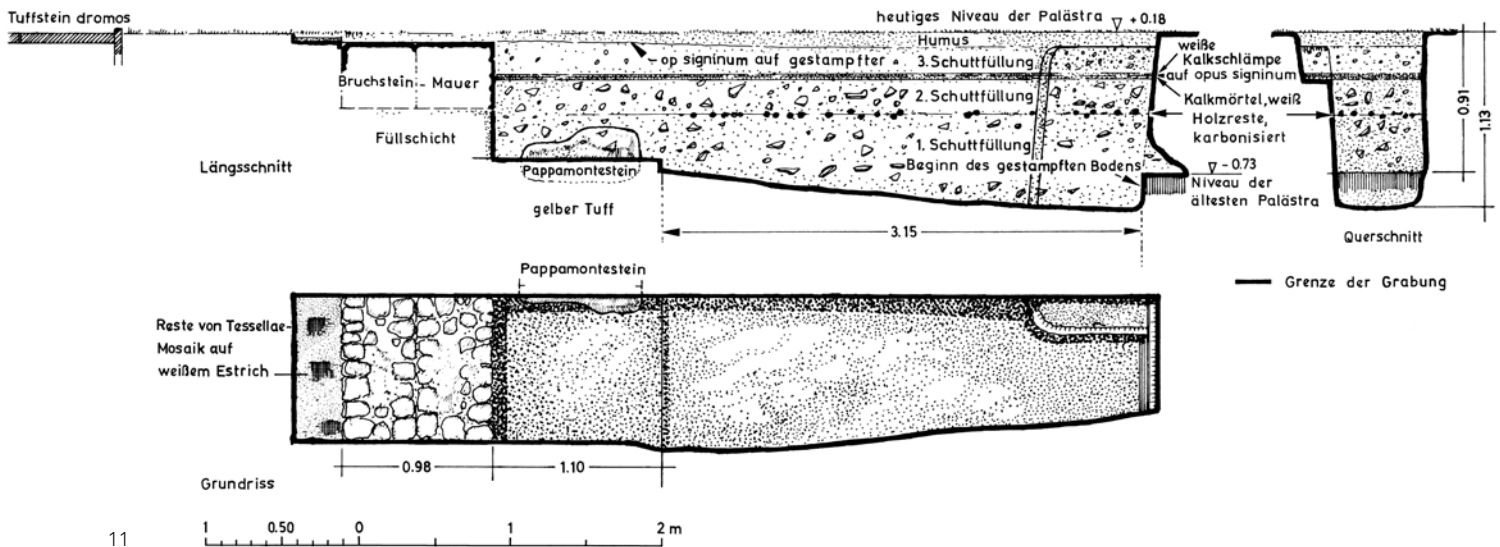
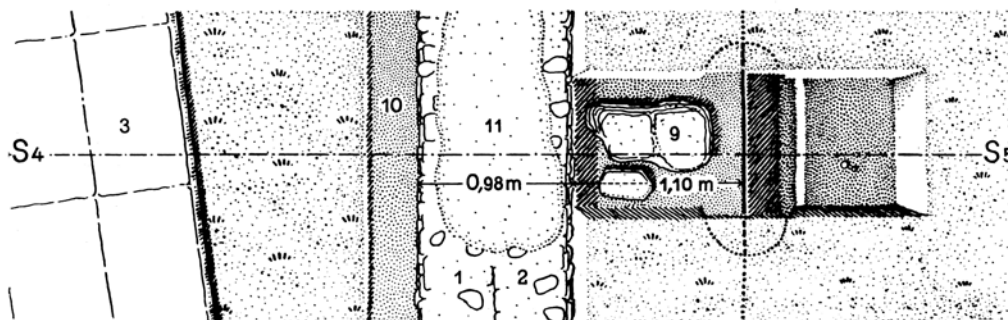
13 Giglio 2016, 14 f.



## HEUTIGE OBERFLÄCHE



10



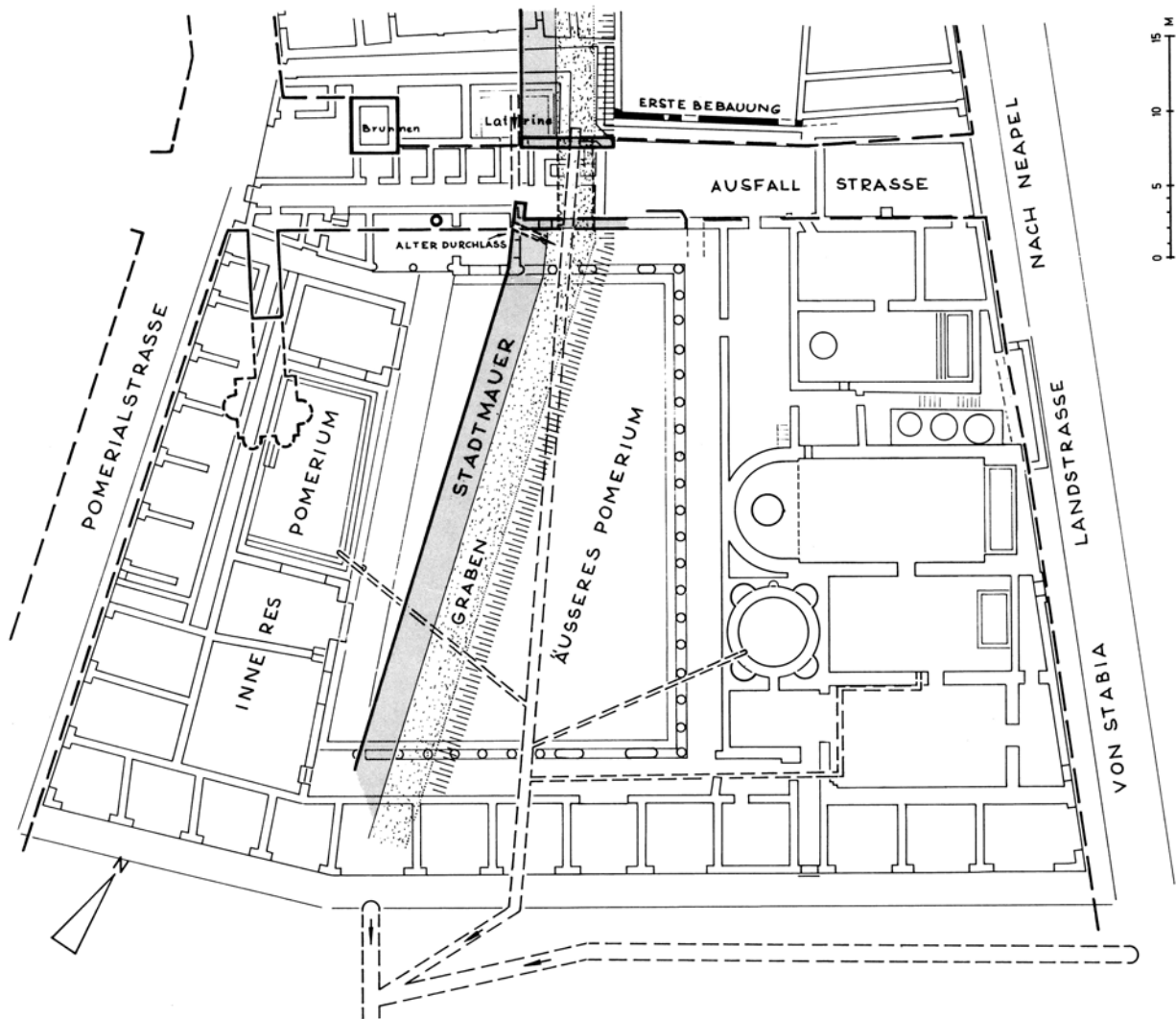
11

and Schnitt S4-S5, were dug to the east of the double wall. The illustrations of these trenches published by Eschbach were possibly the original drawings of Sulze (Fig. 9. 10)<sup>14</sup>. Each trench showed a ledge about 1.10 m wide, immediately to the east of the double wall, which comprised layers of soil and volcanic ash. Further east was a *Grube* (pit or ditch), which was at least 2.00 m deep in S2-S3 and at least 1.10 m deep in S4-S5. The pit in S2-S3 was filled with building demolition rubble including stone, plaster and mortar while S4-S5 had a loose rubble fill with sherds of *terra sigillata*. In the center of S4-S5, above the soil and ash layers, there was a block of pappamonte, a weak grey volcanic tuff, 0.80 m long upon it. Pappamonte blocks were commonly used for Archaic

Fig. 10: Sulze's trench S4-S5 at the Stabian Baths (scale 1 : 50)

Fig. 11: Eschbach's trench 24 at the Stabian Baths (scale 1 : 50)

14 Eschbach 1970, suppl. 2. 3.



12

Fig. 12: Eschebach's reconstruction of the Altstadt defenses (scale 1 : 500)

structures in the 6<sup>th</sup> century B.C. at Pompeii<sup>15</sup>. Sulze interpreted the deep pit as the negative of the Altstadt wall which would have been made in Emplekton technique; the pit would have been created by the demolition of this wall and removal of its foundations once the city expanded<sup>16</sup>.

11 As mentioned above, Eschebach postulated a two-stage development of an Archaic Altstadt at Pompeii using the street plan of the town and Sulze's results from the Stabian Baths. Phase 1, the original Altstadt of the 7<sup>th</sup> century B.C., was centered around the forum with an eastern limit just beyond the Vicolo di Eumachia (Fig. 1)<sup>17</sup>. Only in a second phase, during the 6<sup>th</sup> century B.C., did the Altstadt have the perimeter suggested by von Gerkan (Fig. 2. 8) running through the palaestra of the Stabian Baths<sup>18</sup>.

12 In 1973, Eschebach re-opened Sulze's trench S4-S5, re-exposing the papamonte block (which, strangely, he mis-located too far north on his trench plan) and extending the trench eastwards to establish the limit of the loose rubble-filled feature (Fig. 11)<sup>19</sup>. Eschebach thought this block to be *in situ* and that it would most likely have

15 Esposito et al. 2011; Giglio 2016; Avagliano 2018, *passim*.

16 As claimed by Eschebach 1975b, 182; this is also shown in Eschebach 1970, 31 fig. 11 (here Fig. 3); and Eschebach 1970, suppl. 4 a (here Fig. 4), which shows the Emplekton wall and, with question mark, a ditch to its east.

17 Eschebach 1970, 17–24.

18 Eschebach 1970, 24–40.

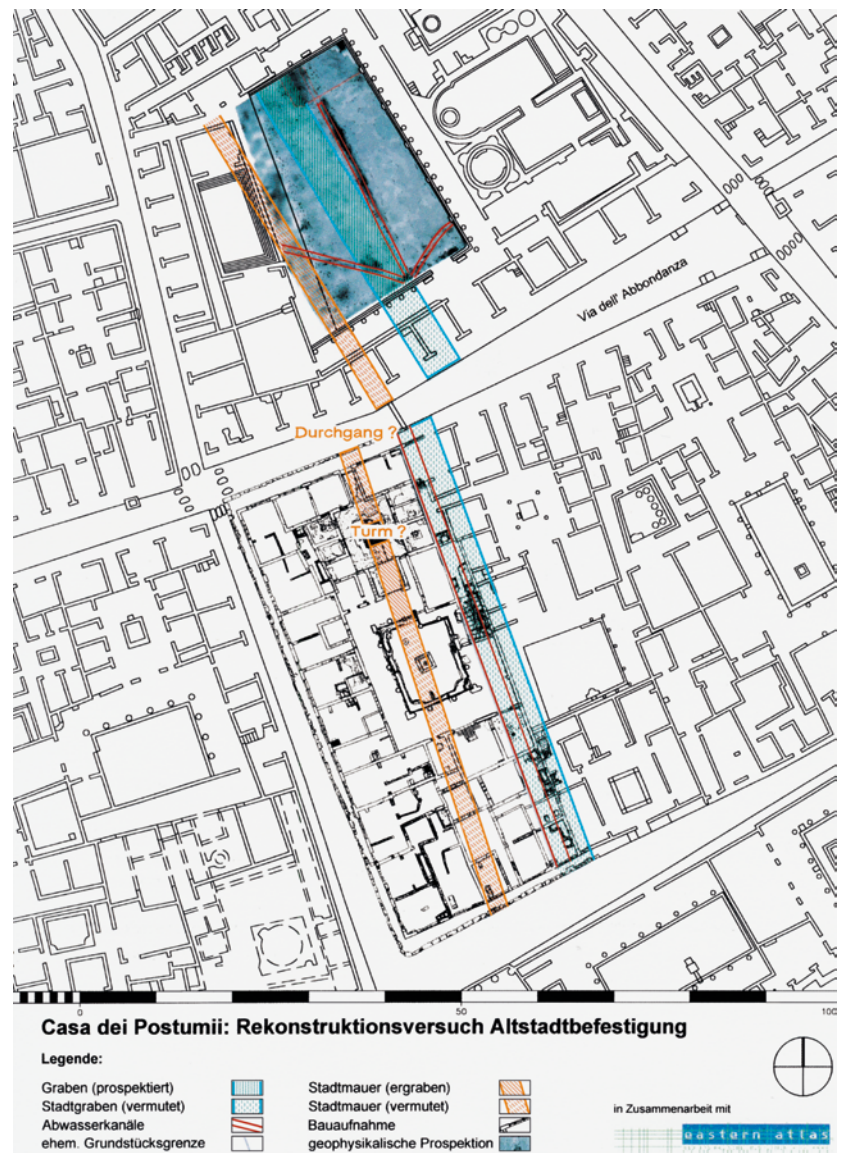
19 Eschebach 1979, 48 pl. 32 a: sounding 24.

