

INGRID ADENSTEDT

RECONSTRUCTING PHARAONIC ARCHITECTURE IN NUBIA:
THE CASE STUDY OF SAVI, SAI ISLAND

ÖSTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN
DENKSCHRIFTEN DER GESAMTAKADEMIE, BAND 80

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INGRID ADENSTEDT

**RECONSTRUCTING PHARAONIC
ARCHITECTURE IN NUBIA**

The Case Study of SAV1, Sai Island

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PREFACE

Traditionally Egyptian archaeology has focused on stone monuments, tombs and temples, with little attention paid to domestic architecture made of unfired mudbrick. The need to explore the domestic settlement sites along the Nile Valley has been addressed only since the 1970s¹ and even today, Egyptian settlement archaeology is still in its infancy.² Nevertheless, the Egyptian “Wohnhaus” was subject of Egyptological research since the early times of Flinders Petrie, Ludwig Borchardt and Herbert Ricke.³ In more recent years, Felix Arnold, Manfred Bietak and Cornelius von Pilgrim (among others) complemented the study of domestic buildings with new results from fresh fieldwork.⁴

Apart from novel ideas about the “Wohnhaus”, much progress has been made in recent decades in Egyptian settlement archaeology with ongoing research at sites like Amarna, Elephantine, Abydos and Tell el-Dab^a/Qantir.⁵ In their seminal publications “Busy Lives at Amarna”, Barry Kemp and Anna Stevens have highlighted the rich potential of a contextual approach with interdisciplinary measures, including aspects of the environment, the landscape and the material culture.⁶ In general, during the last decade, Egyptological studies have begun to stress social aspects of domestic architecture⁷ as well as social and cultural identities of the occupants.⁸

The latter approach nicely coincides with the current goals of the *European Research Council project AcrossBorders* (ERC Starting grant no. 313668 “*AcrossBorders – Settlement patterns in Egypt and Nubia in the 2nd Millennium BC*” and

FWF START Prize Y-615). Sai Island, as one of the most important New Kingdom sites in Upper Nubia (Northern Sudan), can be understood as the prime example for settlement policy of New Kingdom Egypt in the area between the Second and Third Cataracts. The *AcrossBorders* project aims to provide new insights on the lifestyle and the living conditions in New Kingdom Nubia, thanks to new fieldwork and multi-layered research on Sai Island. A data-based approach – focusing on the architecture and material culture, as well as investigating how environmental conditions affected daily life – will help achieve a more complete understanding of the New Kingdom town of Sai, in both its regional setting and its historical context.

In general, Egyptian towns founded in Upper Nubia during the period of the New Kingdom (c. 1539–1077 BCE) offer the unique chance to conduct a detailed analysis of domestic life at the junction of Egyptian and Nubian culture. In direct opposition to sites located within the borders of modern Egypt, these sites in Northern Sudan are better preserved and more accessible because they have not been superimposed by modern houses or cities.⁹

For many years, in line with traditional Egyptology, only temples and tombs were the focus of studies on the Pharaonic architecture in Nubia – this has changed dramatically in the last decade with resumed excavations at Amara West, Sesebi, Tombos and Sai Island.¹⁰ There is still a considerable lack of knowledge about the social stratification, population and structure within

¹ E.g. KEMP 1972; BIETAK 1979.

² Cf. FORSTNER-MÜLLER/MÜLLER 2011.

³ PETRIE 1890; RICKE 1932; BORCHARDT/RICKE 1980.

⁴ ARNOLD 1989; BIETAK 1996; VON PILGRIM 1996a.

⁵ E.g. KEMP/STEVENS 2010; KEMP/STEVENS 2011; KOLTSIDA 2007, 1; SPENCE 2010; BIETAK/CZERNY/FORSTNER-MÜLLER 2010. For a recent summary of urban life in Egypt, see also SNAPE 2014.

⁶ KEMP/STEVENS 2010; KEMP/STEVENS 2011. See also KEMP 2012.

⁷ E.g. KOLTSIDA 2007.

⁸ E.g. SHAW 2004; SPENCE 2010.

⁹ Cf. FORSTNER-MÜLLER/MÜLLER 2011, 209; BUDKA/DOYEN 2013, 167.

¹⁰ Cf. SPENCER/STEVENS/BINDER 2014; SPENCE/ROSE et al. 2009; SPENCE/ROSE et al. 2011; SMITH/BUZON 2014; BUDKA/DOYEN 2013.

Pharaonic towns in Nubia, but these questions are now being addressed from various perspectives and with diverse methods.¹¹ To recreate a snapshot of everyday life in New Kingdom Upper Nubia, a well preserved settlement like Sai offers rich data of various quality and character.

The Pharaonic town of Sai Island has the shape of a fortified settlement with an orthogonal layout in a south-north direction.¹² As highlighted by recent excavations, there are several different sectors within the town, which contrast regarding their layout and dating.¹³ Whereas the southern part (SAV1, see below) reflects the orthogonal planning of the town, with building units organised along north-south and east-west axes, other areas (SAV1 North and SAV1 East) show a more diverse plan in earlier levels. The earliest remains from these two sectors date to the early 18th Dynasty and find a close parallel in the Kerma site Gism el-Arba.¹⁴ From the mid-18th Dynasty, the domestic features in all parts of the fortified town fall into the category of Egyptian-style architecture in Nubia, well attested in the neighboring Pharaonic towns.¹⁵

The present volume deals with the internal structure of this town at Sai Island, concentrating on the organization of the living space, the architectural outline and features of the individual buildings in the southern part of the site. This study of the domestic architecture by Ingrid Adenstedt, as part of the FWF START project Y-615 “Across ancient borders and cultures”,¹⁶ is based on research and documentation work undertaken on Sai Island in 2013 and 2014. The architectural remains of the southern area within the town, named SAV1 (label by Jean Vercoutter for: Sai Adou Ville 1) and dateable to the 18th Dynasty,¹⁷ have been revisited. They are the best preserved ruins within the town area and it seemed logical to start a 3-D reconstruction with these re-

mains, especially with the excellent documentation by Michel Azim as a base to build from.¹⁸

The remains in SAV1 seem to illustrate the heyday of Sai during the mid-18th Dynasty, and it is clear that from the time of Thutmose III onwards, the site was an important administrative centre for the region.¹⁹ A stone temple (Temple A) and large magazines (SAF5) are core features of the southern town area, as is a large administrative building, the so-called governor’s residence (SAF2). Together with small houses of Egyptian types and various streets, the architecture of SAV1 nicely illustrates key elements of a typical “temple-town” of New Kingdom Nubia, including an orthogonal layout.

This volume is the first of a series of monographs as outcome of the START and ERC project AcrossBorders, and the architecture of SAV1 can serve as a sound basis for a deeper understanding of settlement patterns in Sai during the 18th Dynasty. The reassessment of SAV1, the southern part of the New Kingdom town of Sai Island, has produced several new results, which are relevant for a better understanding of the town layout.

I hope that the high efforts, meticulous plans and 3-D reconstruction by Ingrid Adenstedt will be not only recognized, but will fulfil their desired outcome: to illustrate as one specific case study living conditions in respect to domestic space and Egyptian architecture in New Kingdom Nubia.

Acknowledgments

Funds by the Austrian Science Fund (FWF START project Y615-G19) enabled the research for this study. First of all, we are very grateful for the permission by the French Mission as concession holders of Sai Island (until 2015: UMR 8164 HAL-MA-IPEL, University Charles-de-Gaulle Lille 3, France) to work on this subject; thanks go in particular to Didier Devauchelle (head of the Sai Is-

¹¹ See, as an exemplary volume with a variety of relevant papers: SPENCER/STEVENS/BINDER 2016. For a general assessment of domestic architecture in ancient Sudan (from Prehistoric to medieval and recent times) see FITZENREITER 1999.

¹² Cf. AZIM 1975; DOYEN 2009; BUDKA/DOYEN 2013; BUDKA 2014b; BUDKA 2015a.

¹³ See BUDKA 2015a.

¹⁴ BUDKA 2014b, 61 (with further literature in footnote 70).

¹⁵ Cf. FITZENREITER 1999, 119–120.

¹⁶ See BUDKA 2014a; BUDKA 2014b; BUDKA 2015a.

¹⁷ Six levels of occupation were recorded by M. Azim. These levels were only roughly dated and assigned to the Pharaonic, Meroitic and post-Meroitic periods as well as to two phases within medieval times and finally to the Islamic period (Ottoman fortress). See AZIM 1975, 93–95; GEUS 2004, 115; FRANCIGNY 2014, 798–799. AcrossBorders and the present study focus on the Pharaonic remains only.

¹⁸ AZIM 1975.

¹⁹ Cf. BUDKA 2014b; BUDKA 2015a.

land Archaeological Mission until 2014) and Florence Doyen (field director prior to AcrossBorders until 2012). Work at the site would not have been possible without the support of the Sudanese authorities (NCAM), and here we would like to thank especially Abdelrahman Ali, El-Hassan Ahmed und Huda Magzoub.

The terrestrial 3-D laser scanning campaign on Sai Island, realized thanks to a cooperation with Robert Kalasek from the Vienna University of Technology, Department of Spatial Development, Infrastructure and Environmental Planning, was fi-

nanced by the FWF and provided the necessary data for the present volume.

Martin Fera created the digital landscape model (Pls. 52.1 and 59) in 2015, based on kite photography. Last but not least, I would like to thank all people on Sai, who made our work not only successful but also really enjoyable, despite the curse of the black flies, the “*nimiti*”.

Julia Budka
Vienna, December 2015

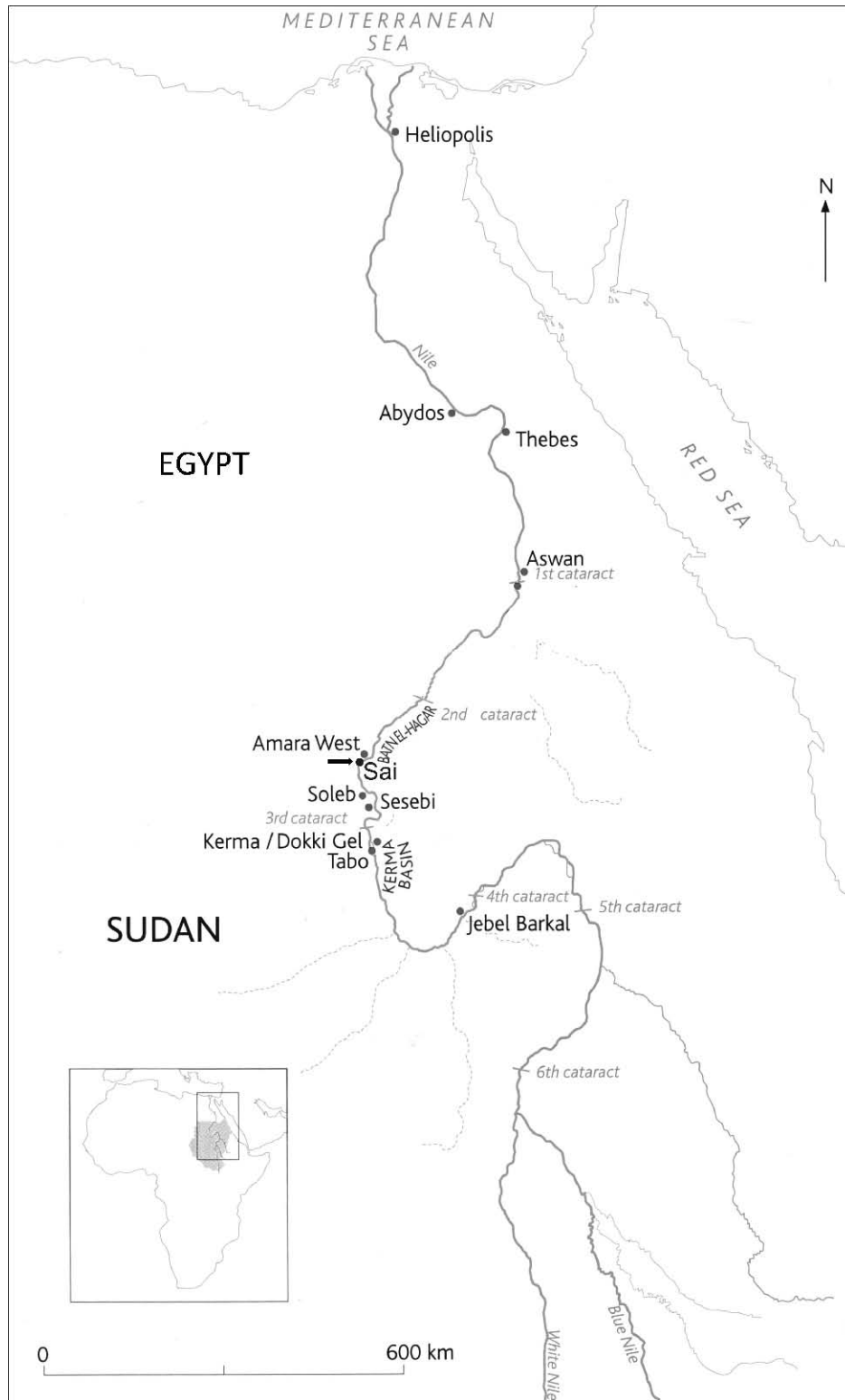


Fig. 1. Location of Sai Island along the Nile Valley. After: WELSBY/ANDERSON (eds.) 2004, 93, fig. 68

1. INTRODUCTION

This publication is based on the research and documentation work undertaken on Sai Island, Sudan, in the years 2013 and 2014 by the author and is part of the FWF START project Y-615 “Across ancient borders and cultures” (Fig. 1).²⁰ The goal is a reassessment of the architectural remains of the southern area of the New Kingdom fortified town on Sai Island, named SAV1 (Pls. 52.1 and 54). This part of the settlement, which makes up about one third of the entire town, was excavated in the 1950s and 1970s by a French Mission.²¹ The main publication, with the results of the excavations carried out in the years 1970–1973, was published in 1975 by Michel Azim.²² While he provides an overview of the excavated areas, with occasional detailed observations, the present publication shall provide more solid in-depth documentation and analysis, by reexamining the former results and putting them into a wider context. A major objective of the current work is the provision of new

plan material, since Azim’s plan of the town while being an important source of information, is unsatisfactory in that the distinction between the actual state of the ruins and a suggested reconstruction is often not clear.²³

As already described by Azim, six occupational phases can be identified for this area, ranging from the 18th Dynasty Pharaonic town up to the Ottoman fortress, erected in 1560 and lasting until 1820. Apart from the prominent ruins of this fortress and the remains of the New Kingdom settlement, most notable are the Meroitic ruins – primarily small dwellings – and structures from the Late Middle Ages, which seem to have been refugee shelters with a spiral-form ground plan.²⁴ The other occupational phases manifest themselves through the pottery finds. The present study, like Azim’s work, concentrates solely on the remains from the New Kingdom period, in accordance with the topic of “Across ancient borders and cultures”.

²⁰ The FWF START Prize Y-615 is complemented by the ERC Starting grant no. 313668 “*Across Borders – Settlement patterns in Egypt and Nubia in the 2nd Millennium BC*” (principle investigator Julia Budka). This project commenced in 2012 and is projected for five years. The project blog with further information and literature references can be found at: <http://acrossborders.oeaw.ac.at>. My thanks go to Julia Budka for having given me the opportunity to become a member of the team and for all the help and valuable information she has provided me with in the past years. I would also like to express my thanks to Meg Gundlach, for proofreading and critically assessing my text.

²¹ Directed by Jean Vercoutter. Since that time the island has been a French concession supervised by the University Charles-de-Gaulle – Lille 3.

²² AZIM 1975. See also GEUS 2004.

²³ Cf. AZIM 1975, 98, pl. IV. For example, there are six columns depicted in the main room of SAF2, even though only the two northern ones actually exist *in situ*, while the other four are reconstructed.

²⁴ AZIM 1975, 93–95; for the Meroitic ruins see GEUS 1994, 141–150.

2. METHODOLOGY

The first campaign for the work presented here took place over three weeks in 2013. It entailed a basic architectural survey of the area, in order to gain an overview and to assess what can be done in the future. During this campaign, the entire area was measured and sketched in a scale of 1:50 in order to get a grasp of the structures and their specifics, such as construction joints, thresholds and interior installations.²⁵ In addition, a so-called room book, i.e. a catalogue of all the rooms, was compiled, with the more detailed information, for example the overall measurements and the square meters of the room and the length, width and preserved height of the wall. Other specifications are listed as well, including any door openings, possible thresholds, remains of floors or installations, and the size of the bricks etc.²⁶ Together with the sketches, the room book served as a basic tool for further work, as one could easily look up and compare the various details. The main result of this first campaign was the compilation of a new preliminary plan based on the hand-measurements.

This plan was already very useful, especially concerning the details, however it lacked exact geometric parameters. Therefore, the need for an accurate survey arose and a second campaign was undertaken in 2014 with the goal of obtaining complete documentation of SAV1 with the help of a 3-D laser scanner. As a partner for this endeavor, Robert Kalasek from the Vienna University of Technology, Department of Spatial Development, Infrastructure and Environmental Planning was responsible for the scanning process.²⁷ An Image Laser Scanner Riegl VZ-1000 was used for the scanning and a Nikon D800 camera with a 14mm lens was mounted on the scanner in order to record the texture. During the scanning process, a grid of

three dimensional points is automatically measured in the surveyed area. So-called point clouds result from this process, including xyz-coordinates and an intensity value depending on the surveyed material.

The complete scan of the remains of the Pharaonic town required 155 different scan positions, whereby the maximum distance of the measured points ranged between 200 and 400m, according to the angle of incidence and the reflectivity of the material (Pl. 53). The result of each scan is a point cloud in a local coordinate system. In a next step the scans can be joined (registered) with the help of a multitude of reflector points, which had been distributed throughout the ruins. Generally, at least five overlapping points are needed in order to put two scans together. These reflector points were additionally measured with a total station so that the registered scans can be placed into a georeferenced net.²⁸

In addition to the standing remains of SAV1, the newly excavated trenches SAV1 East and SAV1 West were also scanned and georeferenced, as was SAV1 North, the area excavated from 2008 to 2012. In order to collect data for the topographic understanding of the surroundings, four long-range scans (range of 1.2km) from elevated points were undertaken as well (Fig. 2). From these, together with an aerial photograph, a digital terrain model was compiled by R. Kalasek (Pl. 52.2).

For the actual core area, namely the area of SAV1, several post-processing steps were undertaken for generating new ground plans and sections through key areas of the site. The post-processing includes steps such as registering the single scans together and then cleaning the resulting 3-D point cloud, removing any unwanted information. After carry-

²⁵ These elements are mostly missing or only depicted in a very perfunctory manner on Azim's plan of the 1970s. See AZIM 1975, 98, pl. IV.

²⁶ Cf. Chapter 14.

²⁷ See <http://www.srf.tuwien.ac.at/kalasek/> for further 3-D laser scanning projects by R. Kalasek.

²⁸ The geographical data was provided by Florence Doyen and the Sai Island Archaeological Mission and is currently a local "Sai Island" coordinate system that still needs to be transferred into the global coordinate system.



Fig. 2. Long-range 3-D laser scan plan (R. Kalasek)

ing out these steps and taking certain vital settings into consideration, such as deviation, the range and the reflectance, a smooth data transfer into a further post-processing software was possible. In our case, the software program PointCab²⁹ seemed to be the best solution for creating plans (Pls. 1–12) and sections directly from the 3-D point cloud, which can then be further worked out in AutoCad (Plans 1–4).

With all this new information, the ground plan was once again revised, this time as a georeferenced ground plan of the Pharaonic town with all the details available from the laser scanning results, as

well as from the hand measurements and observations made on site. This seems to be the best possible combination for an analytical ground plan. In addition, sections through the main areas of the settlement were generated (Plans 5–7).

Apart from the fact that the new plan is now georeferenced, one of the unsatisfactory points of the older plans is that often the distinction between the actual state of the remains and an interpretation or reconstruction is not clear, since everything is compiled into one plan (Fig. 3). Therefore, the need arose for the production of two plans, one

²⁹ <http://www.pointcab-software.com/>.

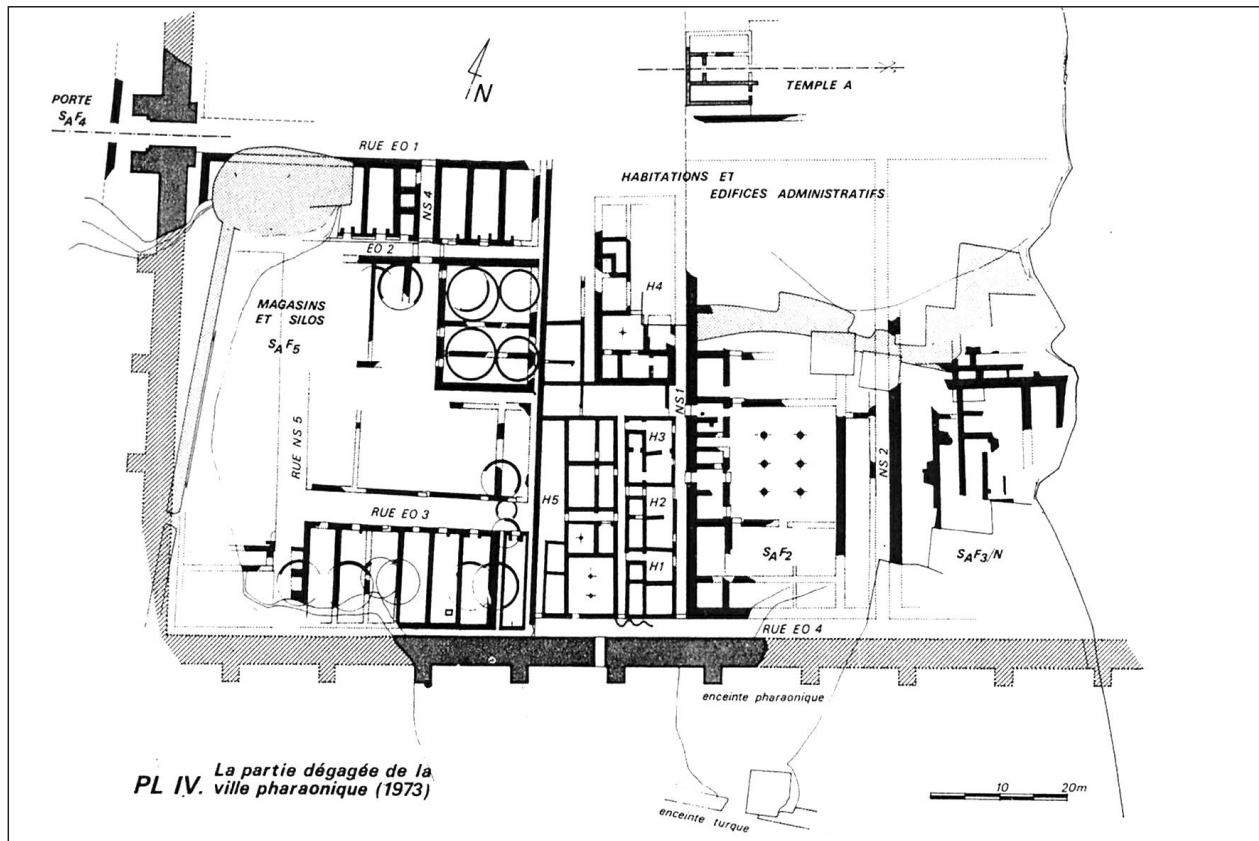


Fig. 3. Plan of SAV1 by M. Azim (AZIM 1975, 98, pl. IV)

with the actual state of the ruins and one with a reconstruction of the settlement, particularly SAV1 (Figs. 4 and 5). As a further step – and from the beginning one of the goals of the project – a 3-D reconstruction of the area SAV1 was attempted (Pl. 62). Due to the state of the ruins, a lot of the reconstruction must however remain hypothetical, especially when going into the third dimension, determining building elevations and adding possible upper stories. For the most part, the consid-

erations can only be based on comparisons with other similar sites and buildings.³⁰ Other clues with regard to the third dimension are to a certain extent given by the thickness of the walls, deliberations on the possible weight they could carry and therefore the height of a building. In any case, the aim of the 3-D reconstruction is to offer an idea of what the town could have possibly looked like, always keeping in mind that it is merely a suggestion and not a definite answer.

³⁰ So far, not very many comprehensive reconstructions, based on extensive scientific background work exist for Egyptian cities. The most progress so far has been made for Amarna, where a physical model of the city was made for an exhibition in 1999. See http://www.amarnaproject.com/pages/model_of_the_city/. Another project, illustrating parts of the city is still in progress and can be found at <http://www.amarna3d.com/>. More models exist for singular houses, e.g. <http://www.ucl.ac.uk/museums-static/digitalegypt/3d/houses.html>, where basic reconstructions of different house types are illustrated. A main guide for considerations on the third dimension of domestic build-

ings is certainly SPENCE 2004, 123–152. See also KEMP 1995, 146–168 for the reconstruction of House P46.33 in Amarna; KEMP/STEVENS 2010, 509, fig. 10.13 for the Grid 12 houses in Amarna; SNAPE 2014, 90 for the House of Ranefer (N49.18) at Amarna. For comparisons regarding fortifications, 3-D reconstruction drawings for the Nubian forts of the Middle Kingdom can be found in DUNHAM 1960 and 1967 and EMERY/SMITH/WILLARD 1979. A virtual 3-D reconstruction exists at <http://www.vizin.org/projects/buhen/gallery.html> resp. <http://www.learningsites.com/EarlyWork/buhen-2.htm>.



Fig. 4. Plan of the remains of SAV1 based on the 3-D laser scan



Fig. 5. Reconstruction plan of SAVI



Fig. 6. The different sectors of SAVI

3. OVERVIEW OF SAV1

(Fig. 6; Plans 1–4; Pl. 54)³¹

The New Kingdom town of Sai Island, situated on a sandstone outcrop bordering the eastern branch of the Nile, follows the typical form of an Egyptian fortified town.³² While the western and central areas were relatively flat, the eastern part of the town slopes first gently downwards for about 2.0m and then steeply drops off towards the Nile with a height difference of about 8.0m. A c. 4.40m wide enclosure wall surrounded the approximately 240 × 120m large settlement.³³ The southern part of the town, SAV1, underlies a strict perpendicularity with roughly north-south and east-west oriented streets and large rectangular buildings. In contrast, the excavations in the northern and the western parts of the town present a different picture with a rather irregular layout of the streets and small, mostly domestic houses.³⁴ The central part (about two-thirds) of the settlement has so far not been thoroughly examined, though to the north of the small sandstone Temple A on the eastern side of the town, Building A has been excavated since 2013.³⁵ This building, similar to SAF2 to the south of the temple, proves to be very important for the internal structure of the town, since it shows that the orthogonal layout known from the southern part of the town extended further to the north.³⁶

The southern part of the town was bordered in the north by the east-west oriented street Rue EO1. On its western side was the presumed main entrance into the settlement, labelled Gate SAF4.³⁷ From this gate the aforementioned street, thought to be one of the main thoroughfares of the town, led to the sandstone Temple A, which lies directly to the north

of the street on the eastern side of the town. To the south of Rue EO1, three distinct sectors can be identified: in the west is the quarter SAF5 with silos and several rows of rectangular storage rooms, in the center a domestic quarter consisting of five houses (H1 to H5) and in the east the so-called governor's residence, SAF2. The storage area SAF5 is separated from the residential area by a north-south oriented dividing wall, with no passageway connecting the two city quarters. On the northern, southern and western sides, SAV1 was enclosed by fortification walls. A second known gate is situated in the southern enclosure wall, to the south of House H5.

When looking at the city map of the southern part of the New Kingdom town, a slight difference in alignment of the buildings between SAF5 in the west and the residential quarters in the east is noticeable. The reason for this is not clear, but perhaps it is an indication of different building phases between the eastern and western parts of the town. For the town in general, recent research has established three main phases for the development of the settlement, beginning in the early 18th Dynasty when Sai was probably a simple landing place and supply base, though the size and internal structure of this early settlement is not known.³⁸ The town enclosure was definitely established during the reign of Thutmose III,³⁹ together with Temple A,⁴⁰ Building A⁴¹ and presumably the buildings of SAV1. As exemplified by Temple A,⁴² there were several building phases during the reign of Thutmose III, as well as under his successors Amenhotep II, Thutmose IV

³¹ The naming of the different areas and the main streets derive from the excavation by M. Azim, while specific room numbers were assigned during the reexamination by the author.

³² Cf. KEMP 1972a, 651–656.

³³ For the reconstruction of the enclosure wall and the expansion of the town see Chapter 5.

³⁴ For SAV1 North see DOYEN 2009, 17–20; BUDKA/DOYEN 2013, 167–208; DOYEN 2014, 367–375; for SAV1 West see BUDKA 2014b, 63–65; BUDKA 2015a, 45–46.

³⁵ BUDKA 2014b, 61–63; BUDKA 2015a, 43–45; BUDKA 2016.

³⁶ BUDKA 2015a, 51.

³⁷ Cf. AZIM 1975, 120.

³⁸ This is supported by archaeological evidence from SAV1 East and around Temple A. BUDKA 2015a, 51.

³⁹ Results from the excavation at SAV1 West confirm this dating. BUDKA 2015a, 45–46.

⁴⁰ THILL 1997, 105–117, AZIM/CARLOTTI 2011–2012, 39, 45; BUDKA 2014b, 60.

⁴¹ BUDKA 2014b, 61–63; BUDKA 2015a, 43–45.

⁴² Cf. Chapter 7.

and Amenhotep III. Finally, the town was still in use during the 19th Dynasty.⁴³

Returning to the shifted alignment between SAF5 and the eastern part of the settlement, it seems possible that the area of SAF5 with the north-south dividing wall to the east was first – maybe during the first development phase – established as a storage area with silos,⁴⁴ while in the second phase under Thutmose III the rectangular storage rooms were erected following the direction of north-south dividing wall. At the same time, the domestic buildings and the governor's palace in the east were built, following a slightly different alignment. Currently, there are no ana-

lyzed finds from SAV1 to establish an exact dating for this area, though an important clue is given by an inscription on a door post situated in the northern part of SAF5, which names the viceroy Nehi (Pl. 20.2), indicating that at least this part of SAV1 must have been erected during the reign of Thutmose III.⁴⁵

While three different development phases can be noted for SAF5 during the New Kingdom period⁴⁶ and five building phases were established for Temple A,⁴⁷ little restructuring could be observed in the area of the residential buildings or the governor's palace SAF2, indicating a rather short usage period for these buildings.

⁴³ BUDKA 2015a, 51. New finds from the town site as well as the cemetery SAC5 confirm this development phase.

⁴⁴ Cf. Chapter 8.1. Some of the silos in SAF5 were later overbuilt by the rectangular storage rooms.

⁴⁵ Viceroy Nehi was in office during the years 22/23–52 (see MÜLLER 2013, 106–108); his building inscription dates to year 25; all in all, this building phase in SAF5 seems to

date to the third decade of Thutmose III' reign. See also AZIM 1975, 116; VERCOUTTER 1956, 74–75.

⁴⁶ Cf. Chapter 8.1. Especially for the southern row of magazines in SAF5 the large amount of reconstruction work that seems to have been undertaken at the walls of the storage rooms must be noted. See Chapter 8.2.

⁴⁷ AZIM/CARLOTTI 2011–2012, 45–47, 65.

4. BUILDING TECHNIQUE

As is common for Egyptian settlement architecture, the walls of the buildings of SAV1 are throughout composed of mudbricks, with only two different brick formats: smaller ones at $33 \times 15 \times 10$ cm and larger ones at $40 \times 19 \times 9$ cm. The larger bricks prevail in the governor's palace SAF2 and the town enclosure, while the smaller ones were used for the simpler domestic buildings. As a rule, the two formats were not used within one and the same wall. However, an exception to this rule can be observed in the area of the storage rooms, where the walls consist of various brick formats, which seems to stem from restructuring work on the walls. During the excavation in the 1970s Azim noted 20 different markings on the large rectangular surface of the bricks, such as double or triple, oblique or parallel lines or impressions with fingertips.⁴⁸ Unfortunately due to the long exposure of the walls to the natural elements, these markings cannot be seen anymore today. However, during the excavation of SAV1 North similar marks were observed.⁴⁹

The applied brickwork always follows a similar pattern (Pl. 13), in that one course of bricks consists of a row of facing stretchers followed by a number of headers according to the thickness of the respective wall, which ranges between 0.54 and 1.56m. In the alternating course, the row of stretchers was placed on the opposing side of the wall. The horizontal joints filled with mortar are throughout 2–4cm thick, while the vertical joints differ considerably; sometimes large gaps of up to 10cm were left between the bricks. These holes were either filled with mortar or left open and they probably enabled an adjustment of the wall thickness due to irregular

brick lengths.⁵⁰ The wall plastering was very uniform as well, with remains of a mud plastering observed throughout the entire area of the settlement, while no traces of wall painting or whitewashing of the walls could be detected.⁵¹

As for the foundation of the walls, in most cases no special foundation seemed to have been applied. An exception is the massive enclosure wall, where the excavations in 2012 revealed that the two to four lowest layers of bricks jut out for 6–8cm, forming a foundation step.⁵² Together with this step, a filling composed of a dense packing of mudbricks, covering the projecting brick courses, was observed. Additionally, broken or complete mudbricks were dumped into the foundation trench along the inner facing of the enclosure wall.⁵³ In contrast, little attention seems to have been given in the preparation of good foundations for the interior structures of the settlement, where mudbrick walls were usually built directly on the ground surface.⁵⁴ In this regard, a means of steadying the wall was observed in the southern part of the storage area SAF5, where a mixture of plaster and rubble was applied at an angle to the lower part of the wall (Pl. 14.1). If this method was also employed at other places is not known, although it seems to at least have been the case at Building A in SAV1 East.⁵⁵

In a few cases, bricks standing on edge could be detected, mostly in the lowest regions of the wall, but occasionally higher up (Pl. 14.2). This was usually a means of levelling, either of the uneven ground surface or of uneven brick courses resulting from irregular bricks.⁵⁶

⁴⁸ AZIM 1975, 105.

⁴⁹ Cf. DOYEN 2009, 19, pl. 3.

⁵⁰ Cf. KEMP 2000, 90.

⁵¹ Cf. AZIM 1975, 105. In contrast, whitewashing and wall-painting could be detected throughout the remains of Amara West. Cf. SPENCER 1997. Whitewashing of the walls, especially on the outside, was also detected at Deir el-Medina. See SNAPE 2014, 78. Some of the inside walls of Kahun were painted dark in the lower regions and yellow in the upper parts. See CORREAS-AMADOR 2013, 399.

⁵² BUDKA/DOYEN 2013, 178; a parallel can be found at the Middle Kingdom fortress at Buhen. See EMERY/SMITH/MILLARD 1979, 67, fig. 37.

⁵³ BUDKA/DOYEN 2013, 178.