belonged to the city wall located at this point. The pit filled with demolition rubble would have constituted the old ditch immediately to the east of the wall<sup>20</sup>. This block is clearly shown in his reconstruction of the city wall and ditch (Fig. 5: nos. 7 and 8)<sup>21</sup>. Therefore, while Sulze had identified only evidence he interpreted as being from the demolished and robbed out wall, Eschebach claimed to have discovered remains of the wall and of an adjacent ditch. At the eastern end of the trench, beyond the limit of the ›ditch‹ at a depth of about 0.90 m below the modern surface of the palaestra he found a levelled ›hard-packed‹ stratum that resembled the stratum found in room N1, which he interpreted as the surface of the first (5<sup>th</sup> century B.C.) palaestra (Fig. 11: »Niveau der ältesten Palästra«).

13 Eschebach's concept of the *Altstadt* was most fully developed in a work probably written around 1980 although it was only published posthumously with his wife in 1995 (Fig. 12)<sup>22</sup>. Phase 1 of the city was an oppidum of the 7<sup>th</sup> century B.C. centered on the forum. This expanded in Phase 2 to become the defended *Altstadt* of the 6<sup>th</sup> century B.C. with its boundary running through the palaestra of the Stabian Baths. There was a further extension in the 5<sup>th</sup> century B.C. which took the western limits of the *Altstadt* to the Porta Marina.

14 There were no serious challenges to this thesis of a defended Archaic *Altstadt*, with a system of suburban main roads which formed the basis of the street system of the subsequent *Neustadt*, until the excavations of de Caro in the 1980s on the city wall between the amphitheater and the Porta Nocera. De Caro found a pappamonte block wall belonging to the first half of the 6<sup>th</sup> century B.C. on an alignment close to that of the extant city wall<sup>23</sup>. This would imply that the entire area of Pompeii, including what became the *Neustadt*, was enclosed by a defensive wall at the date when it was thought the *Altstadt* was being fortified. This inevitably led to some doubts being cast upon the existence of separate *Altstadt* defenses.

15 Various excavations carried out after 1980 provided evidence that was linked with possible *Altstadt* defenses. These include, in chronological order, trenches to the



13

Fig. 13: Dickmann's and Pirson's reconstruction of the *Altstadt* defenses (scale 1 : 1000)

20 Eschebach 1979, 48: »... von dem Pappamontestein (...), der sich in situ befindet. Er stammte mit großer Wahrscheinlichkeit von der alten Stadtmauer, die hier verlief. Die mit Bauschutt gefüllte Grube bildet vermutlich den alten Graben, der zu einer bestimmten Zeit zugeschüttet wurde.«

21 Eschebach 1979, pl. 34 a.

22 Eschebach – Eschebach 1995, 5–41.

23 De Caro 1985.





14

Fig. 14: The various reconstructions of *Altstadt* defenses in relation to the current excavations at the Stabian Baths (scale 1 : 500)

north of forum<sup>24</sup>; in the Casa dei Postumii (VIII 4, 4)<sup>25</sup>; in the Casa di Mercurio (VII 2, 15)<sup>26</sup>; and in the insula della Casa di Arianna (VII 4)<sup>27</sup>. Since the findings and their interpretation have been discussed in detail in recent publications<sup>28</sup>, focus is here on work that is particularly relevant for a reassessment of the evidence in the Stabian Baths.

<sup>16</sup> Excavations in the Casa dei Postumii (VIII 4, 4) which is located across the Via dell'Abbondanza from the Stabian Baths found pappamonte and Sarno limestone blocks in the atrium and northern porticus of the peristyle courtyard. These blocks were attributed to a wall with a width of 2.60 m which was dated not earlier than the 5<sup>th</sup> century B.C.<sup>29</sup>. This wall was correlated with the large drainage channel from the

<sup>24</sup> Arthur 1986, 32 f.

<sup>25</sup> Dickmann – Pirson 2002, 2005.

<sup>26</sup> Pedroni 2008; Pedroni 2011; Pedroni 2014.

<sup>27</sup> Bustamante et al. 2014.

<sup>28</sup> Giglio 2016 provides the most detailed discussion of the research history and a critical assessment of these excavations; cf. also Avagliano 2018, 79–86.

<sup>29</sup> Dickmann – Pirson 2002, 271–273; regarding the width, see the critical remarks of Giglio 2016, 35.

Stabian Baths that ran along the eastern boundary of the Casa dei Postumii, presumed to be following the course of the former *Altstadt* ditch. The combination of a large wall with ditch, potentially city defenses, prompted a geophysical survey of the palaestra of the Stabian Baths which revealed a linear anomaly of low resistivity. This ran from the north to the south and was 6 m wide and 4 m deep. While its course differed considerably from Sulze's and Eschbach's *Altstadt* wall and ditch, the anomaly was still interpreted as being the *Altstadt* ditch (Fig. 13)<sup>30</sup>. The corresponding wall was hypothetically reconstructed to the west of the ditch, running largely under the tuff dromos of the palaestra and the natatio of the Stabian Baths<sup>31</sup>. The change in alignment from the Casa dei Postumii to the Stabian Baths was interpreted as the result of a staggered gateway on the Via dell'Abbondanza. Thus, there were several reconstructions for the defenses of the *Altstadt* (Fig. 14).

17 Excavations from the 1990s onwards showed that the Archaic settlement was not confined to the area of the *Altstadt*. Buildings of the 6<sup>th</sup> century B.C. with foundations made of pappamonte blocks and aligned on the major road system were sparsely present throughout the entire walled area<sup>32</sup>. Seiler re-exposed a pappamonte structure first uncovered by Maiuri that once formed part of the Porta Vesuvio<sup>33</sup>. The highest concentration of Archaic activity outside the *Altstadt* so far discovered is in the NW corner of the town in Regio VI. It has long been argued that there was a decline in activity or even a discontinuity of settlement at Pompeii during the 5<sup>th</sup> century B.C. and Regio VI showed no exception to this trend. These discoveries led Coarelli and Pesando to place new interpretations on the *Altstadt* in relation to the development of the town. One possibility would be that the town of the 6<sup>th</sup> century B.C. was a walled city which contained within it a walled sacred center<sup>34</sup>. Another interpretation considers the ›hiatus‹ of the 5<sup>th</sup> century B.C. in the development of Pompeii and the dating of the massive walls at the Casa dei Postumii. These walls would imply that during the 5<sup>th</sup> century B.C., the population withdrew into a small settlement enclosed by a fortification wall and that the *Altstadt* represents not the beginning but only one phase in a complex process of urban development<sup>35</sup>.

18 In the last decade, the urban development of Pompeii has been intensively debated particularly in Italian scholarship, and the existence of an *Altstadt* has been questioned. Central to a reassessment of this question is the critical discussion of remains attributed to *Altstadt* defenses as well as a digital elevation model provided by Holappa and Viitanen<sup>36</sup>. Giglio analyzed the correlation between the topography and streets as well as the sequence of the occupation phases of the Pompeian plateau between the second half of the 7<sup>th</sup> century B.C. and the end of the 4<sup>th</sup> century B.C. He concluded that the whole urban layout, both *Altstadt* and *Neustadt*, was designed and built in the Archaic period; the streets would have followed the terrain which was much more uneven than hitherto assumed: »in realtà ha una conformazione molto più articolata, con evidenti salti di quota, avvallamenti e prominenze, che sviluppano, oltre alle naturale pendenze da nord a sud anche una serie di pendenze da est ad ovest«<sup>37</sup>. This would also have resulted in insulae of different shapes and sizes. From a topographical point of view, the presumed *Altstadt* defenses would have been located in highly unfavorable areas

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30 Dickmann – Pirson 2002, 296–302; Dickmann – Pirson 2005, 157–162.

31 Had this wall continued further north, it would have hit the presumably Archaic deep well of the Stabian Baths; this conflict has been ignored in literature.

32 Avagliano 2018, with a catalogue of all Archaic finds, 135–209 and two corresponding distribution plans, pls. 1. 2; cf. also Esposito et al. 2011; Giglio 2016; Osanna – Giletti 2020, 9–11.

33 Seiler et al. 2004, 184 f.

34 Coarelli – Pesando 2011, 46.

35 Coarelli – Pesando 2011, 47 f.

36 Holappa – Viitanen 2011.

37 Giglio 2016, 24.

that were neither clearly elevated and thus ideal for walls, nor natural depressions ideal for ditches. This alone would question the identification of the evidence as *Altstadt* defenses<sup>38</sup>. The prominent shape of the *Altstadt* would simply result from streets that followed natural valleys on the border of the elevated southwestern part of the city.

19 Avagliano argued similarly for the layout of the Archaic city<sup>39</sup>. However, she maintained the notion of an *Altstadt* that may have been inhabited and developed slightly earlier than the rest of the city and did not explain the nature of the remarkably irregular boundary of the *Altstadt*, neither in the text or in the various plans<sup>40</sup>.

20 Both Giglio and Avagliano were aware of our project and its preliminary results when they published their revisions of the Archaic city plan<sup>41</sup>. The fact that no traces of any *Altstadt* defenses were found in the palaestra of Stabian Baths is central to their argument.

## Excavation in the Stabian Baths

21 Of the many trenches dug by our project so far, one is particularly crucial to the argument here (Fig. 6. 7):

– Area III: re-excavation and significant enlargement to the east in the center of the palaestra<sup>42</sup>.

Other trenches are consistent with the findings from this trench, but cannot be discussed in detail here. These trenches include:

– Area I: re-excavation and enlargement in cell N1<sup>43</sup>; fully new excavation in N2.

– Area II: re-excavation and enlargement in the northwest corner of the palaestra<sup>44</sup>.

– Area V: fully new excavation at the west end of corridor H<sup>45</sup>.

– Area IX: re-excavation and enlargement in the western part of the palaestra, immediately to the south of Area II<sup>46</sup>.

– Area X: excavation of an east-west oriented trench in room L.

22 The following discussion focuses on Area III, first describing the contexts, followed by a discussion of the chronology and a reconstruction of the phases. The relevance of the evidence is interpreted separately for the *Altstadt* defenses and the development of the baths; this includes brief reference to results of the other above-mentioned trenches that were particularly important for the *Altstadt* discussion, but also for the original date of the baths.

### Description of Contexts of Area III

23 Area III (Fig. 15–24) was excavated primarily in order to re-consider the evidence from the palaestra of the Stabian Baths for the presence of *Altstadt* defensive works. Trench S4–S5 of Sulze / 24 of Eschebach was re-excavated (Fig. 26), extending the trench further eastwards so it spanned all defensive features identified by Sulze

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38 See the plan Giglio 2016, 37 fig. 9. The colored DEM Holappa – Viitanen 2011, 179 f. figs. F–H provides a better idea of the absolute levels.

39 Cf. the plans Giglio 2016, 37 fig. 9 and Avagliano 2018, 92 fig. 76.

40 Avagliano 2018, 89 fig. 73; 90 fig. 74; 92 fig. 76; 170–172 nos. 75–77 she lists the finds in VII 4, 28–30 as »fossato difensivo(?)«.

41 Giglio 2016, 32 n. 1; Avagliano 2018, 169 no. 69.

42 Sulze's sounding S4–S5 (Eschebach 1970, suppl. 3. 7) or SIV–SIVbis (Giornale dei saggi di scavo 1940, 4–6, see above n. 1); Eschebach's sounding 24 (Eschebach 1979, pl. 32 a). For room numbers of the baths, see here Fig. 6, for the numbering of trenches, see here Fig. 7.

43 Eschebach 1979, pl. 31 a: sounding 1; see now Trümper et al. 2019.

44 Sulze's sounding without number; Eschebach 1970, suppl. 7.

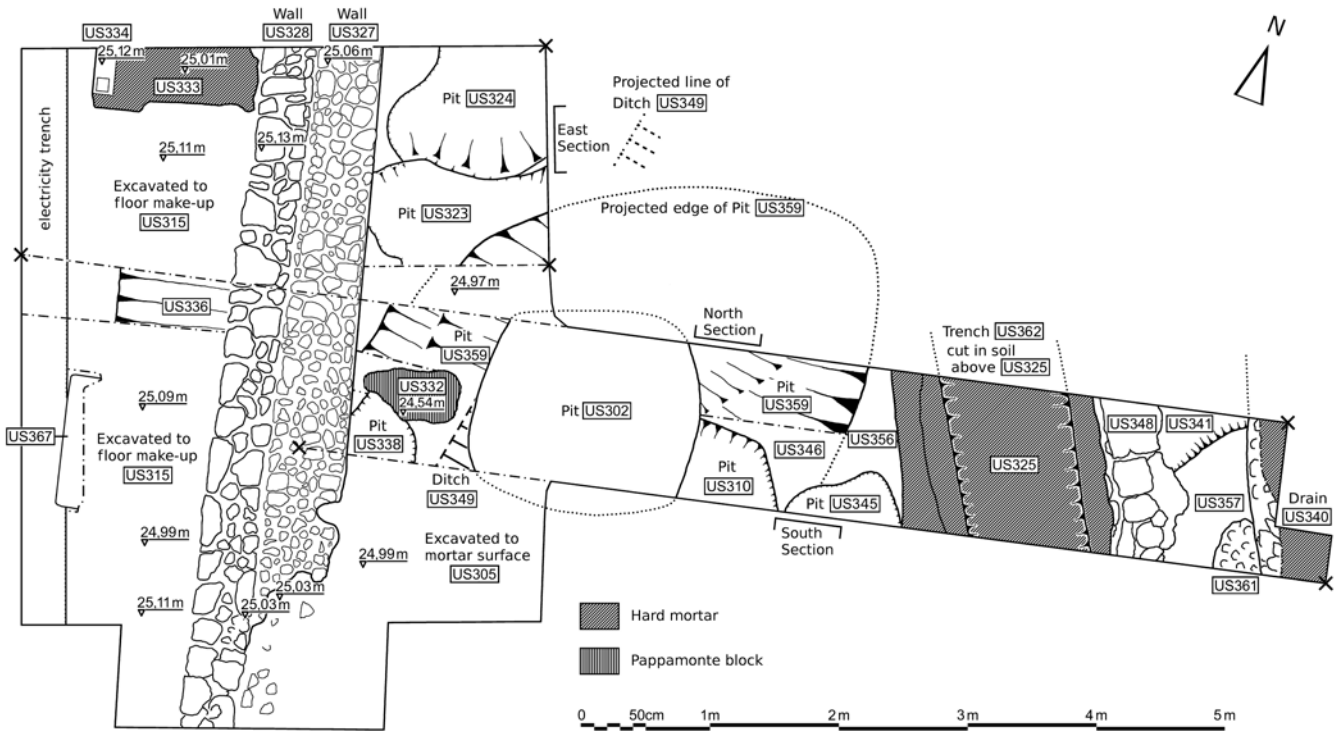
45 Complementing Eschebach's series of trenches in the former house: Eschebach 1979, pl. 32 a: soundings 21–36.

46 Sulze's sounding without number; Eschebach 1970, suppl. 7.

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Stabian Baths Palaestra Excavation Area III



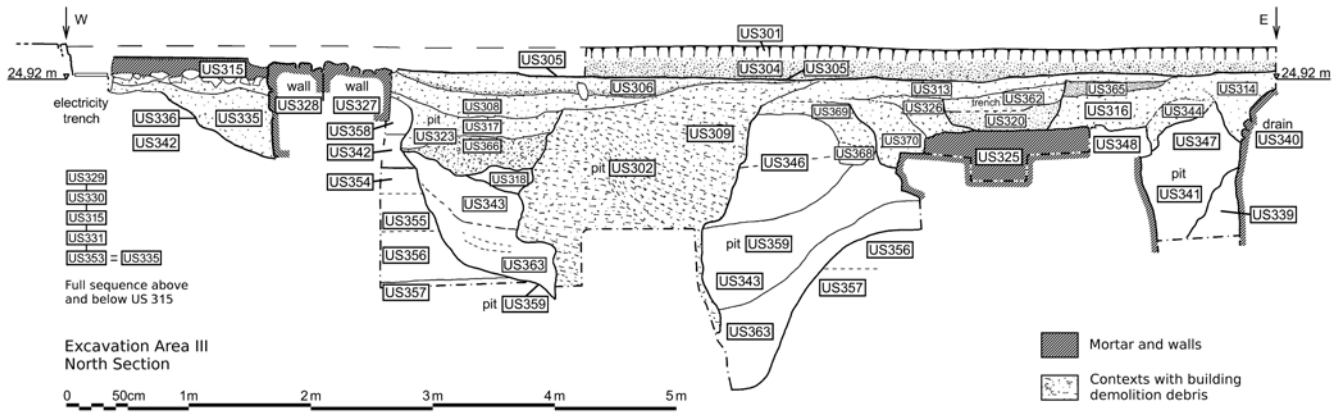
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16

and Eschebach as well as the postulated line of the ditch reconstructed by Dickmann and Pirson (Fig. 7. 14). This trench also served to investigate any sequence of palaestra surfaces, the main drain of the baths, the domus beyond the earlier western boundary of the baths and the state of the site prior to the construction of the baths. The results for

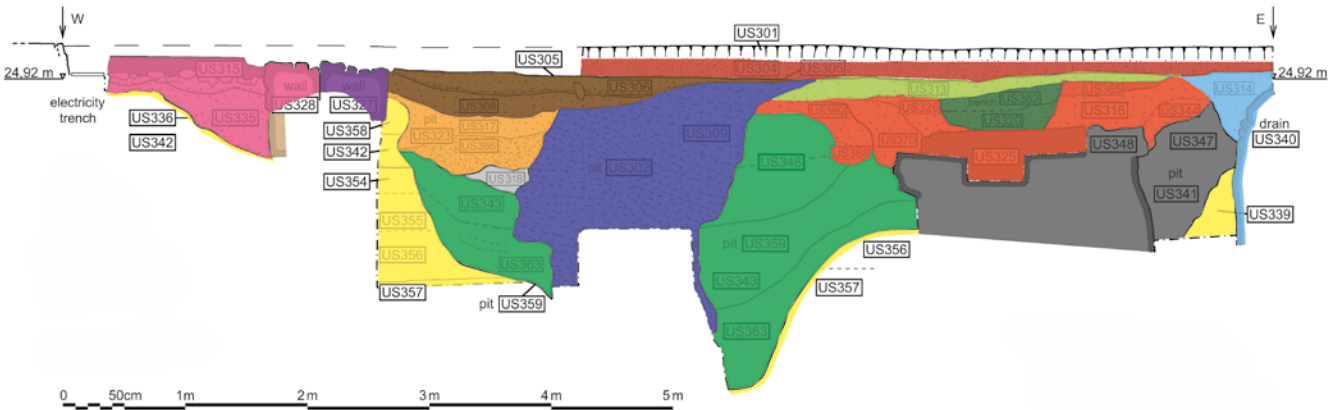
Fig. 15. 16: Area III, trench plan and orthophoto



17



18



- |                                |  |  |
|--------------------------------|--|--|
| ■ 01 Ash, paleosol             | ■ 07 Earth mortar well cover                                 | ■ 17 Layer US 313                        |
| ■ 02 Pit US 359                | ■ 10 Wall US 327   | ■ 18 Pit US 302                          |
| ■ 03 Early ditch US 349        | ■ 12/13 Wall US 328 upper course, construction trench, floor | ■ 19 Pit US 323                          |
| ■ 04 Well US 348               | ■ 14 Drain US 340  | ■ 20 Layer US 306                        |
| ■ 06 Wall US 328 lowest course | ■ 16 Trench US 362   | ■ 21 Mortar surface and the layers above |

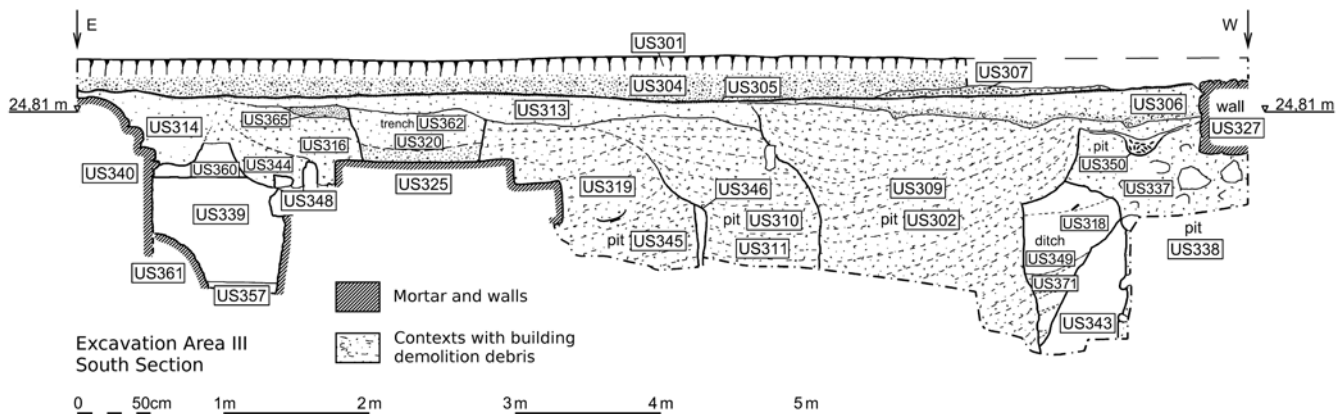
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Fig. 17. 18. 19: Area III, north section, SfM model and sequence of context groups; for numbers cf. Fig. 42

all the contexts encountered by the excavation of Area III are presented below but focus is on those contexts which are relevant to the consideration of any *Altstadt* defenses as well as Eschbach's early phases of the Stabian Baths.