⁵⁴ Cf. SPENCER 1979, 120, 163, for similar observations at Amarna.

⁵⁵ Personal communication by J. Budka.

⁵⁶ Bricks standing on edge are also commonly used for structural reasons, such as the reinforcement at the top and bottom of windows and the top of doors, or also as a method of making the steps of a staircase. Cf. KEMP 2000, 90, fig. 3.5; CORREAS-AMADOR 2013, 83.

Three different types of floors were detected in the area of SAV1. For the most part, the floors consisted of mud pavements, only in the case of the so-called governor's residence, SAF2, brick floors were found in the main rooms of the building (Pl. 15.3). These were composed of two different brick formats and were laid in a special pattern in even rows with aligned joints.⁵⁷ The bricks were set in a hard, pink-colored mortar bed. Finally, floors consisting of irregular schist slabs were observed in two of the storage rooms in SAF5 (Pls. 29.2 and 56). It is not known if all of the magazines were formerly equipped with this kind of pavement, or only a few that were perhaps intended for a special usage.⁵⁸

As for sandstone elements, apart from those architectural pieces belonging to temple architecture, several sandstone thresholds (Pls. 15.1–2) and two sandstone column bases are still *in situ* in the governor's residence SAF2. In addition, some of

the storage rooms in SAF5 are also equipped with sandstone thresholds, as well as House H4 in the domestic quarter. In the more simple dwellings the thresholds presumably only consisted of bricks or a raised mud sill. For the most part, the lowest courses of a wall were laid without the doorways being marked and the thresholds commonly lay on one to two courses of bricks.

Not a single ceiling or roof has survived, though one can assume flat roofs of mud laid over wooden beams and straw mats.⁵⁹ For larger rooms, the cross beams of the roof must have been supported by columns – by comparison the roofs at Amarna were usually not more than about 3.5m across.⁶⁰ For the magazines in SAF5, remains in two of the storage rooms point to vaulted roofs, which was generally common for these kind of rooms (Pl. 15.4).⁶¹ In order to create a flat surface above the adjacent vaults, the intervening spaces were filled with bricks or rubble.⁶²

⁵⁷ Cf. Chapter 10.

⁵⁸ Several magazines in Amara West were also equipped with schist or sandstone slabs, reflecting the value of objects stored here and perhaps intended to reduce the effects of rodents or insects. Cf. SPENCER/STEVENS/BINDER 2014, 19.

⁵⁹ Azim observed remains of a roof or ceiling in House H3. See AZIM 1975, 118. Cf. ENDRUWEIT 1994, 46; KEMP 2000, 93, 94, fig. 3.8.

⁶⁰ Cf. KEMP 2000, 93; VON PILGRIM 1996a, 201–202, assumes that the maximum width that can be spanned without supporting columns is 4.0m.

⁶¹ As can be observed throughout Egypt. See for example the magazines at the Ramesseum. Cf. ARNOLD 1992, 142–144, fig; WILKINSON 2000, 183, figs. 1 and 2; KEMP 2006, 258, pl. 6; 259, fig. 94. Vaulting is also attested for the magazines surrounding the temple at Amara West. See SPENCER 1997, 53–74.

⁶² Cf. KEMP 2000, 93–95.

5. FORTIFICATIONS

(Fig. 7)

Of the fortification walls surrounding the town, remains on the north, south and west sides still exist. These remains enable a secure reconstruction of at least these three sides of the fortification walls, resulting in a north-south extension of the town of 242m. In regard to the eastern side, hardly any evidence of the former city wall has so far been traced. Previously, one had assumed that the cliffs along the Nile had reached further to the east and had at some point in time collapsed, together with the eastern fortification wall.⁶³ Through the recent examinations, however, it is now clear that the sandstone cliffs and the water table of the Nile have not changed considerably since antiquity⁶⁴ and therefore the city wall must have been situated further to the west than previously assumed. Instead of an east-west extension of 140m, as originally presumed, only about 120m can be accounted for.⁶⁵ In the course of his examinations in 2014, Erich Draganits assumed that remains of a mudbrick wall directly to the east of Temple A actually belonged to the fortification wall,⁶⁶ which, however, cannot be verified at this time. In any case, the eastern enclosure wall must have been situated close to the eastern side of Temple A and also the so-called governor's palace SAF2, possibly only leaving a relatively narrow gap for a proposed wall street.⁶⁷

The remains of the fortifications on the southern side of the town can be traced to a length of 41.80m

and up to a height of about 2.40m (Pls. 16 and 17.1).⁶⁸ They are situated to the south of Rue EO4 and the row of magazines M1–M7. To the west, the city wall was overbuilt by the Ottoman fort, using the Pharaonic fortification as a substructure, while the eastern part of the southern enclosure wall has completely deteriorated. The width of the fortifications in the south is 4.40m, consisting of mudbricks of the format 40 × 19 × 9cm, which were laid in alternating layers of headers and stretchers.⁶⁹ On the outside of the wall, the remains of two small towers or buttresses⁷⁰ can still be seen. The western one, situated directly to the east of the southern gate, is better preserved and measures 2.23 × 2.34m (N–S). Of the eastern one, only sparse remains on floor level still exist. Nevertheless, the eastern tower or buttress can be reconstructed measuring 2.56 × 2.30m with the distance between the two protrusions measuring 11.96m. A simple 1.68m wide gate is situated directly next to the western protrusion (Pl. 17.2). In a later period it was closed off with walls on the northern and southern sides. This gate lies opposite of House H5 and has no direct connection to any north-south oriented street. Even though no clear evidence remains, it seems plausible that there was also a tower or buttress directly to the west of the gate. The fortification wall in that area is badly damaged, and the face of the wall is irregular, which could indicate that a tower bonded to the city wall existed here.

⁶³ AZIM 1975, 94, pl. II; 122; GEUS 2004, 115, fig. 89; MORRIS 2005, 86, fig. 13; DOYEN 2009, 18.

⁶⁴ DRAGANITS 2014, 22; BUDKA 2014b, 60; BUDKA 2015b, 67; BUDKA 2016.

⁶⁵ Cf. BUDKA 2014b, 60; BUDKA 2016; BUDKA forthcoming. Compared to the more or less square-shaped layout of the fortified towns of Sesebi (270 × 200m) and Amara West (c. 100 × 100m), the layout of Sai is thus surprisingly elongated. For a plan of Sesebi see SPENCE/ROSE 2011, 34, fig. 1; UPHILL 1988, 37, fig. 16. For an overview plan of Amara West see SPENCER/STEVENS/BINDER 2014, inside of the back cover.

⁶⁶ DRAGANITS 2014, 22.

⁶⁷ The new excavation area SAVI Northeast from the field campaign 2016 could shed some light on the position of the eastern enclosure wall. Here, a few bricks possibly belong-

ing to the fortification were uncovered (Fig. 7). Personal communication by J. Budka. By reconstructing the wall at this location, the presumed wall street at SAF2 would be about 1.05m wide.

⁶⁸ Cf. AZIM 1975, 120–121.

⁶⁹ This layering method is very common and is also attested for at the Nubian forts of the Middle Kingdom. See VOGEL 2004, 120.

⁷⁰ Cf. VOGEL, 2004, 121–122; VOGEL 2009, 177. As opposed to older reconstructions (cf. EMERY/SMITH/MILLARD 1979), she proposes that the protrusions on the fortification walls of Buhen were not actually towers, but rather abutments that were about two-thirds of the height of the wall with the purpose of distributing the load on the wall. This could also have been the case at Sai, especially considering the small size of the abutments at roughly 2.50 × 2.50m.



Fig. 7. Plan of the Pharaonic town of Sai in its topographical setting

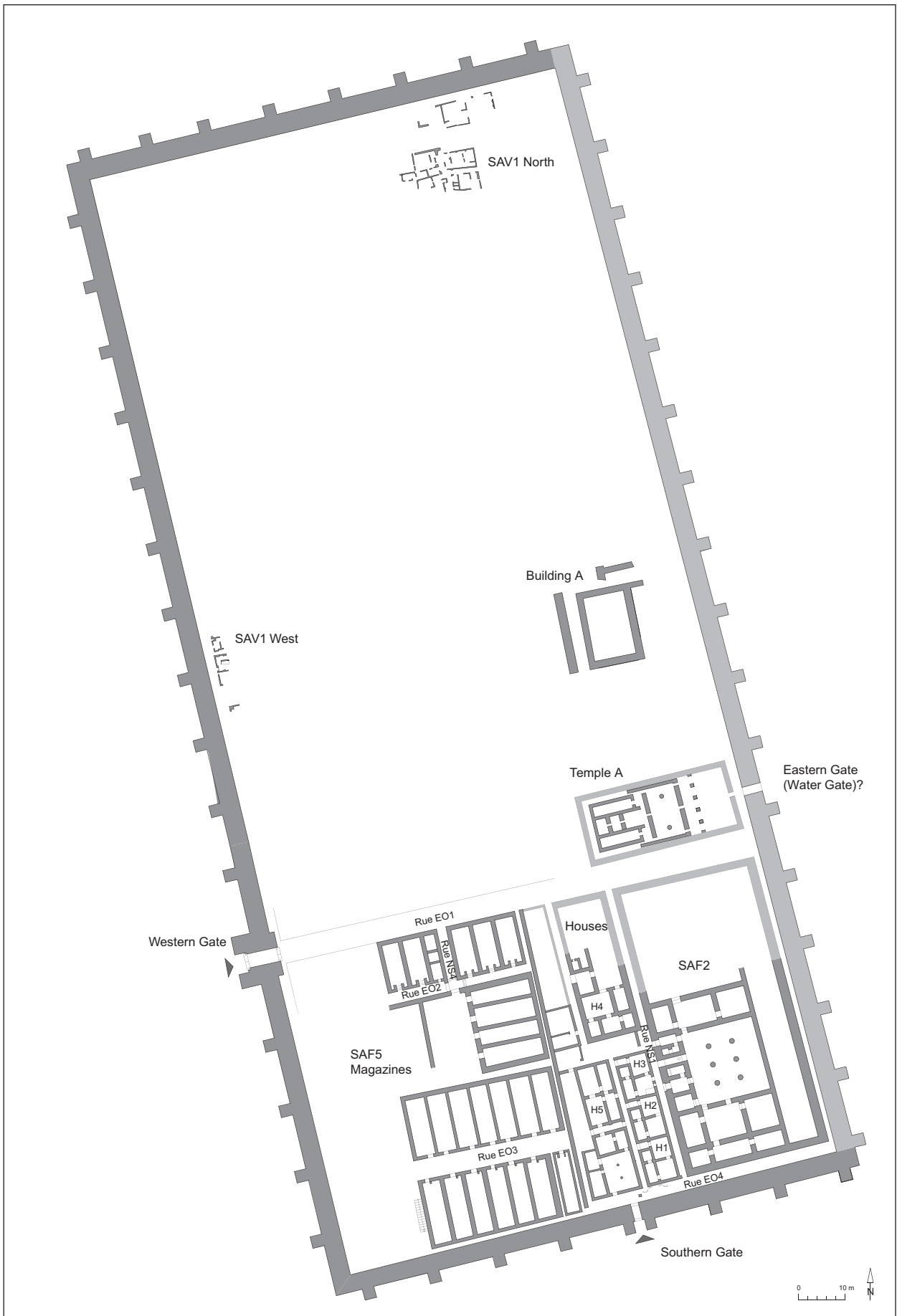


Fig. 8. Reconstruction plan of the Pharaonic town of Sai

On the north side of the town, remains of the enclosure wall were excavated during the campaigns in the years 2008 to 2012 (Pl. 17.3).⁷¹ They can be traced to a length of 39.32m and show similar results as in the southern part of town, with the enclosure wall being 4.26m thick, composed of ten rows of mudbrick headers alternating with layers of stretchers. Bricks laid in various positions existed as well. No gate was discovered in this part of the town wall, but a small protrusion, measuring 2.64 × 2.12m existed on the outer side, similar to the southern side of the fortification. In addition, a curtain wall surrounding the original bastions is proposed as well as an enlargement of the protrusion during Pharaonic times.⁷²

During the recent excavations in 2014–2015, another part of the enclosure wall was uncovered in SAV1 West, on the western side of the settlement.⁷³ This newly excavated part of the wall exactly followed the presumed course of the fortification, as proposed by previous surveying,⁷⁴ and in line with the remains at SAF4 further to the south. Here, the thickness of the wall was about 4.30m and the building technique was identical to those of the northern and southern parts of the enclosure wall.

Further to the south remains of the western city gate exist, which presumably was the main gate (Pl. 18). Even though the remains are sparse and preserved only at floor level, it is possible to reconstruct the former layout of this gate. It was situated in the axis of the main east-west street Rue EO1, which led from the gate to Temple A.⁷⁵ Remains of four stone thresholds in a row can be found here, whereby only the two eastern ones seemed to have belonged to the original city gate, the others stem from a later period. The two original thresholds were situated between two massive walls, with an inner width of the gate of about 3.05m. The length between the two thresholds was 6.87m. To the west

two towers flanked the entrance, protruding out for a further 2.35m. On the inner (eastern) side of the wall were protrusions as well, albeit smaller at 0.60m. These structures are all documented by singular parts of the walls still remaining *in situ*, where mostly only a few of the mudbricks on floor level exist. The possibility of a ditch on the western side of the gate, as proposed by Azim,⁷⁶ must remain unanswered. The current state of the site allows no interpretation of a ditch, nor has a ditch been yet established at SAV1 West.⁷⁷ Moreover, a wall to the west of the city gate that Azim had interpreted as a terracing wall situated on the eastern side of the ditch⁷⁸ seems to have been erected at a later date, taking the building material with a small brick format and the building technique into account.⁷⁹

So far it is not known if a further gate had existed somewhere along the missing parts of the enclosure wall. Looking at the Nubian Middle Kingdom forts, the main gate was always facing the desert,⁸⁰ so it seems plausible to address the western gate at Sai as the main gate. In general, smaller and less fortified gates – so-called water gates – were nearer to the water and often offered direct access to a stairway leading to the Nile.⁸¹ That the southern gate at Sai actually represented this water gate cannot be verified, since no walkway to the Nile has so far been discovered. It seems plausible, however, that at least one other gate existed at the eastern side of the enclosure wall, since here the fortification is situated on the cliffs bordering the river. Thus, in the reconstruction of the town (Fig. 8) a small gate is proposed on the eastern side at Temple A. In view of the possibility of a landing place for ships to the north of the temple site, as proposed by J. Budka and S. Neogi,⁸² a gate situated here is even more feasible.

As for the 3-D reconstruction of the fortifications (Pl. 55), it must be noted that the *in situ* remains were not very high and therefore the height

⁷¹ Fieldwork conducted by the Sai Island Archaeological Mission of Lille 3, directed by D. Devauchelle. See DOYEN 2009, 17–20; BUDKA /DOYEN 2013, 167–208; DOYEN 2014, 367–375.

⁷² Cf. BUDKA/DOYEN 2013, 178.

⁷³ BUDKA 2014b, 63–65; BUDKA 2015a, 45–46.

⁷⁴ Cf. AZIM 1975, 120–122.

⁷⁵ See AZIM 1975, 120–121, pl. XIV. For the description of Rue EO1 see Chapter 6. It must be noted that this street only exists as a reconstruction and the width of the street is an assumption based on the axis through the main gate.

⁷⁶ Cf. AZIM 1975, 120–122.

⁷⁷ BUDKA 2014b, 64.

⁷⁸ AZIM 1975, 120.

⁷⁹ The findings at SAV1 West show a similar result. Cf. BUDKA 2014b, 63–65.

⁸⁰ Cf. VOGEL 2010b, 299.

⁸¹ Cf. VOGEL 2004, 125, VOGEL 2010b, 302. See also BUDKA forthcoming.

⁸² Personal communication by J. Budka and S. Neogi. At Se-sebi four gates (one at each side) are attested for, at Amara West three gates. SPENCER 1997, pl. III; MORRIS 2005, 336, 676; SPENCE/ROSE 2011, 34, fig. 1; MORKOT 2012a and 2012b; VOGEL 2013, 83.

of the wall must remain unknown. In the 3-D reconstruction the elevation is assumed to be about 8.0m high.⁸³ The tower-like protrusions exist both on the northern and southern sides, therefore it seems logical to suppose that they were originally situated on all four sides. The respective distance between them is evident from the southern side, where the two still existing protrusions are about 12.0m apart from each other. However, at the excavations of SAV1 West no evidence of a projection on the outer side of the fortification could be determined on the entire length of the excavated wall (c. 18.0m).⁸⁴ While the western and southern gates were probably flanked by actual towers, a reconstruction with buttresses is favored over one with small towers, as already discussed above. Whether towers were situated also on the corners of the fortification wall must remain open; while this is certain for the Middle Kingdom fortresses in Nubia⁸⁵ and for the New Kingdom town of Amara West,⁸⁶

the New Kingdom fortified town of Sesebi presumably had no towers at the corners.⁸⁷ The latter could have also been possible at Sai, especially in view of the fact that no remains of corner towers are attested for.

With this reconstruction it becomes clear that the enclosure wall is of limited fortifying purpose, especially when compared to the imposing Middle Kingdom fortresses. However, one must keep in mind that the New Kingdom fortified towns are also defined by a change of function. Rather than the almost exclusive military usage of the Middle Kingdom fortresses, a more varied and complex layout with at least one temple, storerooms and domestic and administrative buildings was attested for the newly established towns.⁸⁸ Nevertheless, it seemed important that these settlements appeared as strongholds, guaranteeing the control of Upper Nubia, particularly of the supplies of resources such as gold and the trade of goods.⁸⁹

⁸³ Cf. the wall at the Middle Kingdom fortress at Buhen is assumed to be between 10.0 and 14.0m high. VOGEL 2009, 177. Since the actual fortifying function of the New Kingdom towns is by comparison diminished, the elevation of the walls was probably somewhat lower.

⁸⁴ BUDKA 2014b, 63–65.

⁸⁵ Cf. BADAWY 1966, 202; DUNHAM 1960 and 1967; STEINER 2008, 120; WILLIAMS 2012, 340–347.

⁸⁶ Cf. SPENCER 1997, pl. III and IV; see SPENCER/STEVENS/BINDER 2014, inside of the back cover, for a reconstruction of the town enclosure of Amara West.

⁸⁷ Cf. MORRIS 2005, 337–338, SPENCE/ROSE 2011, 34, fig. 1.

⁸⁸ Cf. KEMP 1972, 651; VOGEL 2013, 81.

⁸⁹ Cf. VOGEL 2013, 80; SNAPE 2014, 224; see also KEMP 1972, 653–654, who also points to the symbolic nature of the fortifications and notes that they seem to be copies of a type of temple enclosure wall in Egypt itself.



Fig. 9. The streets of SAV1

6. STREETS⁹⁰

(Fig. 9)

The southern part of the town, SAV1, follows the orthogonal layout of an organized plan with an approximately north-south and east-west orientation. From this planning, some of the original streets can still be clearly identified, namely four east-west running streets (Rues EO1–EO4) and four north-south oriented streets (Rues NS1–NS4). If the remaining area of the fortified settlement on Sai also followed this layout cannot be determined, as only about one third of the town area has been excavated. It is however clear that at least the northern part, SAV1 North,⁹¹ and the western part at the newly excavated area SAV1 West⁹² did not share the same strict perpendicularity.

From the main gate in the west, SAF4, the town was entered via the east-west oriented street Rue EO1, which led to the site of Temple A. Of this street, actually only the southern border is known, formed by the northern walls of the row of storage rooms M13–M18. Assuming that the street passed directly by the southern side of Temple A and lay in the axis of the western city gate, its width can be reconstructed as 5.31m. This main thoroughfare serves as the northern boundary of SAV1 and it is indeed unfortunate that it is not known if and what kind of buildings were on the street side opposite of the row of magazines M13 to M18. These magazines could not be directly accessed by Rue EO1, but only via the north-south running street Rue NS4 that led into the area of the storage rooms SAF5.⁹³ To the east of the magazines no trace of Rue EO1 has remained and it can only be reconstructed as the boundary of the houses H4 and SAF2.

As mentioned, the short north-south oriented street Rue NS4⁹⁴ gave access to the storage area

SAF5 (Pl. 19.1). It was situated between the magazines M15 and M16 and seems to have been the only entrance way into this part of town.⁹⁵ For being the main access, this street is surprisingly narrow, at 2.03m. Its entire length comprised 11.80m, ending at Rue EO1 in the north and Rue EO2 in the south. On the southern side there were buttresses built onto the eastern and western walls, narrowing the width of the alley to 1.21m. Two courses of bricks were situated between these buttresses, on which there presumably formerly had been a stone threshold, marking the actual entrance into the storage area.

The alley Rue NS4 opened onto Rue EO2 (Pls. 19.2 and 20.1), running parallel to Rue EO1. This east-west oriented street was part of the storage area SAF5 and gave access to the magazines M13–M18 lying on the north side of the street. To the east the street ends at the enclosing wall of the storage area, while the western end is not known. The eastern part of Rue EO2 is 1.91m wide, while the western part has a width of 2.60m, since the magazines in that area are slightly set back. Two stone thresholds accentuate the street crossing with Rue NS4, and the western one is aligned with the western wall of Rue NS4. Here, parts of the northern doorjamb are still *in situ*, bearing an inscription of the viceroy Nehi (Pls. 20.2 and 20.3).⁹⁶ The second threshold is situated 3.02m to the east. Both span the entire width of Rue EO2. A further east-west aligned threshold could be detected underneath a secondary wall to the south of Rue EO2, directly opposite of Rue NS4, indicating that Rue NS 4 formerly continued onwards to the south.⁹⁷

In the southern part of SAF5 a further east-west oriented street can be found, Rue EO3. It can be

⁹⁰ The excavator M. Azim assigned the existing street names Rue EO1 to EO4, Rue NS1 and Rue NS4. See AZIM 1975, 98, pl. IV. For a better understanding of the town layout the names Rue NS2 and Rue NS3 were recently assigned to the narrow corridors in the area of the houses H1 to H5. On Azim's plan of SAV1 (Fig. 3), the designations Rue NS2 and Rue NS5 exist for streets that the recent examinations could not verify.

⁹¹ For the results of the excavations at SAV1 North see DOYEN 2009, BUDKA /DOYEN 2013.

⁹² For the preliminary results at SAV1 West see BUDKA 2014b, 63–65.

⁹³ See AZIM 1975, 111.

⁹⁴ Cf. Chapter 14.15.

⁹⁵ Cf. AZIM 1975, 111.

⁹⁶ Cf. AZIM 1975, 116; VERCOUTTER 1956, 74–75.

⁹⁷ Three sandstone thresholds on the western wall of magazine M12 show that the former storage rooms in this area were entered from the west and therefore from the extension of Rue NS4.

traced from its eastern end at the dividing wall to the storage room M7 in the west, but it is not known if the street continued further onwards to the west. Rue EO3 was continuously 4.35m wide and it enabled access to the storage rooms M1–M7 on the south side and M8–M11 on the north side of the street, whereby at least three more magazines can be reconstructed to the west of M11, which also were entered from Rue EO3.⁹⁸

Since there must have been an access route to Rue EO3, one can assume that a north-south oriented street existed in the western part of SAF5.⁹⁹ However, this area has been either completely overbuilt in later periods or has deteriorated, therefore no statements can be made to the position and width of the street.

In the eastern part of SAV1 with the domestic quarter and the so-called governor's palace SAF2, one main thoroughfare existed, the north-south oriented street Rue NS1 (Pl. 21.1). This 1.50m wide street was situated between the houses H1–H4 to the west and the large dwelling SAF2 to the east, which had at least three entrances lying on Rue NS1. Maybe the houses H1–H3 could be accessed from Rue NS1 as well.¹⁰⁰ It seems possible that Rue NS1 continued on to the north, where it would have met with the main east-west thoroughfare Rue EO1. Though if it went even further northwards cannot be determined, it must be noted that the western side of Temple A was exactly aligned with this street.¹⁰¹ Also, further to the north, Building A was situated along a supposed northern extension of Rue NS1.¹⁰² At the southern end of the street, where it opened into the east-west oriented street Rue EO4, the southern wall of House H1 protrudes out into Rue NS1, acting like a doorjamb and hereby narrowing the street to 1.16m at the junction of Rue NS1 and Rue EO4.

The other north-south oriented streets in the domestic sector, Rue NS2 and Rue NS3, are in fact narrow corridors (1.15 and 1.30m wide) that served as access roads for the entrances to the houses H1–H5 and did not function as through-roads. Rue NS2

was 28.75m long, reaching from Rue EO4 in the south to an open area situated between the houses H3 and H4 in the north. Through this corridor the houses H1–H3 on the eastern side and the house H5 on the western side could be accessed. The houses H1–H3 had one entrance each, while the situation is not so clear for H5 on the western side, where there could have been up to four entrances.¹⁰³ The 1.30m wide Rue NS3 was situated to the west of House H4 and stretched from the open area H3N in the south to probably Rue EO1 in the north. This northern part, however, does not exist anymore and is an assumed reconstruction. From this street, one entrance into House H4 has been preserved in the form of a stone threshold, but if other doorways existed as well can no longer be determined. On the southern end of the west side of the street are simple structures, where the walls were very narrow, consisting of only one row of stretchers. These structures could be entered from Rue NS3 as well. At the southern end of Rue NS3 is a course of four bricks at ground level, which could have been the substructure for a threshold located here.

The area H3N, situated between the houses H3 and H5 in the south and H4 in the north, seems to have been an open area which could be accessed from the streets NS1, NS2 and NS3. The entire area was 4.40m wide and 12.10m long. From Rue NS1 it was closed off by a 3.26m long wall, leaving a 1.14m wide entrance. This wall was not exactly aligned with the western border of Rue NS1, but lay 1.05m further to the west, thus widening Rue NS1 in this area.

Lastly, one further east-west oriented street is known, Rue EO4, which is situated to the south of the domestic buildings and SAF2, adjacent to the southern fortification wall (Pl. 21.2). In the west, this street ended at the partition wall to the storage area SAF5 and the eastern end is not known, since this area is either badly deteriorated or overbuilt by later structures. Rue EO4 was 2.76m wide and had crossing points with the streets Rue NS1 and Rue NS2. In the west, a further 1.12m wide north-south

⁹⁸ See Chapter 8.

⁹⁹ In Azim's plan (AZIM 1975, 98, pl. IV) the street Rue NS5 is situated here.

¹⁰⁰ Except for one entrance into House H3, the building features give no clear indication for entrances on the eastern side of the Houses H1–H3, since the walls are badly deteriorated and one cannot clearly define the present openings as original doorways. See Chapter 9.1.

¹⁰¹ For Temple A see AZIM/CARLOTTI 2011–2012. In their reconstruction of the temple a mudbrick enclosure wall existed on all sides. However, remains of this wall could only be verified for the north, east and south sides. If a wall actually had existed on the western side as well, the street Rue NS1 would have ended at the temple. Cf. Chapter 7.

¹⁰² For Building A see BUDKA 2014b, 61–63.

¹⁰³ Cf. Chapter 9.3.

oriented corridor, which could have belonged to House H5, merged with Rue EO4. In addition, the southern city gate was situated at this street, lying to the south of House H5. Close to the ground level, directly to the south of House H1, one can see the remains of an unusual structure: an at least 5.60m long serpentine wall with a thickness of one brick, of which only one course of bricks has been preserved, so the original height of this structure is unknown to us (Pl. 22). Perhaps this structure, possibly a half-height wall, served as some kind of protection for the outer wall of House H1 as well as the entrance to the corridor Rue NS2.¹⁰⁴ Immediately to the west of this structure and to the east of the southern gate, an almost square pillar (0.60 × 0.50m) was situated in the center of the street, constricting the passageway directly at the southern city gate, though a reason for this measure cannot be offered.

At the western end of Rue EO4 was formerly an opening to a much narrower alley with a width of 0.95m, situated between the back side of the row of magazines M1–M7 and the southern fortification wall. The opening was, however, closed off by

a narrow wall, and it could not be determined, if it belonged to the original Pharaonic structure or if it was erected at a later date. In any case, this narrow street could have been a so-called wall street, as is known from other fortified towns and fortresses.¹⁰⁵ A wall street also existed in the area of the western city gate, as can be verified by the still existing corner of an unknown structure, situated 1.12m to the east of the remains of the city gate, thus leaving a street-wide gap between the fortifications and a building situated here. It seems highly likely that the wall street continued along the entire length of the fortifications.¹⁰⁶

Generally, all the streets showed no signs of any special pavement, but remained unsurfaced.¹⁰⁷ As for the width of the streets, especially the north-south oriented streets seem very narrow. While the corridors Rue NS2 and NS3 are access roads for the individual houses, Rue NS1 seems to have been one of the main roads and, with a width of 1.50m, barely meets the minimum required standard of 1.20m, where two people can pass each other without touching.¹⁰⁸

¹⁰⁴ Although not formed in such a way, doorways in Amara West were blocked by walls in order to prevent debris from accumulating in the entrance. Cf. SPENCER/STEVENS/BINDER 2014, 36. Also at the Middle Kingdom settlement of Qasr el-Saga in the Fayum depression such serpentine walls were observed in the street running along the southern and the western enclosure wall. Cf. ŚLIWA 1992, 179, fig. 1; HERBICH 2001, 182, fig. 1. A special thanks to Beatrice and Cornelius von Pilgrim for bringing this parallel to my attention.

¹⁰⁵ BADAWY 1966, 203; STEINER 2008, 103. In the New Kingdom town of Sesebi a wall street is also attested for, while the structures in Amara West reached directly to the wall, leaving no room for a wall street. See SPENCER 1997, Pls. III and IV.

¹⁰⁶ Cf. SAVI North, where there is also a gap of 1.61m between the city wall and the neighboring structures, leaving enough space for a street running along the wall. See DOYEN 2014, 368, fig. 1. A wall street is also attested for SAVI West, see BUDKA 2014b, 64. As could be observed by M. Semple in 2015, the wall street at SAVI West was later used to collect debris from the neighboring buildings. Personal communication by J. Budka.

¹⁰⁷ Cf. VON PILGRIM 1996a, 219 and 1996b, 255 for the same observation at Elephantine. In general, the streets in Egyptian towns seemed to have received no special treatment.

¹⁰⁸ Cf. VON PILGRIM 1996a, 219.

7. TEMPLE A

Temple A was not part of the research in the years 2013–2014, since the temple was already thoroughly examined by Michel Azim in 1974 and by Jean-François Carloti in 2010. The results were presented in 2012¹⁰⁹ and are currently being prepared for final publication as a monograph, including the relief decoration.¹¹⁰ The evaluation of its architectural evolution published in 2012 served as the basis for the 3-D reconstruction of the temple in context to the entire town area for the present study.

The temple was located on the eastern side of the settlement, presumably adjoining the eastern enclosure wall and situated directly to the north of the so-called governor's palace SAF2. The two main streets of the town, Rue EO1 and Rue NS1 met at the southwestern corner of Temple A. The remains of the temple are rather scarce; only the sandstone pavement and the lower courses of the sanctuary walls have survived (Pl. 23). Through foundation deposits, the cella of the earliest temple can be dated to Thutmose III.¹¹¹ Another building phase can be dated to the year 25 of this king through a building inscription on a pillar (S.1), written in the name of viceroy Nehi.¹¹² In total, five construction phases were worked out for Temple A, of which four fall

within the reign of Thutmose III and the last is attributed to the reign of Amenhotep III.¹¹³ Close parallels to Temple A can be found at other Nubian sites, e.g. Kumma and Semna, where similar construction phases are accounted for.¹¹⁴

In regard to the reconstruction plan and also the 3-D model of the fortified town of Sai, the fourth construction phase of Temple A (Thutmose III) was chosen, because this phase is already more advanced and clearly shows the orientation of the temple towards the east, with the sanctuary in the west and a pillared porch and entrance in the east.¹¹⁵ The temple was enclosed by a mudbrick wall, of which only the northern, eastern and southern parts are attested for, the western enclosure wall is hypothetical. As already discussed in Chapter 6, this hypothetical western wall does not fit into the assumption that the north-south oriented street Rue NS1 continued northward from SAV1 – alongside Temple A and further to Building A – since it would be blocking the way. The dimensions for the temple can be given with a length of about 33.0m and a width of 15.50m (assuming a mudbrick enclosure on all four sides). The width of the sandstone pavement in the interior measures 10.70m.

¹⁰⁹ AZIM/CARLOTTI 2011–2012.

¹¹⁰ The publication is being prepared by J.-F. Carloti together with L. Gabolde.

¹¹¹ See THILL 1997, 105–117; AZIM/CARLOTTI 2011–2012, 39, 45; BUDKA 2014b, 60.

¹¹² BUDKA 2014b, 60 with reference to BREASTED 1908, 98; VERCOUTTER 1956, 74–75, Doc. 13. See also GEUS 2004, 115; AZIM/CARLOTTI 2011–2012, 46, note 84, and most recently DAVIES 2014, 7–9.

¹¹³ AZIM/CARLOTTI 2011–2012, 45–47, 65, pl. XVIIb.

¹¹⁴ AZIM/CARLOTTI 2011–2012, 44, 65, pl. XVI.

¹¹⁵ AZIM/CARLOTTI 2011–2012, 46, 65, pl. XVIIb.

8. SAF5

(Fig. 10)

The area in the western half of SAV1 labelled SAF5 was excavated in 1973.¹¹⁶ The entire quarter has a dimension of about 3,671m² and consisted of storage rooms and silos, though these two elements probably never were in use at the same time. In the south and the west, SAF5 is bordered by the fortification wall and in the north by the east-west oriented street Rue EO1. To the east a dividing wall existed to the domestic area with the houses H1–H5. This north-south oriented wall was 0.81m thick and covered the entire length of SAF 5. The most northern part is however missing and must be reconstructed up to Rue EO1. Except for a small opening with a width of 1.59m at the southern end, leading to the wall street behind the southern row of magazines, there seemed to have been no direct connection between the eastern and the western parts of the town.¹¹⁷

The western part of SAF5 was completely overbuilt by buildings of later time periods and unfortunately no information can be given on the former layout in this area. Regarding the remaining structures in the eastern part, rows of storage rooms can clearly be seen in the south (M1–M7) and the north (M13–M18) of SAF5.¹¹⁸ As for the central area, the remains of the original structures are sparse and much of it is furthermore overbuilt by secondary walls. Nevertheless, additional storage rooms can also be reconstructed here, namely a row of north-south oriented storage rooms to the south (M8–M11) and a complex of east-west oriented ones to the north (M12).

The only known entrance into this city quarter was in the north via the rather narrow corridor Rue

NS4, which breached off of the main thoroughfare Rue EO1.¹¹⁹ Two more streets still exist in SAF5, the east-west oriented streets Rue EO2 in the north and Rue EO3 in the south, which served as the access roads to the various storage rooms.¹²⁰

8.1. SILOS¹²¹

Several remains of silos¹²² can be found throughout the area, varying in size and brick format and mostly only preserved at floor level.¹²³ In the south¹²⁴ the silos had a diameter of 2.50 to 5.80m, and in some cases two silos overlap (M6, Rue EO2), clearly indicating that here the silos belonged to two different phases (Pl. 26.1). Since they were overbuilt by the longitudinal storage rooms, it is clear that two storage phases with the use of silos had existed before the rectangular magazines were erected. Unfortunately, no absolute chronology can be set up for this area and it is also not possible to determine the duration of use of these silos. The brick format used for the silos was either 51 × 37cm, 34 × 29cm or 44 × 32cm, all with a slightly trapezoid form. In total, ten silos can be identified.

In the central area of M12 four silos existed, which had diameters of either 5.45 or 7.20m. They corresponded to the walls of the storage rooms existing here and seem to have been built into the outer walls of the magazine area at a later date, rendering the rectangular storage rooms out of use. The brick format used for the silos here is 35 × 35cm and the remains of the silos reach up to a height of 0.50m (Pl. 29.2). These silos were later overbuilt by Meroitic structures.

¹¹⁶ See AZIM 1975, 113–118.

¹¹⁷ As already mentioned in Chapter 6, this passage is now closed off by a narrow wall, which probably stems from a later time period.

¹¹⁸ The magazine numbers M1–M18 were assigned in 2013 by the author to facilitate the description of the storage rooms.

¹¹⁹ See Chapter 6. Perhaps having one access point was a means of better protecting the goods, since the guarding of only one entrance was easier to maintain. Cf. UPHILL 1988, 29.

¹²⁰ See Chapter 6.

¹²¹ Cf. AZIM 1975, 113.

¹²² Silos are amongst the most numerous storage facilities found throughout Ancient Egypt. In settlements such as

Kahun and Amarna they are most often part of the house, situated in an open courtyard. See ARNOLD 2005; KEMP 2006, 327–331; KEMP 2010, 15, fig. 1.1; BARDOŇOVÁ 2014, 194–207; in Elephantine silos are mostly found in connection with a temple or sanctuary. See VON PILGRIM 1996a, 233.

¹²³ The former height of the silos as well as the extent to which they were filled, is unknown. The same holds true for the silos in Kahun and Amarna. See BARDOŇOVÁ 2014, 196.

¹²⁴ The remains of silos were found in M1, M2, M6, to the west of M7, M8, in the street Rue EO3 and – as only example from the northern part of SAF5 – to the south of Rue EO2.

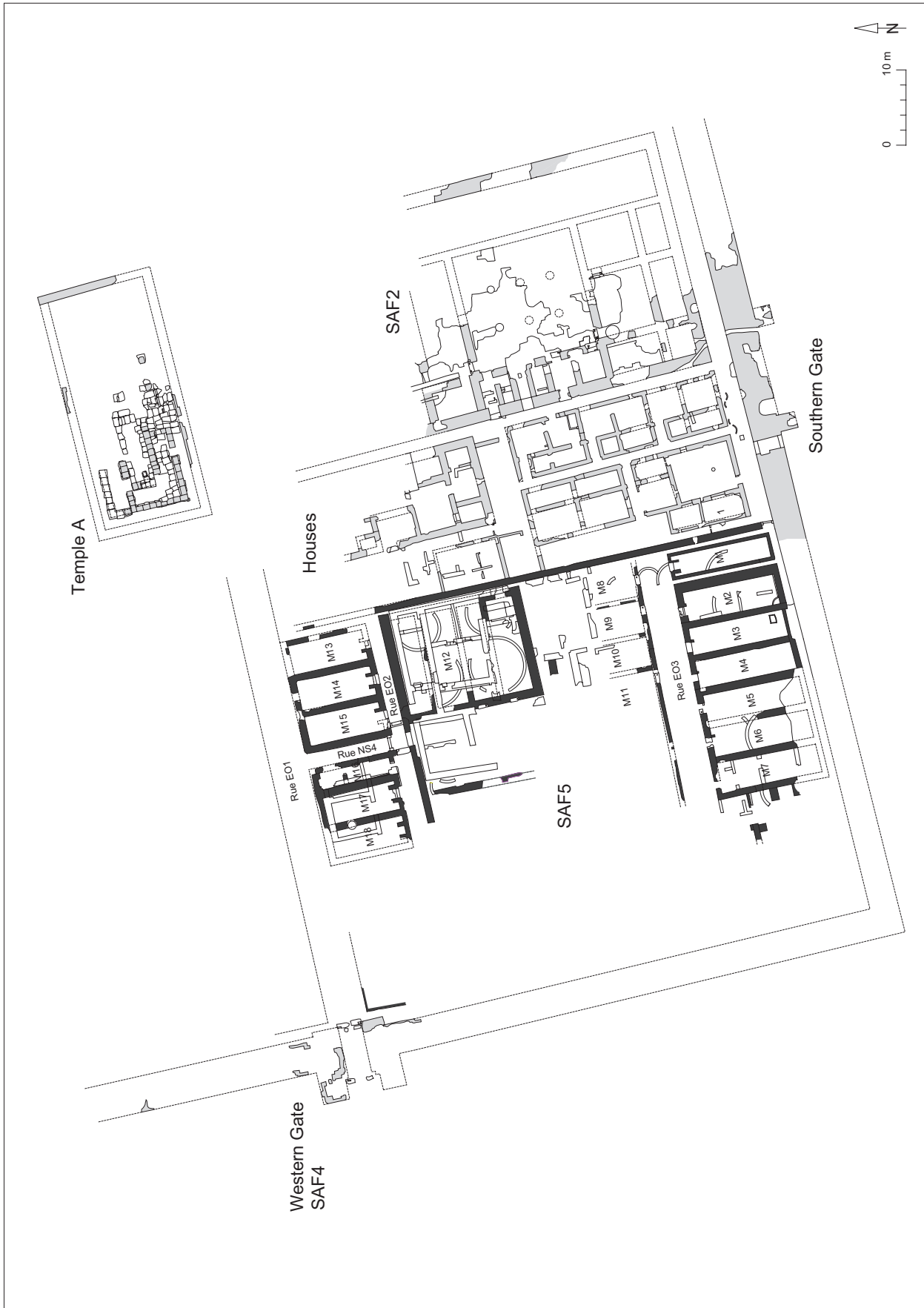


Fig. 10. Overview of SAF5

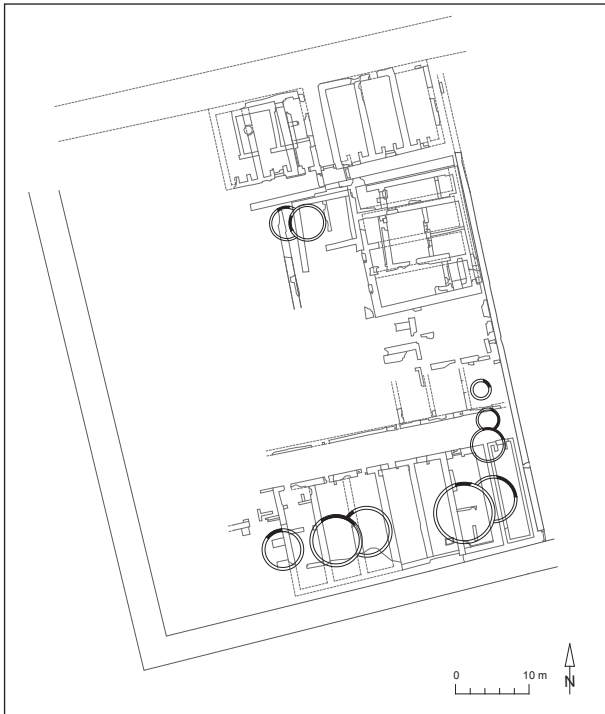


Fig. 11. Location of the phase 1 silos

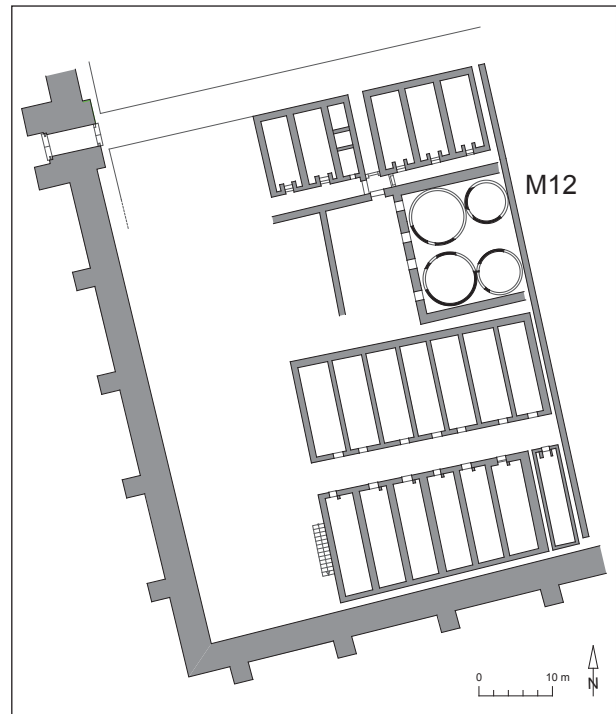


Fig. 12. Location of the phase 2 silos

Summarizing, a certain phasing can be determined:¹²⁵ in the beginning, silos for storage were erected in the area (Fig. 11). While the majority of silos could be detected on the southern side of SAF5, the remains of silos just to the south of Rue EO2 give evidence that silos could have been situated throughout the entire area of SAF5. This first phase of silos can actually be split into two sub-phases, since some of the remains overlap one another. In a second period, the rectangular storage rooms were erected. Finally, at least in the central zone (M12), these storage rooms were later replaced by four circular silos (Fig. 12), which must have occurred before Meroitic times, since they were later overbuilt by structures of this period.

8.2. M1–M7

(Pl. 1, Plan 7 section 14)

The row of longitudinal storage rooms on the south side (M1–M7) is bordered by the southern fortification wall with a gap of about 1.0m between the enclosure wall and the backside of the magazines. Whether this gap can actually be labelled as the wall street cannot be verified with certainty, since

only the eastern part is not overbuilt or void of rubble.¹²⁶ To the north of the storage rooms was the street Rue EO3, from which the magazines were entered. The seven preserved magazines of this row are all approximately the same size and form. It is however noteworthy that the northern and southern walls are not parallel to each other but situated at an angle, giving the rooms a slightly trapezoid form. The southern wall is thereby parallel to the southern fortification wall, while the northern wall deviates slightly from this direction (deviation of 2°). The east-west oriented walls, separating the magazines from each other, are not perpendicular to either of them.

While the magazines M2–M7 share the respective east-west oriented partitioning walls, the eastern most storage room M1¹²⁷ (Pl. 24.1) is separated from the others by a narrow corridor of 0.54m. To the east of M1 an additional 0.57m wide corridor is situated between M1 and the dividing wall to the domestic sector. The walls of M1 are only 0.41m wide and preserved up to a height of 1.30m. The bricks used here have a format of 41–44 × 26 × 8cm and the walls are for the most part covered with

¹²⁵ Cf. AZIM 1975, 116–119, pl. XIII.

¹²⁶ Cf. Chapter 6.

¹²⁷ Cf. Chapter 14.1.

mud plaster. The entire room has a size of 37.17m² (13.02 × 2.76m). The 1.21m wide entrance lies centrally in the northern wall, where a stone threshold with a hole for the door pivot on the western side is still lying *in situ* on two courses of bricks. The doorway was flanked by two (perhaps half-height) walls that jutted into the room for 0.75m. The mud pavement of the room was set about 0.50m lower than the threshold, making steps into the storage room necessary.¹²⁸

The following storage rooms to the west, M2–M7, all have about the same dimensions and are built in a similar fashion. What is noteworthy is the usage of various brick formats in all of the walls, ranging from 31 × 15 × 9cm to 39 × 25 × 8cm. From a specific height in the walls, which varies in every magazine and every wall, even larger bricks were applied.¹²⁹ A further detail of the building technique can be seen on the northern side of the north walls, where a mixture of plaster and pebbles is applied at an angle to the lower part of the wall, which seems to be a method for securing the wall in place of a foundation.¹³⁰ All the doorways were formed in a similar fashion with a stone threshold¹³¹ and a small wall on the eastern side protruding into the storage room for about 0.40–0.50m. Except for the northern and eastern walls of M2 with 0.90 and 1.31m respectively, the thickness of the walls were all similar at 0.70 to 0.75m. In the southern parts of two of the magazines, M2 and M3, rubble consisting of slanted bricks can be interpreted as the remains of vaults that covered the rooms.¹³²

Going into more detail from east to west, M2¹³³ (Pl. 24.2, Plan 7 section 15) was situated to the west of M1, separated by the above mentioned narrow corridor. The dimensions of the room are 12.37 × 3.99m, resulting in a floor surface of 49.36m². As already noted, the northern and eastern walls are considerably thicker than the others. The northern, eastern and southern walls bond with each other, while they are built onto the western wall, which is preserved up to a height of about 2.50m.

The entrance on the northern side is not exactly in the center of the wall, but lies slightly to the west. The width of the door is 1.15m and the stone threshold is preserved in its entirety. A hole for the door pivot exists on the western side. The threshold is situated on three courses of bricks and therefore lies about 0.60m higher than the mudbrick floor. The small wall, jutting out into the room for 0.21m on the eastern side of the door bonds with the northern wall. There are several installations such as partition walls and a bench in the room, which seem to stem from a later date.

The following magazine to the west, M3¹³⁴ (Pl. 24.3), was of similar design with a size of 47.51m² (12.67 × 3.77m). Here, the western wall of the room is added onto both the northern and the southern wall. The small wall lying to the east of the doorway on the northern side of the room is added on as well, and it protrudes into the room for 0.39m. The width of the entrance was 1.24m and, as in M2, it was not situated in the center of the northern wall, but slightly to the west. Two courses of bricks, on which the threshold was originally situated, remain in the opening, while a stone threshold lying in the northeastern corner of M3 can probably be assigned to the doorway. The eastern and the southern walls of this magazine are very well preserved, with the remaining height of the southern wall being about 3.30m and the eastern wall about 2.50m. The walls were partially covered in mud plaster. In the southeastern corner of the room a kind of a storage basin is installed, erected out of one row of bricks on edge, of which three courses of bricks are preserved (Pl. 24.4). The measurements of this basin are 1.10 × 0.80m. As in M2, rubble in the southwestern corner of the storage room could have originally stemmed from the vaulted ceiling.

M4¹³⁵ (Pl. 25.1), the following magazine to the west, measured 13.00 × 3.64m, resulting in a floor surface of 47.25m². The eastern wall is built onto the northern and southern walls, while the northern and the southern walls are built onto the western

¹²⁸ Cf. SPENCER 1997, 56–74, for the magazines at Amara West. She does not explicitly mention steps into the storage rooms, however the difference in height between the stone thresholds and the pavement of the rooms is usually about 0.50–0.60m.

¹²⁹ According to Azim (AZIM 1975, 115) the bricks of the silos were reused. He interprets this as a separate building phase, where the bricks were used for restoration purposes.

¹³⁰ Cf. Chapter 4.

¹³¹ Still *in situ* in the rooms M2 and M5.

¹³² Cf. AZIM 1975, 113. See also footnote 61 for parallels throughout Egypt. For comparisons regarding slanted bricks for the construction of vaults see SPENCER 1979, 142; KEMP 2000, 93, 95, fig. 3.9.

¹³³ Cf. Chapter 14.2.

¹³⁴ Cf. Chapter 14.3.

¹³⁵ Cf. Chapter 14.4.

wall. As in the neighboring room, M3, the southern wall is preserved up to a height of 3.30m and the southern part of the western wall is also very well preserved up to 2.90m. The entrance on the north side is designed just as the ones in the previously described storage rooms with the opening being 0.97m wide. A threshold is no longer preserved, though one course of bricks remains, on which a threshold must have been situated. Once again, there is a small wall added onto the wall to the east of the doorway.

The storage rooms M5¹³⁶ (Pl. 25.2) and M6¹³⁷ (Pl. 26.1) are not preserved in their entirety, since the southern parts of these two rooms are covered in rubble from the Ottoman fortress. Additionally, of the north-south oriented wall between these two magazines, only about 3.72m on the southern side still exists, while the northern part has deteriorated. Nevertheless, the former sizes of the rooms can be reconstructed by extending the dividing wall to the north and south, and presuming that the southern wall was aligned with the southern walls of the previous magazines. The reconstructed floor surfaces result in 46.71m² (M5) and 50.23m² (M6), making them similar in size to the other storage rooms in this sector. Of the 1.36m wide door in M5, part of the original threshold still exists on the western side of the opening, situated on one course of bricks. The small wall to the east of the doorway, as attested in the other storage rooms, could not be detected here, though presumably it existed. From the 1.30m wide door in M6, only one course of bricks remains, on which a stone threshold probably lay. Here, once again, a small wall was added onto the wall to the east of the entrance, jutting out into the room for 0.41m. The remains of two overlapping silos exist at the floor level, later overbuilt by the dividing wall of the two storage rooms.

The westernmost room in this row of magazines is labelled M7¹³⁸ (Pl. 26.2). As in M5 and M6, the southern part is covered in rubble and the original size must be reconstructed by supplementing the southern wall and prolonging the eastern and western walls, which amounts to a total floor surface of

53.24m². While the western wall is well preserved up to a height of 2.30m, the northern wall is almost entirely deteriorated and only few courses of bricks remain. The opening for the door can still be identified with a width of 0.93m. Inside of the room are many secondary walls, which separated the room into several smaller chambers for a later usage. An opening in the western wall with a width of 0.90m probably stems from a later period as well. To the west of M7 three east-west oriented walls are built onto the outer wall of the magazine. These could have belonged to the substructure of a staircase leading up to the roof of the storage rooms.¹³⁹

4.25m further to the west of M7, the sparse remains of two walls on floor level can be seen. According to Azim¹⁴⁰ these were part of a further row of magazines in the western part of SAF5, oriented from east to west along the western city wall and bordering a further north-south oriented street (Rue NS5 on Azim's plan¹⁴¹). However, neither the street nor the magazines can be verified through the remaining features, since too little is preserved in this area.

8.3. M8–M11

(Pl. 4, Plan 7 section 13)

To the north of the 4.30m wide street Rue EO3, a further row of at least seven storage rooms can be reconstructed, even though almost all the original walls in this area have deteriorated and the many secondary walls make the situation very unclear. In contrast to Azim's plan,¹⁴² where only one magazine on the eastern side and the southern boundary wall of the row of magazines is reconstructed, more evidence could be detected during the recent investigations in order to support the now suggested reconstruction. Bordering Rue EO3 in the north, the sparse remains of the southern wall of the magazines can be traced for an entire length of 31.70m. Though these remains are at the most three courses high, more often only one or two courses still exist or the wall can only be seen as a faint imprint on the ground. Based on the existing remains, an about 0.70m thick wall can be reconstructed, covering ap-

¹³⁶ Cf. Chapter 14.5.

¹³⁷ Cf. Chapter 14.6.

¹³⁸ Cf. Chapter 14.7.

¹³⁹ See AZIM 1975, 116. At the Ramesseum, many staircases can be found at the granaries, making the roof accessible in order to enable filling the storage room through roof aper-

tures. See KEMP 2006, 259, fig. 94; VOGEL 2010b, 425, fig. 4, for the painted representation of a granary complex of the 12th Dynasty featuring stairs to the roof.

¹⁴⁰ AZIM 1975, 98, pl. IV, 113.

¹⁴¹ AZIM 1975, 98, pl. IV, 113.

¹⁴² AZIM 1975, 98, pl. IV.

proximately the same length as the storage rooms M1–M7 to the south of Rue EO3. Along this wall three stone thresholds are still lying *in situ*, marking the entrances into three of the magazines (M8, M9, and M11). Together with the remains of three north-south oriented walls and one east-west oriented wall piece, situated 12.47m to the north of the southern wall (Pl. 28.2), at least four magazines in a row (M8–M11) can be reconstructed that all had similar measurements. One may further assume that this row of magazines continued to the west, resulting in a total of seven longitudinal storage rooms situated directly opposite of the magazines M1–M7.

The easternmost threshold with a hole for a door pivot on the eastern side marks the entrance to M8¹⁴³ (Pls. 27 and 28.1). To the east one course of bricks is preserved for a length of 1.16 m, while to the west the wall is preserved along a length of 2.86m between the two thresholds. The brick format used here is 31 × 16 × 9cm. Of the north-south oriented dividing wall between M8 and M9 only a small part remains, with mostly only the western edge of the wall discernable. This wall can be traced on a length of 5.20m, starting at the southern wall. By assuming the thickness of the wall to have been about 0.60m and the eastern wall situated at a distance of 3.67m, leaving a narrow corridor to the bordering wall of SAF5, the storage room M8 must have had a size of about 47.00m².

The threshold of M9¹⁴⁴ was also preserved in its entirety and was situated on three courses of bricks. To the west of the threshold, the southern wall continued further to the west, up to a height of three brick courses, with some bricks of the lowest course standing on edge. Of the western wall, only a small piece (1.07m) remains on the southern side of the magazine. Too little of this wall is left for verifying the thickness, but it is also reconstructed with 0.60m, making the room about 4.28m wide and resulting in a floor surface of 52.71m² for M9.

Of the magazine situated to the west of M9, M10,¹⁴⁵ only the continuing southern wall remains at floor level, without a preserved threshold or evidence of the former doorway. Next to the small piece of the dividing wall between M9 and M10, the remains of another north-south oriented wall can be

traced about 4.0m further to the west, resulting in a probable room size of 47.72m² for the storage room M10. Directly to the west of these wall remains lies the third threshold, marking the entrance into a further storage room M11.¹⁴⁶ To the west of the threshold, the southern wall can be traced for a further length of 15.93m, though the wall is badly deteriorated and can only be seen at floor level (Pl. 28.3). No further north-south oriented wall could be detected to the west of M11. However, as already mentioned above, three further storage rooms can be assumed for this area.

8.4. M12

(Pl. 3, Plan 7 section 12)

To the north of M8–M11 lies the complex M12.¹⁴⁷ Here, the rising walls that dominate the area all stem from later periods, mainly the Meroitic period,¹⁴⁸ while the remains of the New Kingdom settlement are only preserved in the lower levels (Pl. 29.1). Nevertheless, it is possible to attempt a reconstruction of this area, resulting in four longitudinal east-west oriented storage rooms with entrances in the west. As already described above, the remains of the four silos in this area overbuild the walls of the original magazines, as opposed to the situation in the south of SAF5, where the silos precede the longitudinal storage rooms.¹⁴⁹

The entire area of M12 has a size of 282.70m². Remains of the outer walls of the New Kingdom complex are preserved on the northern, western and southern sides. Additionally, the remains of east-west oriented dividing walls in the interior can be identified on the floor level. The northern wall, bordering Rue EO2, is 1.23m thick and is preserved up to a height of about 0.70m. The brick format used here is 36 × 18 × 11cm. On the eastern side the wall ends 0.40m to the west of the north-south oriented dividing wall towards the residential area. On the western side, the northern wall bonds with the western wall, which covers an entire length of 16.68m and is 1.06m thick (Pl. 30.1). Three courses of mudbricks are preserved of this western wall. The northern part is overbuilt by secondary walls, though the corner of a threshold can still be seen here (Pl. 30.3). Two further stone thresholds, aligned with the west-

¹⁴³ Cf. Chapter 14.8.

¹⁴⁴ Cf. Chapter 14.9.

¹⁴⁵ Cf. Chapter 14.10.

¹⁴⁶ Cf. Chapter 14.10.

¹⁴⁷ Cf. Chapter 14.11.

¹⁴⁸ Cf. GEUS 1994, fig. 4, for a reconstruction of the later building in this area.

¹⁴⁹ See Chapter 8.1.

ern edge of the wall, are lying on the wall, indicating the former entrances into the storage rooms.

The southern wall, with a length of 12.59m and a thickness of 1.10m, bonds with the western wall. In the southeastern corner, where a small part of the eastern wall bonds with the southern wall as well, the wall is preserved up to a height of 1.72m (Pl. 30.2). Two interior east-west oriented dividing walls can be determined through sparse remains on the western side: the first one is situated 3.02m to the south of the northern wall, the second one 4.17m further again to the south. The width of these walls was originally 0.72m. A further piece of the northern dividing wall can be traced 4.65m further to the east, partly covered by a secondary wall. Lastly, a third dividing wall can be reconstructed 3.60m to the north of the southern wall, where a few bricks at floor level on the eastern side indicate the position of a former wall. Thus, four storage rooms, ranging from 39.70 to 53.43m² formerly existed in the area of M12. In the southernmost room, the floor is still preserved in the western part, consisting of schist slabs of various sizes, set in an irregular fashion in lime mortar (Pl. 29.2). Singular slabs were also found in other areas of M12, so one can assume that perhaps the floors of these magazines were all constructed in this way.

In alignment with the northern wall, a 1.85m long threshold is situated directly opposite of the entrance to Rue NS4 in the north. It was later overbuilt by a secondary wall, but during the usage period of the storage rooms in the area of M12, there must have been a north-south oriented street beginning here that gave access to the magazines.¹⁵⁰ The wall to the south of Rue EO2 continued onwards to the west for a length of at least 10.55m. The remains of a north-south oriented wall could furthermore be detected 9.48m to the west of the western wall of M12. This wall is 0.85m thick and is preserved up to two courses of bricks.

8.5. M13–M18

(Pl. 2, Plan 7 section 11)

In the northern part of SAF5 was a further row of longitudinal storage rooms, of which six can still be clearly detected. They are bordered by the streets Rue EO1 in the north and Rue EO2 in the south, from where the magazines were accessed. The

north-south oriented dividing wall to the residential quarter served as the eastern border, with a gap of 0.97m between the dividing wall and the eastern wall of M13. The access road Rue NS4 divides the row of magazines into two parts: M13–M15 are on the eastern side of Rue NS4, while M16–M18 are on the west. The row of magazines possibly continued onwards towards the west and the western gate, where the corner of a building stands in alignment with the northern wall of the storage rooms M13–M18 (Pl. 35.2). As in the southern part of SAF5, various brick formats were used for the walls of the storage rooms here, ranging from 31 × 17 × 9cm to 39 × 19 × 13cm. The walls all have a thickness of 0.90m. The entrances into the rooms had stone thresholds and were flanked by small walls on either side, which protruded into the room. The floors inside were at a lower level than the street, therefore there must have been steps leading into the storage rooms.

At 40.90m², each of the three magazines M13–M15 are of the same size and layout, with a length of 10.10m and a width of 4.05m. The entrances on the southern side lie in the center of the southern walls. M13¹⁵¹ (Pl. 31.2), the easternmost magazine, is not preserved in its entirety, since only the western wall and the western part of the southern wall exist up to a height of 0.80m, while of the northern and eastern walls only small parts up to two courses of bricks remain. A small wall to the west of the doorway is preserved as well and juts out into the room for 0.60m. The width of the entrance at 1.05m and an eastern accompanying wall, analogous to the other storage rooms of this area, need to be reconstructed. From the entrance one course of bricks is preserved, on which a stone threshold was originally situated. Courses of bricks standing on edge are found throughout the masonry of the room.

The following storage room to the west, M14¹⁵² (Pl. 32, Plan 7 section 12), is very well preserved up to a height of 1.36m in the southwestern corner. The central entrance on the southern side is 1.28m wide and the stone threshold is lying *in situ*, aligned to the southern edge of the wall. A step with a depth of 0.25m leads down into the room. The half-height walls accompanying the entrance on both sides protrude into the room for 0.77m and are 0.40m wide. The entire floor of the room is covered by irregu-

¹⁵⁰ See Chapter 6.

¹⁵¹ Cf. Chapter 14.12.

¹⁵² Cf. Chapter 14.13.

larly formed schist slabs of various sizes that are laid in a lime mortar (Pl. 56). At least the lower parts of the walls were also covered with schist, as can be seen by the remains on the eastern, southern and western walls. An opening in the northern wall was added in a later building period.

The walls of M15¹⁵³ (Pl. 33.1), lying to the west of M14, are also all preserved, with the western wall even as high as 2.0m. As for the entrance, the eastern accompanying wall still exists, measuring 0.71 × 0.40m, though the western one is missing. Of the stone threshold only the eastern part is preserved. It is situated on one course of bricks and a step to the north of the threshold leads further into the storage room.

The rooms to the west of Rue NS4¹⁵⁴ are partly overbuilt by secondary walls, but the original layout can still be determined. Directly adjoining Rue NS4 is the room M16¹⁵⁵ (Pl. 33.2). With a length of 9.63m and a width of 2.26m, it deviates from the other magazines of this row. Also, the entrance situation differs from the others, since there are no flanking walls on either side of the doorway. The southern wall is badly preserved; therefore, it is also difficult to determine the width and the exact position of the former entranceway. The northern wall is also very much deteriorated – only the western corner is preserved up to a height of about 1.0m – while the remaining parts are only one to two courses high. The western wall is overbuilt by a wall from a later period; however, it can be reconstructed, especially since the western edge of the wall is still visible (Pl. 34.1). Of interest are two east-west oriented dividing walls in the room, which according to the brick format seem to have belonged to the original structure. One of these walls is situated 2.96m to the south of the northern wall, the second one lies a further 2.0m to the south of the first dividing wall. Of these walls, only sparse remains at ground level exist. Because of the poor state of preservation, it must remain open if this storage room was formerly divided into three smaller storage facilities or if the room had another function, for example a staircase, leading to the roofs of the magazines.

Further to the west is the magazine M17¹⁵⁶ (Pl. 34.2–3), with a size of 36.21m². This room is

once again constructed in the layout known from the magazines to the east of Rue NS4 with the central southern doorway flanked by small, half-height walls on either side. The width of the door is 1.30m, with a step into the room on the northern side. Even though a stone threshold is missing, there probably was one originally placed here on a course of bricks. The accompanying walls protrude into the room for 0.87m. The southern and western walls of the storage room are preserved up to a height of 1.30m, while the northern and eastern walls are mostly overbuilt by secondary walls. An east-west oriented wall within the room and a large storage vessel inserted into the western wall also belong to a later building phase.

Of the next storage room to the west, M18¹⁵⁷ (Pl. 35.1), only the eastern and part of the southern wall are still visible, while the northern and western walls are covered by rubble and secondary structures. On the southern side, the wall is preserved up to a height of 0.95m and the small walls flanking the entrance exist as well, protruding into the room for 0.80m. The actual entrance cannot be seen anymore, but one can assume that there was a stone threshold situated in the 1.25m space between the two flanking walls. The size of the storage room M18 is reconstructed in accordance to the neighboring room M17, with a width of 3.60m and a length of 9.72m, resulting in a floor surface of about 34.90m².

8.6. THE WESTERN AREA OF SAF5

The western area of SAF5 is, for the most part, built up with structures from later time periods, especially the remains of small houses (also laid out in a grid) and the Ottoman fortress to the far west. Of the layout in the Pharaonic period nothing remains. Azim assumed that there was an east-west oriented row of longitudinal magazines situated along the western fortification, accompanied by a north-south oriented street Rue NS5.¹⁵⁸ Apart from the rather vague remains to the west of M7 (already mentioned above), this assumption cannot be supported through the actual findings.

8.7. RECONSTRUCTION OF SAF5

For the reconstruction of SAF5, the following rows of magazines can safely be accounted for: in the

¹⁵³ Cf. Chapter 14.14.

¹⁵⁴ Cf. Chapters 6 and 14.15 for the description of Rue NS4.

¹⁵⁵ Cf. Chapter 14.16.

¹⁵⁶ Cf. Chapter 14.17.

¹⁵⁷ Cf. Chapter 14.18.

¹⁵⁸ AZIM 1975, 98, pl. IV; 116.