24 The most complete exposure of the geological and palaeosol sequence was shown in the north section of this trench (Fig. 17. 18. 19. 27. 28). At the bottom of the sequence was US 357 yellow silt with white pumice lapilli, probably from the Mercato

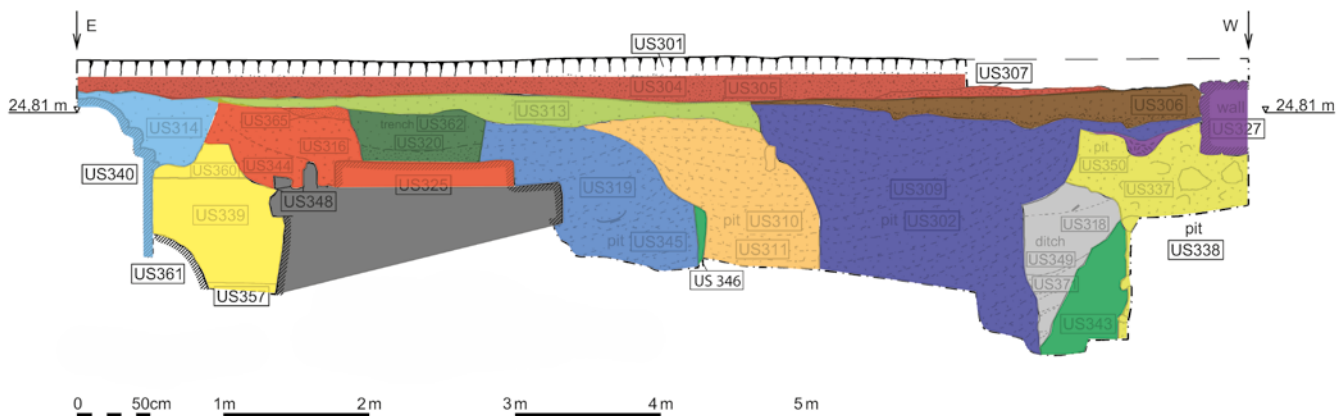




20



21



- |                            |                            |  |
|----------------------------|----------------------------|--|
| 01 Ash, paleosol           | 08 Pit US 345              | 16 Trench US 362                       |
| 02 Pit US 359              | 09 Pit US 338              | 17 Layer US 313                        |
| 03 Early ditch US 349      | 10 Wall US 327, Pit US 350 | 18 Pit US 302                          |
| 04 Well US 348             | 14 Drain US 340            | 20 Layer US 306                        |
| 07 Earth mortar well cover | 15 Pit US 310              | 21 Mortar surface and the layers above |

22

eruption of Vesuvius. Above this was a sub-soil of 0.42 m thickness of partly weathered ash (US 356), a mixed yellow and brown silty loam with white pumice lapilli. US 355, the soil above US 356, was 0.31 m thick and comprised a fully mature soil of dark brown sandy very silty loam which had likewise developed from weathered ash. A single impasto sherd of probable Bronze Age was found within it. It in turn lay below

Fig. 20. 21. 22: Area III, south section, SFM model and sequence of context groups; for numbers cf. Fig. 42



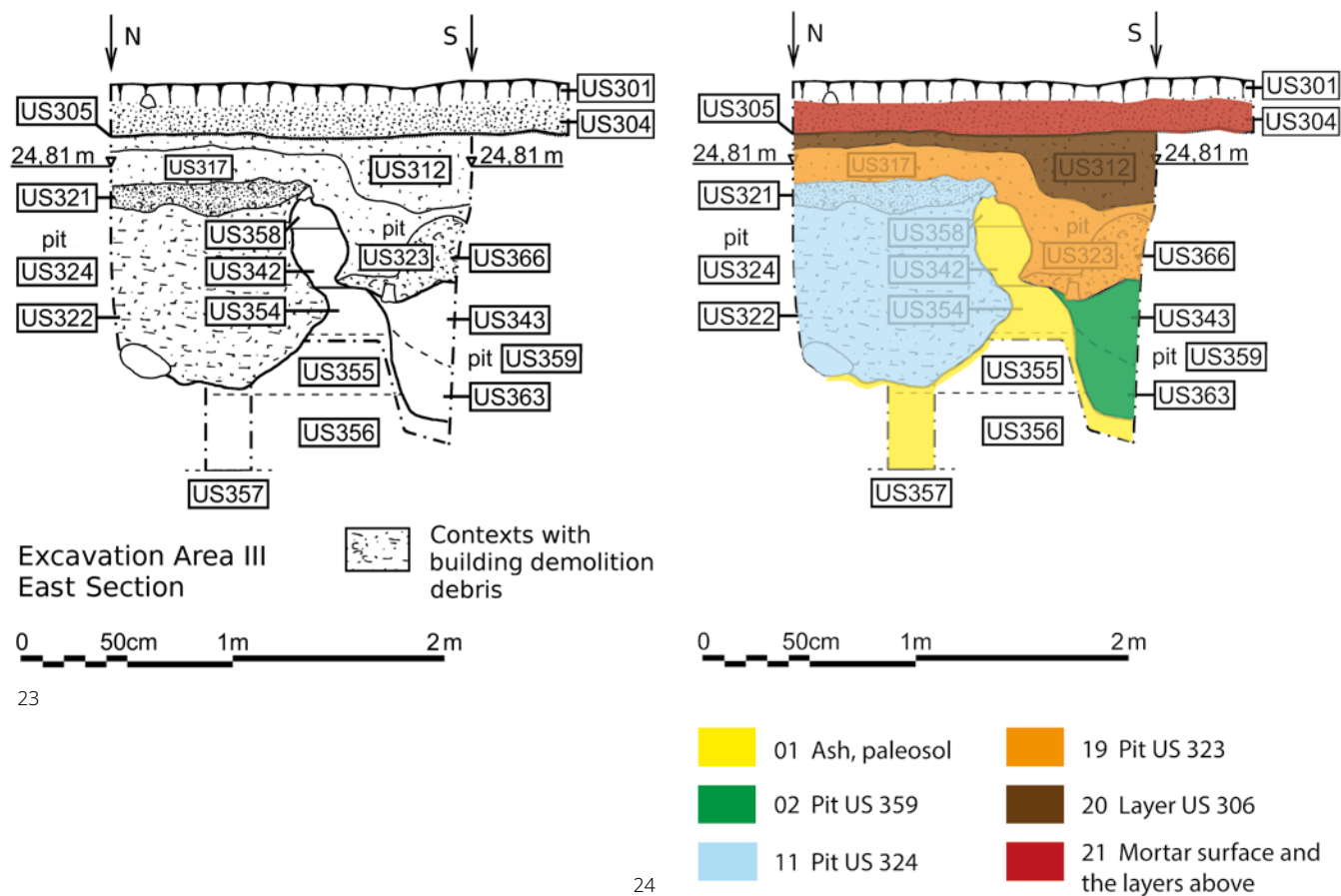


Fig. 23. 24: Area III, east section, sequence of context groups; for numbers cf. Fig. 42

US 354, 0.21 m of a palaeosol of dark brown sandy silt loam with areas of unweathered fine pale grey volcanic ash. US 354 was sealed by US 342, 0.39 m of grey volcanic ash comprising grey sandy silt with some soft and some hard-volcanic grit. The grey ash is regarded as being from a protostoric AP (Ante Plinian) eruption of Vesuvius. Elements of this sequence were recorded elsewhere in the excavation. A narrow peak of these layers partly separated pits US 324 and US 323 (Fig. 23. 24).

25 US 336, the construction trench of Wall US 328 cut through US 342. At the eastern end of the trench (Fig. 20. 21. 22), a localized area of diffuse grey ash (US 360), was possibly the equivalent of US 342. The soil beneath US 360, US 339, was probably the equivalent of US 354, US 355 and US 356. US 339 was met at 24.37 MASL, US 354 at 24.18 MASL, suggesting that the paleosol sloped from east to west here. At the bottom of the sequence at the eastern end of the trench there was a transition to the yellow probable Mercato ash (US 357, hit at 23.81 MASL). In the western part, US 357 was found at 23.24 MASL, confirming the sloping of the terrain from east to west.

26 A soil (US 358) had developed from the grey ash (US 342; Fig. 17. 18. 19). It was a very dark brown sandy silt with much soft volcanic grit. The survival of US 358 in Area III was extremely limited with less than 0.2 m<sup>2</sup> being observed intact although it survived to what was probably its full height, a thickness of 0.24 m, adjacent to the eastern side of the double wall (US 327). This distinctive dark soil, sometimes referred to as the Archaic palaeosol of Pompeii, began to form in the Iron Age and remained the active soil of much of Pompeii until particles of Sarno limestone and other building demolition debris became incorporated in post-Archaic times, particularly from the 4<sup>th</sup> century B.C. onwards<sup>47</sup>.

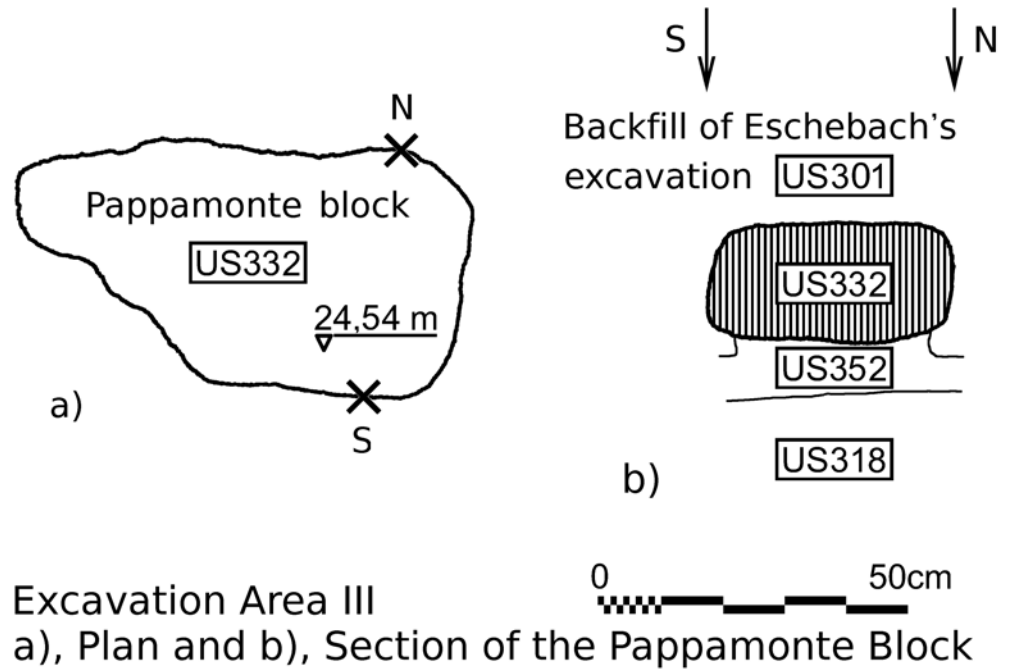
27 The earliest archaeological feature on the site was a very large pit (US 359), which was possibly oval on a SW to NE axis (Fig. 15). It cut US 342 and the contexts be-

47 M. Robinson is preparing a study of this phenomenon.

Fig. 25: Area III, detail of the pappamonte block US 332, plan (a) and section (b)

Fig. 26: Area III, Eschebach's trench after the removal of his backfill

Fig. 27: Area III, the prehistoric volcanic ash and palaeosol sequence under and adjacent to wall US 327; eastern end of the pappamonte block US 332



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neath to a depth of at least 2.40 m below what would have been the Iron Age to Archaic ground surface and was over 3.00 m wide (Fig. 17. 18. 19. 28). It cut 0.90 m into US 357, the probable Mercato ash, and the pit is interpreted as a quarry for this material. The lower fills of the pit were possibly deliberate back fills, US 363 comprising soil with grey





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Fig. 28: Area III, north section, pit US 359 cut by pit US 302; eastern face of wall US 327 and the pappamonte block US 332



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Fig. 29: Area III, south section, pit US 359 cut by ditch US 349 which is cut by pit US 302, also pit US 338 and the pappamonte block US 332

Fig. 30: Area III, south section, pit US 359 cut by ditch US 349 which is cut by pit US 302



30

ash bands while US 343 was relatively clean grey ash (from US 342) with occasional small lumps of yellow ash. However, the top 0.85 m of the pit contained US 346, a dark brown soil similar to US 358, the Archaic palaeosol, which probably accumulated very slowly. Finds were entirely absent from Pit US 359.

28 US 359 was cut by a steep-sided ditch-like feature (US 349; Fig. 20. 21. 22. 29. 30). Its eastern and northern parts within the excavated area had been destroyed by later pits. Its bottom was at least 1.50 m below the Archaic ground surface and it ran on a NS alignment. Its lower fill (US 371) comprised alternating bands of dark brown silt and water-lain grit; its upper fill (US 318) was dark brown slightly sandy silt which probably merged with US 346, the soil in the top of US 359. The only finds from the upper fill (US 318) of the ditch US 349 were three sherds of possible Archaic date, finds were absent from the lower fill.

29 Activity within Area III was extremely limited between the 6<sup>th</sup> century B.C. and the 2<sup>nd</sup> century B.C. US 352, about 0.12 m of mixed yellow and grey silt loam with Sarno limestone grit, a small fragment of





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Fig. 31: Area III, north section, US 348 and its construction trench, mortar slab US 325 and the cut for US 362 above it, and the bath drain US 340 with the cut for its roof construction

Fig. 32: Area III, south section, pit US 345 and the mortar slab US 325

Fig. 33: Areas III, south section, pit US 302

wall plaster and some 6<sup>th</sup>/5<sup>th</sup> century B.C. sherds of cooking ware accumulated above US 318, the top fill of the ditch-like feature on its western edge<sup>48</sup>. An eroded block of pappamonte, 0.74 m EW by 0.40 m NS by 0.19 m thick (US 332), rested on US 352 (Fig. 15. 25. 27. 28. 29. 36). It was the block of pappamonte found by Sulze in S4–S5 and incorrectly located by Eschebach in sounding 24. The other stone shown adjacent to it in S4–S5 is a lump of Sarno limestone in US 337. The latter is the fill of pit US 338, which cut the southern side of the pappamonte block<sup>49</sup>.