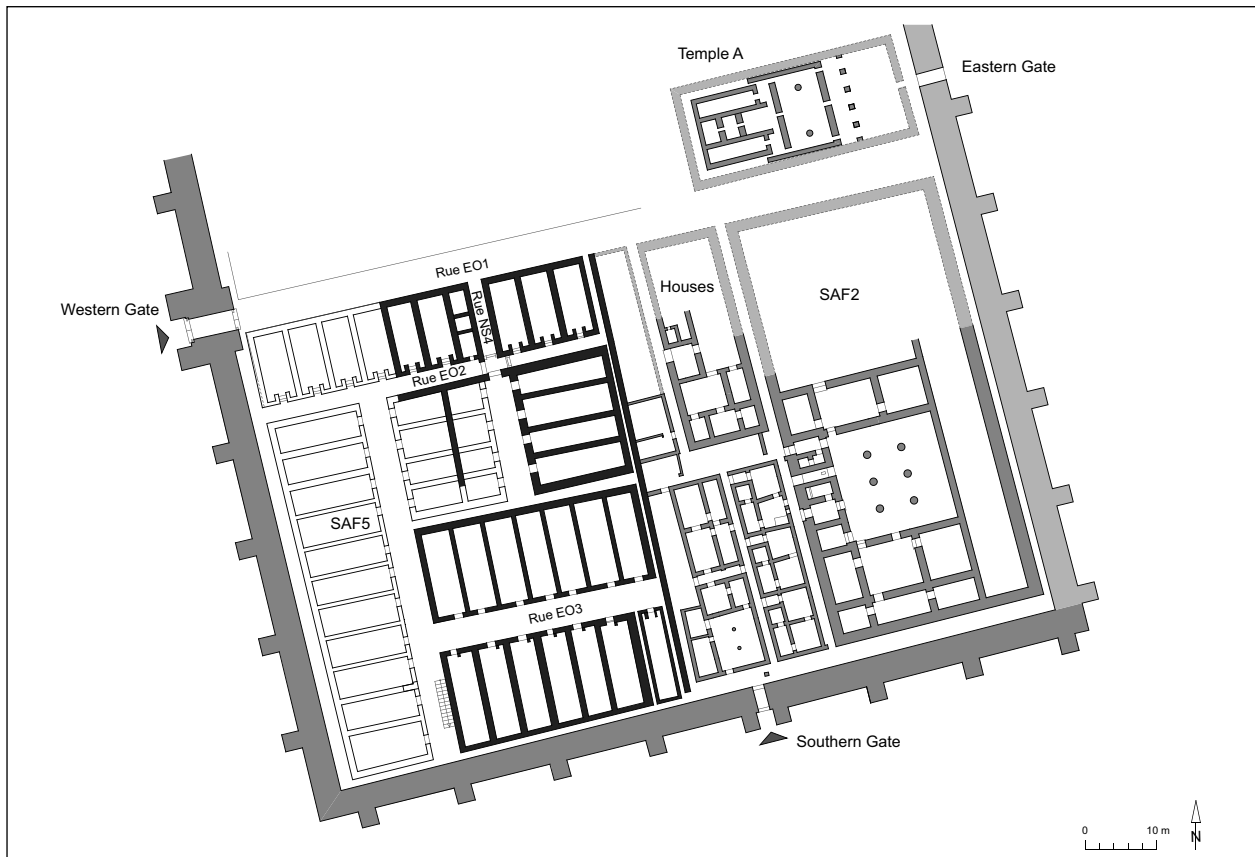


Fig. 13. Reconstruction plan of SAF5 with presumed magazines on the western side

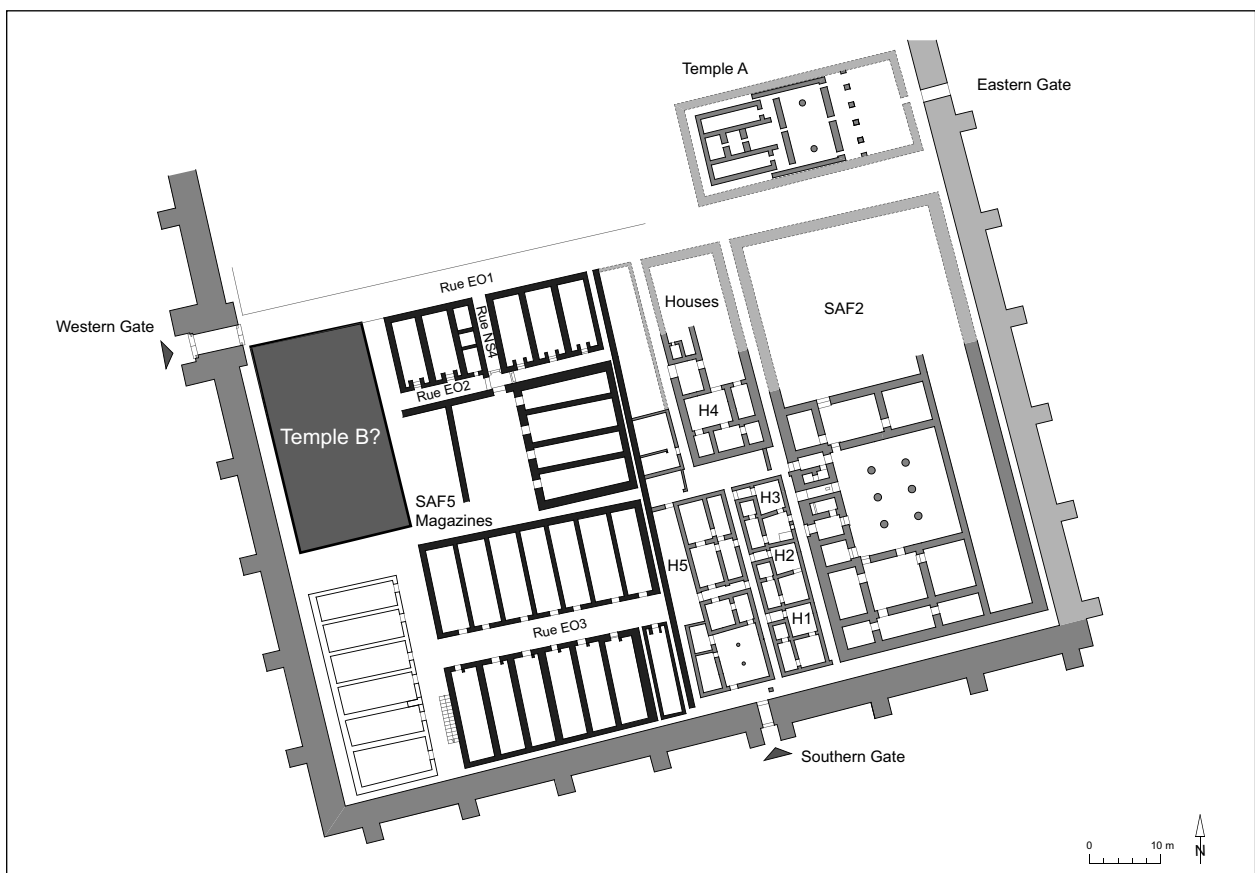


Fig. 14. Suggested reconstruction of SAF5 with a presumed second temple (Temple B)

south seven longitudinal storage rooms lay to the south (M1–M7) and the north (M8–M11) of Rue EO3, with a staircase built onto the western side of the southern row. Such stairs could, naturally, also be possible for the other buildings blocks. Furthermore, four storage rooms facing to the west can be reconstructed in the area M12, situated to the south of Rue EO2, as well as five to six magazines in the north (M13–M18), to be accessed from Rue EO2. As for the reconstruction of the buildings themselves, the elevations of the magazines must remain hypothetical and are reconstructed with an assumed height of 4.0m. The rows of magazines are covered with a common flat roof (Pl. 57.1).¹⁵⁹

A more hypothetical reconstruction must be undertaken for the western side of SAF5 and also for the central area to the west of M12. As a first proposal (Fig. 13), the area could have been filled with more magazines – i.e. the already mentioned row of magazines along the western fortification wall – which would have been accessed from the eastern side. By using approximately the same size for the magazines as those remaining, a total of eleven storage rooms could fit in this area. In addition, the northern row of magazines, M13–M18, could have continued to the west, up to the western gate, for an additional four more storage rooms reconstructed. As for the central zone, hypothetically four east-west oriented magazines, similar to those of the area M12, would fit into the remaining space. One must keep in mind, however, that the remains

of a north-south oriented New Kingdom wall exist here, which would split the storage rooms into a total of eight smaller rooms.¹⁶⁰

Especially in view of this central area, the special situation at the crossing point of the streets Rue EO2 and Rue NS4 (with its continuation to the south) must be considered. This crossing point was accentuated by four stone thresholds spanning the widths of the respective streets (Pl. 20.1).¹⁶¹ At the threshold to the west of the crossing point, parts of a stone doorjamb still exist, bearing an inscription of the viceroy Nehi (Pls. 20.2 and 20.3) and thus also aiding in the dating of the area. It seems plausible to assume that similar doorjambs¹⁶² and lintels were set up at all sides of the street crossing, in order to emphasize this place as the access point to some kind of special building.¹⁶³ One hypothesis in this line of thought is that some kind of sanctuary or second temple existed here (Fig. 14). In addition to the fact that longitudinal storage rooms were very often located in the vicinity of a temple,¹⁶⁴ comparable fortified towns such as Soleb and Sesebi also had two temples, usually a major one and a smaller one.¹⁶⁵ Furthermore, in the 19th century early explorers of Sai Island reported two temples at the site, one in the middle of the “fortress” (by which they meant the Ottoman fortress) and the other one further to the north.¹⁶⁶ In addition, a conspicuously large number of sandstone blocks from temple architecture can be found in this area, for which the original site is not known.¹⁶⁷

¹⁵⁹ Cf. model of the city of Amarna: http://www.amarna-project.com/pages/model_of_the_city/index.shtml (last accessed 18/09/2015).

¹⁶⁰ Cf. SPENCER 1997, 56–74, for the temple magazines at Amara West, where the storerooms have varying sizes, ranging from c. 3.50 × 2.50m to 5.40 × 3.20m.

¹⁶¹ Three of these thresholds are still *in situ*, while a fourth one in Rue NS4 can be reconstructed lying on a course of bricks situated there. See also Chapter 6.

¹⁶² An additional doorpost bearing the name of Nehi was found in a secondary usage as a threshold in the northern part of M12 (Pl. 31.1).

¹⁶³ In Uronarti, evidence for a treasury next to the granary exists in the form of clay seal impressions. Textual evi-

dence is available for treasuries in Askut, Mirgissa and Semna South. See VOGEL 2010b, 427.

¹⁶⁴ Cf. Ramesseum (e.g. ARNOLD 1992, 142–144, with plan on p. 142; WILKINSON 2000, 183, figs. 1 and 2; KEMP 2006, 258, pl. 6; 259, fig. 94), magazines at the temple at Amara West (SPENCER 1997, 53–74), Sesebi (site plan e.g. UPHILL 1988, 37, fig. 16; SPENCE/ROSE 2011, 34, fig. 1).

¹⁶⁵ Cf. EMERY/SMITH/MILLARD 1979, pl. IV; MORRIS 2005, 336; SPENCE/ROSE 2009 and 2011; MORKOT 2012a; CAVALIER 2014.

¹⁶⁶ Cf. BUDGE 1907, 461–465; VERCOUTTER 1958 and 1986, 13; BUDKA forthcoming. This is also the reason why Vercoutter labelled the first temple he discovered Temple A.

¹⁶⁷ Cf. BUDKA forthcoming, footnote 122.

9. THE HOUSES H1 TO H5

(Fig. 15)

The houses H1 to H5 (Pl. 36.1) are located in the central part of the excavated area SAV1 and are flanked by the streets Rue NS1 in the east, the reconstructed Rue EO1 in the north, and Rue EO4 in the south. On the western side, a north-south oriented wall separates the residential quarter from the magazines in the west. The five houses comprise a total area of 1,273m², with a north-south extension of 64.50m and an east-west extension of 19.66m. It must be noted, however, that the northernmost part of House H4 does not exist anymore and one can only assume that it formerly had reached to Rue EO1 in the north.¹⁶⁸ The houses were erected in a strict orthogonal grid, with the walls perpendicular to each other.

Overall, the walls of the houses are standing up to the height of about 1.0m, though the condition of the walls in the south is generally less well preserved. Here, at House H1 and the southern part of House H5, only around three to four courses of bricks have survived, reaching a maximum height of 0.50m. Some of the walls can only just be seen as a slight elevation protruding from the ground surface. It is therefore sometimes difficult to detect whether the wall continued onwards or may have incorporated a doorway.¹⁶⁹ Also, the lowest courses of the walls were commonly laid without doorways being marked, so when the upper brickwork has been lost, the pattern of access across the continuous lengths of wall often cannot be identified clearly.¹⁷⁰

Apart from one example in House H3, there are no existing windows or niches in any of the walls,

possibly a result of the level of preservation. In general, windows in Egyptian domestic architecture are presumed to have been rather high up.¹⁷¹ The thickness of the walls for the houses H1–H3 and H5 is very uniform with 0.55m, consisting of one row of headers and one of stretchers per course, with the laying pattern alternated in every other course. The walls of House H4 were thicker, with the outer walls being 1.10m and the inner ones 0.75m, possibly indicating an upper story at this house.¹⁷² The format of the bricks used in all the houses was very uniform with 33 × 15 × 10cm. Nothing of a floor covering made of mudbricks or stone has been preserved; one may therefore assume that there were pressed mud pavements throughout the dwellings. Also, the wall plastering, conserved in a few areas, was made of clay.

9.1. THE HOUSES H1 TO H3¹⁷³

(Pl. 5, Plan 5 section 1)

The houses H1 to H3 are situated to the west of the main north-south thoroughfare Rue NS1 and are aligned in a row from the south to the north. They are designed as row houses, always sharing the dividing wall. The three houses all have approximately the same layout and size, consisting of five rooms: two main rooms in the east and two smaller rooms and an entrance room in the west. With an area of c. 55.0–58.0m² the houses are rather small in size.¹⁷⁴ The access of the rooms followed a spiral-form pattern¹⁷⁵ beginning from the entrance room 1 and ending in room 5. The main entrance to the houses

¹⁶⁸ In Azim's plan House H4 is not reconstructed to reach Rue EO1, but ends slightly to the south of the street. There is however no explanation given for this reconstruction. Cf. AZIM 1975, 98, pl. IV.

¹⁶⁹ Cf. KEMP/STEVENS 2010, 299.

¹⁷⁰ Cf. KEMP 2000, 88.

¹⁷¹ See SPENCE 2004, 131.

¹⁷² It must be noted however, that no traces of a staircase have been found. Also, the thickness of the walls does not necessarily indicate a second story. At Amarna, walls with a thickness of merely 0.14–0.18m also could have supported a lightweight upper floor. See SPENCE 2004, 129.

¹⁷³ AZIM 1975, 118. The nomenclature of the houses themselves was given by Azim, while the room numbers were assigned by the author for a better differentiation of the various rooms.

¹⁷⁴ The size of these houses corresponds with those of the small houses in the western quarter in Kahun as well as with the houses in the workmen's village in Amarna and Deir el-Medina. See TIETZE 1985, 48–85; LACOVARA 1997, 47–49; KOLTSIDA 2007, 6–7; SNAPE 2014, 66, 86.

¹⁷⁵ "Schneckenhaus-Grundriß" resp. "escargot-plan" as used by VON PILGRIM 1996b, 256, and LACOVARA 1997, 54, for explaining certain house types of Tell el-Dab'a and Kerma. See also BIETAK 1996, 24, fig. 3.



Fig. 15. Overview of the houses H1–H5

lay in the narrow north-south running corridor Rue NS2, situated between Rue EO4 in the south and the probably open area H3N in the north.¹⁷⁶ This corridor also separated the houses H1–H3 from House H5 in the west. As already noted by Azim,¹⁷⁷ no architectural elements of stone, such as thresholds or lintels, have been recovered in these dwelling units, nor have column bases. He suggests however that one could possibly reconstruct a central column in the principal rooms of the houses.¹⁷⁸ An interesting detail is that the walls between the respective rooms 2 and 3 did not follow the usual perpendicular layout, but were situated at a slight angle, especially in the houses H2 and H3. No remains of staircases exist at these houses, therefore one may conclude that they consisted only of the ground story.

9.1.1. House H1

(Pl. 6.1, Plan 5 section 4)

House H1 is the southernmost house of the row houses H1–H3. Its state of preservation is the worst of the three houses, with only up to three courses of bricks remaining of some of the walls (Pl. 36.2). The majority of the walls, however, have almost deteriorated to the ground level and can only be seen as a weak imprint on the ground. From the existing features it is possible to reconstruct the course of these walls, without being able to go into greater detail. Therefore, for example, it cannot always be determined where the entrances to the rooms had been in the original layout of the house.

The area of House H1 comprised 57.96m² with a north-south extension of 9.58m and an east-west extension of 7.30m. The house was entered from Rue NS2 in the west via Room H1/1,¹⁷⁹ a rectangular, corridor-like room measuring 2.56 × 1.39m. The opening to Rue NS2 covers the entire width of the room, the flanking walls of the entrance are however badly deteriorated, so it cannot be determined if perhaps the walls projected further into the room

to form doorjambs. A brick buttress added to the eastern end of the northern wall formed the northern doorjamb of the entrance into Room H1/2, situated to the east of Room H1/1. If a corresponding buttress also existed on the southern side cannot be determined from the present situation of the walls; it seems however likely.

Room H1/2¹⁸⁰ was almost rectangular, with a north-south extension of 4.26m and a width of 3.76m, amounting to an area of 16.39m². The room was entered from the west. If a second entrance existed on the eastern side, giving access from Rue NS1,¹⁸¹ cannot be determined with certainty, because the eastern wall of the room is badly deteriorated in this area. The southern wall of the room, being the dividing wall to Room H1/3, can only be seen as a weak imprint in the ground as well and therefore the exact position of the opening between these two rooms can only be guessed at.

Room H1/3¹⁸² is situated in the southeast corner of the building. At 15.61m² (4.18 × 3.76m) it had almost the same size as Room H1/2 and can be classified as the second main room of the house. Of the walls of this room, only the southwest corner is preserved up to a height of 0.38m, while the rest can only barely be seen as weak imprints on the ground. Here, once again, it is therefore not possible to determine the exact position of the door openings to the neighboring rooms. An interesting detail presents itself at the southeast corner, where the southern wall of House H1 continued onwards to the east, thus projecting into the street Rue NS1 for about 0.30m, where it formed a kind of a doorjamb at the crossing point to the east-west oriented street Rue EO4. At the small part of the remaining wall in the southwest corner of the room, the bricks in the lowest course are standing on edge. This could have been a means of leveling out any unevenness of the ground and creating a horizontal alignment before laying further brick courses.¹⁸³

¹⁷⁶ Azim mentions a second entrance into the houses in the east. These entrances cannot be confirmed, however, since the walls are badly deteriorated and one cannot determine if the openings in the wall were original doorways, entrances installed at a later period, or simply deteriorated parts of the masonry. Cf. AZIM 1975, 118.

¹⁷⁷ AZIM 1975, 118.

¹⁷⁸ AZIM 1975, 118. There are a few remains of column bases in the vicinity of the houses H1–H3 (two in H2, two in Rue NS2), none are however *in situ* and it cannot be determined if these bases were formerly part of the dwellings.

¹⁷⁹ Cf. Chapter 14.19.1.

¹⁸⁰ Cf. Chapter 14.19.2.

¹⁸¹ As postulated by AZIM 1975, 118; 98, pl. IV. For the reconstruction questionable openings were not considered, since domestic architecture in other Egyptian towns (e.g. Amarna, Elephantine, Tell el-Dab'a, Abydos) generally have only one main entrance and are not perforated with many openings. Cf. BORCHARDT/RICKE 1980; TIETZE 1985; ENDRUWEIT 1994; BIETAK 1996; VON PILGRIM 1996b; SPENCE 2004; KEMP/STEVENS 2010.

¹⁸² Cf. Chapter 14.19.3.

¹⁸³ Cf. KEMP 2000, 88 and see above Chapter 4.

To the west of Room H1/3 lay Room H1/4,¹⁸⁴ with a size of 8.84m² (4.35 × 2.04m). It was accessed from the east, although, as already mentioned, the exact location of the entrance is not known. The situation of the walls is similar to the rest of the house, with a preservation height of up to 0.40m (about three courses of bricks). Once again, the lowest course of the southern wall consists of bricks on edge.

Finally, to the north of Room H1/4 is the small, almost square chamber Room H1/5,¹⁸⁵ with 4.41m² (2.18 × 2.08m). It could be entered from the south. In the western part of the room remains of the mud pavement are still preserved.

9.1.2. House H2

(Pl. 6.2, Plan 5 sections 4 and 5)

Directly to the north of House H1, House H2 has the same layout as House H1 and (with an area of 55.19m²) is approximately the same size (Pl. 37). In general, the walls are better preserved, up to a height of 0.90m, making it easier to determine the exact course of the walls and the position of the doors. The house was entered from the west into Room H2/1.¹⁸⁶ The walls forming the doorjamb on the northern and southern side of the entrance are both badly deteriorated, so they could have formerly jutted out more than in the present condition. The room measures 2.57 × 1.32m, opening on the eastern side to Room H2/2, where a buttress is added on the northern side of the entrance (cf. H1/1). An equivalent doorjamb on the southern side seems possible, since the wall in that area is damaged.

The 15.02m² large Room H2/2¹⁸⁷ has an almost square form (4.07 × 3.76m). As in House H1, an opening to Rue NS1 on the eastern side of the room could be possible, even though the wall faces framing the entrance are not shaped as doorjamb, but are irregular. Therefore, the dimension of a possible door in this area cannot be determined. The southern wall of Room H2/2 is not parallel to the northern wall, but is situated at a slight angle. The opening to Room H2/3 is on the eastern side of this wall. The eastern wall of the room continues onwards to

Room H2/3; at the interface between the two rooms there is no indication of a buttress or doorjamb projecting to the west. An opening in the northern part of the wall was added at a later time and is not part of the original layout.

Since the northern and southern walls of Room H2/3¹⁸⁸ are both slightly slanted, the room has a trapezoid form, with an area of 15.18m². The room was entered from the north and a second door opening existed in the west towards Room H2/4. The western wall is badly deteriorated, therefore the exact location of this entrance cannot be determined. The walls of Room H2/4¹⁸⁹ are generally in a bad shape and very little of the original masonry is still intact. The layout of the room can however be clearly identified with measurements of 4.12 × 2.09m (8.58m²). Even though the exact position can, once again, not be determined, there must have been an entrance in the north to make Room H2/5¹⁹⁰ accessible. Apart from the entrance room H2/1, this chamber is the smallest room (4.45m²) and, due to its position in the house, seems to be the most private one.¹⁹¹

9.1.3. House H3

(Pl. 7, Plan 5 section 4)

House H3 is the northernmost of the three row houses, following the same layout. It is the best preserved of the three, since all the walls have a remaining height of at least 0.40m (Pl. 38). The surface area of the entire house is 56.42m². As in the other two houses, the (presumably) main entrance is in the northwestern corner, where one entered a 1.33m wide and 2.09m long corridor, Room H3/1.¹⁹² Here, the doorjamb, i.e. the walls framing the door on the north and the south side, have once again been badly damaged. On the eastern side of the corridor, a small wall juts out of the northern wall, forming a doorjamb for the entrance to Room H3/2. In this case, a southern counterpart cannot be reconstructed, since the southern wall is in good shape and there is no indication that a similar buttress was in place here.

In the 15.74m² large Room H3/2,¹⁹³ a 1.44m wide opening in the eastern wall is more pro-

¹⁸⁴ Cf. Chapter 14.19.4.

¹⁸⁵ Cf. Chapter 14.19.5.

¹⁸⁶ Cf. Chapter 14.20.1.

¹⁸⁷ Cf. Chapter 14.20.2.

¹⁸⁸ Cf. Chapter 14.20.3.

¹⁸⁹ Cf. Chapter 14.20.4.

¹⁹⁰ Cf. Chapter 14.20.5.

¹⁹¹ Cf. Room H1/5 and Room H3/5.

¹⁹² Cf. Chapter 14.21.1.

¹⁹³ Cf. Chapter 14.21.2.

nounced than in the comparable rooms H1/2 and H2/2 and the doorjambs can be more clearly defined. Nevertheless, this opening seems to be of a secondary nature and is therefore not considered in the reconstruction of House H3. In the southern wall of the room a 1.20m wide door leads into Room H3/3. Remains of the mud wall plastering are extant on the western doorjamb of this opening as well as on the wall itself. This southern wall is once again set in an angle to the other walls and is therefore not parallel to the northern wall. In the southwest corner of the room the remains of a former installation – perhaps a small storage bin – can be seen. The remains consist of one brick standing on edge with one brick lying on top, creating a niche with a width of 0.44m in the southwest corner.

The second main room of the house, the 14.66m² large Room H3/3,¹⁹⁴ could definitely be entered from Rue NS1; in the northern part of the eastern wall, a 1.23m wide entrance, where both doorjambs are preserved, can be identified. The only still existing window of all the dwellings is installed in this wall as well (Pl. 40). It is situated 0.50m to the south of the door opening and has a width of 0.67m. The window sill is 0.26m above ground level. On both sides of the window opening bricks are standing on edge, forming the window frame. Remains of a lime plaster are extant inside of the window opening. Directly to the south of the window, a rectangular installation was situated in the southeastern corner of the room, consisting of a row of bricks standing on edge and encompassing an area of 1.87 × 1.01m. This could have been a storage bin or, what seems more likely, a mastaba situated in the corner of the room, forming a close relationship to the neighboring window and therefore a link to the outside world (Pl. 39).¹⁹⁵ Furthermore, remains of the mud floor still exist in the western part of the room. Brick rubble was found in its center. If these tumbled down bricks

were formerly part of the masonry or the ceiling can no longer be determined. Azim also mentions the existence of the remains of the flat roof, consisting of a 0.15m thick layer of earth on top of straw mats and wooden beams.¹⁹⁶ This feature could however not be verified through the post-examination.

To the west of Room H3/3 was the rectangular Room H3/4¹⁹⁷ (4.34 × 2.02m), accessible through a 1.22m doorway in the east. The southern doorjamb was damaged, so the entrance was possibly narrower. To the north, the 4.35m² large Room H3/5¹⁹⁸ could be entered through a 1.08m doorway. Here, both doorjambs are covered in mud plaster.

To the north of House H3 is a presumably open area or courtyard (Area H3N¹⁹⁹), with a length of 12.14m and a width of 4.45m. This space was separated from Rue NS1 by a north-south oriented wall, leaving a 1.13m wide entrance into the area. Neither House H3 nor House H4 to the north could be accessed directly from the area H3N, only the corridors Rue NS2 and Rue NS3, leading to the entrances of the respective houses.²⁰⁰

9.2. HOUSE H4

(Pl. 8, Plan 5 section 4, Plan 6 sections 8–10)

House H4 was situated on the north side of the domestic quarter, though only the rooms in the southern part and to the west have been preserved (Pl. 41.1). Therefore, the total dimensions of the former dwelling must remain unknown. Due to the general layout of this town quarter, one could assume that House H4 formerly reached to the main east-west oriented street Rue EO1 in the north and therefore encompassed an entire area of about 368.0m² (11.91 × 30.95m).²⁰¹ The part of the house that can still be traced consists of seven rooms and an area of 111.90m². It is bordered by Rue NS1 in the east and Rue NS3 in the west, as well as the open area H3N in the south. The outer walls of House H4 are

¹⁹⁴ Cf. Chapter 14.21.3.

¹⁹⁵ Mastabas are a common feature in Egyptian houses, found for example in Amarna, Elephantine and Amara West, both inside and outside of the houses. See VON PILGRIM 1996a, 219 for Elephantine; CORREAS-AMADOR 2013, 416, 421 for Amarna; SPENCER/STEVENS/BINDER 2014, 38 for Amara West. Also, the so-called “box beds” in Deir el-Medina have similar dimensions (1.70 × 0.80 × 0.75m) and are placed in one of the front (main) rooms of the house. Cf. LESKA 1994, 98–100, 104, figs. 3 and 4; KLEINKE 2007, 17 and 30–31; SNAPE 2014, 79.

¹⁹⁶ AZIM 1975, 118.

¹⁹⁷ Cf. Chapter 14.21.4.

¹⁹⁸ Cf. Chapter 14.21.5.

¹⁹⁹ Cf. Chapter 14.21.6.

²⁰⁰ Cf. Chapter 6.

²⁰¹ The possibility that more than one house existed in this area cannot be entirely ruled out.

between 1.02 and 1.08m wide, while the inner walls have a width of about 0.70m. The size of the bricks used here were the same as at the houses H1–H3, 33x15x10cm.

The main entrance, or rather the only known entrance, seems to have been on the western side of the building, where a 1.50m long stone threshold is situated *in situ*. Through this doorway one entered Room H4/1²⁰² from the corridor-like Rue NS3. Not all of the walls of Room H4/1 have survived, but enough to trace the outlines, establishing a room of 15.19m². A possible second doorway leading to the rest of the dwelling could have been on the eastern side of the room, where the wall has completely eroded, aside from the corners. The southern wall, added onto the massive outer western wall, was preserved in its entire length up to a height of 0.90m. From the northern wall, on the other hand, only the northeastern corner is still visible. The western wall, being the outer wall of the dwelling, was still preserved to the south of the threshold, where it continued to the south. To the north, this outer wall is only barely visible at ground level to a distance of 2.70m from the threshold. Another north-south oriented wall can be determined to the north of Room H4/1 as well; here a small chamber (Room H4/1N²⁰³) of 2.84m² can be reconstructed, of which the entrance lay either in the north or the east. The eastern wall of Room H4/1 also continued to the north, though the extent is not known.

Also unknown are the dimensions of the room to the east of Room H4/1. The only evidence here is the remains of a stone threshold situated in a doorway leading to the south (Room H4/2). The width of this entrance cannot be determined, since the threshold is not preserved in its entirety and the western side of the now existing opening is uneven. A secondary wall overbuilds the area, where presumably the original southern wall was situated. To the north and the east no trace of the original building remains.

Room H4/2,²⁰⁴ with 29.37m² (6.08 × 4.86m), seems to have been one of the main rooms of the house, being the largest room in the preserved part of the house. It is situated to the south of Room H4/1. Apart from the already mentioned entrance in the north, this room provided access to the southern rooms of the house, though the entrance to Room

H4/4 was closed off at a later time. Both doors leading to the southern rooms were 1.32m wide and presumably had sandstone thresholds. Parts of such a threshold are lying near the entrance in Room H4/5. Inside of Room H4/2, the base of a column was found. If a column was actually formerly part of the room must remain unknown, but due to the size of the room, one could assume that there was at least one column situated in the middle. The diameter of the base is 0.72m and the remains of the column are 0.28m in diameter.

To the east of Room H4/2 lay Room H4/3²⁰⁵, of which the northern part was completely overbuilt by a wall from a later time period. Therefore, the original size of the room cannot be determined. One can, however, see a small piece of masonry underneath this secondary wall, which seems to have been aligned to the northern wall of Room H4/2 and also probably formed the eastern doorjamb of the stone threshold located there. The eastern wall (being the outer wall of House H4) is only preserved in parts and is clearly a continuation of the better preserved part of the wall located at Room H4/6 to the south. Therefore, the size of the room can probably be reconstructed with 12.77m², with a length (north-south) of 4.77m and a width (east-west) of 2.46m. The former entrance into the room cannot be determined and is presumed to be on the northern side, since the remains of the western wall are for the most part too high to accommodate a door opening.

In the southern part of the house three rooms were situated next to each other (Pl. 41.2). In the southwestern corner was Room H4/4,²⁰⁶ a relatively small room with only 7.61m² total. This room is now completely closed off, since the former 1.20m wide entrance in the north wall was first narrowed down to 0.96m and later completely filled with brick masonry (Pl. 42.1). When these changes occurred is not known, but presumably after the main occupation phase in Pharaonic times. The walls of this room are very well preserved up to a height of 1.60m and still have parts of the original mud plaster, the exception being the outer southwest corner, which is almost completely destroyed.

The middle room located on the southern side, Room H4/5,²⁰⁷ had a size of 13.90m² and was the largest of the three rooms. It had a central entrance

²⁰² Cf. Chapter 14.22.1.

²⁰³ Cf. Chapter 14.22.2.

²⁰⁴ Cf. Chapter 14.22.3.

²⁰⁵ Cf. Chapter 14.22.4.

²⁰⁶ Cf. Chapter 14.22.5.

²⁰⁷ Cf. Chapter 14.22.6.

in the north (measuring 1.30m), with another doorway situated in the east, giving access to Room H4/6. This opening and the dividing wall between the two rooms was overbuilt in a later time period, but the original walls can still be identified underneath the secondary wall. An opening in the southern wall was not part of the original layout.

Finally, Room H4/6²⁰⁸ was located in the southeastern corner of the house. With 6.73m², it had about the same dimensions as Room H4/4. The only entrance was the 1.17m wide doorway in the west, leading from Room H4/5 into the chamber.

To the west of Rue NS3 is the area labelled Area H4W²⁰⁹ (Pl. 9), where the original layout is unclear because of the many secondary walls that were erected in this area. Nevertheless, some of the original walls can be determined and two rooms can tentatively be reconstructed. Three east-west oriented walls could have belonged to the original layout; they were all built onto the dividing wall to the storage room area, SAF5. These remains are at the most two to three courses high; in some parts they could only be determined as imprints in the ground. The outer walls were between 0.45m and 0.50m thick, while the interior wall was only 0.25m. The southernmost wall was aligned with the outer wall of House H4. An entrance to the southern room, with a size of 14.53m², could be identified from the corridor Rue NS3. Access to the larger northern room (c. 30.0m²) could have been either from the corridor or from the southern room. To the south of these two rooms a further room existed, labelled Room H5N,²¹⁰ which could be accessed from Area H3N. It also had an opening to House 5 in the south. For the reconstruction, it is assumed that the area to the north of these three rooms was built up with similar structures, thus creating, together with House 4, the corridor Rue NS3.²¹¹

9.3. HOUSE H5

(Pls. 10 and 11, Plan 5 sections 2 and 5)

The area to the west of the houses H1–H3 and up to the dividing wall to SAF5 is labelled as House H5,²¹² encompassing a total area of 303.16m² (Pl. 42.2). Azim assumed that there was only one rather large house with nine rooms here. However,

by viewing the ground plan it seems just as likely that there were actually two smaller houses situated here, divided by the central east-west corridor H5/5. For the description of the rooms, the house will be treated as one, while keeping the possibility of a separation into two in mind.

In general, especially in this house, it is difficult to determine in most rooms where the original door openings had been, because many of the walls are not preserved in their entirety and may also have openings and holes that were intentionally added in later time periods. Regarding the state of preservation, the walls in the northeastern part of the house are the best preserved, up to a height of about 1.20m, while in the southern part only about two to three courses of bricks per wall have remained.

The main entrance seems to have been to the east, at the above mentioned Corridor H5/5,²¹³ entering the house from the north-south oriented street Rue NS2. This 7.65m long and 1.38m wide corridor, leading through the house to the (probably) open courtyard H5/9 in the west, presumably gave access to the rooms lying to the north and south of the corridor. Unfortunately, the exact access points cannot be verified due to the state of preservation of the walls. It is however assumed that the rooms H5/3 and H5/6 could be entered from the corridor, since the walls of the neighboring rooms H5/4 and H5/7 are preserved higher and offer no possibility for doors. As for the openings of the corridor to the east and the west, buttresses on the northern sides of both doorways formed the doorjambes, though a corresponding element on the southern side did not exist. A further buttress was located as the extension of the dividing wall between the rooms H5/3 and H5/4, jutting out for 0.16m into the corridor H5/5.

The northern part of the house consisted of four rooms, H5/1–H5/4, forming a rectangular block. The 20.85m² (5.97 × 3.71m) large Room H5/1²¹⁴ is situated in the northwestern corner (Pl. 43.1). The walls of this room are not preserved in their entirety and the northern and western walls are especially damaged. Nevertheless, the outline of the room can be traced very well. Due to the state of preservation of the walls, entrances into the room could be pos-

²⁰⁸ Cf. Chapter 14.22.7.

²⁰⁹ Cf. Chapter 14.22.8.

²¹⁰ Cf. Chapter 14.23.13.

²¹¹ Cf. Chapter 6.

²¹² Cf. AZIM 1975, 118.

²¹³ Cf. Chapter 14.23.5.

²¹⁴ Cf. Chapter 14.23.1.

sible at all sides, though the remains of the eastern and southern walls most strongly suggest openings, since doorjambs seem to exist here. Therefore, the room was probably entered from an approximately central door in the south, while access was also given to Room H5/2 in the east, through a door situated in the southern part of the eastern wall.

The walls of the elongated Room H5/2²¹⁵, with 12.91m² (5.97 × 2.17m) in the northeast of the building are slightly better preserved, with the eastern and southern walls reaching a height of up to 1.18m. Entrances to the room seem to have been from the west (Room H5/1) and the south (Room H5/4). That another doorway may have existed in the east towards Rue NS2 cannot be entirely ruled out, since the northern part of the eastern wall is completely missing.

Room H5/3²¹⁶ was situated to the south of Room H5/1. It had an area of 21.02m² (5.93 × 3.71m), making these two rooms almost the same size. They were interconnected by a central doorway in the dividing wall. Another entrance to Room H5/3 formerly existed in the northern part of the eastern wall, though this door was closed off at a later time. The southern and the western walls of the room seem to have been replaced in a later period (modern?), since the bricks used here are very regular and have a different format than the ones used at the other walls (31 × 17 × 7cm). Nevertheless, they follow the original outline of the room. The northern part of the western wall is missing in its entirety.

To the east of Room H5/3 was Room H5/4,²¹⁷ which was the same size as Room H5/2. All of the entrances into this room lay in the northern part of the room. As with the door in the western wall, a 1.0m wide entrance in the east, leading to Rue NS2, was closed off at a later time as well.

Five further rooms of House H5 were situated to the south of the dividing corridor H5/5. From the corridor, Room H5/6²¹⁸ could probably be entered (see above). Unfortunately, the northern wall of this room is missing almost in its entirety, with only wall stumps on the eastern and western sides remaining. Therefore, the entrance situation is not assured. This almost square room (4.16 × 3.65m, 15.37m²) probably also had an entrance to Room H5/7 in the east.

Here too, the wall is not extant anymore, so precise statements are once again difficult to make. It can also no longer be determined if the column base that now can be found in the room was actually part of a column formerly situated here.

The neighboring 9.08m² large Room H5/7²¹⁹ was entered from the west and had another door in the south, giving access to the large room H5/8. A doorjamb was situated 0.15m to the west of the eastern wall, while a second one was probably 0.92m further west. The northern wall of this room was inserted between the eastern and western walls and may stem from a later period. Since the facings of the eastern and western walls are uneven on their northern sides, it is possible that they previously continued to the north, forming a larger room together with the eastern part of the corridor H5/5.

Room H5/8,²²⁰ with 52.63m² (7.90 × 6.50m), was definitely the largest and therefore the main room of House H5 (Pl. 43.2). Apart from the above mentioned entrance from Room H5/7 in the north, the room could be accessed directly from the outside via a 1.20m wide door in the southern wall, entering from Rue EO4. A column base with a diameter of 0.47m is probably situated *in situ* in the southern half of the room. A second, dislocated column base was also found here. Therefore, considering also the size of the room, it seems plausible to reconstruct two columns in this room for supporting the roof.

Two further rooms were situated to the west of Room H5/8, Rooms H5/10²²¹ and H5/11,²²² which could be accessed from Room H5/8. The walls of these two rooms are only 0.35m thick, but were connected to the western wall of the rooms H5/6 and H5/8, indicating that they were part of the original planning and not a secondary addition as one could suspect in view of the plan. The northern room, H5/10, is 12.03m², while the southern one, H5/11, has a size of 15.98m². Also to the west, bordered by the rooms of H5 in the east and the dividing wall to the area SAF5 in the west, is the probably open area H5/9,²²³ which can presumably be addressed as a courtyard. This 20.85m² large area was accessible from the corridor H5/5 of House H5, as well

²¹⁵ Cf. Chapter 14.23.2.

²¹⁶ Cf. Chapter 14.23.3.

²¹⁷ Cf. Chapter 14.23.4.

²¹⁸ Cf. Chapter 14.23.6.

²¹⁹ Cf. Chapter 14.23.7.

²²⁰ Cf. Chapter 14.23.8.

²²¹ Cf. Chapter 14.23.11.

²²² Cf. Chapter 14.23.12.

²²³ Cf. Chapter 14.23.9.

as from an 11.07m long and 1.09m wide corridor in the south (H5/9A²²⁴). A further entrance could have also existed in the north.

9.4. SUMMARY AND RECONSTRUCTION OF THE HOUSES H1 TO H5 (Fig. 16)

The domestic area in the center of SAV1 consisted of five dwelling units which were all arranged in the orthogonal grid that defined the southern part of the town. The assumed main accesses into the houses occurred from the north-south oriented corridors Rue NS2 and Rue NS3. The houses H1–H3 are row houses with an almost identical ground plan, with two main rooms in the east and two smaller rooms and the entrance corridor in the west, leading from the entrance in a spiral-form to the most private room.²²⁵ The neighboring house H5 consisted of a central corridor and nine rooms, situated to the north and the south of the corridor. In the west was an open courtyard. From the ground plan of the house it seems possible that H5 actually comprised two separate dwelling units, divided by the corridor. In this case, the northern house would consist of two larger rooms in the west and two elongated smaller ones in the east. The southern house possessed one main room in the south, probably equipped with columns, and four smaller rooms. The access to these two smaller houses would have been from the central corridor.

In the north of the residential sector was House H4, separated from the houses H1–H3 and H5 by an open area. Only the southern part of House H4 is preserved; it is however assumed that the dwelling reached to the main street Rue EO1 in the north. In the still existing part of the building, the main entrance could be detected in the west, on the longitudinal side of the house. The entrance room was followed by five further rooms of varying sizes, with the southernmost rooms aligned in a row.

As for the 3-D reconstruction of the domestic quarter (Pl. 58), one of the main problem is once again the former height of the buildings and especially the question of the existence of upper stories.²²⁶ As already addressed, the thickness of the walls do not necessarily indicate a possible upper floor. In fact, all the walls in the domestic area would have been strong enough to support one.²²⁷ However, no remains of staircases could be found in the entire area of the domestic buildings. Therefore, the houses H1–H3 and H5 are reconstructed as single-story houses with flat roofs, always spanning the entire building block.²²⁸ Parapet-walls of a height of about 0.50m enclosed the roof surface.²²⁹ If the houses had any windows apart from the single example in House H3, can no longer be determined; if windows were present, they were of small format and must have been situated higher up in the walls.²³⁰ As alternate sources of light and ventilation, openings in the roof or even roofless rooms also seem plausible.²³¹

In the extant part of House H4 no traces of a staircase could be detected anymore either. However, due to the presumed size of the house – and thus possibly being of heightened importance – a second story is proposed for this dwelling, assuming that the missing staircase was situated somewhere in the northern part of the house. In comparison to reconstructions of other contemporaneous dwellings, this second floor is presumed to have been situated only over two-thirds of the house, leaving the remaining part as a terrace, which was accessed from the upper story.²³²

Of all of the houses excavated here, the actual function of the rooms must remain unknown, especially since no finds are recorded for the specific rooms. One can therefore only suggest distinctions into main and secondary rooms according to their size. In general, larger rooms are classified as the

²²⁴ Cf. Chapter 14.23.10.

²²⁵ Row houses are a common feature in Egyptian settlements of all time periods. Exemplary are the row houses at the Middle Kingdom city of Kahun and the workmen's village at Amarna. See KEMP 1987, 21–50; LACOVARA 1997, 47; KEMP 2006, 212–217. For a listing of model settlements throughout the ages with detailed descriptions see KEMP 2006, 195–244. The domestic quarter at Sesebi consists of row houses as well. See LACOVARA 1997, 159, fig. 66.

²²⁶ The existence of an upper floor for Egyptian domestic buildings, especially those of special importance, is generally assumed. See SPENCE 2004, 123–152, KOLTSIDA 2007, 123–135.

²²⁷ Cf. SPENCE 2004, 129.

²²⁸ Cf. UPHILL 1988, 21, who also suggests this for the houses in Deir el-Medina.

²²⁹ Cf. ENDRUWEIT 1994, 48 with reference to house models of the Middle Kingdom. See PETRIE 1907, pl. XV.

²³⁰ Cf. ENDRUWEIT 1994, 25; SPENCE 2004, 131; SPENCE 2010, 291.

²³¹ Cf. KEMP 1995, 156. In his view, rooms with no windows or internal rooms which received their lighting through the doors of the neighboring rooms could have very well existed, depending on their usage and the need of the occupants for natural lighting.

²³² Cf. SPENCE 2004, 123–152; 134; KOLTSIDA 2007, 123–135.



Fig. 16. Reconstruction plan of the houses H1–H5

main rooms, where possible columns in a room heightened their importance.²³³ Compared to the classic Amarna house, with its tripartite plan²³⁴ considered the most common form of ancient Egyptian houses, no typical tripartite division can be identified here and thus also a subdivision into distinct sections cannot be made. Typical identifying architectural elements, such as niches or bed platforms for the bedrooms²³⁵ are also not extant here. In the case of the row houses H1 to H3, which shared identical ground plans, one could assume a sequence of rather public to private rooms following the spiral-form accessibility of the rooms, with the rooms 2 and 3 being the main rooms and the rooms 4 and 5 the secondary, more private, ones. House H5 is much more difficult to interpret in this way. Room H5/8 in the south can clearly be identified as the main room of the house,

set apart from the others by its size and the probable existence of two columns, while the remaining rooms are rather uniform in their size and layout. Furthermore, the accessibility of the rooms gives no clue to any hierarchy, with perhaps only the rooms H5/10 and H5/11 tentatively labelled as secondary rooms, given their location within the house. As for House H4, an interpretation is even more difficult, due to the fact that only the southern part still exists. The main entrance seems to have been in the central area of the house. One main room can possibly be identified with Room H4/2, while the three rooms in the south could have been more private ones. In general, one must assume for these houses that the rooms were seldom used for only one function, but were rather multifunctional and flexible, depending on the imminent need and seasonal factors.²³⁶

²³³ Cf. CROCKER 1985, 58–64; VON PILGRIM 1996a, 207–208; CORREAS-AMADOR 2013, 200. Columns in rooms were often not necessary for supporting the ceiling or roof beams, but served as an important status symbol.

²³⁴ Cf. TIETZE 1985; BIETAK 1996; VON PILGRIM 1996a, 190; LACOVARA 1997, 50; 56; SPENCE 2004, 127. A summary of

the research on the standard Amarna villa is given in CORREAS-AMADOR 2013, 27–36.

²³⁵ Cf. SPENCE 2004, 129; SPENCE 2010, 290. She points out, however, that these identifying elements only occurred in medium to large houses (larger than 100.0m²).

²³⁶ Cf. VON PILGRIM 1996a, 217; SNAPE 2014, 91.

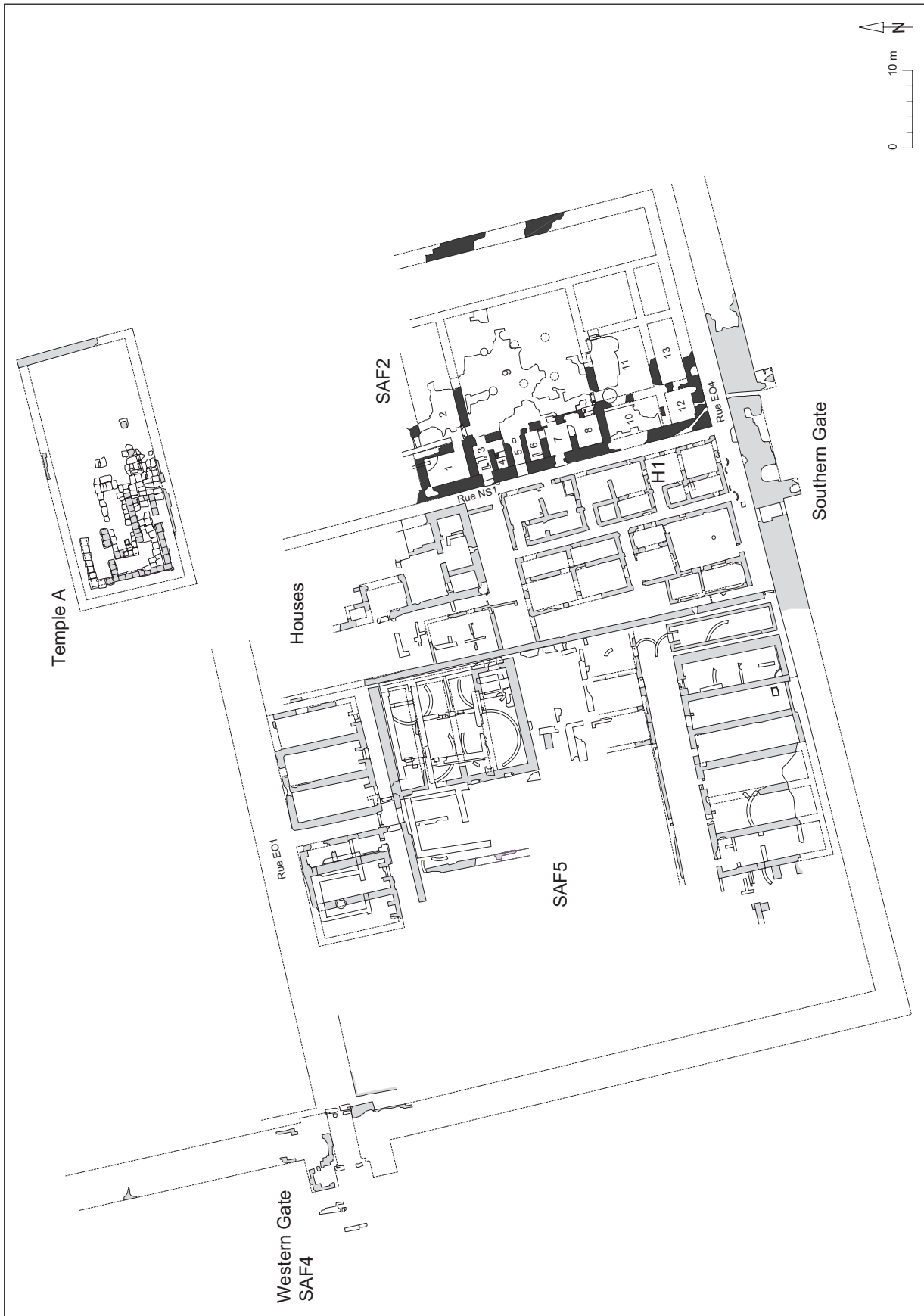


Fig. 17. Overview of SAF2

10. SAF2²³⁷

(Fig. 17, Pl. 12, Plan 5 section 3, Plan 6 sections 6 and 7)

The area SAF2 lies to the east of Rue NS1 and consists of a large residential building, the so-called governor's palace.²³⁸ Unfortunately, only the central part of this building is well preserved; the northern and eastern parts are either overbuilt or destroyed and the southern part is also badly deteriorated (Pl. 44). Even though the northern part is entirely missing, one can assume that the building reached to the main street Rue EO1 in the north. In the south it was bordered by Rue EO4, followed by the southern fortification wall. Just as to the north, the eastern side of the building has to be reconstructed hypothetically. By assuming a symmetrical building layout along a north-south-axis, the entire width of the building would have been 31.46m. This corresponds well with the remains of a 1.86m wide north-south oriented wall located in the east, of which one can assume that it represented the outer eastern wall of SAF2 (Pl. 51). In contrast to this proposed reconstruction, Azim assumed this wall to have been the western boundary of a further building to the east of SAF2, with a hypothetical street, Rue NS2, lying between the two buildings.²³⁹ Due to the considerations concerning the eastern fortification wall that have already been discussed above,²⁴⁰ this reconstruction can be dismissed. It is now assumed that the eastern enclosure wall of the town was situated only at a short distance from the eastern side of SAF2, forming a

so-called wall street, as could be seen at the other sides of the fortifications.²⁴¹ The building SAF2 would therefore be situated at the southeastern corner of the fortified town. With a reconstructed length of 64.24m and a width of 31.46m, the total size of SAF2 is about 2,020m².²⁴²

The brick format used in SAF2 differed from the other residential buildings, being larger at 40 × 19 × 9cm. In addition, the walls were considerably thicker: the outer walls were 1.56m, the inner walls 0.86m. Due to the thickness of the walls, one can assume that this dwelling had a second story, although no remains of a staircase were detected.²⁴³ It is however possible that stairs were originally located in the missing eastern part of the building.²⁴⁴ Noteworthy in general is the high standard of the building material and décor. Apart from the mud-brick walls that were set very regularly, the sandstone thresholds to be found here are finely cut and made of high quality sandstone.²⁴⁵ The floors of the main rooms were made of brick and laid into a special pattern. In contrast, the walls were only covered with mud plaster and no remains of paint was discovered.²⁴⁶ An interesting detail was noted by Azim in regard to the western wall of the residence: he observed that the four lowest brick courses were extremely regular in their entire length and a horizontal construction joint existed above these lowest brick layers, which seemed to be laid out as a first,

²³⁷ The name SAF2 follows Azim's designation of the various areas assigned during the excavations in the 1970s. The room numbers are once again a recent addition by the author.

²³⁸ See AZIM 1975, 100–109; BUDKA forthcoming.

²³⁹ Cf. AZIM 1975, 98, pl. IV, 109–111. See also Chapter 11.

²⁴⁰ See Chapter 5.

²⁴¹ See Chapter 6.

²⁴² Cf. the larger houses in Kahun with 60 × 42m (2,520m²). For a plan of the Kahun mansions 1 and 2 see RICKE 1932, figs. 4 and 47; BIETAK 1996, 31, figs. 12 and 13; LACOVARA 1997, 48. In contrast, the residential building in Amara West measured only 24.5 × 29m (710.50m²). Cf. SPEN-

CER 1997, 163; SPENCER/STEVENS/BINDER 2014, 17. The commander's residences in the Middle Kingdom fortresses in Nubia are also much smaller, with c. 1,000m² in Buhen, c. 550m² in Uronarti and c. 275m² in Askut and Shalfak. Cf. SMITH 1995, 47; VOGEL 2010a, 423–424.

²⁴³ As with House H4 one must note that thicker walls do not necessarily indicate the presence of a second story. However, the importance and size of the building would definitely allow one.

²⁴⁴ Cf. BUDKA forthcoming.

²⁴⁵ Personal communication by J. Budka and S. Neogi.

²⁴⁶ Cf. AZIM 1975, 105.

preparatory step, before the remaining walls were erected (Pl. 45.1).²⁴⁷

As for the general layout of the building SAF2, the dominant feature is the central columned hall (Room 9), from which the other rooms were accessed;²⁴⁸ the main rooms seem to have been to the north and the south of the columned hall. Along the western side of the building were a row of smaller rooms (Rooms 3–8), of which three have entrances from the north-south oriented street Rue NS1. The walls in this western part are well preserved up to a height of about 1.50m, while the walls in the south-western part of the building can only barely be seen at floor level, at times only as small heaps of brick. Nevertheless, the general course of the walls can still be traced. Assuming that the layout of the building was actually more or less symmetrical, as already stated above, a similar row of smaller rooms could have been located on the eastern side of SAF2.

Another noteworthy feature of SAF2 is the pavement in the central hall, Room 9, and some of the other main rooms (Pl. 15.3). It consisted of mudbricks laid into a very dense pink-colored mortar,²⁴⁹ whereby two different brick formats ($39 \times 17\text{cm}$ and $33 \times 15\text{cm}$) and a special decorative pattern was applied (Pl. 60). So far, this is the only building in the fortified New Kingdom town of Sai Island with a brick pavement, as opposed to mud pavements in the other dwellings.²⁵⁰

As already mentioned, the building was accessed from Rue NS1 in the west,²⁵¹ where three entrance rooms existed: Rooms 3, 5 and 7. The northern one, Room 3²⁵² (Pl. 45.3), had a size of 7.31m^2 ($3.78 \times 1.91\text{m}$). Apart from the entrance in the west, openings existed into the northwestern

corner of Room 9 to the east and to Room 4 to the south. Both the northern and the southern walls did not bond with the massive western wall, but were added on. The stone threshold of the 1.41m wide entrance into the house is still *in situ* (Pl. 45.2). It is situated on the western side of the door opening, whereby it is not exactly aligned with the face of the wall, but juts out into the street for 7cm. The processing traces on the threshold imply that the door frame was made of stone as well. The lowest brick courses of the western wall continued throughout the door opening and the threshold was placed above these. With a length of 1.55m, the threshold was longer than the width of the door opening, therefore it reached underneath the rising wall on both sides and recesses were cut into the wall to fit the threshold in. The facings of the walls on either side of the entrance are irregular, which could indicate that the entrance was installed at a later date. This was also noted by Azim, who suggests that both this entrance, as well as the one in Room 7, was installed at a later date, while the central access into Room 5 was closed off.²⁵³

The southern wall of Room 3 is – together with the north-south oriented dividing wall in Room 4 – the only wall in SAF2 with a differing brick format of $32 \times 13 \times 8\text{cm}$. This could be an indication that this wall was inserted at a later time, with the rooms 3 and 4 formerly being a single unit. The erection of this partitioning wall could be related to the above mentioned installation of a new entrance into the building. These changes to the original layout are the only restructuring that could be observed in the building, implying a relatively short period of usage.

²⁴⁷ AZIM 1975, 108; Cf. KEMP 2006, 194. The actual planning of the building layout seems to have been done directly on site at full scale by first creating the foundations of all the main walls and thus setting the intended pattern at a low level before building the actual walls.

²⁴⁸ Complexes with a central columned hall are well known from other sites, for example at the earlier fortresses in Lower Nubia (Buhen, Semna, Uronarti), but parallels from Egypt proper also exist, such as the so-called Amarna villas or the Kahun house. At Sesebi, center-hall houses are also attested as elite dwellings. Columns were also found at the governor's residence in Amara West. See BUDKA forthcoming. For the Nubian fortresses see VOGEL 2010a; VOGEL 2012. For Amarna and Kahun see ARNOLD 1989; BIETAK 1996; VON PILGRIM 1996b, 211; KOLTSIDA 2007, 57–61. For Sesebi see MORRIS 2005, 338. For Amara West see SPENCER 1997, 163 and SPENCER/STEVENS/BINDER 2014, 17.

²⁴⁹ Cf. AZIM 1975, 108.

²⁵⁰ Mudbrick floors occur throughout Egyptian domestic architecture, for example in Elephantine, Tell el-Dab'a and Amarna. See as examples House Q46.2 in Amarna (BORCHARDT/RICKE 1980, plan 3) with mudbrick pavements in most of the larger rooms as well as in the entrance room and House E12.10 in Amara West (SPENCER/STEVENS/BINDER 2014, 37) with brick floors in two of the larger rooms.

²⁵¹ Due to the state of preservation it is not known if other entrances existed on the other sides of the building.

²⁵² Cf. Chapter 14.24.3.

²⁵³ AZIM 1975, 107. The closure of the entrance in Room 5 and the changes in structure of Room 7 could not be verified in the later examinations of the building.

²⁵⁴ Cf. Chapter 14.24.4.

To the south of Room 3 was the small Room 4,²⁵⁴ with 5.14m² (3.78 × 1.35m), which was separated into two parts by a north-south oriented dividing wall (Pl. 46.1). The room was accessed from Room 3 in the north and a further 0.92m wide doorway in the partitioning wall led to the western part of the room (Pl. 46.2). This wall was made with bricks of the same format as the northern wall (i.e. the southern wall of Room 3, see above), though they were not connected. Nevertheless, they must have been erected at the same time. Room 4 seems to have been a small storage room, located just to the south of and accessible from Room 3.

Room 5,²⁵⁵ a longitudinal entrance corridor with a length of 4.81m and a width of 1.37m neighbored Room 4 in the south (Pl. 46.1). It provided access to the central hall, Room 9, and was more or less a central entranceway into the building. On the west side of the room, four courses of the massive outer wall of SAF2 continued across the entire width of the room. Separated by a horizontal construction joint, the northern and southern walls of the room were built over these four courses, indicating two phases of construction that must have occurred shortly after each other and belonged to the same planning phase (Pl. 45.1). A stone threshold does not exist anymore, but the western corners of the walls to the north and the south of the entrance show recesses where the threshold was originally located. The eastern side of Room 5 opened up to Room 9 in its entire width.

Neighboring Room 5 to the south is Room 6²⁵⁶ (Pl. 47.1), with a size of 6.54m² (3.76 × 1.75m). This room could be entered through a 1.04m wide doorway in the southern wall. There is no longer a threshold in place, but on the southern side of the western doorjamb a recess, where a threshold could have been situated, is visible. Two courses of bricks continued throughout the door opening. This southern wall is added onto both the eastern and the western walls, but consists of the same brick format and

building technique and therefore most probably belonged to the same building phase. A row of bricks on floor level, 0.65m to the east of the western wall, could be the remains of a storage bin, a type of installation known also from SAV1 North and Amara West (Pl. 47.2).²⁵⁷

The third entrance room on the western side of SAF2 was Room 7²⁵⁸ (Pl. 47.1), with 11.09m² (3.75 × 2.97m). Just as in Room 3, a 1.64m long stone threshold was situated on the western side of the 1.35m wide doorway, featuring traces for stone doorjamb and jutting out into Rue NS1 for 0.07m (Pl. 48.1). It is built directly into the southern part of the wall, while the northern wall is set back for 0.21m, creating a niche for the doorjamb. A second stone threshold existed on the eastern side of the room, of which only the southern part still remains (Pl. 15.1). From here, the central hall, Room 9, could be accessed. This threshold also features holes for the doorposts and is situated on the eastern side of the wall, jutting out into Room 9. Room 6, situated to the north, could be accessed from Room 7 as well.

The southernmost room of this western row of small chambers was the almost square Room 8²⁵⁹ (Pl. 48.2) with a size of 11.79m² (3.75 × 3.18m). It could be accessed from Room 9 in the east. The 1.57m long threshold is still *in situ* in the southern part of the eastern wall, situated on a layer of bricks on the eastern side of the door opening and jutting out into Room 9 for 0.13m (Pl. 15.2). Except for the southernmost part with a preserved doorjamb, the eastern wall is almost completely deteriorated. Of the northern wall, the eastern part can also only be seen as an imprint in the ground.

The central hall, Room 9,²⁶⁰ can most certainly be addressed as the main room of the house (Pls. 49.1 and 59).²⁶¹ One can assume that there were formerly six columns situated here,²⁶² though only the two northernmost stone column bases are still

²⁵⁵ Cf. Chapter 14.24.5.

²⁵⁶ Cf. Chapter 14.24.6.

²⁵⁷ Cf. SPENCER 2009, 52–53; BUDKA/DOYEN 2013, 173–175; SPENCER 2014b, 462–463; BUDKA forthcoming.

²⁵⁸ Cf. Chapter 14.24.7.

²⁵⁹ Cf. Chapter 14.24.8.

²⁶⁰ Cf. Chapter 14.24.9.

²⁶¹ If a similar room existed in the northern part of the building can no longer be determined. Some of the Kahun mansions, as well as the Amarna villas, comprise of several rooms with columns. See for example RICKE 1932, 53 (Kahun mansions 1 and 2); BORCHARDT/RICKE 1980, plan 3 (House Q46.2).

²⁶² AZIM 1975, 107–108; this reconstruction seems correct, given the measurements of the room and the distances of the columns to each other. Comparable colonnaded halls also exist at Amara West, where column bases are recorded for the residence of the Deputy of Kush (building E13.2), see SPENCER 1997, 163–167, but also at the Middle Kingdom fortresses in Lower Nubia, e.g. Buhen, Semna and Uronarti. See VOGEL 2010a, VOGEL 2012. Another parallel can be found in Askut in the so-called commandant's quarter. See SMITH 1995, 140, fig. 6.2; FUCHS 2009, fig. 101; VOGEL 2012, 155–156. Cf. BUDKA forthcoming.

in situ. Their diameter on the upper side measures 0.87–0.89m. The western base is situated 5.21m to the east of the western wall and 3.97m to the south of the northern wall. The eastern base lies a further 5.14m to the east of the western column base.

Of the walls, only the western and parts of the northern and southern walls of Room 9 are preserved. The location of the eastern wall can however be reconstructed by assuming that the distance between the western wall to the western column base equals the distance between the eastern base and the eastern wall. This assumption is supported by a small piece (2.71m²) of the brick pavement situated on the eastern side of the room (Pl. 49.2), which corresponded with a now missing wall that would have been exactly at the location proposed by the measurements. Therefore, the original dimensions of the room can be given with a north-south extension of 16.17m and an east-west extension of 15.67m, resulting in a total size of 253.40m².

The central hall featured several doorways into the adjoining rooms and at some of them the stone thresholds are still *in situ*. On the western side the entrance rooms 3, 5 and 7, as well as Room 8, could be entered (see above). In the north, a 1.23m wide entrance into Room 2 existed in the northwestern corner. A stone threshold was situated on the northern side of this entrance, jutting out into Room 2 for 9cm. It was overbuilt by the walls on either side of the opening and had holes (probably) for stone doorjambes. On the southern side of Room 9 two doorways can be determined. The western one, in the southwest corner, is equipped with a stone threshold and also with processing traces for doorjambes. As with the aforementioned threshold, it is situated on the northern side of the 1.32m wide entrance. A second opening existed about 4.0m further to the east. However, this opening can only be reconstructed through the pavement of Room 11, since a few of the bricks of this pavement continued into the space where a doorway must have existed. If and how many doors were formerly situated on the eastern side of the room must unfortunately remain open, but one may assume that there were several, similar to the western side, since the central hall obviously served as the main distribution room.

As for the brick pavement in Room 9 (Pl. 59), about one-third (c. 90m²) of the entire pavement has been preserved, mostly in the northern and western

part of the room. From these remains, the original laying pattern can be reconstructed (Pl. 60). As already mentioned above, two different brick formats were used: larger ones at 39 × 17cm and smaller ones at 33 × 15cm. From the west, there were ten rows of bricks of the larger format laid in an east-west direction, followed by four rows of smaller bricks adjacent to the western stone column base. Further to the east was one row of bricks of the larger format laid in a north-south direction, then seven rows of the larger bricks again oriented east to west, followed by four rows of smaller bricks around the eastern column base. In the small piece remaining on the eastern side of the room, the bricks are also laid in an east-west direction, with exception of the easternmost row, which was oriented north to south and was presumably the row directly adjoining the eastern wall. The bricks were laid in a dense pink-colored mortar bed and underneath was a thick layer of mud over the pebbly ground.

To the north of the central hall, Room 2²⁶³ could be entered through a 1.23m wide entrance in the southwestern corner of the room. Unfortunately, only the western and part of the southern wall of the room have survived. A secondary wall is situated directly to the east of the original western wall. In the north, underneath a secondary wall and rubble, the sparse remains of the northern wall and a stone threshold giving access to a further room in the north can be identified. Therefore, the north-south dimension of Room 2 can be determined as 5.40m, while the east-west length can perhaps be reconstructed by assuming that the eastern wall was aligned with the eastern wall of Room 11 to the south of the central hall. With this, Room 2 would amount to a size of 48.22m². As in Room 9, parts of the original brick pavement are preserved, especially in the southern part of the room and at the northern wall. The brick format was of the larger type with 39 × 17cm; the bricks were laid in a north-south direction, except for one row along the northern wall that was oriented east to west. Furthermore, four schist slabs are situated in the middle of the room, though they seem to stem from a later period.

Apart from the already mentioned doorways in the north and the south of Room 2, access was also given to Room 1²⁶⁴ (Pl. 50.1) on the western side, via an entrance in the southwest corner of Room 2. The doorway was 1.28m wide with the southern

²⁶³ Cf. Chapter 14.24.2.

²⁶⁴ Cf. Chapter 14.24.1.

wall forming the southern door facing. The northern and southern walls of the 21.11m² large room are added onto the massive western wall. Remains of the brick pavement still covers almost the entire floor, consisting of 39 × 19cm large bricks laid in an east-west direction.

To the south of Room 9 more rooms can be identified, even if the remaining features are sparse, consisting mainly of sporadic parts of the walls, which are at the most one to two courses high (Pl. 51.1). Sometimes they are, however, only mounds or imprints that can barely be determined. Directly to the south of the central hall, Room 11²⁶⁵ could be accessed by two doorways in the north. Of this room, a part of the northern wall and the northern part of the western wall are preserved up to a height of about 1m. In the south only sparse remains (one to two courses) of the wall can be traced for a length of about 1.20m. In the east a stone threshold that presumably belonged to the original building is situated underneath a wall from a later time period (Pl. 50.2). This threshold points to the location of the eastern wall of Room 11, as well as to the access point to a room lying to the east. An important clue that the threshold actually belonged to the Pharaonic building is that the remains of the brick pavement reached exactly to the threshold. With this, the original size of Room 11 can be reconstructed at 57.22m². Remains of the brick pavement can be found in the northern part of the room and the pink mortar is also preserved in the southern part. As in Room 9, two brick formats were used for this floor, the larger one being 39 × 17cm, the smaller one 33 × 15cm. The bricks were laid in an east-west direction. Two rows of the smaller bricks are situated 3.60m from the eastern wall as well as in the vicinity of the eastern threshold. Also, a single north-south oriented brick could be observed (3.00m to the south of the northern wall and 3.14m to the east of the western wall), perhaps indicating the location of a column base.

To the west of Room 11 was Room 10²⁶⁶, of which the northern and the north part of the eastern wall are preserved up to a height of 1.20m. The

other walls are mostly deteriorated with only a few bricks remaining from the southern and western walls. They give, however, an indication of the former layout of the room with a total size of 30.22m². The entrance into the room is reconstructed on the eastern side, from where the room would have been accessed from Room 11. The brick pavement of Room 10 is preserved in large parts. Here, the bricks with the smaller format (33 × 15cm) were used and were oriented in an east-west direction.

The southernmost rooms, Rooms 12 and 13, can only be reconstructed via the sparse remains of the walls, namely a few bricks at floor level or mere imprints in the ground. In the west, these remains represent the continuation of the western outer wall of the building, while the remains in the south are aligned with the southern walls of the Houses H1 and H5 further to the west. Together with the remains of the interior walls, the rooms can be reconstructed with sizes of 14.25m² (Room 12) and 18.25m² (Room 13). Due to the bad preservation of the walls in this area, it is not possible to determine from which side these rooms were originally entered. To the east of Rooms 11 and 13, two more rooms are reconstructed, even though no traces of walls are available anymore. For the layout of these rooms, the existing walls to the west were continued, while the eastern boundary was aligned with the presumed eastern wall of Room 9.

10.1. SUMMARY AND RECONSTRUCTION OF SAF2 (Fig. 18)

The building SAF2, of which only the western part is preserved, was the largest and certainly the most representative building of the New Kingdom town of Sai Island known to us and is regularly assumed to be the governor's palace.²⁶⁷ Its outstanding feature is certainly the colonnaded central hall with (formerly) six columns, from which the other main rooms could be accessed.²⁶⁸ All of the main rooms had brick pavements, while the secondary rooms had mud floors. Due to the size of the building and also the thickness of the walls, one must assume that the building had at least one upper story, even

²⁶⁵ Cf. Chapter 14.24.11.

²⁶⁶ Cf. Chapter 14.24.10.

²⁶⁷ Cf. BUDKA forthcoming. With the excavation of the so-called Building A in SAV1 East, situated directly to the north of Temple A, a comparable building has emerged in the town. See BUDKA 2014b, 61–63; BUDKA 2015a, 43–45; BUDKA 2016.

²⁶⁸ Cf. BUDKA forthcoming. Columned halls are also often the center of the representative villas of Amarna, see ARNOLD 1989; BIETAK 1996; VON PILGRIM 1996a, 211; KOLTSIDA 2007, 57–61. Similar houses are also attested at Sesebi. See MORRIS 2005, 338. See also the so-called governor's palaces in the Middle Kingdom Nubian fortresses. Cf. VOGEL 2004, 129, 137.