30 One stratigraphically early feature was US 348 (Fig. 31), which was apparently a well. It had a rim of large pieces of Sarno limestone and a mortar-lined shaft which expanded with depth. US 341, its construction pit (Fig. 17. 18. 19), was filled with US 347 which comprised the type of volcanic deposits to be found at great depth in Pompeii including yellow slightly silty sand with small black and reddish-grey fragments of lava. No finds were made from US 341 but the mortar of the shaft had a couple of fragments of unpainted wall plaster adhering to it. This would imply that the well could not have been much earlier than the 3<sup>rd</sup> century B.C. but could have been younger. Another structure that was possibly early was US 361, a second well-like structure of mortared Sarno limestone which intruded into the southern side at the east end of the trench (Fig. 20. 21. 22).

31 Stratigraphically, the next events were the partial demolition of the top of the well-like feature US 348 and its sealing with US 325, a very substantial structure of hard dark grey-brown earth mortar, which included finds dated to the 4<sup>th</sup>/3<sup>rd</sup> century B.C. (Fig. 17. 18. 19. 20. 21. 22. 31. 32). Contexts US 316, US 326, US 344, US 365, US 368–370 were all fill deposits of brown sandy silt loam related to this construction activity. Pottery of the 2<sup>nd</sup> century B.C. was recorded from US 316 and US 326 (Fig. 38: 11–12; 39: 3–4). While it is possible that the capping of US 348 was simply done to seal a dangerous deep hole once it had ceased to be used as a well, US 362, a trench cut into the soil covering of US 325 had the appearance of a robber trench from which the stones of a wall had been removed. US 325 therefore probably represents the foundations for a NS-oriented structure. The earth mortar is similar to that found in other trenches dug by our project; this earth mortar was connected with walls and features attributed to the first phase of the bath building<sup>50</sup>. The fill of US 362 was US 320, brown sandy loam with many crushed earth mortar and Sarno limestone particles up to coarse grit size which included material dated to the first half of the 2<sup>nd</sup> century B.C. (Fig. 39: 2). Along the eastern edge of US 362 and cut by it was US 365, a hard-mixed layer of small plaster and mortar fragments with Sarno limestone grit. It was possibly from the footings of a structure running alongside whatever stood in US 362.

32 After the construction of the baths, a series of quarry pits were dug in the area between US 325, the earth mortar structure, and Wall US 327. Four of them, Pits US 302, US 310, US 338 and US 345, extended into US 357, the probable Mercato ash. These four pits were not fully excavated and could have been over 3.00 m deep. Their relationship is shown in the south section (Fig. 20. 21. 22). The other two pits, US 323 and US 324, were shallower, apparently being dug to recover the Bronze Age soil (US 354 and US 355). They are visible in the east section (Fig. 23. 24).

33 Pit US 345 (Fig. 32) post-dated the earth mortar structure US 325 but was cut by US 362, the possible wall robber trench. It was filled with US 319, pale brown sandy

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48 US 352 is not visible on either section, Figs. 17 or 20; it is shown in Figs. 25. 27. 36 below the pappamonte block.

49 Eschebach 1979, 48 stated that his trench 24 was made immediately to the south of Sulze's trench S4–S5. His planum, pl. 32 b, does not show the Sarno limestone found and drawn by Sulze (Eschebach 1970, suppl. 3) and re-excavated in 2016; cf. here Figs. 15. 16. 29. 36. Pit US 338 was not fully excavated, the sherds from its fill, US 337, gave a tpq of 130/125 B.C., see below.

50 Trümper et al. 2019, 143–145.



loam with very much Sarno limestone grit, some wall plaster and rubble of Sarno limestone, and its pottery had a tpq of 150 B.C. (Fig. 39: 1). Pit US 345 was cut by a second-deep pit, US 310 which was filled with similar building demolition waste (US 311) to pit US 345. The pottery assemblage from US 311 gave a tpq of 175/150 B.C. (Fig. 38: 6–9). US 313, a compact layer of dark grey-brown sandy loam with a ceramic tpq of the 1<sup>st</sup> century A.D. sealed these two pits. US 349, the ditch-like feature at the western end of the south section (Fig. 20. 21. 22) was cut by US 338, a third deep pit which also cut the pappamonte block US 332 and pre-dated wall US 327. Its fill, US 337, was unconsolidated, comprising Sarno limestone rubble up to 0.45 m across with loose grey-brown sandy loam and crushed Sarno limestone between the stones. Pottery from it gave a tpq of 130/125 B.C. (Fig. 39: 7). A small pit containing much wood charcoal, US 350, cut the top of the pit adjacent to wall US 327. A third large pit, US 302, cut through US 313, Pit US 359, Ditch US 349 and Pit US 338 (Fig. 28. 29. 30. 33). It was likewise filled with demolition debris, particularly Sarno limestone and earth mortar, mostly lumps below 100 mm but also rubble of wall plaster, lava, tuff and tile (US 309). The interstices between the larger items were filled with soil mixed with sand and grit from degraded building material. This context contained Italian *terra sigillata* fragments, dated to the Augustan period and possibly to after A.D. 65 (Fig. 38: 2–5; 40: a–d). US 302 was the pit partly excavated by the trenches of Sulze and Eschebach.

34 The two smaller pits were in the north of Area III immediately to the east of wall US 327. The earlier, US 324, was undercut into US 354 and US 355 (Fig. 23. 24). It was filled with US 322, brown sandy loam with Sarno limestone and lava rubble up to 0.40 m across and much broken tile. The pottery from it gave a tpq of the 1<sup>st</sup> century B.C. although much of it was earlier. The pit was capped with US 321, a layer of crushed fragments of earth mortar and Sarno limestone. Pit US 323 cut Pit US 324 although it largely respected the edge of the earlier pit. It also cut through the »grey ash« US 342, undercut the line of wall US 327 (Fig. 15), and cut down into US 318 and US 343. Its relationship with pit US 302 was uncertain although the fillings of the hollow left by pit US 323 after it had been backfilled suggested it to have been the later pit. The lower fill of the pit, US 366 was almost entirely rubble of Sarno limestone with some large pieces of amphora and wall plaster. Its upper fill, US 317, contained more soil, a dark grey sandy loam, as well as the coarser debris. The pottery was mostly from the late 2<sup>nd</sup>/first half of the 1<sup>st</sup> century B.C. as were three securely legible of seven bronze coins (Fig. 38: 13–14; 40: e–g). US 308/US 312, dark brown sandy loam with small fragments of Sarno limestone, earth mortar and wall plaster filled a hollow left by the pit, lapping over pits US 302 and US 323. The pottery from it gave a tpq of the mid-1<sup>st</sup> century B.C. A general levelling spread of brown sandy loam with some small rubble debris at the bottom, US 306, covered the remainder of pit US 302 and extended over US 308. It gave a ceramic tpq of the mid-1<sup>st</sup> century B.C.

35 The eastern wall of a house, US 328, ran NS across Area III. It was 0.46 m wide and its foundations were 0.78 m deep. The lowest course comprised unmortared rectangular blocks of Sarno limestone and gritty yellow tuff 0.44 m high (Fig. 34). The wall above them was set on a thin layer of earth mortar and was mostly of mortared



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Fig. 34: Area III, western face of wall US 328 and its construction trench





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Fig. 35: General view of Area III from the west showing the house floor and the mortar palæstra surface US 305 partly extending over wall US 327

Fig. 36: Wall US 327 and pappamonte block US 332 from east

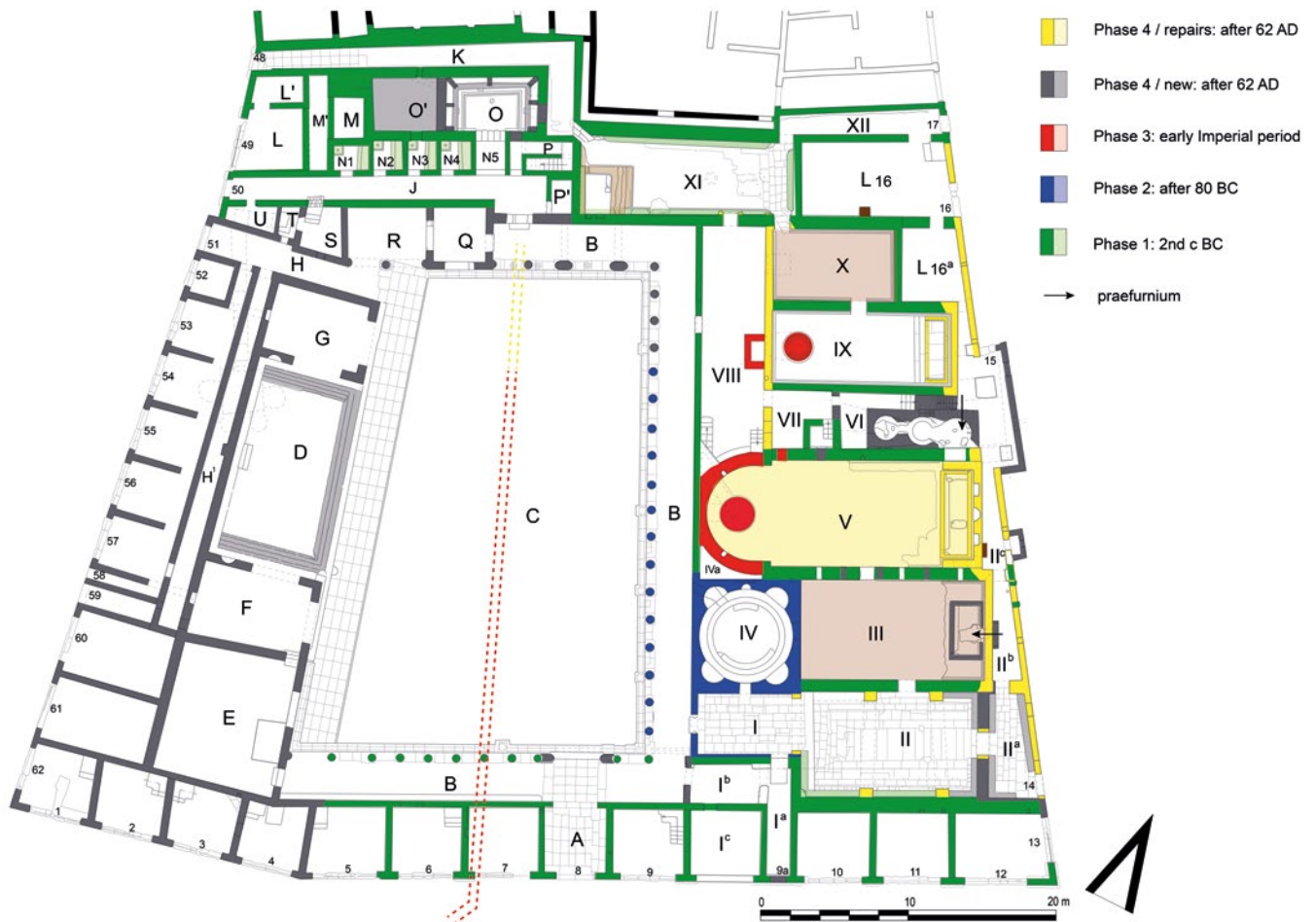


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Sarno limestone rubble but also included hard lava, soft black lava, grey tuff and gritty yellow tuff up to 0.45 m long but mostly smaller. It is possible that the rectangular blocks were the bottom course of an earlier wall which had been used as footings for a mortared wall. A construction trench, US 336, 0.90 m wide ran along the western side of the wall which sloped gently to the base of the footings. It cut US 342, undisturbed grey volcanic ash. The grey sandy loam with some Sarno limestone grit (US 335) which filled the construction trench contained a sherd of a thin-walled vessel with a tpq of 50/30 B.C. (Fig. 39: 6). The fill of the construction trench (US 335) reached to the upper preserved courses of the wall suggesting that the trench was excavated – or re-excavated – and filled when the upper part of the wall was built.

36 The remains of a tessellated pavement extended from the western side of the wall (Fig. 35). It comprised a 3 mm layer of white sand-free mortar with impressions of tesserae (US 329) above a layer of pink sandy mortar containing fragments of a pavement of white tesserae which were not *in situ* (US 330) above a sub-floor of pale brown sandy loam with particles of Sarno limestone and some very broken fragments of *opus signinum* (US 315) which had been laid on a level surface of lava rubble about 0.12 m long (US 331). This sequence was for the floor associated with wall US 328 and was above US 336. An amphora sherd from US 331 gave a tpq of 50/25 B.C. (Fig. 39: 5). Also, part of this phase was US 335, the pink mortar footings of an EW door threshold which abutted wall US 328 at the northern end of the trench (Fig. 15. 16). Part of the hard-white limestone threshold stone with the notch for a door post, US 334, survived set in the mortar. A modern trench for electricity cables along the western side of Area III revealed the edge of a Sarno limestone slab (US 367) partly covered by US 331. It was possibly from an earlier pavement.





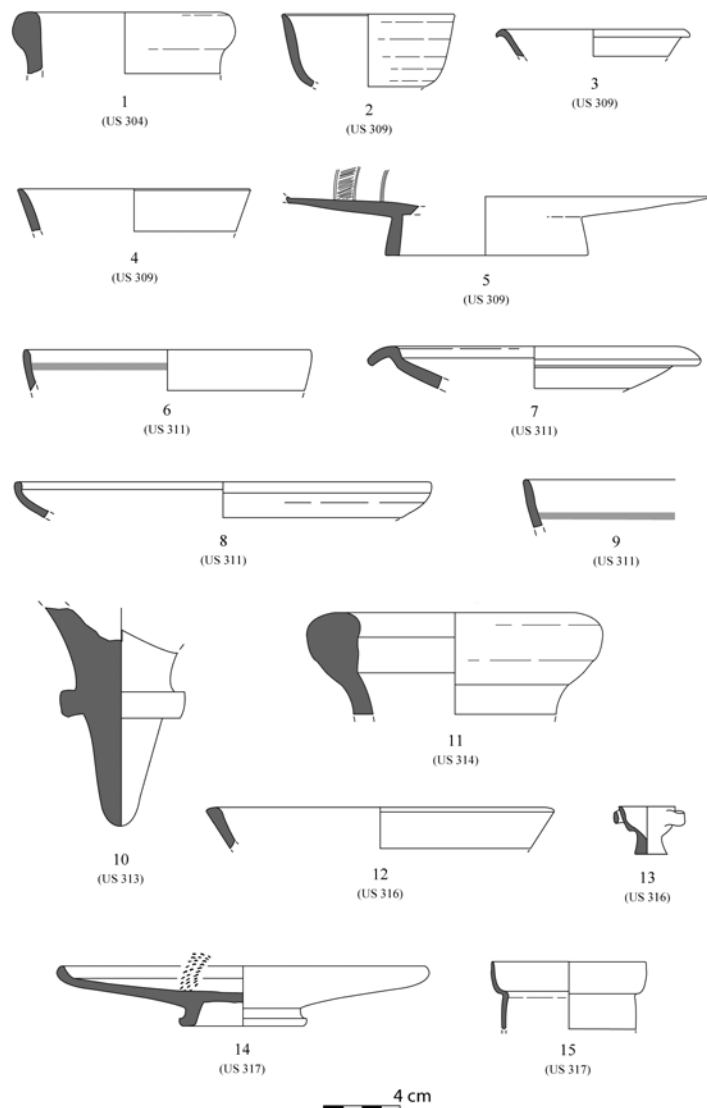
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37 A second wall (US 327) had been constructed adjacent to the eastern side of US 328 by digging a foundation trench 0.57 m wide with vertical sides 0.48 m deep and a flat bottom. Mortar was poured into the trench and rubble placed such that the eastern face of the wall was almost entirely earth mortar although the body of the wall was compact rubble (Fig. 28. 36). It mostly comprised pieces of Sarno limestone up to 0.18 m long but there was some lava and soft grey tuff with black lava grit. It was not possible to establish the relationship between the two walls, neither had been keyed into the other. Wall US 327 cut US 338, one of the earlier pits, but its line appears to have been undercut by pit US 323 probably after the wall had been constructed. The fill of Pit US 338 (US 337) provides a terminus *tpq* of 130/125 B.C. (Fig. 39: 7); and the *tpq* of the fill of Pit US 323 (US 317) is the 1<sup>st</sup> century B.C. (Fig. 38: 13–14; 40: e–g).

38 At the very eastern edge of Area III, the western part of a large drain running in NS-direction (US 340) was revealed, which is covered with a vault made of *opus caementicium* (Fig. 31). The drain was partially set into the Bronze Age paleosol (US 339) and the grey volcanic ash (US 360), and partially cut the construction pit US 341 of the well-like structure US 348. The western wall of the drain of lava rubble and a little Sarno limestone in grey mortar had been built against the side of the cut but the construction trench for the roof of the drain was wider. The brown sandy silt-loam fill of the construction trench (US 314) included material which gave a *tpq* of the Augustan or Julio-Claudian period (Fig. 38: 10). US 361, a structure of mortared very rough Sarno limestone rubble against the wall of the drain was either part of a well cut by the drain or some sort of side branch to it.

39 The last major structural development within Area III was the demolition of walls US 327 and US 328. Shortly afterwards, the entire area east of the pair of walls was sealed by a roughly smoothed pale grey brown fine-grained earth mortar surface for the

Fig. 37: Phase plan of the Stabian Baths (scale 1 : 500)



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Fig. 38: Diagnostic pottery (scale 1 : 4)

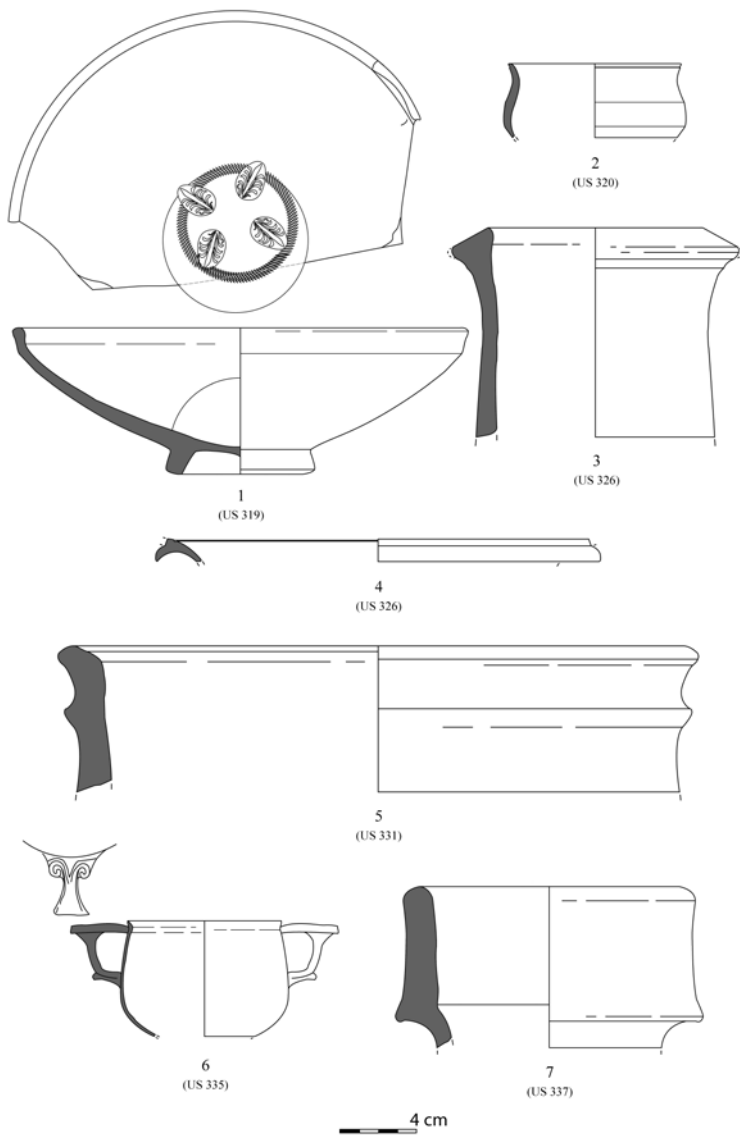
palaestra of the baths (US 305). It was only about 6 mm thick and originally extended over both walls although this relationship had partly been destroyed by earlier archaeologists who wished to display the walls (Fig. 35). This was the only palaestra surface encountered in Area III.

40 There was a spread of grey tuff chippings, US 307, above US 305 in the southern part of Area III to the east of wall US 327 (Fig. 20) which were possibly from a particular event of building work in the palaestra. Otherwise, US 305 was covered with US 304, brown sandy loam with very much crushed wall plaster, some tile and earth mortar fragments, and small pieces of Sarno limestone rubble. The bottom 10 mm was a stone-free brown sandy loam suggesting a period when the mortar surface had sparse patches of grass or low-growing weeds allowing earthworm activity to facilitate soil formation. Subsequently the remainder of US 304 with its component of building debris was deposited. US 304 was not a sealed context, being directly below US 301, the modern turf of the palaestra, but the pottery from it gave a tpq of 70/60 B.C. (Fig. 38: 1).

### Dating of the Archaeological Sequence of Area III

41 The dating of the sequence of Area III was not easy, particular problems resulting from pits, the way in which waste from redevelopment work was dispersed and the lack of accumulations of locally-generated refuse. As is usually the case in Pompeii,





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much of the earlier stratigraphy had been destroyed by pits to quarry silty volcanic ash and prehistoric soil for use in earth (pozzolanic) mortar. The stratigraphic relationships between quarry pits can be difficult to determine because they were often undercut (for example pit US 324, Fig. 23) and their limits often extended up to earlier pits rather than cutting into them (for example the narrow baulk of US 346 which separated the lower parts of Pits US 310 and US 345, Fig. 20, 21, 22). A further problem created by these pits is that they were subsequently filled with rubble soil generated by terracing work into earlier levels and with building demolition debris from which much re-useable stone has been salvaged. Similar material was also used as hardcore to raise the ground level and to create sub-surfaces for floors. Such infilling did not necessarily even have its origin on the site where it was dumped, it could have been brought from another region of Pompeii. These contexts can be rich in ceramic artefacts, wall plaster and even occasionally coins but most if not all the artefacts are residual, they are not waste and losses from contemporaneous activities occurring on the site at the place and time of dumping. It is probably safe to say that the vast majority of artefacts excavated in Area III fall into this category, no »occupation« deposits, waste pits or refuse dumps were discovered.

42 The pottery and other finds provide the *termini post quem* presented in Fig. 41.

Fig. 39: Diagnostic pottery (scale 1 : 4)

Fig. 40: Diagnostic pottery and finds

Fig. 41: Table of diagnostic pottery and coins from Area III (Tot. frg. = total number of pottery sherds/total number of finds; R = rim; B = base; H = handle; W = wall; R.P. = reconstructed profile).

Finds include, next to pottery and coins, fragments of tiles, bones, glass, plaster, opus signinum, opus tessellatum, and others. It is beyond the scope of this paper to discuss all of these finds in detail.