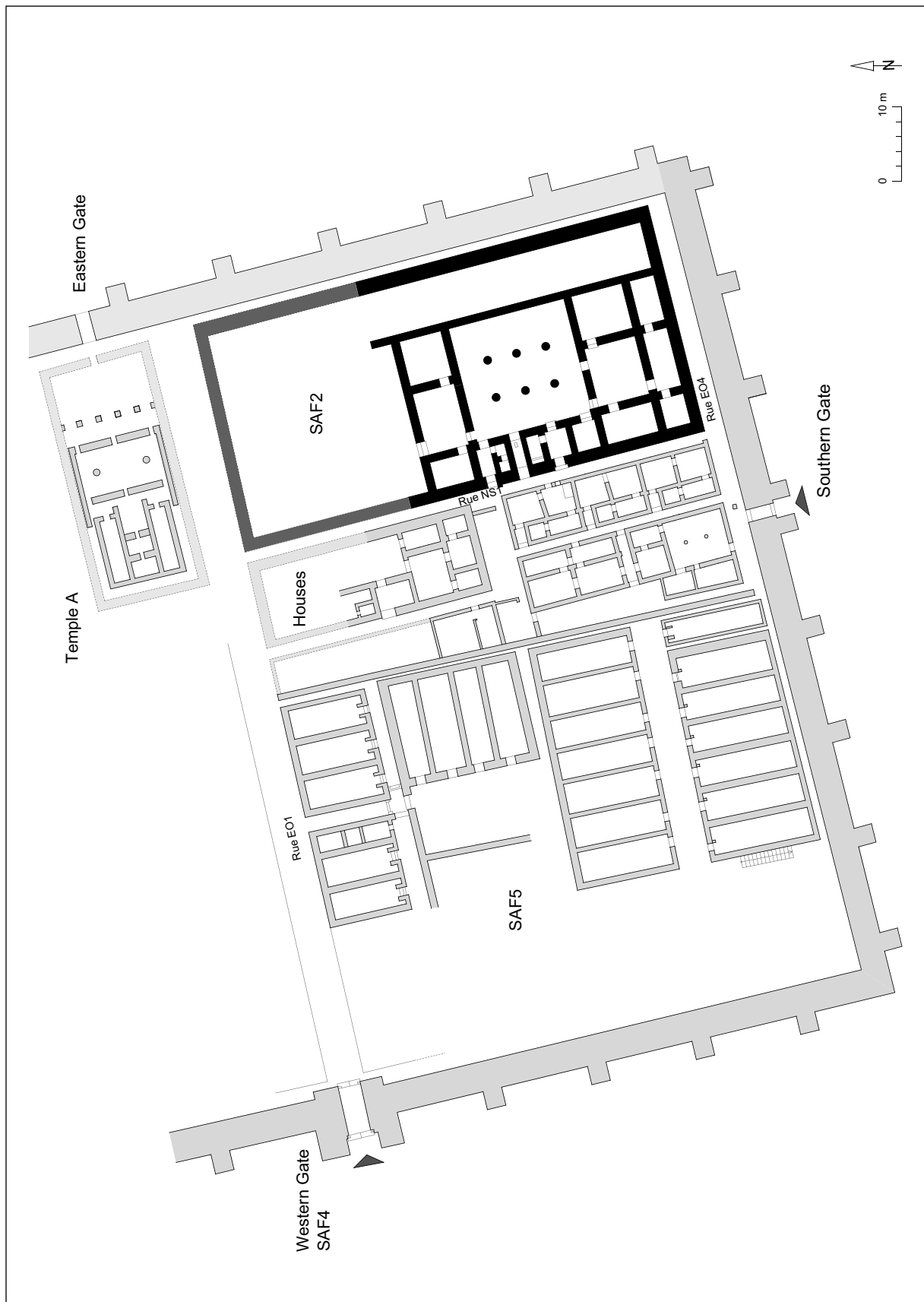


Fig. 18. Reconstruction plan of SAF2

though no evidence for a staircase could be found.²⁶⁹ Stairs could, however, have been situated in one of the missing parts of the building, e.g. in one of the chambers assumed to be to the east of the central hall, or in the northern part of the building.²⁷⁰ Comparisons with the Amarna villas show that the stairs were generally located next to the central hall, with access from it.²⁷¹

The preserved western part of the building consisted of smaller chambers – specifically three entrance rooms with adjacent storage rooms – while the main rooms were situated to the north and the south of the central hall. Any other specialized rooms, such as a bedroom with a niche or a bathroom, were not detected. As already noted in Chapter 9.4, the majority of the rooms were most likely used in multifunctional ways, although in the case of SAF2, as the presumed governor's residence, administrative and ceremonial uses can probably be added to the everyday functions of the smaller houses, since a division between official and domestic functions probably did not exist in Pharaonic culture.²⁷²

Though the layout of the missing northern part of the building must remain unknown, it is assumed that the building reached to the main street Rue EO1. It is possible that the northern part contained a second central room with columns or even an open courtyard.²⁷³ In any case, the building SAF2 was situated in a prominent position directly next to Temple A and in the southeastern corner of the town, which is another indication of the importance

of the building SAF2.²⁷⁴ The eastern part of SAF2 is presumed to have been similar to the western side, perhaps also with a row of smaller rooms.

The 3-D reconstruction of SAF2 is once again difficult and can only be based on hypothetical considerations (Pl. 61). As already attested for at the reconstruction of the houses H1 to H5, no known window openings exist, so the openings applied here are purely hypothetical. Since in Egyptian architecture the residential buildings are in general thought to be oriented towards the inside, probably very few windows existed. Though some have nevertheless been added to the reconstruction, it must be noted that their position is entirely arbitrary.

As already proposed for House H4, the second story added in the 3-D reconstruction once again only covers about two-thirds of the ground floor, with the remaining area being a terrace, accessible from the upper floor. The central room and the surrounding rooms are all equipped with a second floor, which creates the problem of how the central room received daylight. A possible solution could be that one of the surrounding rooms – perhaps in the southern or eastern regions of the house – was roofless and therefore served as a light well.²⁷⁵ For the room above the central room, clerestory windows are suggested. For the total elevation of the building, this would amount to a height of about 5.70m, if one considers 2.50m for the ground floor, 2.20m for the upper story and 1.0m for the upper window zone.²⁷⁶

²⁶⁹ Here, as already discussed for the domestic quarter, the thickness of the walls is in itself not necessarily an indicator for an upper floor, but rather the size and importance of the building.

²⁷⁰ Cf. BUDKA forthcoming. She assumes that the staircase was situated to the east of the central hall. Comparisons are given at other sites such as Askut and Buhen. See SMITH 1995, 140, fig. 6.2; VOGEL 2012, 154, figs. 2–3.

²⁷¹ Cf. SPENCE 2004, 131.

²⁷² Cf. BUDKA forthcoming.

²⁷³ Some of the large Kahun houses comprised a central reception room with an open court on the northern side. Cf. RICKE 1932, 53; BIETAK 1996, 32–33, figs. 12 and 13; KEMP 2006, 215. Houses with two or more columned rooms are also common in Pharaonic architecture, e.g. House Q46.2 in Amarna, see BORCHARDT/RICKE 1980, plan 3. The commander's building in the Nubian fortress of Buhen, albeit smaller with c. 1,000m², generally offers many simi-

larities in its layout with SAF2 and comprises three colonnaded halls. See VOGEL 2004, 128–129; VOGEL 2012, fig. 2.

²⁷⁴ In the Nubian Middle Kingdom fortresses the headquarters and/or commander's residence are commonly placed in a corner of the fortress with direct access to the ramparts. Cf. VOGEL 2010a, 423; VOGEL 2012, 152–158; BUDKA forthcoming.

²⁷⁵ B. KEMP proposes this for House P46.33 in Amarna. See KEMP 1995, 156–157, fig. 4.9. Other reconstructions of Amarna houses suggest, on the other hand, that the central room must have covered the height of two stories (c. 5.60m) with an addition of clerestory windows above the roof height. Cf. TIETZE 1985, 81, fig. 18.

²⁷⁶ Cf. KEMP 1995, 152–154, who proposes similar heights or even less for the respective stories. Cf. TIETZE 1985, 69–70, for the extra height of about 1.0m for accommodating clerestory windows.

11. SAF3

To the east of SAF2, is the area labelled SAF3.²⁷⁷ The terrain of this area is sloped towards the east and then falls off sharply towards the Nile. Azim presumed that another building similar to SAF2 was situated here.²⁷⁸ According to his town map,²⁷⁹ several walls of the Pharaonic period existed in this sector. However, these could not be verified during the post-examination of the area. Rather, the walls detected here all stem from later building periods, which is shown through their building technique and brick format, as well as the orientation of the walls that deviates slightly from the one of the original city layout. The only structure that can safely be

placed into the framework of the Pharaonic town is the 1.86m thick wall, of which the remains are situated about 30m to the east of Rue NS1 (Pl. 51). This wall, as already described above, was probably the eastern outer wall of SAF2, and not, as Azim believed, the western boundary of the building SAF3.²⁸⁰ Once again it can be stated that the current reconstruction places the building SAF2 directly into the southeastern corner of the town, with the eastern fortification wall following at a short distance to the east. All in all, one can conclude that the presumed building SAF3 does not exist in the layout of the 18th Dynasty town of Sai Island.

²⁷⁷ Cf. AZIM 1975, 109–111.

²⁷⁸ AZIM 1975, 98, pl. IV, 109.

²⁷⁹ AZIM 1975, 98, pl. IV.

²⁸⁰ Cf. AZIM 1975, 98, pl. IV. See also Chapter 10.

12. OVERALL RECONSTRUCTION OF SAV1

(Pl. 62)

By adding the third dimension for the reconstruction of the site, new problems certainly arise. In addition to the question of the actual elevation of the respective buildings, the placement of eventual windows and a second story require special consideration. With the 3-D model for the southern part of the fortified settlement of Sai, an attempt was made to present an idea of what this area of the town could have looked like in the New Kingdom. This should by no means be understood as an absolute, definitive solution, but merely a suggestion, for which many elements must remain hypothetical. What can however be illustrated through the reconstruction is how densely this area was built up, leaving hardly any space for open spaces between the buildings. The buildings themselves are, in their strict orthogonality, clear examples of Pharaonic architecture resulting from preliminary planning of the town's layout, with little margin for individuality. In this regard, it seems reasonable to assume that the elevations of the buildings were also more or less similar, only differing when a second story was added, as was the case at House H4 and SAF2. The assumed heights for one-storied houses are therefore about 2.50m, for two-storied buildings c. 4.70m. Also the magazines in the western part of SAV1 can be reconstructed as uniform building blocks with the same heights, being about 4m high.²⁸¹ All in all, these similar elevations add to the impression of uniformity, which seems to be appropriate for such a planned town quarter.

The reconstructed layout of SAV1 (Plan 2) clearly shows the two-part design with about one half of the area, the western side, designated as storage area with several rows of magazines and the other half, the eastern side, as residential area with the

smaller houses H1–H5 and the so-called governor's palace SAF2. The two quarters are distinctly separated by a dividing wall, with no direct access between them.²⁸² While the western part is mostly filled with longitudinal storage rooms, the eastern half is dominated by the c. 2,000m² large mansion SAF2. A close vicinity between such a large house, probably belonging to the most important inhabitant of Sai Island, and rather simple dwellings is not unusual and can also be observed at other Pharaonic towns. In the eastern part of Kahun, for example, large mansions, comparable in size to SAF2, are situated directly next to worker's houses.²⁸³ The same is also known from the workmen's village in Deir el-Medina, where the house of the Chief of Works is situated among the poorer houses,²⁸⁴ and from Amarna, where the residential area consists of houses of varying sizes.²⁸⁵

As for the houses themselves, the surface areas of the dwellings fit well with the houses at other sites throughout Egypt (Figs. 19, 20). As already mentioned, the size of SAF2 is comparable to the larger Kahun mansions, while the smallest houses at SAV1, Houses H1–H3 (about 55–58m²) are similar to the small houses in the western quarter in Kahun, as well as the houses in the workmen's villages in Amarna and Deir el-Medina. The houses H4 and H5 are larger, at 370m² and 300m² respectively, which by comparison fall into the range of rather large dwellings.²⁸⁶ It must be noted, however, that House H5 alternatively could have consisted of two separate houses, which would then have been considerably smaller.²⁸⁷ Also, the northern part of House H4 is reconstructed, therefore the actual house surface area is not known. However, the house was certainly larger than the other dwellings

²⁸¹ This height results from the remaining height of the walls on the southern side of SAF5, with the addition of a vaulted ceiling.

²⁸² Cf. Kahun, where the western quarter with the worker's dwellings is also completely closed off from the eastern part of the city by a dividing wall. For a plan of Kahun see for example UPHILL 1988, 28, fig. 12; KEMP 2006, 212, fig. 76.

²⁸³ Cf. UPHILL 1988, 27–33; KEMP 2006, 217.

²⁸⁴ Cf. UPHILL 1988, 24.

²⁸⁵ Cf. KEMP 2006, 311–313; fig. 109.

²⁸⁶ Cf. the larger houses in Elephantine were between 100 and 230m², while the larger houses in Amarna varied between 200 and 450m². For Elephantine see VON PILGRIM 1996a, 196–198; for a list of house areas of selected Amarna houses see KEMP 2006, 312, fig. 109; CORREAS-AMADOR 2013, 137, table 4.12.

²⁸⁷ See Chapter 9.3.

Domestic Buildings	Surface Area	Dimensions (meters)	Dimensions (Egyptian cubits)
H1	57.96m ²	9.58 × 7.30m	18.28 × 13.93
H2	55.19m ²	9.12 × 7.43m	17.40 × 14.18
H3	56.42m ²	9.97 × 7.48m	19.03 × 14.27
H4	373.50m ² (reconstructed)	31.44 × 11.88m	60 × 22.86
H5	303.16m ²	28.74 × 11.65m	54.85 × 22.23
SAF2	2,020m ² (reconstructed)	64.24 × 31.46m	122.60 × 60.04
Storage Rooms			
M1	36.00m ²	13.00 × 2.75m	24.81 × 5.25
M2	48.88m ²	12.32 × 3.97m	23.51 × 7.58
M3	46.09m ²	12.78 × 3.63m	24.39 × 6.93
M4	47.50m ²	12.98 × 3.65m	24.77 × 6.97
M5	46.73m ²	13.07 × 3.61m	24.94 × 6.89
M6	50.35m ²	13.22 × 3.83m	25.23 × 7.31
M7	52.39m ²	13.62 × 3.83m	26.00 × 7.31
M8	44.54m ² (reconstructed)	12.42 × 3.50m	23.70 × 6.68
M9	53.16m ² (reconstructed)	12.42 × 4.28m	23.70 × 8.17
M10	47.74m ² (reconstructed)	12.42 × 3.84m	23.70 × 7.33
M11	45.21m ² (reconstructed)	12.42 × 3.64m	23.70 × 6.95
M12a	40.79m ² (reconstructed)	12.77 × 3.32m	24.37 × 6.34
M12b	52.84m ² (reconstructed)	12.74 × 4.14m	24.31 × 7.90
M12c	39.63m ² (reconstructed)	12.72 × 3.13m	24.27 × 5.97
M12d	48.02m ² (reconstructed)	12.68 × 3.76m	24.20 × 7.18
M13	39.34m ²	9.99 × 3.93m	19.06 × 7.50
M14	40.13m ²	10.10 × 3.96m	19.27 × 7.56
M15	39.33m ²	10.02 × 3.92m	19.12 × 7.48
M16	20.77m ²	9.48 × 2.28m	18.09 × 4.35
M17	36.69m ²	9.75 × 3.64m	18.61 × 6.95
M18	35.77m ² (reconstructed)	9.75 × 3.59m	18.61 × 6.85

Fig. 19. Measurements of the buildings of SAV1

Site	House	Surface Area
Elephantine	H10	93m ²
(Middle Kingdom)	H25	77m ²
	H70	105m ²
	H86	170m ²
Kahun	Mansion 1	2,560m ²
(Middle Kingdom)	Mansion 2	2,520m ²
	Western quarter (average house)	60m ²
Tell el-Dab'a	House I	76m ²
(Middle Kingdom)	House II	91m ²
	House IIIa	192m ²
Askut	Commander's residence	275m ²
(Middle Kingdom)		
Buhen	Commander's residence	1,000m ²
(Middle Kingdom)		
Uronarti	Administrative building	550m ²
(Middle Kingdom)		
Amarna	N49.18 (House of Ranefer)	320m ²
(New Kingdom)	P47.6	225m ²
	P47.19 (House of Ramose)	477m ²
	Q47.23	452m ²
	Workmen's village (average house)	52m ²
Amara West	Residence for the Deputy of Kush (E13.2)	710.50m ²
(New Kingdom)		
Deir el-Medina	Workmen's village (average house)	80m ²
(New Kingdom)		

Fig. 20. Surface area of selected houses at other sites

in this area and the thickness of the walls indicates that the house was solidly built, which perhaps could be seen as a means for promoting its importance.²⁸⁸

A look at the different ground plans of the buildings reveals that even if this area was entirely pre-planned, the layout of the dwellings is not alike, except for the identical row houses H1–H3. They also cannot be placed into general Egyptian house schemes, such as the typical tripartite plan.²⁸⁹ As already elaborated above,²⁹⁰ the so-called governor's residence SAF2, with its large columned hall, is comparable to buildings at other sites, especially the large Kahun mansions²⁹¹ and the commander's

building at Buhen.²⁹² A major difference to other common building layouts, however, is that the main entrances of the houses seem to always have been on the long side of the dwelling as opposed to the short side, as seen elsewhere in the tripartite houses, the Amarna villas, the Kahun mansions and the houses in Elephantine.²⁹³

Summarizing, the overall reconstruction of SAV1 most certainly emphasizes the very structured and organized character of the southern part of the Pharaonic town of Sai Island. This impression is even more enhanced by the 3-D reconstruction, revealing the strict orthogonality of the houses also in their elevation.

²⁸⁸ The thickness of the walls of a house can maybe be seen as a kind of status symbol. Cf. VON PILGRIM 1996a, 208–209, for similar observations at Elephantine and Amarna.

²⁸⁹ Cf. TIETZE 1985; BIETAK 1996.

²⁹⁰ See Chapter 10.1.

²⁹¹ Cf. BIETAK 1996, 32–33, figs. 12 and 13; KEMP 2006, 215

²⁹² Cf. VOGEL 2004, 128–129; VOGEL 2012, fig. 2.

²⁹³ Cf. TIETZE 1985; BIETAK 1996, 24, fig. 2, 32–33, figs. 12 and 13; VON PILGRIM 1996a, 197; KEMP 2006, 215, fig. 109.

13. CONCLUSIONS

The reassessment of SAV1, the southern part of the New Kingdom town of Sai Island, has produced several new results, which are relevant for a better understanding of the town layout. From the documentary side of the project, the goal to record the entire town area as completely and accurately as possible was certainly achieved through the 3-D laser scan, which served as an important basis for the newly generated plan material. Thus, as was already repeatedly pointed out, a clarification of the old town map by Azim could be realized, both for the actual state of the ruins and also for the reconstruction of SAV1, providing a clear distinction between these two conditions (Plans 1 and 2). It must be stressed that accurate documentation, as well as the reexamination, was in many areas essential for making new reconstructions of the town possible, of which the most important observations shall be recapitulated here.

1. For the overall layout of the New Kingdom town, the hypothesis that the newly established eastern fortification wall was situated directly to the east of Temple A and SAF2 could be supported by the fact that the structures in the area SAF3 do not belong to the original Pharaonic architecture. Azim had originally interpreted them as part of a further building within the town and in his plan these walls are exactly aligned with the walls of SAF2.²⁹⁴ However, the 3-D laser scan showed that they actually deviate slightly from this general direction. Therefore, the eastern enclosure wall can safely be situated further to the west than originally assumed. Unfortunately though, no trace of this fortification wall could be detected on the laser scan. The 3-D reconstruction of the enclosure wall itself is mainly based on comparative studies, designating the outer rectangular protrusions as buttresses instead of small towers and omitting corner towers, as could also be observed at the comparable fortified town of Sesebi.
2. The storage area SAF5 in the western part of SAV1 was somewhat clarified through the reexaminations as well. In particular, the row of storage rooms M8–M11 shall be mentioned, where the reconstruction of a row of seven magazines to the north of Rue EO3 could be established. Furthermore, the situation in the area M12 was also clarified, by connecting the sparse Pharaonic remains and thus identifying four former east-west oriented storage rooms in this area. For this, the laser scan was a helpful support, since the exact locations of the former walls could be pinpointed. For the western part of SAF5, the documentation and reassessment yielded no new results. However, a thorough examination of different possibilities for the reconstruction of this area resulted in the hypothesis of either a further row of magazines along the western enclosure wall or a possible second temple in this area. What still remains unclear is the reason for the slightly different alignment of the storage rooms and the neighboring domestic area, and in this regard the unusual trapezoid form of the southernmost storerooms, M1–M7. Without further examinations, one can only speculate that this is in some way related to different construction phases for the magazines and the domestic quarter.
3. The ground plans of the houses H1–H3 and H5 seemed already very clear on Azim's plan, and their layout could be confirmed through the 3-D laser scan and the reassessment. Also, the southern part of House H4 could be ascertained, while the northern part is now assumed to have reached to the street Rue EO1 as opposed to Azim's proposal that its northern wall lay further the south. By adding the third dimension to the reconstruction of the houses, a typical Pharaonic domestic quarter could be exemplified with the houses H1–H5.
4. For the reconstruction of the so-called governor's building SAF2, the 3-D laser scan once again

²⁹⁴ AZIM 1975, 98, pl. IV.

proved to be a helpful tool. While the layout of the missing northern part must remain unknown, the position of the eastern outer wall and also the eastern wall of the central hall could exactly be pinpointed through the 3-D scan. This result corresponds with the other clues given for the reconstruction, such as a symmetrical layout of the building and the remains of the brick pavement on the eastern side of the central hall. With this, a clear reconstruction of SAF2, at least for the southern part, could be achieved.

To conclude, this study resulted in several new insights that shall help broaden the knowledge of the New Kingdom town of Sai Island and of fortified towns in Nubia in general. While many factors, especially with regard to the remaining parts of the settlement, still remain unknown, at least some major points concerning the southern part of the settlement could be clarified. Hopefully, the new assessment of SAV1 provides an important part in recreating the living conditions of this significant town of Upper Nubia.

14. ROOM CATALOGUE

14.1. SAF5/M1

Plates	1, 24.1
Function	Storage room
Measurements	Length: 13.00m (W)
	Width: 2.75m (N), 2.96m (S)
Surface area	36.00m ²
Adjoining rooms/areas	N: Rue EO3 E: Corridor (width: 0.60m) S: Corridor (width: 1.07m), followed by the southern enclosure wall W: Corridor (width: 0.55m), followed by the dividing wall to the domestic quarter
Entrance	In the north (Rue EO3), the stone threshold is preserved
Floor	Remains of a mud pavement with brick sherds and pebbles are in the center of the room
Other remarks	Seven bricks of a silo are visible at floor level, on the western side of the room (two courses of bricks are <i>in situ</i>) To the north of M1 (in Rue EO3) are remains of two further silos. Brick format: 34 × 29cm
	M1 is bordered by narrow corridors to the east (0.60 m), south (1.07 m) and west (0.55–0.57 m); the latter corridor is closed off by what is probably a secondary wall on the southern end (width of the wall: 0.32m, remaining height: 0.61m)
Northern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.75m
	Width: 0.42m
	Remaining height: 0.53m (in the northwestern corner)
Brick format	41 × 32 × 8cm Irregular joints
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Remains of mud plaster
Openings (door/window)	Door to Rue EO3, width: 1.21m
Threshold	Measurements: 121 × 63 × 25cm A hole for the door pivot with a diameter of 16cm is on the western side The threshold is situated on two courses of bricks
Other remarks	There are two presumably half-height walls to the east and the west of the entrance, connected to the northern wall Western wall: 0.80 × 0.45m, the remaining height 0.78m Eastern wall: 0.79 × 0.20m, the remaining height 0.15m
Eastern wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 12.90m
	Width: 0.42m
	Remaining height: 1.17m
Brick format	42 × 25 × 9cm Joints: 2.5cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Mud plaster covers almost the entire wall
Openings (door/window)	–
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.96m
	Width: 0.51m
	Remaining height: 0.98m
Brick format	44 × 26 × 8cm
Layering technique	Courses of stretchers alternate with courses of headers

Plaster	Mud plaster on parts of the wall
Openings (door/window)	–
Western wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 13.02m
	Width: 0.42m
	Remaining height: 1.32m
Brick format	41 × 26 × 8cm Joints: 3–3.5cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Mud plaster, about 3cm thick
Openings (door/window)	–

14.2. SAF5/M2

Plates	1, 24.2
Function	Storage room
Measurements	Length: 12.32m
	Width: 3.98m
Surface area	48.88m ²
Adjoining rooms/areas	N: Rue EO3 E: M1, with a narrow corridor between M1 and M2 S: Corridor, followed by the enclosure wall W: M3
Entrance	In the north (Rue EO3), the stone threshold is preserved
Installations	Several remains of secondary walls are in the room In the southwestern corner is a rounded wall with the width of one brick (17cm) built onto the southern and the western wall. The remaining height is 0.55m
Building phases	The room was probably built in one phase; the construction joints between the western and the southern and northern walls seem to be part of the original building procedure
Other remarks	At floor level are the remains of two silos
	The remains of a collapsed vault are in the southern side of the room
Northern wall	
Connected-to/added-on	Connected to the eastern wall, added onto the western wall
Measurements	Length: 3.99m
	Width: 0.81–0.90m
	Remaining height: 1.06m
Brick format	31 × 15 × 9cm Joints: 2cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Remains of mud plaster
Openings (door/window)	Door to Rue EO3, width: 1.15m
Threshold	Measurements: 115 × 60 × 13cm A hole for the door pivot (17 × 12 × 8cm) is on the western side The threshold is situated on at least three courses of bricks
Other remarks	On the eastern side of the door there is a half-height wall connected to the northern wall (measurements: 0.33 × 0.19m)
	On the northern side of the wall a mixture of plaster and pebbles is applied at an angle of about 45° to the wall – this seems to be a method for securing the wall (instead of a foundation)
Eastern wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 12.37m
	Width: 1.31m
	Remaining height: 1.00m
Brick format	31 × 16 × 8–9cm
Layering technique	Courses of stretchers alternate with courses of headers The courses with headers have holes of 9–11cm between the bricks
Plaster	Mud plaster
Openings (door/window)	–

Southern wall	
Connected-to/added-on	Connected to the eastern wall, added onto the western wall
Measurements	Length: 3.99m
	Width: 0.76m (upper part), 0.92m (lower part)
	Remaining height: 1.06m
Brick format	33 × 17 × 7cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Mud plaster covers parts of the wall
Openings (door/window)	–
Western wall	
Connected-to/added-on	The northern and the southern wall are added onto the western wall
Measurements	Length: 12.40m
	Width: 0.75m
	Remaining height: 2.50m
Brick format	32 × 18 × 6cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Mud plaster
Openings (door/window)	–

14.3. SAF5/M3

Plates	1, 24.3, 24.4
Function	Storage room
Measurements	Length: 12.78m (E)
	Width: 3.67m (N), 3.62m (S)
Surface area	46.09m ²
Adjoining rooms/areas	N: Rue EO3 E: M2 S: Corridor (filled with rubble), followed by the enclosure wall W: M4
Entrance	In the north (Rue EO3), no threshold is preserved <i>in situ</i> . However, a stone threshold is lying in the room that originally could have belonged to the entrance
Installations	“Basin” in the southeastern corner: Measurements: 110 × 80cm; three courses of brick are preserved on the eastern side, one on the western side The bricks are laid standing on edge
Building phases	The room was built in one phase. The construction joints between the western and the southern and northern walls seem to be part of the original building procedure
Other remarks	Rubble in the southwestern corner of the room stems from a collapsed vault
Northern wall	
Connected-to/added-on	Connected to the eastern wall The western wall is added onto the northern wall
Measurements	Length: 3.77m
	Width: 0.68–0.74m
	Remaining height: 0.72m
Brick format	34 × 16 × 11cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Remains of mud plaster on parts of the wall
Openings (door/window)	Door to Rue EO3, width: 1.24m Two courses of bricks remain, on which a stone threshold was presumably situated
Other remarks	On the eastern side of the door there is a half-height wall built onto the northern wall (measurements: 0.39 × 0.32m) On the northern side of the wall a mixture of plaster and pebbles is applied at an angle of about 45° to the wall – this seems to be a method for securing the wall (instead of a foundation)
Eastern wall	See western wall of M2
Southern wall	
Connected-to/added-on	Connected to the eastern wall The western wall is added onto the southern wall
Measurements	Length: 3.72m

	Width: 0.59m (E), to the west the backside of the wall has crumbled (remaining width: 0.36m)
	Remaining height: 3.24m
Brick format	33 × 16 × 9cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Mud plaster on parts of the wall
Openings (door/window)	–
Western wall	
Connected-to/added-on	Added onto the northern and the southern wall
Measurements	Length: 12.72m
	Width: 0.73m
	Remaining height: 1.16m
Brick format	36 × 18 × 9cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Mud plaster
Openings (door/window)	–

14.4. SAF5/M4

Plates	1, 25.1
Function	Storage room
Measurements	Length: 12.98m
	Width: 3.64m
Surface area	47.50m ²
Adjoining rooms/areas	N: Rue EO3 E: M3 S: Corridor (filled with rubble), followed by the enclosure wall W: M5
Entrance	In the north (Rue EO3), no threshold is preserved
Other remarks	On Azim's plan the remains of silos are depicted in this room, but these can no longer be detected
Northern wall	
Connected-to/added-on	The northern wall is added onto the western wall The eastern wall is added onto the northern wall
Measurements	Length: 3.63m
	Width: 0.73m
	Remaining height: 0.61m
Brick format	36 × 21 × 8cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Remains of mud plaster
Openings (door/window)	Door to Rue EO3, width: 0.97m One course of bricks is partly preserved, on which a threshold was probably situated
Other remarks	On the eastern side of the door a presumably half-height wall is added onto the northern wall, of which only one course of brick remains
Eastern wall	See western wall of M3
Southern wall	
Connected-to/added-on	Added onto the western wall The wall continues to the east as the southern wall of M3 The eastern wall is added onto the southern wall
Measurements	Length: 3.65m
	Width: 0.69m
	Remaining height: 3.24m
Brick format	33 × 16 × 9cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Mud plaster on parts of the wall
Openings (door/window)	–
Western wall	
Connected-to/added-on	The northern and the southern wall are added onto the western wall
Measurements	Length: 13.0m, the northwestern corner has broken off

	Width: 0.86m
	Remaining height: 2.86m
Brick format	37 × 27 × 9.5cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Mud plaster
Openings (door/window)	–

14.5. SAF5/M5

Plates	1, 25.2
Function	Storage room
Measurements	Length: the southern part of the room is covered with rubble. The eastern wall can be followed on a length of 12.24m
	Width: 3.61m (N), 3.73m (S)
Surface area	The room no longer exists in its entirety, but its dimensions must have been similar to the adjoining rooms The room is reconstructed at 46.73m ²
Adjoining rooms/areas	N: Rue EO3 E: M4 W: M6 As with the adjoining rooms, the southern side was probably bordered by a narrow corridor (now covered in rubble), followed by the enclosure wall
Entrance	In the north (Rue EO3), only the western half of the threshold still exists.
Floor	A possible floor level (mud pavement) can be identified between the rooms M5 and M6, overbuilding the remains of two silos
Other remarks	The remains of two silos are situated in M5 and M6. They were overbuilt by the western wall Brick format of the silos: 44 × 32cm
Northern wall	
Connected-to/added-on	Connected to the eastern wall The wall continues to the west as the northern wall of M6
Measurements	Length: 3.80m
	Width: 0.80–0.83m
	Remaining height: 0.56m
Brick format	39 × 25 × 8cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	Remains of mud plaster
Construction joint	Between the northern walls of M4 and M5
Openings (door/window)	Door to Rue EO3, width: 1.36m
Threshold	Measurements: 57 × 47 × 19cm (only the western part is preserved) A hole for the door pivot at 12 × 9 × 7cm is located on the western side. The threshold is situated on one course of bricks
Other remarks	On the northern side of the wall a mixture of plaster and pebbles is applied at an angle to the wall – this seems to be a method for securing the wall (instead of a foundation)
Eastern wall	See western wall of M4
Southern wall	No longer exists
Western wall	
General remarks	Only part of the wall is preserved. The southern part is covered with rubble, the northern part has deteriorated
Connected-to/added-on	Cannot be determined
Measurements	Remaining length: 3.72m
	width: 0.81m
	Remaining height: 1.08m
Brick format	33 × 17 × 11cm
Layering technique	Courses of stretchers alternate with courses of headers Holes between the bricks as vertical joints
Plaster	Mud plaster
Openings (door/window)	–

14.6. SAF5/M6

Plates	1, 26.1
Function	Storage room
Measurements	Length: the southern part of the room is covered with rubble. The western wall can be followed on a length of about 12.30m
	Width: 3.74m (S)
Surface area	The room no longer exists in its entirety, but its dimensions must have been similar to the adjoining rooms The room is reconstructed at 50.36m ²
Adjoining rooms/areas	N: Rue EO3 E: M5 W: M7 As with the adjoining rooms, the southern side was probably bordered by a narrow corridor (now covered with rubble), followed by the enclosure wall
Entrance	In the north (Rue EO3), no threshold exists, but it probably lay on one course of bricks
Northern wall	
Connected-to/added-on	The western wall is added onto the northern wall The wall continues to the east and west as the northern walls of M5 and M7
Measurements	Overall length: 3.74m Length of the western part: 1.36m Length between the doors of M5 and M6: 3.35m
	Width: 0.79m
	Remaining height: 0.50m
Brick format	39 × 25 × 8cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	–
Openings (door/window)	Door to Rue EO3, width: 1.30m One course of bricks on the eastern and western sides, on which a threshold was probably situated
Other remarks	A half-height wall to the east of the door was added onto the northern wall (measurements: 0.41 × 0.25m)
Eastern wall	See western wall of M5
Southern wall	No longer exists
Western wall	
General remarks	The southern part of the wall is covered with rubble
Connected-to/added-on	Added onto the northern wall
Measurements	Remaining length: about 12.30m
	Width: 0.89m
	Remaining height: 2.30m
Brick format	39 × 28 × 10cm Joints: 3.5–4cm
Layering technique	Courses of stretchers alternate with courses of headers Holes between the bricks as vertical joints
Plaster	Mud plaster
Openings (door/window)	–

14.7. SAF5/M7

Plates	1, 26.2
Function	Storage room
Measurements	Length: 10.74m The now existing southern wall was erected in a later period, therefore the room was originally longer. The southern part of the room is covered with rubble
	Width: 3.83m (N), 3.76m (S)
Surface area	The original room no longer exists in its entirety, but its original dimensions must be similar to the other storage rooms in this area. The room is reconstructed at 52.39m ²
Adjoining rooms/areas	N: Rue EO3 E: M6