US	Tot. frg.	Class	Type and production	Chronology (terminus post quem)	Ex.	Sherd	Plate
304	52/105	Amphora	Dressel 2–4 (Vesuvian)	70/60 B.C.	1	R	Fig. 38: 1
306	66/103	Italian Terra Sigillata	(Arretine)	Mid-1 <sup>st</sup> c B.C.	1	W	
308	6/13	Italian Terra Sigillata	(Arretine)	Mid-1 <sup>st</sup> c B.C.	2	W	
309	195/273	Italian Terra Sigillata	McKenzie-Clark 2012, Form C.7.2 (Vesuvian – fabric 1)	Augustan	1	R	Fig. 38: 2; 40: a
		Italian Terra Sigillata	Similis McKenzie-Clark 2012, Form F.5.1 (Vesuvian – fabric 1)	(A.D. 65?)	1	R	Fig. 38: 3; 40: b
		Italian Terra Sigillata	Conspectus 7.2.2 (Arretine)	Mid-late Augustan	1	R	Fig. 38: 4; 40: c
		Italian Terra Sigillata	Conspectus B 1.12 (Arretine)	Late Augustan	1	B	Fig. 38: 5; 40: d
		Greek bronze coin	(Pompeii inv. 90419 & 90423) Illegible	Late 4 <sup>th</sup> c – 2 <sup>nd</sup> c B.C.	2		
		Bronze coin	›Campanian Atelier‹ (Pompeii inv. 90424) Pardini 2017, 172–183; Stannard 2013, 151 f., TC-27 or TC-28 and 155, fig. 11	130/120–80 B.C.	1		
311	76/142	Black Gloss	Lamboglia 31a / Morel 2574 (Campana A)	225/200 B.C.	1	R	Fig. 38: 6
		Black Gloss	Lamboglia 36 / Morel 1313/1314 (Campana A)	225/200 B.C.	1	R	Fig. 38: 7
		Black Gloss	Lamboglia 5 / Morel 2252/53 (Campana B)	175/150 B.C.	1	R	Fig. 38: 8
		Black Gloss	Lamboglia 31b (Campana A)	175/150 B.C.	1	R	Fig. 38: 9
312	56/76	Italian Terra Sigillata	(Arretine)	Mid-1 <sup>st</sup> c B.C.	1	W	
		Bronze coin	›Campanian Atelier‹ (Pompeii inv. 90425) Pardini 2017, 172–183; Stannard 2013, 151 f., TC-27 or TC-28 and 155, fig. 11	130/120–80 B.C.	1		
		Bronze coin	›Campanian Atelier‹ (Pompeii inv. 90434) Pardini 2017, 172–183; Stannard 2013, 152, TC-28.1-2 and 155 fig. 11; Hobbs 2013, 151 f. nos. 637–698, pls. 11. 12	130/120–80 B.C.	1		
313	128/165	Amphora	Mau XXXVIII (Aegean)	1 <sup>st</sup> c A.D.	1	B	Fig. 38: 10
314	99/122	Amphora	Dressel 20	Augustan/Julio-Claudian	1	R	Fig. 38: 11
315	15/19	Thin-Walled Ware	(Central Italy)	2 <sup>nd</sup> c B.C.	1	W	
316	65/80	Black Gloss	Lamboglia 33B / Morel 2973 (Campana A)	225/200 B.C.	1	R	Fig. 38: 12
		Cream Ware Miniaturistic	Grasso 2004, Type I	3 <sup>rd</sup> c B.C.	1	R.P.	Fig. 38: 13
		Thin-Walled Ware	(Central Italy)	2 <sup>nd</sup> c B.C.	3	R, W	

US	Tot. frg.	Class	Type and production	Chronology (terminus post quem)	Ex.	Sherd	Plate
317	269/307	Black Gloss	Lamboglia 5 / Morel 2255a (Campana B)	175/150 B.C.	1	P.R.	Fig. 38: 14
		Thin-Walled Ware	Similis Ricci 2/384–386	First half of 1 <sup>st</sup> c B.C.	1	R	Fig. 38: 15
		Lamp	Dressel 2/3	1 <sup>st</sup> B.C.	1	R	Fig. 40: e
		Amphora	Dressel 1 (Tyrrhenian) Rectangular stamp »ASCLA«(?)	150 B.C.	1	H	Fig. 40: f
		Amphora	Dressel 1B (Vesuvian)	130/120 B.C.	1	R	
		Internal Red-Slip Ware	Goudineau 1970, pl. 1, 1 (Campanian)	2 <sup>nd</sup> /first half of 1 <sup>st</sup> c B.C.	1	R.P.	
		Bronze coin	»Campanian Atelier« (Pompeii inv. 90428, 90429 & 90430) Pardini 2017, 172–183; Stannard 2013, 151, TC-3 and 154 fig. 10; Hobbs 2013, 135–140 pls. 5–7	130/120–80 B.C.	3		
		Bronze coin	»Campanian Atelier« (Pompeii inv. 90431, 90432 & 90433) Pardini 2017, 172–183; Stannard 2013, 152, TC-28.1-2 and 155 fig. 11; Hobbs 2013, 151 f. nos. 637–698 pls. 11. 12	130/120–80 B.C.	3		Fig. 40: 9
318	3/3	Cooking Ware	(Vesuvian)	6 <sup>th</sup> /5 <sup>th</sup> c B.C.	1	W	
		Common Ware	(Vesuvian)	6 <sup>th</sup> /5 <sup>th</sup> c B.C.	1	W	
319	125/179	Black Gloss	Lamboglia 36 (Campana A)	225 B.C.	1	R	
		Black Gloss	Lamboglia 55	200 B.C.	1	R	
		Black Gloss	Morel 2632 (Campana A)	150 B.C.	1	R.P.	Fig. 39: 1
320	11/14	Black Gloss	Morel 3220 (Campana A)	First half of 2 <sup>nd</sup> c B.C.	1	R	Fig. 39: 2
322	179/301	Lamp	Dressel 2/3 (matching sherd from US 317)	1 <sup>st</sup> B.C.	0	R	
325	28/33	Black Gloss	Campana A	4 <sup>th</sup> /3 <sup>rd</sup> c B.C.	1	B	
		Black Gloss	Campana A	4 <sup>th</sup> /3 <sup>rd</sup> c B.C.	1	R	
326	16/30	Black Gloss	Krater?	4 <sup>th</sup> /3 <sup>rd</sup> c B.C.(?)	1	R	Fig. 39: 4
		Thin-Walled Ware		2 <sup>nd</sup> c B.C.	1	R	
		Amphora	Late Greco-Italic or Dressel 1	2 <sup>nd</sup> c or 140/130 B.C.	1	R	Fig. 39: 3
331	42/56	Amphora	Dressel 21–22 (type 2) (Vesuvian)	50/25 B.C.	1	R	Fig. 39: 5
335	67/91	Thin-Walled Ware	Mayet 9a = Marabini XIX (Central Italy)	50/30 B.C.	1	R	Fig. 39: 6
337	15/17	Amphora	Dressel 1 (Vesuvian)	150 B.C.	1	H	
		Amphora	Dressel 1B/C (Vesuvian)	130/125 B.C.	1	R	Fig. 39: 7
339	1/1	Impasto		Bronze Age	1	W	
352	2/2	Cooking Ware	(Vesuvian)	6 <sup>th</sup> /5 <sup>th</sup> c B.C.	2	W	
355	1/1	Impasto		Bronze Age	1	W	



Feature/ Context group	Description	US	Date ( <i>italic: date from relative chronology, otherwise diagnostic finds</i> )	Relative chronology, in relation to other feature/ context groups	Phase baths
1	Soil below grey ash Grey ash 342 Soil from grey ash 358	339, 354 355, 342, 360 358	Bronze Age		Pre
2	Pit US 359	343, 346, 359, 363		After 1	Pre
3	Early ditch	318, 349, 371	6 <sup>th</sup> century B.C.	After 1, 2	Pre
4	Well with construction pit	341, 347, 348		After 1, 2	Pre
5	US 352 with pappamonte block US 332	332, 352	Post-Archaic	After 2, 3	Pre
6	Wall US 328 lowest course?	328		After 1	1 or earlier?
7	Earth mortar footing / well cover with related fills	325 316, 326, 344, 365, 368–370	2 <sup>nd</sup> century B.C. tpq	After 2, 4	1
8	Pit US 345	319, 345	150 B.C. tpq	After 2, 7	2 (or 3)
9	Pit US 338 with Sarno limestone lump in fill	337, 338	130/125 B.C. tpq	After 1, 3, 5	1
10	Wall US 327	327	130/125 B.C. tpq	After 9	1
11	Pit US 324	321, 322, 324	1 <sup>st</sup> c B.C. tpq	After 1	2 or 3
12	Wall US 328 upper courses	328	50/25 B.C. tpq	With 13, after 6?	3
13	Construction trench US 336, opus tessellatum with preparation layers	335, 336 315, 329–331, 333, 334, 353	50/25 B.C. tpq	After 1, with 12, after 6?	3
14	Drain US 340 with construction trench	314, 340	Augustan / Julio-Claudian period tpq	After 4, 7	3
15	Pit US 310	310, 311	175/150 B.C. tpq	After 2, 8	3
16	Trench 362	320, 362	First half of 2 <sup>nd</sup> c B.C. tpq	After 7, 8	3
17	Layer US 313	313	1 <sup>st</sup> c A.D. tpq	After 7, 8, 15, 16	3
18	Pit US 302	302, 309	Late Augustan/ A.D. 65?	After 2, 3, 10, 15, 17	4
19	Pit US 323	317, 323, 366	1 <sup>st</sup> c B.C. tpq	After 11, after 18?	4
20	Layer US 306 etc.	306, 308, 312	Mid-1 <sup>st</sup> c B.C. tpq	After 18, 19	4
21	Mortar surface of palaestra US 305 with further activities	304, 305, 307	70/60 B.C. tpq	After 10, 12, 14, 17, 19, 20	4

42

Fig. 42: Sequence of activities and features in Area III; cf. figs. 19. 22. 24

43

While pottery proved valuable for giving *termini post quem* to contexts, the relative chronology of the various strata and features outlined above clearly shows that there was a high degree of residuality and contexts often proved to be much younger than their ceramic tpq. A combination of relative chronology and dates provided by finds yields a sequence of activities and features, which is summarized in Fig. 42. The various activities and features can be contributed to the period before the construction of the baths, as well as to the phases of the baths that have been established based on stratigraphic excavations and an examination of walls and decoration. Four large phases of the baths have been identified. The three remodelling phases all involved

changes in the bathing rooms, but also major changes and works in the palaestra, which is only partially visible in the colored phase plan (Fig. 37)<sup>51</sup>.

1. Construction after 130/125 B.C.

2. Modernization after 80 B.C., including the construction of a laconicum and a de-strictarium and the relocation of the eastern portico and most likely also the northern portico of the palaestra.

3. Modernization in the Augustan period with connection of the baths to the aqueduct. Works in the palaestra included the construction of a central drain, the relocation of the northern portico, and changes in the western wall.

4. Major luxurious renovation and enlargement after the earthquake of A.D. 62. The baths were significantly extended towards west, which entailed changes in the western part of the palaestra, as well as another relocation of the northern portico and comprehensive redecoration of all porticoes.

### Interpretation of Area III in Relation to the *Altstadt*

44 The earliest part of the sequence from Area III is very familiar from much of Pompeii: a basal deposit of fine yellow ash presumed to be from the Mercato eruption of Vesuvius of around 7,000 B.C. beneath a thick Neolithic to Bronze Age soil which was in turn sealed by a deposit of grey volcanic ash. Since this sequence was described for Pompeii<sup>52</sup>, better dating evidence has emerged for the grey ash layer. It was formerly thought to have been from one of the early AP (Ante Plinian) eruptions of Vesuvius in the middle Bronze Age but at least the upper part is now believed to be Iron Age, probably from the AP3 eruption. This eruption has a radiocarbon date, calibrated (at 95.4 % probability) to 996–797 B.C.<sup>53</sup>. The layer of grey ash, US 342/US 360, sloped upwards by about 0.15 m from the eastern side of Wall US 327 to the edge of the Baths Drain, US 340. While there is an overall slope in Pompeii from the forum down to the Via Stabiana, the excavation provided no evidence that the drain to the baths was situated in a natural steep-sided valley that would have enhanced the defensive nature of a wall situated further to the west in Area III.

45 Two of the archaeological features that were found were of an appropriate date for an *Altstadt* defense/boundary: Pit US 359 and US 349, a possible ditch. Although the profile excavated through US 359 (Fig. 20. 21. 22) could have been that of a ditch, the NW corner of it was located below Pit US 323, showing it to have been a deep pit (Fig. 23. 24). A ridge of the undisturbed prehistoric volcanic ash and palaeosol sequence survived between Pit US 323 and Pit US 324 (Fig. 23. 24: US 357, US 356, US 355, US 354, US 342 and US 358) confirming that no ditch continued northwards. Finds were absent from US 359 but it was cut by US 349 so was probably Archaic or earlier in date. It is suggested that the pit was dug to quarry the Mercato ash. Such material was used since the Archaic period as building material<sup>54</sup>.

46 The profile and depth of US 349 as seen in the southern section of the trench (Fig. 20. 21. 22) looked an even more convincing *Altstadt* ditch than US 359 but this was not borne out by the evidence from the north of the trench (Fig. 17. 18. 19). US 349 had largely been destroyed by Pit US 302 and by earlier excavations but it was not found between and beneath the shallow pits US 323 and US 324 (Fig. 23. 24), which would have been necessary if it were aligned on the edge of the *Altstadt*. If it were indeed a ditch it

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51 For a more detailed discussion of the phases of the baths, see Trümper 2017a; Trümper 2017b; Trümper et al. 2019; Trümper 2020; Trümper – Esposito forthcoming.

52 Robinson 2008; Robinson 2011, 20–23.

53 Santacroce et al. 2008, 2.

54 For example, it was used for the surface of an Archaic road at the southern end of the Via Stabiana; see Ellis et al. 2012, 8, where this surface is described as mottled, hard-packed earthen surface with visible lapilli inclusions.

would be leading to the NE corner of the palaestra of the baths (Fig. 15). Whatever the purpose of US 349, the lower fills (US 371) were water lain sediments, which accumulated rapidly, but the upper fill (US 318), the only one to contain finds, represented slow formation of soil. The absence of any finds younger than 6<sup>th</sup>/5<sup>th</sup> century B.C. in US 318 would be consistent with US 349 being from the 6<sup>th</sup> century B.C. but the general paucity of pottery from the early contexts in Area III shows that this area was not a focus of Archaic settlement activity.

47 Pit US 302, the *Grube* of Eschebach, showed all the characteristics of a Roman quarry pit, with sides that in places were vertical to undercut and having the subcircular plan of a pit. It did not continue northwards alongside Wall US 327. Its fill (US 309) belonged to the late Augustan period or even later. US 302 was not the defensive ditch to an Archaic *Altstadt*, neither was it the robber trench of an *Altstadt* wall.

48 The isolated block of pappamonte (US 332) had quite possibly been derived from an Archaic structure but the context upon which it rested (US 352) was no earlier than the 3<sup>rd</sup> century B.C. The two NS oriented walls (US 327 and US 328) are not necessarily coeval in their currently visible form: stratigraphy provides a tpq of 130/125 B.C. for the eastern wall (US 327) and of 50/25 B.C. for the upper courses of the western wall (US 328). Since the double wall was also excavated further north, in Areas II and IX, full assessment of its chronology must include results of all three areas<sup>55</sup>. The foundations of US 327 included some rectangular stone blocks which could have been in-situ from an earlier wall. Indeed, they have the character of unmortared walls of the 4<sup>th</sup> century B.C. found on the Porta Stabia excavations which were used as the foundations for *lava incertum* walls of the 2<sup>nd</sup> century B.C.<sup>56</sup>. However, there is no reason to believe they were the lowest course of a narrow *Altstadt* wall or re-used Archaic blocks because none of the stones was of pappamonte and they were not as regularly sized as Archaic blocks.

49 In sum, no trace of Eschebach's Phase 2 *Altstadt* boundary, ditch, embankment or wall was found within Area III. There remains the question of what the geophysical survey of the palaestra of the Stabian Baths detected that led to the interpretation of the NS ditch (Fig. 13. 14). The excavation showed that the western half of Area III had solid structures very close to the surface, with the pavement of the house and its sub-floor as well as the two walls and along their eastern side, undercutting rubble-filled pits. Further to the east up to the drain of the baths, there were gaps in the extent of pits. It is possible that this was the difference which was being recorded.

50 The early palaestra surface identified by Eschebach in his 1973 trench proved to be US 325, the earth mortar foundations to a robbed-out structure. The structure was dated to the 2<sup>nd</sup> century B.C. and no evidence was found in Area III for a palaestra surface of the 5<sup>th</sup> century B.C. or any palaestra surface other than US 305, the »Kalkschlämpe« of Eschebach (Fig. 11), which belongs most likely to the post A.D.-62 phase of the baths.

## Other Trenches Relevant to the *Altstadt* Discussion

### Area I

51 What Eschebach interpreted as the Archaic street surface below the »Greek bathing cells« proved to be hard mortar foundations of 2<sup>nd</sup> century B.C. cell walls (Fig. 7)<sup>57</sup>. No Archaic structures were encountered.

### Areas II and IX

52 Extensive remains of the house that was discovered in the western half of Area III were also found in the western halves of Areas II and IX. This prevented deep

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55 This is beyond the scope of this paper and will be published in another place in the near future.

56 Ellis – Devore 2009, 2 f.

57 Trümper et al. 2019.

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excavation in order to examine early contexts. However, no trace of Eschebach's Phase 2 *Altstadt* boundary was found within these trenches or even any Archaic contexts where the appropriate strata could be investigated. There certainly was not a ditch on the line postulated by Eschebach running across the NW corner of Area II, where the Bronze Age palaeosol was exposed.

### Areas V and X

53 These trenches served to investigate whether the *Altstadt* defenses were closer to the Vicolo del Lupanare than postulated by Eschebach. Again, there were problems that some of the earlier levels had either been destroyed or obscured by later archaeology although the Bronze Age palaeosol sequence was seen to be intact close to the street frontage in both trenches. There were no Archaic contexts intruding into the early deposits.

### Interpretation of Area III in Relation to the Baths

54 Little activity can be identified for the period of the 5<sup>th</sup> to mid-2<sup>nd</sup> century B.C. Identifiable activities include the construction of the well (US 348), of another unknown feature (US 361) and of the first Wall US 328 (lowest course). This does not allow to closer determine the use of the terrain in these centuries.

55 Phase 1: The trench Area III confirms that the baths were constructed after 130/125 B.C. The covering of the well (US 348) with earth mortar (US 325) may belong to the first phase of the baths, confirmed by a general tpq of the 2<sup>nd</sup> century B.C. and the earth mortar, which has parallels in other original features of the baths. The earth mortar most likely served to support some built structure<sup>58</sup>.

56 The Wall US 327, which served as the original western border of the palaestra, was built on top of Pit US 338, the fill of which provides a tpq of 130/125 B.C. The original Wall US 328 (lowest course) seems to predate US 327, but may still have been in place when US 327 was built. The precise sequence of the double wall remains to be clarified<sup>59</sup>.

57 Phase 2: The significant remodelling of the palaestra (Fig. 37) may have entailed the digging of quarry pits, a practice well established at this time. The relative sequence of these pits can be established: 1) US 345; after US 325, tpq 2<sup>nd</sup> century B.C.; 2) US 310; 3) US 302, after US 338, tpq 130/125 B.C. Assigning these pits to different phases of the baths is not without problems. The fills of both US 345 (US 319) and US 310 (US 311) have a tpq of 150 B.C. and 175/150 B.C., respectively, but the pits may still have been dug in different phases. Pit US 345 could have been made in phase 2, as suggested by the robber trench US 362, which postdates Pit US 345 and most likely belongs to phase 3 (see below). Pit US 310 was probably also made in phase 3. It cannot be excluded that pits were continuously dug in the palaestra, thus also between the major building phases. But this seems overall less likely as it would have impeded use of the palaestra.

58 Pit US 324 could have been dug at this point or in phase 3, as its fill (US 322) provides only a general tpq of the 1<sup>st</sup> century B.C.

59 Phase 3: Area III confirms that the large remodelling of this phase was undertaken in the Augustan period. This included the construction of the large drain US 340. The structure built on top of US 325 (US 362) was dismantled at this point, even though the fill (US 320) provides only a tpq of the first half of the 2<sup>nd</sup> century B.C. Furthermore, Pit US 310 was probably dug, and filled with early residual material (tpq of 175/150 BC).

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58 Trümper et al. 2019, 143–145.

59 Not only must the results of Area II and IX be evaluated, see above n. 56; a final trench in the SW corner of the palaestra, where Sulze had dug his trench S–S1, was planned for the summer of 2020, but must be postponed to 2021 because of the COVID-19 pandemic. Then, almost the entire sequence of Sulze's trench along the western part of the palaestra (here Fig. 7) will be excavated, allowing for full assessment of the complicated development of the palaestra.

These measures are clearly linked by the layer US 313, which is dated to the 1<sup>st</sup> century A.D.

<sup>60</sup> The house to the west of the baths was either built or at least significantly remodelled in this phase, notably after 50/25 B.C. This entailed the rebuilding of Wall US 328 (upper courses) and the construction of the *opus tessellatum* pavement (US 315). While it cannot be securely determined from Area III that the house and the baths were remodelled simultaneously, further examination of the double wall may clarify this question. In any case, the owner also connected his house to the aqueduct, most likely at the earliest during this remodelling<sup>60</sup>.

<sup>61</sup> Phase 4: The earthquake of A.D. 62 caused major damage to the baths and the house. The house was demolished, and the terrain used for the baths. This is reflected in the destruction of the double wall US 327/328. The largest pit, US 302, and Pit US 323 fit well with the major remodelling of this period, in their relative sequence and the date of their fills, with a top of the Augustan period/A.D. 65 and the 1<sup>st</sup> century B.C., respectively. After the completion of the remodelling, the entire area in Trench Area III was covered with a hard surface.

## Conclusions

<sup>62</sup> Area III provided major results for the early history of Pompeii:

1. No evidence of any permanent or ephemeral *Altstadt* boundary – wall, ditch, fence – was found in any of the areas where they had been identified or might have been expected: the palaestra C, room H or room L (Fig. 6. 7). What is more, the archaeological features upon which Eschebach based his interpretation were shown to have been made for other purposes and were post-Archaic. The results also remove part of the defenses behind which it was suggested the population of Pompeii withdrew in the 5<sup>th</sup> century B.C.<sup>61</sup>.
2. No evidence of an Archaic street was found in any of the rooms where it had been identified or might have been expected: L, N1, N2, or Q (Fig. 6).
3. Other features assigned by Eschebach to the early period of Pompeii such as the underground chamber (»tomb«) and deep well cannot be discussed in detail here. The deep well was only built for the baths, and the underground chamber may also have been built at a much later date than the Archaic period, most likely for the house<sup>62</sup>.
4. While the pappamonte block (US 332) may come from an Archaic wall, no pappamonte wall was found in situ in any area of the baths similar to the pappamonte structures found elsewhere in the city<sup>63</sup>. The scarcity of Archaic finds further suggests that this terrain was little used in the Archaic period. However, according to the recent reconstruction of the Archaic city plan, the terrain of the Stabian Baths was already located in prime location at this time: at the crossing of two major streets and close to important nuclei of the Archaic city, namely sanctuaries at the Foro Triangolare and the Forum area. Future investigations of the Archaic city may clarify the question of how the terrain was used in the Archaic period.

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<sup>60</sup> Eschebach 1975a, 92 f. fig. 11: lead pipes and appliances of a fountain were found. The history of the house will also be investigated with several trenches during the next campaign, see previous note.

<sup>61</sup> Coarelli – Pesando 2011, 47 f.

<sup>62</sup> Trümper et al. 2019, 146. The deep well is currently being studied by Thomas Heide in the frame of his PhD dissertation on water management of baths in the Vesuvian cities; the underground chamber will be investigated in the next campaign, planned for 2021.

<sup>63</sup> The colored DEM model provided by Holappa – Viitanen 2011, 179 fig. F shows the location of pappamonte walls in relation to the topography. Cf. also Avagliano 2018, pls. 1. 2.

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63 Evidence of Area III is also important for an assessment of the post-Archaic period and the history of the baths:

1. If Wall US 328 is really an early wall, it would be an important contribution to evidence of the early Samnite period in Pompeii which is overall scarce, but increasing in recent years<sup>64</sup>. It could testify to a subdivision of the terrain which was later respected, when the baths were built.

2. Several water features – the well US 348, possibly another well (US 361), and structures outside Area III<sup>65</sup> – predate construction of the baths and testify to use of the terrain probably in the 3<sup>rd</sup> and first half of the 2<sup>nd</sup> century B.C. This phenomenon has parallels in other areas of Pompeii, for example on the terrain of the Republican Baths (VIII 5, 36) where different water features were built subsequently, but before construction of the baths<sup>66</sup>. A comprehensive study of such early and later obstructed water features could further elucidate the development of Pompeii in the Samnite period, but remains to be done.

3. While the development of the Stabian Baths in four large phases has been reconstructed from a broad range of evidence, Area III confirms the history and provides important insight into building practices for all four phases. Earth mortar was used as foundation of built structures in the original baths. Quarry pits were probably made in all four phases (1: US 338; 2: US 345 and possibly US 324; 3: US 310 and possibly US 324; 4: US 302 and US 323). In any case, the courtyard of the palaestra was frequently dug up, entailing major earthworks.

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64 For literature, see Trümper et al. 2019, 116 n. 45.

65 The cistern under rooms Q and R seems to predate construction of the baths; Eschebach 1979, 34 f.

66 Trümper 2018, 102 n. 70. 71.



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