	As with the adjoining rooms, the southern side is probably bordered by a narrow corridor, followed by the enclosure wall
Entrance	In the north (Rue EO3), no threshold exists
Building phases	The original room was built in one phase, though the room was reused at a later date (with structural changes)
Other remarks	Walls built onto the western side of M7 possibly belonged to a staircase leading to the roof of the storage rooms
	4.25m to the west of M7 are the remains of two walls, where Azim reconstructed a further row of storage rooms
Northern wall	
General remarks	Only a few courses of brick remain, which are partly covered with sand
Connected-to/added-on	Connected to the western wall The wall continues to the east as the northern wall of M6
Measurements	Overall length: 3.78m Length of the western part: about 0.60m Length between the doors of M6 and M7: 4.45m
	Width: 0.78m
	Remaining height: only a few brick courses
Brick format	39 × 25 × 8cm
Layering technique	Courses of stretchers alternate with courses of headers
Plaster	–
Openings (door/window)	Door to Rue EO3, width: 0.93m The entrance could however have been wider (in the area of the entrance only one course of bricks is preserved, therefore no definite doorjambs can be determined)
Eastern wall	See western wall of M6
Southern wall	This wall is a secondary wall of a later time period
Western wall	
Connected-to/added-on	Connected to the northern wall
Measurements	Remaining length: about 10.20m, the southern part of the wall no longer exists
	Width: 0.77m
	Remaining height: 2.30m
Brick format	36 × 18 × 10cm
Layering technique	Only stretchers
Plaster	Mud plaster
Openings (door/window)	A secondary opening (probably a door) is situated 4.67m from the northern wall Width: 0.90m

14.8. SAF5/M8

Plates	4, 27.1, 27.2, 28.1
Function	Storage room
Measurements	Reconstructed length: 12.42m
	Width: to the eastern boundary wall of SAV5 about 5.0m If a corridor existed between this wall and the storage room M8 (cf. M1), the width can be reconstructed at about 3.50m
Surface area	The original room does not exist in its entirety, but can be reconstructed at 44.54m ²
Adjoining rooms/areas	N: M12 – presumably there was a corridor between M8 and M12 E: eastern boundary wall of SAV5, followed by the residential quarter (H5) S: Rue EO3 W: M9
Entrance	In the south (Rue EO3), a stone threshold still exists
Building phases	Several walls of later time periods are situated in the area of the room
Other remarks	The remains of a silo can be detected on the ground with a brick format of 45 × 33cm
Northern wall	
General remarks	Nothing remains of the northern wall, but a small piece of an east-west oriented wall (preserved at ground level) exists further to the west, which presumably belonged to the northern boundary wall of this row of storage rooms This wall is situated 1.64m to the south of the southern wall of M12
Measurements	Reconstructed length: 3.60m

	Reconstructed width: 0.80m
Eastern wall	
General remarks	Nothing of the eastern wall is preserved. The room could have either extended to the eastern boundary wall of SAF5 or a narrow corridor existed between the boundary wall and the eastern wall of M8
Southern wall	
Connected-to/added-on	Cannot be determined Continued to the west as the southern wall of M9
Measurements	Length: to the east of the threshold: 1.16m Between the thresholds of M8 and M9: 2.86m
	Width: 0.65m
	Remaining height: one brick course
Brick format	31 × 16 × 9cm
Layering technique	Continuously 3 stretchers followed by 3 × 2 headers per course
Plaster	–
Openings (door/window)	Door to Rue EO3, width: 1.32m
Threshold	Measurements: 132 × 60 × 19cm The hole for the door pivot (16 × 12 × 7cm) is situated on the eastern side Traces from the door leaf are visible
Other remarks	A second wall is built onto the northern side of the wall
Western wall	
General remarks	Only a small part of the wall is preserved, mostly only the western edge of the wall can be identified
Connected-to/added-on	Cannot be determined
Measurements	Remaining length: the remains can be traced on a length of 5.20m
	Width: 0.75m
	Remaining height: at the most one course of bricks
Brick format	Cannot be determined
Layering technique	Cannot be determined Bricks standing on edge exist at the lowest level
Plaster	–
Openings (door/window)	–

14.9. SAF5/M9

Plates	4, 27.1, 27.2, 28.1
Function	Storage room
Measurements	Reconstructed length: 12.42m Reconstructed width: 4.28m
Surface area	The original room no longer exists in its entirety, but can be reconstructed at 53.16m ²
Adjoining rooms/areas	N: M12 – presumably there was a corridor between M8 and M12 E: M8 S: Rue EO3 W: M10
Entrance	In the south (Rue EO3), a threshold still exists
Building phases	Several walls of later time periods are situated in the room
Northern wall	
General remarks	See northern wall of M8
Measurements	Reconstructed length: 3.90m Reconstructed width: 0.80m
Eastern wall	
See western wall of M8	
Southern wall	
Connected-to/added-on	Cannot be determined
Measurements	Length between the thresholds of M8 and M9: 2.86m Length to the west of the threshold: 1.97m
	Width: 0.66m
	Remaining height: three courses of bricks (on the southern side)
Brick format	31 × 16 × 9cm
Layering technique	Continuously three stretchers followed by 3 × 2 headers per brick course
Plaster	–

Openings (door/window)	Door to Rue EO3, width: 1.20m
Threshold	Measurements: 121 × 67 × 21cm The hole for the door pivot is situated on the eastern side The threshold is situated on three courses of bricks
Other remarks	A second wall is built onto the northern side of the wall
Western wall	
General remarks	Only a small part of the wall is preserved, mostly only the eastern edge of the wall can be identified
Connected-to/added-on	Cannot be determined
Measurements	Remaining length: 1.07m
	Width: too little remains to determine the width
	Remaining height: at the most one course of bricks
Brick format	30 × 17 × 18cm
Layering technique	Cannot be determined Bricks standing on edge exist in the lowest course
Plaster	–
Openings (door/window)	–

14.10. SAF5/M10–M11

Plates	4, 28.2, 28.3
General remarks	To the west of M9 two more storage rooms can be defined as M10 and M11, but only the southern wall at ground level, sparse remains of the western wall of M10 and the threshold of M11 are preserved From the northern wall a small piece is preserved at ground level (see M8 and M9 northern wall)
Function	Storage rooms
Measurements	M10: reconstructed length: 12.42m M10: reconstructed width: 3.84m
Surface area	M10: 47.74m ² (reconstructed) M11: 45.21m ² (reconstructed)
Adjoining rooms/areas	N: M12 – presumably there was a corridor between M8 and M12 E: M9 S: Rue EO3 W: further storage rooms
Entrance	In the south (Rue EO3), threshold for M11 exists
Building phases	Several walls of a later date are situated in the area of these two rooms

14.11. SAF5/M12

Plates	3, 29.1, 29.2, 30.1, 30.2, 30.3, 31.1
General remarks	The area of M12 is strongly overbuilt by later period walls, with little remains from the Pharaonic structures For the New Kingdom period four storage rooms can be reconstructed in M12 (M12a–M12d)
Function	Four storage rooms: M12a–M12d
Measurements	Length (E–W): 12.62–12.84m
	Width (N–S): 12.62–12.68m
Surface area	Total area: 211.60m ² M12a: 40.79m ² M12b: 52.84m ² M12c: 39.63m ² M12d: 48.02m ²
Adjoining rooms/areas	N: Rue EO2 E: eastern boundary wall of SAV5, followed by H4West S: M8–M11
Entrances	In the west; three thresholds are still <i>in situ</i> on the western wall
Floor	Schist slabs in the southwestern part, with an irregular pattern and set in mud plaster

Installations	Remains of four silos: except for the eastern one, the silos respect the outer walls Brick format: 35 × 35cm The diameter of the western silos is about 7.0m, of the eastern silos about 5.0m, remaining height 0.50m
Building phases	The silos were installed later than the storage rooms
Northern wall	
Connected-to/added-on	Connected to the western wall
Measurements	Remaining length: 13.73m
	Width: 1.15m (W)–1.33m (E)
	Remaining height: 0.80m
Brick format	31 × 16 × 9cm Joints: 2.5–3cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps (up to 12cm)
Plaster	–
Openings (door/window)	–
Eastern wall	
General remarks	The eastern wall is preserved in the southeastern corner and at ground level 1.42m further to the north
Connected-to/added-on	Connected to the southern wall and the southernmost east-west dividing wall
Measurements	Remaining length: 1.40m (N), 0.80m (S)
	Width: 1.03m
	Remaining height: 1.72m (southeastern corner)
Brick format	35 × 16 × 12cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	Schist slabs are applied onto the lower part of the wall in the southeastern corner
Openings (door/window)	–
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 12.59m
	Width: 1.10m
	Remaining height: 1.72m (southeastern corner)
Brick format	33 × 16 × 10cm
Layering technique	Cannot be determined
Plaster	Mud plaster Schist slabs are applied onto the lower part of the wall in the southeastern corner
Openings (door/window)	–
Western wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 3.04m (N), 10.67m (S)
	Width: 1.06m
	Remaining height: 0.26m
Brick format	33 × 15 × 8cm
Layering technique	One course consists of 1 header–1 stretcher–1 header
Plaster	–
Openings (door/window)	Three thresholds, aligned to the western edge, are situated on the wall
Northern threshold (M12a)	Only the northeastern corner is visible, the rest is covered by a secondary wall. No measurements can be determined
Middle threshold (M12c)	Measurements: 127 × 51 × 22cm The hole for the door pivot (17 × 16cm) is situated in the south
Southern threshold (M12d)	Measurements: 124 × 46 × 21cm The hole for the door pivot (11 × 9cm) is situated in the south
Northern dividing wall	
General remarks	This wall is situated 3.10m to the south of the northern wall. Remains are visible on the western side of M12 and further to the east, situated underneath a secondary wall
Connected -to/added-on	Connected to the western wall
Measurements	Remaining length: 1.73m (E), 1.85m (W)
	Remaining width: 0.48m (the wall is overbuilt by a secondary wall, therefore the entire width cannot be determined)

	Remaining height: one course of bricks
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Middle dividing wall	
General remarks	The wall is situated 4.17m to the south of the northern dividing wall. Only a small part on the western side is preserved
Connected-to/added-on	Connected to the western wall
Measurements	Remaining length: 1.45m
	Width: 0.78m
	Remaining height: 0.29m
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	Remains of mud plaster
Openings (door/window)	–
Southern dividing wall	
General remarks	Only singular bricks of this wall are preserved on the eastern side; they can be traced to a length of 2.64m The wall is situated 3.60m to the north of the southern wall
Connected-to/added-on	Connected to the eastern wall

14.12. SAF5/M13

Plates	2, 31.2
Function	Storage room
Measurements	Length: 9.99m
	Width: 3.93m
Surface area	39.34m ²
Adjoining rooms/areas	N: Rue EO1 S: Rue EO2 W: M14
Entrance	In the south (Rue EO2), no threshold exists It does not exist in its entirety anymore, but can be reconstructed
Northern wall	
General remarks	Only a small part in the northeastern corner is preserved (two brick courses)
Connected-to/added-on	Cannot be determined
Measurements	Remaining length: 1.19m
	Width: 0.55m
	Remaining height: 0.20m
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Eastern wall	
General remarks	Not entirely preserved
Connected-to/added-on	Cannot be determined
Measurements	Remaining length: 8.19m
	Width: 0.90m (S)–0.98m (N)
	Remaining height: 0.30m
Brick format	35 × 19 × 10cm Joints: 3–4cm
Layering technique	Stretcher–header
Plaster	–
Openings (door/window)	–
Southern wall	
General remarks	Only the part to the west of the door and the small wall next to the door are preserved
Connected-to/added-on	Connected to the western wall

Measurements	Remaining length: 1.35m
	Width: 0.70m
	Remaining height: 0.93m
Brick format	31 × 15 × 10cm Joints: 3–4cm
Layering technique	Stretcher–header
Plaster	Mud plaster on parts of the wall
Openings (door/window)	Door to Rue EO2 No threshold is preserved, but one course of bricks on which a threshold was probably situated
Other remarks	The small, presumably half-height wall to the east of the door was connected to the southern wall (measurements: 0.57 × 0.39m)
Western wall	
Connected-to/added-on	Connected to the northern wall and the southern wall of M14
Measurements	Length: 10.10m
	Width: 0.97m
	Remaining height: 0.80m
Brick format	39 × 19 × 13cm Joints: 3–3.5cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps The third course of bricks consists of bricks standing on edge
Plaster	Mud plaster (about 3cm thick)
Openings (door/window)	–

14.13. SAF5/M14

Plates	2, 32.1, 32.2, 56
Function	Storage room
Measurements	Length: 10.07m (E), 10.12m (W) Width: 3.93m (S), 4.11m (N)
Surface area	40.13m ²
Adjoining rooms/areas	N: Rue EO1 E: M13 S: Rue EO2 W: M15
Entrance	In the south (Rue EO2), with a stone threshold and one step into the room
Floor	Schist slabs cover the entire floor The slabs are irregular and set in a lime mortar bed
Installations	Step into the room: depth 0.25m
Building phases	The room was built in one phase; a secondary entrance was added later-on in the northern wall
Northern wall	
Connected-to/added-on	Connected to the western and the eastern wall
Measurements	Length: 4.11m
	Width: 0.90m
	Remaining height: 0.50m
Brick format	32 × 17 × 9cm
Layering technique	One course of bricks standing on edge, then one course of headers is visible
Plaster	–
Openings (door/window)	A secondary opening is situated 1.38m from the eastern wall. Width: 1.14m
Eastern wall	
General remarks	See western wall of M13
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 3.93m (E: 1.41m, W: 1.38m)
	Width: 0.80m
	Remaining height: 1.50m
Brick format	32 × 15-17 × 11cm Joints: 2.5–3.5cm

Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	Door to Rue EO2, with threshold and step; width: 1.19m
Threshold	Measurements: 137 × 49 × 15cm The threshold is broken into two pieces A hole for the door pivot (13 × 9cm) is situated on the eastern side
Other remarks	On each side of the door are two half-height walls connected to the southern wall The lower parts of the wall are covered with schist slabs set in a lime mortar
Western wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 10.12m
	Width: 0.95m
	Remaining height: 1.36m
Brick format	31 × 17 × 9cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps In the lowest courses are schist slabs and bricks standing on edge
Plaster	–
Openings (door/window)	–

14.14. SAF5/M15

Plates	2, 33.1
Function	Storage room
Measurements	Length: 10.02m (E), 10.17m (W)
	Width: 3.92m
Surface area	39.33m ²
Adjoining rooms/areas	N : Rue EO1 E : M14 S: Rue EO2 W: Rue NS 4
Entrance	In the south (Rue EO2), half of the threshold and one step into the room are preserved
Northern wall	
Connected-to/added-on	Connected to the western and the eastern wall
Measurements	Length: 3.90m
	Width: 0.90m
	Remaining height: 0.75m
Brick format	31 × 18 × 7–8cm
Layering technique	Stretcher–header One course of bricks is standing on edge
Plaster	Mud plaster on parts of the wall
Openings (door/window)	–
Eastern wall	See western wall of M14
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 3.90m (E: 1.42m)
	Width: 0.86m
	Remaining height: 1.23m
Brick format	32 × 16 × 8cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	Door to Rue EO2 with a threshold lying on one course of bricks
Threshold	Measurements: 116 × 51 × 32cm Only the eastern part of the threshold is preserved A hole for the door pivot (16 × 10cm) is situated in the east
other remarks	To the east of the door opening a half-height wall (0.71 × 0.40m) is connected to the southern wall On the western side this wall no longer exists

Western wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 10.17m
	Width: 0.95–1.00m
	Remaining height: 1.96m
Brick format	39 × 20 × 12cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps In the lower part of the wall are schist slabs and one course of bricks standing on edge In the northern part of the wall are bricks standing on edge at a height of 0.83m
Plaster	–
Openings (door/window)	–

14.15. RUE NS4

Plates	2, 19.1
Function	Street leading from Rue EO1 to Rue EO2 Entrance to the storage area SAF5
Measurements	Length: 11.80m
	Width: 1.97m (N), 2.03m (S)
Surface area	24.78m ²
Adjoining rooms/areas	N: Rue EO1 E: M15 S: Rue EO2 W: M16
Entrance	In the north Rue NS4 is open in its entire width to Rue EO1 In the south two walls (0.56 × 0.34m and 0.56 × 0.41m) were built into the entrance so that the entrance to the street was only 1.21m wide There probably was a threshold in the southern entrance, but only two courses of bricks are preserved on which the threshold was situated
Other remarks	In Rue EO2 a threshold is aligned with the western wall (measurements: 169 × 72 × 22cm) A hole for the door pivot (21 × 17cm) was on the southern side On the northern side of the threshold part of the stone doorjamb is still <i>in situ</i> (with an inscription of Nehi) Another threshold is on the eastern side of Rue NS4 (measurements: 168 × 57cm). A doorjamb belonging to this threshold is possibly lying further to the south A third threshold is lying under a secondary wall to the south of Rue EO2, directly opposite of Rue NS04
Eastern wall	
Connected-to/added-on	–
Measurements	Length: 11.80m
	Width: 0.95m
	Remaining height: 2.10m
Brick format	33 × 15 × 10cm Joints: 2–3cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Western wall	
Connected-to/added-on	–
Measurements	Length: 11.80m
	Width: 0.75m
	Remaining height: 1.76m
Brick format	34 × 16 × 11cm (lower part)
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Construction joint	Horizontal joint: 1.18m over the ground, above the wall juts out for about 0.10m

Openings (door/window)	Secondary opening, width: 1.25m, height from the ground: 0.50m
Other remarks	1.08m from the southern edge of the wall there is a recess of about 0.16m

14.16. SAF5/M16

Plates	2, 33.2, 34.1
Function	Either a storage room divided into three parts or maybe a staircase
Measurements	Length: 9.48m
	Width: 2.20m (S), 2.39m (N)
Surface area	20.77m ²
Adjoining rooms/areas	N: Rue EO1 E: Rue NS4 S: Rue EO2 W: M17
Entrance	In the south (Rue EO2), width: 0.80m The entrance is badly preserved, therefore the exact position of a possible threshold cannot be determined There are also no indications for the flanking half-height walls observed in the other storage rooms
Building phases	The western wall was overbuilt by a secondary wall.
Other remarks	The room originally had three parts, of the east-west oriented partite walls only a few remains are barely visible at ground level, but they are definitely connected to the eastern wall of the room and therefore must belong to the original building phase
Northern wall	
Connected-to/added-on	Connected to the western wall Added onto the eastern wall
Measurements	Length: 2.39m (only the northwestern part is well preserved)
	Width: 0.95m
	Remaining height: 0.97m (northwestern corner)
Brick format	31 × 16 × 8cm
Layering technique	Stretcher–header
Plaster	–
Openings (door/window)	–
Eastern wall	
	See western wall of Rue NS4
Connected-to/added-on	Connected to the southern wall The northern wall is added on
Other remarks	This side of the wall is badly damaged, the upper part of the wall seems to be from a later period
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.20m
	Width: 0.70m
	Remaining height: 0.25m
Brick format	32 × 15 × 10cm
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	Door to Rue EO2 The former measurements cannot be determined, because especially the western part of the wall is badly damaged
Other remarks	On the southern side the wall is not aligned with the southern walls of the other rooms
Western wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 9.26m
	Width: 1.10m
	Remaining height: cannot be determined, the original wall was overbuilt by a secondary wall
Brick format	34 × 16 × 10cm
Layering technique	Stretcher–header Holes for the vertical joints
Plaster	–

Openings (door/window)	–
Other remarks	The secondary wall stems from a later period, width: 0.40m
Southern dividing wall	
General remarks	This wall is only preserved on ground level, width: 0.90m
Connected-to/added-on	Connected to the eastern wall
Northern dividing wall	
General remarks	Only the western part is preserved (c. 1.0m), the eastern part can be determined at ground level
Connected-to/added-on	The bricks at ground level are connected to the eastern wall, but not in the upper part
Measurements	Width: 0.50m
	Remaining height: 0.70m

14.17. SAF5/M17

Plates	2, 34.1, 34.2
Function	Storage room
Measurements	Length: 9.75m
	Width: 3.64m (N)
Surface area	36.69m ²
Adjoining rooms/areas	N: Rue EO1 E: M16 S: Rue EO2 W: M18
Entrance	In the south (Rue EO2), no threshold preserved Flanking half-height walls and a step into the room still exist
Northern wall	
Connected-to/added-on	Connected to the eastern wall The western wall was possibly added on
Measurements	Length: 5.03m (until its end in M18)
	Width: 0.95m
	Remaining height: only a few courses remain; the northern side is damaged
Brick format	38 × 19 × 10cm
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Other remarks	A secondary wall was erected directly to the south of the original wall, situated on a higher level (on a mixture of earth, pebbles and sherds)
Eastern wall	
General remarks	See western wall of M16 The wall is overbuilt by a secondary wall A further secondary wall is situated to the west of the original wall
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 3.97m (E: 1.13m, W: 1.52m)
	Width: 0.71m (E), 0.64m (W)
	Remaining height: 1.34m
Brick format	31 × 16 × 10cm Joints: 2–3cm
Layering technique	Stretcher–header
Plaster	–
Openings (door/window)	Door to Rue EO2; width: 1.30m Two steps into the room
Other remarks	There are two half-height walls flanking the entrance, which are connected to the southern wall (E: 0.99 × 0.55m, W: 0.74 × 0.53m)
Western wall	
Connected-to/added-on	–
Measurements	Remaining length: 8.97m
	Width: 0.90m

	Remaining height: 1.08m
Brick format	31 × 16 × 12cm Joints: 1.5–3cm
Layering technique	Stretcher–header
Plaster	Mud plaster
Openings (door/window)	–

14.18. SAF5/M18

Plates	2, 35.1
Function	Storage room
Measurements	Length: 9.75m
	Width: 3.59m (reconstructed)
Surface area	35.77m ² (reconstructed)
Adjoining rooms/areas	N: Rue EO1 E: M17 S: Rue EO2
Entrance	In the south (Rue EO2), the threshold is not preserved The flanking walls still exist
Other remarks	Only the southern part of the room is preserved (the rest is covered with rubble)
Northern wall	No longer preserved
Eastern wall	See western wall of M17
Southern wall	
Connected-to/added-on	Connected to the eastern wall
Measurements	Remaining length: 3.44m
	Width: 0.65m
	Remaining height: 0.95m
Brick format	31 × 16 × 12cm
Layering technique	Stretcher–header Bricks standing on edge on the southern side of the wall
Plaster	–
Openings (door/window)	Door to Rue EO2; width: 1.25m (reconstructed by the flanking walls)
Other remarks	There are two half-height walls flanking the entrance, which are connected to the southern wall (E: 0.88 × 0.50m, W: 0.87 × 0.53m)
Western wall	No longer preserved

14.19. HOUSE H1

Plates	5, 6.1, 36.1, 36.2
Surface area	57.96m ²
General remarks	The walls of H1 are greatly deteriorated, and mostly only one to two brick courses or an imprint in the ground is preserved. The ground plan can however be reconstructed and is identical to the houses H2 and H3

14.19.1. Room H1/1

Function	Entrance room
Measurements	Length: 2.56m
	Width: 1.39m
Surface area	3.63m ²
Adjoining rooms/areas	N: H2/4 E: Room H1/2 S: Room H1/5 W: Rue NS2
Entrances	Main entrance in the west Door to Room H1/2 in the east
Northern wall	
Connected-to/added-on	Connected to a small wall in the east
Measurements	Length: 2.56m

	Width: 0.52m
	Remaining height: 0.50m
Brick format	35 × 15 × 11cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Other remarks	The northwestern corner no longer exists, therefore it cannot be determined if there was a wall in the west functioning as a doorjamb for the entrance
Eastern wall	
General remarks	Only a small wall in the north as doorjamb exists, it is possible that there was a similar wall in the south
Connected -to/added-on	Connected to northern walls of Rooms H1/1 and H1/2
Measurements	Length: 0.22m
	Width: 0.52m
	Remaining height: 0.24m
Brick format	Cannot be determined
Layering technique	One stretcher–one header
Plaster	–
Openings (door/window)	To Room H1/2, width: 0.98m
Southern wall	
Connected-to/added-on	Connected to the western walls of Rooms H1/2 and H1/5
Measurements	Length: 2.56m
	Width: 0.51m
	Remaining height: 0.33m
Brick format	33 × 15 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 6cm)
Plaster	Mud plaster
Openings (door/window)	–
Western wall	
General remarks	In the west there is an entrance spanning the entire width of the room. It can no longer be determined if there were flanking walls in the north and south

14.19.2. Room H1/2

Function	Main room
Measurements	Length: 4.26m
	Width: 3.76m
Surface area	16.59m ²
Adjoining rooms/areas	N: Room H2/3 E: Rue NS1 S: Room H1/3 W: Room H1/1
Entrances	In the west (Room H1/1) and the south (Room H1/3) Maybe there was also an entrance in the east (Rue NS1)
Northern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 3.76m
	Width: 0.55m
	Remaining height: 0.35m
Brick format	32 × 16 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 10cm)
Plaster	–
Openings (door/window)	–

Eastern wall	
General remarks	Only a few remains in the north and in the middle of the wall are preserved
Connected-to/added-on	Connected to the northern wall and probably the southern wall The wall continues as the eastern wall of H1/3
Measurements	Remaining length: 0.21m (N), 0.68m (middle)
	Width: 0.52m
	Remaining height: 0.35m (N), 0.16m (middle)
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	A possible door to Rue NS1 could be situated in the northern part, but the exact position cannot be determined
Southern wall	
General remarks	Of this wall, only an imprint in the ground, mostly in the east and the west, is still preserved
Connected-to/added-on	Cannot be determined
Measurements	Length: 3.76m (E: 0.44m, W: 1.28m)
	width: 0.52m
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	The exact position of the door opening between Rooms H1/2 and H1/3 can no longer be determined
Western wall	
Connected-to/added-on	Connected to the southern wall of Room H1/1, probably also to the southern wall of Rooms H1/2 and H1/5
Measurements	Remaining length: 2.30m
	Width: c. 0.50m
	Remaining height: 0.17m
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–

14.19.3. Room H1/3

General remarks	Only the southwestern corner of the room is preserved, the other walls can be partly seen as imprints on the ground
Function	Main room
Measurements	Length: 4.18m
	Width: 3.74m
Surface area	15.61m ²
Adjoining rooms/areas	N: Room H1/2 E: Room NS1 S: Rue EO4 W: Room H1/4
Entrances	To be reconstructed in the north (Room H1/2) and the west (Room H1/4)
Northern wall	See southern wall of Room H1/2
Eastern wall	
Connected-to/added-on	Connected to the southern wall, probably also to the northern wall
Measurements	Length: 4.25m
	Width: 0.55m
	Remaining height: only an imprint is preserved
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Southern wall	
General remarks	A few courses of the western part are preserved

Connected-to/added-on	Connected to the western wall The wall continues to the west as the southern wall of Room H1/4 and to the east into the street Rue NS1 for c. 0.40m
Measurements	Remaining length: 1.16m
	Width: 0.55m
	Remaining height: 0.38m
Brick format	33 × 16 × 10cm Joints: 2cm
Layering technique	One stretcher–one header Holes for the vertical joints Bricks standing on edge at the lowest level
Plaster	–
Openings (door/window)	–
Western wall	
General remarks	Only the southwestern corner is preserved, the rest can be seen as an imprint in the ground
Connected-to/added-on	Connected to the southern wall
Measurements	Remaining length: 0.38m
	Width: ca. 0.52m
	Remaining height: 0.16m
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	The exact position of the door opening to Room H1/4 cannot be determined

14.19.4. Room H1/4

Function	Secondary room
Measurements	Length: 4.35m
	Width: 2.04m
Surface area	8.84m ²
Adjoining rooms/areas	N: Room H1/5 E: Room H1/3 S: Rue EO4 W: Rue NS2
Entrances	To be reconstructed in the north (Room H1/5) and the east (Room H1/3)
Northern wall	
General remarks	The western part and a small part in the east are the best preserved
Connected-to/added-on	Connected to the eastern and western walls
Measurements	Remaining length: 1.10m (W), 0.19m (E)
	Width: 0.55m
	Remaining height: 0.12m
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	The door opening to Room H1/5 was probably situated in the eastern part of the wall
Eastern wall	
	See western wall of H1/3
Connected-to/added-on	Connected to the northern and the southern wall
Other remarks	An east-west oriented secondary wall, situated on a higher level, covers the northern part of the wall
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall The wall continues to the east as the southern wall of Room H1/3
Measurements	Length: 2.04m
	Width: 0.55m
	Remaining height: 0.19m
Brick format	33 × 16 × 10cm Joints: 2cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps Bricks standing on edge in the lowest course

Plaster	–
Openings (door/window)	–
Western wall	
General remarks	The southern and the northern parts are preserved in a few courses, in between there is only one course of bricks
Connected-to/added-on	Connected to the northern and the southern wall The wall continues to the north as the western wall of Room H1/5
Measurements	Length: 2.86m (N), 0.63m (S)
	Width: 0.55m
	Remaining height: 0.40m
Brick format	32 × 15 × 10cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–

14.19.5. Room H1/5

Function	Secondary room
Measurements	Length: 2.18m
	Width: 2.07m
Surface area	4.41m ²
Adjoining rooms/areas	N: Room H1/1 E: H1/2 S: Room H1/4 W: Rue NS2
Entrances	To be reconstructed in the south (Room H1/4)
Floor	Remains of a mud pavement
Northern wall	
	See southern wall of Room H1/1
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.07m
	Width: 0.55m
	Remaining height: 0.12m
Brick format	33 × 15 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 6cm)
Plaster	Mud plaster
Openings (door/window)	–
Eastern wall	
	See western wall of Room H1/2
Connected-to/added-on	Connected to the northern and the southern wall
Southern wall	
	See northern wall of Room H1/4
Western wall	
Connected-to/added-on	Connected to the northern and the southern wall The wall continues to the south as the western wall of Room H1/4
Measurements	Length: 2.18m
	Width: 0.55m
	Remaining height: 0.21m
Brick format	35 × 16 × 10cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 6cm)
Plaster	–
Openings (door/window)	–

14.20. HOUSE H2

Plates	5, 6.2, 36.1, 37.1, 37.2
Surface area	55.19m ²
General remarks	House H2 is the middle house of the row houses H1–H3 with identical ground plans The southern part of House H2 is greatly deteriorated, while the northern part is preserved up to a height of about 0.90m

14.20.1. Room H2/1

Function	Entrance room
Measurements	Length: 2.57m
	Width: 1.32m
Surface area	4.05m ²
Adjoining rooms/areas	N: Room H3/4 E: Room H2/2 S: Room H2/5 W: Rue NS2
Entrances	Main entrance in the west Door to Room H2/2 in the east
Northern wall	
Connected-to/added-on	Connected to the eastern wall and western wall of Room H3/4
Measurements	Length: 2.57m
	Width: 0.55m
	Remaining height: 0.87m
Brick format	31 × 15.5 × 10cm Joints: 1.5–4.5cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps.
Plaster	Mud plaster
Openings (door/window)	–
Other remarks	The northwestern corner is damaged, a doorjamb for the western entrance could have been situated here
Eastern wall	
General remarks	Only a small wall in the north exists, forming the northern doorjamb
Connected-to/added-on	Connected to the northern wall
Measurements	Length: 0.24m
	Width: 0.38m (S), 0.55m (N)
	Remaining height: –
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	Mud plaster
Openings (door/window)	Door to Room H2/2, width 1.08m
Other remarks	There is a mixture of mud, sherds and pebbles in the southeastern corner that reaches into Room H2/2
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall of Room H2/5
Measurements	Length: 3.05m
	Width: 0.55m
	Remaining height: 0.89m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–
Other remarks	The southern doorjamb of the door to Room H2/2 seems to be damaged – maybe there was a small wall jutting out, just as on the northern side of the entrance
Western wall	
General remarks	On the western side is the doorway from the corridor Rue NS2. The wall facings are damaged on both sides, so maybe there were doorjambs protruding into the entrance Width: 1.32m

14.20.2. Room H2/2

Function	Main room
Measurements	Length: 4.07m
	Width: 3.76m
Surface area	15.02m ²
Adjoining rooms/areas	N: Room H3/3 E: Rue NS1 S: Room H2/3 W: Room H2/1
Entrances	From the west (Room H2/1), maybe also from the east (Rue NS1) Door to Room H2/3 in the south
Northern wall	
Connected-to/added-on	Connected to the western wall and probably the eastern wall
Measurements	Length: 3.75m
	Width: 0.55m
	Remaining height: 0.78m
Brick format	34 × 14 × 8cm Joints: 1.5–3cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Other remarks	An opening on the western side seems to have been inserted at a later period
Eastern wall	
General remarks	Only the southern part of the wall is preserved
Connected-to/added-on	Continues to the south as the eastern wall of Room H2/3
Measurements	Total length (+ Room H2/3): 8.70m
	Width: 0.55m
	Remaining height: 0.79m
Brick format	34 × 16 × 10cm Joints: 1.5–3cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	Possibly a door in the northern part, but this opening is not confirmed
Southern wall	
General remarks	The wall is not parallel to the northern wall or perpendicular to the eastern or western wall
Connected-to/added-on	Connected to the western wall and the western wall of Room H2/3
Measurements	Length: 2.33m
	Width: 0.52m
	Remaining height: 0.43m
Brick format	33 × 15 × 10cm Joints: 1.5–2cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	Door to Room H2/3, width: 1.34m The western doorjamb is damaged, so it could also have been narrower. There is no indication of a doorjamb on the eastern wall
Western wall	
Connected-to/added-on	Connected to the southern wall and the southern wall of Room H2/1 Continues to the south as the western wall of Room H2/3
Measurements	Length: 2.68m
	Width: 0.55m
	Remaining height: 0.81m
Brick format	33 × 17 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster

Openings (door/window)	–
Other remarks	In the northwestern corner a mixture of mud, earth and sherds covers the corner

14.20.3. Room H2/3

Function	Main room
Measurements	Length: 3.89m (W)–4.11m (E)
	Width: 3.72m (S)–3.75m (N)
Surface area	15.18m ²
Adjoining rooms/areas	N: Room H2/2 E: Rue NS1 S: Room H1/2 W: Room H2/4
Entrances	From the north (Room H2/2), a further door exists in the west to Room H2/4
Northern wall	See southern wall of Room H2/2
Eastern wall	See eastern wall of Room H2/2, the wall continues through both rooms
Southern wall	
Connected-to/added-on	Connected to the eastern and western walls
Measurements	Length: 3.72m
	Width: 0.55m
	Remaining height: 0.35m
Brick format	32 × 16 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 10cm)
Plaster	–
Openings (door/window)	–
Western wall	
General remarks	Very few remains and imprints on the ground
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 3.89m
	Width: 0.52m
	Remaining height: 0.20m
Brick format	34 × 17 × 9cm Joints: 1.5–4cm
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	A door to Room H2/4 must have been somewhere in this wall, but the exact position can no longer be determined

14.20.4. Room H2/4

General remarks	Only very little of the walls is preserved
Function	Secondary room
Measurements	Length: 4.12m
	Width: 2.09m
Surface area	8.58m ²
Adjoining rooms/areas	N: Room H2/5 E: Room H2/3 S: Room H1/1 W: Rue NS2
Entrances	In the east to Room H2/3, in the north to Room H2/5
Northern wall	
Connected-to/added-on	Connected to the eastern and the western walls
Measurements	Length: 2.09m
	Width: 0.52m
	Remaining height: 0.43m
Brick format	32 × 16 × 9cm Joints: 1.5–4cm

Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	There must have been a door to Room H2/5, though the exact position can no longer be determined
Eastern wall	See western wall of Room H2/3
Connected-to/added-on	Connected to the northern and the southern wall
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.09m
	Width: 0.52m
	Remaining height: 0.60m
Brick format	35 × 15 × 11cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Western wall	
General remarks	Only a few remains at ground level exist, covered with dirt. However, the outline of the wall can be clearly seen
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 4.10m
	Width: 0.55m
	Remaining height: 0.05m
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–

14.20.5. Room H2/5

Function	Secondary room
Measurements	Length: 2.18m
	Width: 2.07m
Surface area	4.45m ²
Adjoining rooms/areas	N: Room H2/1 E: Room H2/2 S: Room H2/4 W: Rue NS2
Entrances	In the south (Room H2/4)
Northern wall	See southern wall of Room H2/1
Eastern wall	See western wall of Room H2/2
Southern wall	See northern wall of Room H2/4
Western wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 2.18m
	Width: 0.55m
	Remaining height: 1.04m
Brick format	32 × 15 × 10cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 9cm)
Plaster	–
Openings (door/window)	–

14.21. HOUSE H3

Plates	5, 7, 36.1, 38.1, 38.2, 39.1, 39.2, 40.1, 40.2
Surface area	56.42m ²
General remarks	House H3 is the northernmost house of the identical row houses H1–H3. The walls are preserved up to a height of about 0.70m

14.21.1. Room H3/1

Function	Entrance room
Measurements	Length: 2.09m
	Width: 1.33m
Surface area	4.20m ²
Adjoining rooms/areas	N: Area H3N E: Room H3/2 S: Room H3/5 W: Rue NS2
Entrances	From the west (Rue NS2) Door to Room H3/2 in the east
Northern wall	
Connected-to/added-on	Connected to the eastern wall The wall continues to the east as the northern wall of Room H3/2
Measurements	Length: 2.09m
	Width: 0.55m
	Remaining height: 0.56m
Brick format	33 × 15 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 6cm)
Plaster	–
Openings (door/window)	–
Other remarks	The wall is badly weathered, the western corner has broken off
Eastern wall	
General remarks	There is a small wall on the northern side of room, forming the northern doorjamb for the door to Room H3/2
Connected-to/added-on	Connected to the northern wall
Measurements	Length: 0.19m
	Width: 0.57m
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	Door to Room H3/2, width: 1.17m
Southern wall	
Connected-to/added-on	Connected to the western wall and the western wall of H3/5
Measurements	Length: 3.15m
	Width: 0.57m
	Remaining height: 0.65m
Brick format	34 × 15 × 10cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–
Western wall	
General remarks	In the west is the door opening from the corridor Rue NS2 Width: 1.33m

14.21.2. Room H3/2

Function	Main room
Measurements	Length: 4.15m (E), 4.34m (W)
	Width: 3.78m
Surface area	15.74m ²
Adjoining rooms/areas	N: Area H3N E: Rue NS1 S: Room H3/3 W: Room H3/1
Entrances	From the west (Room H3/1) Door in the south (Room H3/3)
Installations	There was possibly a storage bin at the southern wall, of which one brick standing on edge and one added onto it is preserved It is located 0.44m to the east of the western wall
Northern wall	
Connected-to/added-on	Connected to the eastern wall and the western wall The wall continues to the west as the northern wall of Room H3/1
Measurements	Length: 3.78m
	Width: 0.55m
	Remaining height: 0.65m
Brick format	33 × 15 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 6cm)
Plaster	–
Openings (door/window)	–
Eastern wall	
Connected-to/added-on	Connected to the northern and the southern wall The wall continues to the south as the eastern wall of Room H3/3
Measurements	Length: 4.15m (N: 0.44m, S: 2.26m)
	Width: 0.55m
	Remaining height: 0.42m
Brick format	34 × 15 × 10cm Joints: 1.5–3cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	There was possibly a door to Rue NS1, width: 1.44m The northern doorjamb is 0.44m to the south of northern wall This could, however, be a secondary opening
Southern wall	
General remarks	The wall is not parallel to the northern wall
Connected-to/added-on	Connected to the eastern and western walls
Measurements	Length: 3.78m (E: 0.24m, W: 2.35m)
	Width: 0.57m
	Remaining height: 0.27m
Brick format	32 × 15 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 13cm)
Plaster	Mud plaster
Openings (door/window)	Door to Room H3/3, width: 1.20m The western doorjamb is coated with plaster
Western wall	
Connected-to/added-on	Connected to the southern wall of Room H3/2 and the northern and southern walls of Room H3/5 The wall continues to the south as the western wall of Room H3/3
Measurements	Length: 2.95m
	Width: 0.57m
	Remaining height: 0.85m

Brick format	32 × 15 × 10cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 9cm)
Plaster	Mud plaster
Openings (door/window)	–

14.21.3. Room H3/3

Function	Main room
Measurements	Length: 3.92m (E), 4.18m (W)
	Width: 3.76m
Surface area	14.66m ²
Adjoining rooms/areas	N: Room H3/2 E: Rue NS1 S: Room H2/2 W: Room H3/4
Entrances	From the north (Room H3/2) and the east (Rue NS1) Door to the west (Room H3/4)
Floor	Remains of the mud pavement exist in the western part of the room
Installations	Along the southern wall is a rectangular installation – probably a mastaba – consisting of one course of bricks standing on edge. They are added onto the southern and the eastern walls Measurements: 1.87 × 1.01m
Northern wall	See southern wall of Room H3/2
Eastern wall	
Connected-to/added-on	Connected to the northern and the southern wall The wall continues to the north as the eastern wall of Room H3/2
Measurements	Length: 4.18m (N: 0.60m, S: 2.49m)
	Width: 0.55m
	Remaining height: 0.58m
Brick format	33 × 14 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	Door to Rue NS1, width: 1.06m (W), 1.23m (E) Both doorjambes are preserved, with mud plaster covering the southern one Window to Rue NS1, width: 0.67m Height of the windowsill: 0.26m The northern soffit is located 0.52m to the south of the door. Bricks standing on edge are situated on both sides of the window, forming the window soffits. They are coated with a lime plaster
Southern wall	See northern wall of Room H2/2
Western wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 3.92m (S: 0.36m, N: 2.34m)
	Width: 0.57m
	Remaining height: 0.96m
Brick format	33 × 16 × 10cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster, especially in the northwestern corner
Openings (door/window)	Door to Room H3/4, width: 1.22m The northern doorjamb still exists, the southern one could have originally been further to the north

14.21.4. Room H3/4

Function	Secondary room
Measurements	Length: 4.34m
	Width: 2.03m (S), 2.0m (N)
Surface area	9.03m ²
Adjoining rooms/areas	N: Room H3/5 E: Room H3/3 S: Room: H2/1 W: Rue NS2
Entrances	In the east (Room H3/3) and the north (Room H3/5)
Northern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.0m (E: 0.22m, W: 0.72m)
	Width: 0.57m
	Remaining height: 0.75m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	Door to Room H3/5, width: 1.08m Both doorjambes exist and are covered with mud plaster
Eastern wall	See western wall of Room H3/3
Southern wall	See northern wall of Room H2/1
Western wall	
Connected-to/added-on	Connected to the southern and the northern wall The wall continues to the north as the western wall of Room H3/5
Measurements	Length: 4.34m
	Width: 0.55m
	Remaining height: 1.10m
Brick format	34 × 15 × 10cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–

14.21.5. Room H3/5

Function	Secondary room
Measurements	Length: 2.15m
	Width: 2.02m (S), 2.05m (N)
Surface area	4.35m ²
Adjoining rooms/areas	N: Room H3/1 E: Room H3/2 S: Room H3/4 W: Rue NS2
Entrances	In the south (Room H3/4)
Northern wall	See southern wall of Room H3/1
Measurements	Length: 2.05m
Eastern wall	See western wall of Room H3/2
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 2.16m
Southern wall	see northern wall Room H3/4
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.02m
Western wall	
Connected-to/added-on	Connected to the southern and the northern wall The wall continues to the south as the western wall of Room H3/4

Measurements	Length: 2.14m
	Width: 0.55m
	Remaining height: 1.10m
Brick format	34 × 15 × 10cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–

14.21.6. Area H3N

Function	Courtyard or an open communal space
Measurements	Length: 12.14m
	Width: 4.45m (E), 4.36m (W)
Surface area	51.92m ²
Adjoining rooms/areas	N: Rooms H4/4, H4/5, H4/6, Area H4W E: Rue NS1 S: Rooms H5/1, H5/2, H3/1, H3/2 W: Room H5N
Entrances	In the north (Rue NS3), east (Rue NS1) and south (Rue NS2)
Northern wall	See southern wall of House H4 (Rooms H4/4, H4/5 and H4/6)
Eastern wall	
Connected-to/added-on	Added onto the northern wall
Measurements	Length: 3.17m
	Width: 0.53m
	Remaining height: 0.62m
Brick format	32 × 15 × 8cm Joints: 2.5–4cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	Entrance in the south, width: 1.13m
Other remarks	The wall is situated 1.06m to the west of the southeastern corner of House H4
Southern wall	See northern wall of House H3 (Rooms H3/1 and H3/2) and House H5 (Rooms H5/1 and H5/2)
Western wall	See eastern wall of Room H5N

14.22. HOUSE H4

Plates	8, 9, 41.1, 41.2, 42.1
Surface area	373.50m ² (reconstructed) Remaining area: 159.14m ²
General information	Only the southern part of House H4 is preserved. In the proposed reconstruction it reaches the street Rue EO1 in the north

14.22.1. Room H4/1

Function	Entrance room
Measurements	Remaining length: 4.62m
	Width: 3.18m
Surface area	15.19m ² (reconstructed)
Adjoining rooms/areas	N: Room H4/1N S: Room H4/2 W: Rue NS3
Entrances	In the south (Room H4/2) and the west (Rue NS3)
Northern wall	

Connected-to/added-on	Connected to the eastern wall
Measurements	Remaining length: 2.03m
	Width: 0.60m (since the southern side has crumbled, the wall could have originally been wider)
	Remaining height: 0.37m
Brick format	33 × 15 × 10cm
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Eastern wall	
General remarks	The wall is partly preserved in the northeastern corner. In the southeastern corner one can only determine that a wall is connected to the southern wall, however, the exact corner and the western edge no longer exists
Connected-to/added-on	Connected to the southern and the northern wall
Measurements	Remaining length: 0.35m (N), 0.32m (S) The northern part continues to the north (for c. 1.10m) as an imprint in the ground
	Width: 0.47 (N)
	Remaining height: 0.15m (N), 0.85m (S)
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Southern wall	
	See northern wall of Room H4/2
Connected-to/added-on	Connected to the eastern wall Added onto the western wall
Western wall	
Connected-to/added-on	The wall continues to the south as the western wall of Room H4/2
Measurements	Length: 2.40m, in the north the wall ends at the threshold
	Width: 1.00m, the wall is however badly deteriorated
	Remaining height: 1.16m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Headers–stretchers The vertical joints are formed as wide gaps Mortar with lime
Plaster	Mud plaster
Openings (door/window)	Door from Rue NS2, threshold <i>in situ</i>
Threshold	Measurements: 151 × 61 × 13cm The threshold is broken into two pieces and is strongly weathered. It is situated on a course of bricks to the north of the remaining western wall A hole for the door pivot is situated on the southern side

14.22.2. Room H4/1N

General remarks	The ground plan of the room can be reconstructed through the sparse remains of the walls
Function	Perhaps a storage room due to its small size
Measurements	Reconstructed length: 2.06m
	Width: 1.38m
Surface area	2.84m ² (reconstructed)
Adjoining rooms/areas	S: Room H4/1 W: Rue NS3
Entrance	Probably in the north
Northern wall	
Connected-to/added-on	Connected to the western wall
Measurements	Remaining length: 0.40m
	Width: 0.39m
	Remaining height: one course of bricks
Brick format	Cannot be determined

Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Eastern wall	
Connected-to/added-on	Connected to the southern wall
Measurements	Remaining length: 1.51m
	Width: 0.50m
	Remaining height: one course of bricks
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Other remarks	1.36m to the east of the eastern wall another wall can be identified as an imprint in the ground Length: 1.26m Width: 0.50m
Southern wall	See northern wall of Room H4/1
Western wall	
General remarks	The remains of the wall are situated 2.06m to the north of the threshold in Room H4/1
Connected-to/added-on	Connected to the northern wall The wall continues to the north
Measurements	Length of entire section of the wall: 2.63m
	Width: 1.0m, the wall is however badly deteriorated
	Remaining height: one course of bricks
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps Mortar with lime
Plaster	Mud plaster
Openings (door/window)	–

14.22.3. Room H4/2

Function	Main room of the house?
Measurements	Length: 6.08m (W)
	Width: 4.86m
Surface area	29.37m ²
Adjoining rooms/areas	N: Room H4/1 E: Room H4/3 S: Rooms H4/4 and H4/5 W: Rue NS3
Entrances	In the north to an unknown room In the south to Rooms H4/4 and H4/5
Floor	Mud pavement
Other remarks	The remains of a column base are in the room A column could have been situated in the middle of the room. Measurements: diameter 0.72m, imprint of the column 0.28m
Northern wall	
Connected-to/added-on	Added onto the western wall
Measurements	Length: 3.86m
	Width: 0.75m
	Remaining height: 0.90m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretchers–headers The vertical joints are formed as wide gaps (up to 7cm)
Plaster	Mud plaster
Openings (door/window)	The wall is broken off in the east, it therefore cannot be determined where the opening started

Threshold	Measurements: 75 × 58 × 16cm Only part of the threshold is preserved. It is lying on the eastern side of the opening
Other remarks	In the northeastern corner the remains of a wall (three visible bricks) are situated underneath a secondary wall
Eastern wall	
Connected-to/added-on	Connected to the southern wall
Measurements	Remaining length: 3.65m (the northern part is overbuilt by a secondary wall) Width: 0.93m (S), 0.73m (N) Remaining height: 0.70m
Brick format	33 × 15 × 10cm Joints: 2–3cm
Layering technique	Stretchers–headers The vertical joints are formed as wide gaps
Plaster	Mud plaster – two to three layers can be found in the southeastern corner
Openings (door/window)	–
Other remarks	The northeastern corner of the room can be determined to the north of the secondary wall
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 6.11m (E: 0.77m, W: 4.03m) Width: 0.75m Remaining height: 1.36m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	Door to Room H4/4, width: 0.99m In a first step a niche was built into the western side of the door opening (width: 0.61m, depth: 0.31m) Later the entire door was closed off, making the room inaccessible Door to Room H4/5, width: 1.32m Two sandstone slabs are visible in the rubble. They could have belonged to a threshold
Western wall	
Connected-to/added-on	Connected to the northern and the southern wall The wall continues to the north and the south
Measurements	Length: 4.86m Width: 1.00m Remaining height: 1.42m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretcher–headers The vertical joints are formed as wide gaps Mortar with lime
Plaster	Mud plaster
Openings (door/window)	–

14.22.4. Room H4/3

Function	Unknown
Measurements	Remaining length: 3.65m (the room is overbuilt in the north and could have been longer – probably like Room H4/2) Width: 2.50m
Surface area	16.57m ² (reconstructed)
Adjoining rooms/areas	E: Rue NS1 S: Room H4/6 W: Room H4/2
Entrance	Probably in the north
Northern wall	No longer exists
Eastern wall	
Connected-to/added-on	Connected to the southern wall The wall continues to the south

Measurements	Remaining length: 0.47m (S), 1.26m (N)
	Width: 1.41m (S), 0.60m (N), broken off on the western side
	Remaining height: 0.60m (S), 0.34m (N)
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretcher–headers The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	Possibly there was an opening from Rue NS1?
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.52m
	Width: 0.93m
	Remaining height: 0.75m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretchers–headers The vertical joints are formed as wide gaps (up to 7cm)
Plaster	Mud plaster
Openings (door/window)	–
Western wall	See eastern wall of Room H4/2

14.22.5. Room H4/4

Function	Unknown
Measurements	Length: 3.32m (E)–3.38m (W)
	Width: 2.19m (N), 2.25m (S)
Surface area	7.61m ²
Adjoining rooms/areas	N: Room H4/2 E: Room H4/5 S: Area H3N W: Rue NS3
Entrances	In the north (secondarily closed off)
Northern wall	
Connected-to/added-on	Connected to the western wall The eastern wall is added on
Measurements	Length: 2.19m (E: 0.78m, W: 0.47m)
	Width: 0.75m
	Remaining height: 1.36m
Brick format	33 × 15 × 10cm Joints: 2–2.5cm (horizontal joints: 3cm) The bricks of the closed off door have the same measurements and are covered with plaster
Layering technique	Stretcher–header The closed off door section is erected on a higher level and is composed of bricks, slate, mortar and many pebbles
Plaster	Mud plaster in the northeastern corner and on the former doorjambs
Openings (door/window)	Door to Room H4/2, width: 0.99m The door was closed off in a later period (see Room H4/2, southern wall)
Eastern wall	
Connected-to/added-on	Connected to the southern wall Added onto the northern wall (the plaster covers both walls)
Measurements	Length: 3.32m
	Width: 0.66m
	Remaining height: 1.60m
Brick format	33 × 10 × 15cm Joints: 1.5–3cm
Layering technique	Two headers–1 stretcher, alternating with two stretchers The vertical joints are formed as wide gaps

Plaster	Mud plaster
Openings (door/window)	–
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall The wall continues to the east as the southern wall of Room H4/5
Measurements	Length: 2.25m
	Width: 1.10m
	Remaining height: 0.90m (southeastern corner)
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Western wall	
Connected-to/added-on	Connected to the southern and the northern wall The wall continues to the north as the western wall of H4/2
Measurements	Length: 3.38m
	Width: 1.00m
	Remaining height: 1.30m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–

14.22.6. Room H4/5

Function	Unknown
Measurements	Length: 4.0m (S)–4.26m (N)
	Width: 3.37m
Surface area	13.90m ²
Adjoining rooms/areas	N: Room H4/2 E: Room H4/6 S: Area H3N W: Room H4/4
Entrances	In the north (Room H4/2) and in the east (room H4/6)
Northern wall	
Connected-to/added-on	Connected to the eastern wall
Measurements	Length: 4.26m (E: 1.80m, W: 1.17m)
	Width: 0.75m
	Remaining height: 1.20m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretchers–headers The vertical joints are formed as wide gaps (up to 7cm)
Plaster	Mud plaster
Openings (door/window)	Door to Room H2/2, width: 1.32m
Eastern wall	
General remarks	Only sparse remains of the original wall exist in the north and the south. The wall was overbuilt in a later period
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 3.37m (N: 0.40m, S: 1.67m)
	Width: 0.55m (N), 0.74m (S)
	Remaining height: 0.28m (N), 1.10m (S)
Brick format	33 × 15 × 10cm Joints: 2–4cm
Layering technique	Cannot be determined

Plaster	Mud plaster in the corners and on the construction joint
Construction joint	0.22m to the north of the southern wall
Openings (door/window)	Door to Room H4/6, width: 1.16m
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall The wall continues to the east (Room H4/6) and the west (Room H4/4)
Measurements	Length: 4.0m
	Width: 1.10m
	Remaining height: 1.22m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Western wall	See eastern wall of Room H4/4

14.22.7. Room H4/6

Function	Secondary room
Measurements	Length: 3.04 (E)–3.07m (W)
	Width: 2.18m
Surface area	6.73m ²
Adjoining rooms/areas	N: Room H4/3 E: Rue NS1 S: Area H3N W: Room H4/5
Entrance	In the west from Room H4/5
Northern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.19m
	Width: 0.93m
	Remaining height: 0.75m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps (up to 7cm)
Plaster	Mud plaster
Openings (door/window)	–
Eastern wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 2.07m
	Width: 1.10m
	Remaining height: 1.06m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall The wall continues to the east (Room H4/5)
Measurements	Length: 2.18m
	Width: 1.10m
	Remaining height: 1.22m
Brick format	33 × 15 × 10cm Joints: 1.5–4cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps

Plaster	Mud plaster
Openings (door/window)	–
Western wall	See eastern wall of Room H4/5

14.22.8. Area H4W

General remarks	This area, to the west of House H4, is not clear because of many secondary walls. Nonetheless some remains of the original walls can be determined
Function	Secondary rooms
Measurements	Length: 7.80m
	Width: 5.40m
Surface area	42.74m ²
Adjoining rooms/areas	E: Rue NS3 S: Room H5N W: storage area M12
Entrances	To the north or the east
Northern wall	
Connected-to/added-on	Added onto the western wall
Measurements	Remaining length: 1.75m Further to the east sparse remains can be seen at ground level. Total length: 5.40m
	Width: 0.29m (W)
	Remaining height: one to two courses of brick, but mostly only an imprint in the ground
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Eastern wall	
Connected-to/added-on	Connected to the southern wall
Measurements	Remaining length: 1.90m (S) Further to the north are two to three brick courses and imprints in the ground (northern part, northeastern corner)
	Width: 0.50m
	Remaining height: two to three courses of bricks
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Southern wall	
Connected-to/added-on	Connected to the eastern wall Added onto western wall
Measurements	Length: 4.45m
	Width: 0.54m
	Remaining height: 0.74m
Brick format	32 × 15 × 9cm Joints: 1.5–2cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–
East-west oriented dividing wall	
General remarks	The remains are located 0.58m from the western wall and 1.07m from the eastern wall, where it makes a bend to the south for 0.40m The distance from the southern wall is 2.86m
Connected-to/added-on	Cannot be determined
Measurements	Length: 3.80m
	Width: 0.30m
	Remaining height: 0.46m

Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–

14.23. HOUSE H5

Plates	10, 11, 36.1, 42.2, 43.1, 43.2
Surface area	303.16m ²
General remarks	House H5 is split into two almost equal sized halves by a corridor (Room H5/5). It is possible that there were actually two separate houses in this area

14.23.1. Room H5/1

General remarks	Little of the walls is preserved, but it is possible to reconstruct the room
Function	Unknown
Measurements	Length: 5.93m Width: 3.68m
Surface area	20.85m ²
Adjoining rooms/areas	N: Area H3N, Room H5N E: Room H5/2 S: Room H5/3 W: Room H5/9
Entrances	Could be possible on all sides
Northern wall	
General remarks	Only the northwestern part and the middle of the wall are preserved
Connected-to/added-on	Connected to the western wall, probably also to the eastern wall
Measurements	Remaining length: 0.50m (W), 0.93m (middle) Width: 0.58m Remaining height: 0.55m
Brick format	28 × 16 × 9cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–
Eastern wall	
Connected-to/added-on	Connected to the southern wall
Measurements	Remaining length: 3.90m Width: 0.62m Remaining height: 0.65m
Brick format	33 × 18 × 9cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	A door to Room H5/2 is possible in the southern part, width: 1.15m
Southern wall	
General remarks	The wall is not preserved in its entirety, but mostly only the eastern part
Connected-to/added-on	Connected to the eastern wall
Measurements	Remaining length: 1.31m (E) Width: 0.55m Remaining height: 1.24m
Brick format	33 × 16 × 9cm Joints: 2–4cm
Layering technique	Cannot be determined A few bricks standing on edge are visible
Plaster	Mud plaster
Openings (door/window)	–
Western wall	

General remarks	Only the northern part is preserved. The wall is badly damaged
Connected-to/added-on	Connected to the northern wall
Measurements	Remaining length: 3.60m
	Width: 0.61m
	Remaining height: 0.65m
Brick format	33 × 17 × 9cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster on the outer side of the wall
Openings (door/window)	–

14.23.2. Room H5/2

Function	Unknown
Measurements	Length: 5.93m
	Width: 2.17m
Surface area	12.91m ²
Adjoining rooms/areas	N: Area H3N E: Rue NS2 S: Room H5/4 W: Room H5/1
Entrances	Possible on the eastern, southern and western sides
Northern wall	
Connected-to/added-on	Connected to the eastern wall, probably also the western wall
Measurements	Length: 2.17m
	Width: 0.58m
	Remaining height: 0.50m
Brick format	33 × 17 × 8cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Eastern wall	
General remarks	The northeastern corner and the southern part of the wall are preserved
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 5.92m (N: 0.40m, S:3.50m)
	Width: 0.61m
	Remaining height: 1.18m (southeastern corner)
Brick format	34 × 17 × 7cm Joints: 1.5–3.5cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps Bricks standing on edge in the southeastern corner
Plaster	Mud plaster
Openings (door/window)	A door to Rue NS2 is possible here. The width is unknown
Southern wall	
General remarks	Only the eastern part is preserved
Connected-to/added-on	Connected to the eastern wall
Measurements	Remaining length: 1.20m (E)
	Width: 0.50m
	Remaining height: 1.18m
Brick format	35 × 18 × 8cm Joints: 1.5–3cm
Layering technique	One stretcher–one header In the southeastern corner are two bricks standing on edge
Plaster	Mud plaster
Openings (door/window)	Possible door to Room H5/4, width: 1.02m
Western wall	See eastern wall of Room H5/1

14.23.3. Room H5/3

Function	Unknown
Measurements	Length: 5.91m
	Width: 3.68m
Surface area	21.02m ²
Adjoining rooms/areas	N: Room H5/1 E: Room H5/4 S: Room H5/5 W: Room H5/9
Entrances	Entrance in the east (from Room H5/4, seems to have been closed off in a later period) Entrance in the south could be a secondary entrance Due to the state of preservation of the walls, the original entrance could have been on any side
Northern wall	See southern wall of Room H5/1
Eastern wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 5.91m
	Width: 0.58m
	Remaining height: 0.92m
Brick format	36 × 18 × 8cm Joints: 1.5–2cm Bricks of the wall blocking the entrance: 33 × 18 × 9cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps Wall blocking the entrance: very irregular brick courses with a thick mud plaster
Plaster	Mud plaster
Openings (door/window)	Possible door to Room H5/4, width 1.09m The northern doorjamb is situated 0.20m to the south of the northern wall The wall was closed off at a later time
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 3.68m
	Width: 0.61m
	Remaining height: 0.51m
Brick format	31 × 17 × 7cm
Layering technique	Stretcher–header
Plaster	–
Openings (door/window)	Door from Room H5/5 The western doorjamb is situated 1.27m from the western wall
Other remarks	The brick format and composition as well as the layering technique point to an amendment of the structure in modern times
Western wall	
Connected-to/added-on	Connected to the southern wall
Measurements	Remaining length: 3.35m, the northern part is not preserved
	Width: 0.61m
	Remaining height: 0.47m
Brick format	31 × 17 × 7cm
Layering technique	Stretcher–header, very regular
Plaster	Mud plaster
Openings (door/window)	–
Other remarks	The brick format and composition as well as the layering technique point to an amendment of the structure in modern times

14.23.4. Room H5/4

Function	Unknown
measurements	Length: 5.88m
	Width: 2.17m
Surface area	12.96m ²

Adjoining rooms/areas	N: Room H5/2 E: Rue NS2
	S: Room H5/5 W: Room H5/3
Entrances	Possibly in the north Closed off entrances in the east and the west
Northern wall	See southern wall of Room H5/2
Eastern wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 5.88m
	Width: 0.60m
	Remaining height: 0.79m
Brick format	40 × 20 × 7cm Joints: 2cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	Possible door to Rue NS2, width: 1.01m The northern doorjamb is 0.33m to the south of the northern wall The entrance was closed off at a later time The brick format in the wall blocking the door is 33 × 16 × 10cm
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.17m
	Width: 0.60m
	Remaining height: 0.61m
Brick format	34 × 18 × 8cm Joints: 1.5–3cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Western wall	See eastern wall of Room H5/3

14.23.5. Room H5/5

Function	Corridor
Measurements	Length: 7.65m
	Width: 1.38m
Surface area	10.42m ²
Adjoining rooms/areas	N: Rooms H5/3 and H5/4 E: Rue NS2 S: Rooms H5/6 and H5/7 W: Room H5/9
Entrances	Openings spanning the entire width of the room to the east and the west Entrance to Room H5/3 in the north Possible entrances to Rooms H5/6 and H5/7 in the south
Northern wall	See the southern walls of Rooms H5/3 and H5/4
General remarks	In alignment with the dividing wall between the rooms H5/3 and H5/4 a small wall is jutting out into the corridor. A possible counterpart exists on the southern side of the corridor
Southern wall	See the northern walls of Rooms H5/6 and H5/7

14.23.6. Room H5/6

Function	Unknown
Measurements	Length: 4.16m
	Width: 3.65m
Surface area	15.37m ²

Adjoining rooms/areas	N: Room H5/5 E: Room H5/7 S: H5/8 W: Rooms H5/9 and H5/10
Entrances	Doors are possible in the north and the east
Other remarks	The northern wall was maybe installed at a later time and the room was larger in its original phase
Northern wall	
General remarks	Only remains in the east and the west still exist
Connected-to/added-on	Added onto the eastern and the western wall
Measurements	Length: 0.13m (W), 1.02m (E)
	Width: 0.40m
	Remaining height: 0.30m (W)
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	–
Eastern wall	
General remarks	Preserved in the north and the south
Connected-to/added-on	Connected to the southern wall
Measurements	Length: 0.80m (N)
	Width: 0.60m
	Remaining height: 0.77m (N), the southern part is only an imprint in the ground
Brick format	Cannot be determined
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–
Other remarks	The northern side of the wall is torn out, therefore it could have continued to the north. Maybe the rooms H5/6 and H5/7 originally reached further to north. With the installation of the corridor (Room H5/5) in a later period, the two rooms became smaller
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall The wall continues to the east as the southern wall of Room H5/7
Measurements	Length: 3.68m
	Width: 0.54m
	Remaining height: only one to two courses
Brick format	35 × 19 × 9cm Joints: 1.5–2cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–
Western wall	
Connected-to/added-on	Connected to the southern wall The wall continues to the south as the western wall of Room H5/8
Measurements	Length: 4.16m
	Width: 0.35m
	Remaining height: 0.68m
Brick format	35 × 15 × 10cm Joints: 1cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–
Other remarks	The northern end of the wall cannot be clearly determined. It possibly continued to the north (see comment at the eastern wall)

14.23.7. Room H5/7

Function	Unknown
Measurements	Length: 3.95m
	Width: 2.17m
Surface area	9.08m ²
Adjoining rooms/areas	N: Room H5/5 E: Rue NS2 S: Room H5/8 W: Room H5/6
Entrances	In the south (Room H5/8) and in the west (Room H5/6)
Other remarks	The northern wall was possibly installed at a later time and the room was larger in its original phase
Northern wall	
Connected-to/added-on	Added onto the eastern and the western wall
Measurements	Length: 2.17m
	Width: 0.34m In the corners are “pillars” (35 × 54cm)
	Remaining height: 1-2 courses
Brick format	34 × 17 × 9cm Joints: 2.5cm
Layering technique	Very irregular, only stretchers can be determined
Plaster	–
Openings (door/window)	–
Other remarks	Maybe a later wall was installed here
Eastern wall	
General remarks	Three parts are preserved, in between the wall no longer exists
Connected-to/added-on	Connected to the southern wall The wall continues to the south as the eastern wall of Room H5/8
Measurements	Length: 1.36m (N), 1.03m (center), 0.79m (S)
	Width: 0.64m
	Remaining height: one to two brick courses
Brick format	35 × 18 × 8cm Joints: 1.5–2cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster in the southeastern corner
Openings (door/window)	–
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.21m
	Width: 0.54m
	Remaining height: one to two courses
Brick format	35 × 19 × 9cm Joints: 1.5–2cm
Layering technique	One stretcher–one header
Plaster	–
Openings (door/window)	Door to Room H5/8, width: 1.15m The eastern doorjamb is 0.15m to the west of eastern wall
Western wall	See eastern wall of Room H5/6

14.23.8. Room H5/8

Function	Main room of the house
Measurements	Length: 7.91m (W)
	Width: 6.49m (S)–6.52m (N)
Surface area	52.63m ²
Adjoining rooms/areas	N: Rooms H5/6 and H5/7 E: Rue NS2

	S: Rue EO4 W : Rooms H5/10 and H5/11
Entrances	In the south (Rue EO4) and in the north (Room H5/7) Further entrances possible in the west (Rooms H5/10 and H5/11)
Other remarks	One column base with a diameter of 0.47m is probably <i>in situ</i> . A second one with a diameter of 0.58m is lying dislocated in the room
Northern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 6.52m Width: 0.54m Remaining height: only 1–2 brick courses
Brick format	35 × 19 × 9cm Joints: 1.5–2cm
Layering technique	One stretcher–one header
Plaster	–
Openings (door/window)	Door in the eastern part to Room H5/7, width: 1.13m
Eastern wall	
Connected-to/added-on	Connected to the northern and the southern wall The wall continues to the north as the eastern wall of Room H5/7
Measurements	Length: 7.90m Width: 0.64m Remaining height: 0.63m
Brick format	35 × 18 × 8cm Joints: 1.5–2cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall The wall continues to the west as the southern wall of Room H5/11
Measurements	Length: 6.49m Width: 0.61m Remaining height: 0.57m
Brick format	38 × 20 × 8cm Joints: 1.5–4cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	Door to Rue EO4, width of door: 1.19m The western doorjamb is 0.48m to the east of western wall
Western wall	
Connected-to/added-on	Connected to the northern and southern wall The wall continues to the north as the western wall of Room H5/6
Measurements	Length: 8.09m Width: 0.61m Remaining height: 0.60m
Brick format	38 × 16 × 8cm Joints: 1–2.5cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	Doors to the rooms H5/10 and H5/11 must have existed, their location cannot be determined

14.23.9. Room H5/9

Function	Courtyard
Measurements	Length: 17.41m Width: 3.41m (N), 4.01m (S)
Surface area	20.85m ²

Adjoining rooms/areas	N: Room H5N E: Rooms H5/1, H5/3, H5/5 and H5/6 S: Rooms H5/10 and H5/9A W: dividing wall to the storage area SAF5
Entrances	In the north (Room H5N), east (Room H5/5) and south (Room H5/9A)
Northern wall	
Connected-to/added-on	Added onto western wall
Measurements	Remaining length: 2.09m
	Width: 0.58m
	Remaining height: 0.33m
Brick format	34 × 17 × 8cm
Layering technique	probably one stretcher–one header
Plaster	–
Openings (door/window)	Entrance in the eastern part of the wall, width: 1.24m
Eastern wall	See the western walls of the rooms H5/1, H5/3 and H5/6
Southern wall	See the northern wall of Room H5/10
Openings (door/window)	Entrance to Room H5/9A, width: 0.93m
Western wall	
General remarks	This is the dividing wall to the storage area SAF5
Connected-to/added-on	Continues to the north and the south
Measurements	Entire length of wall: 52.42m
	Width: 0.80m
	Remaining height: 1.25m
Brick format	36 × 20 × 9cm Joints: 1.5–2cm (vertical), 3cm (horizontal)
Layering technique	Two headers or one stretcher–one header–one stretcher The vertical joints are formed as wide gaps (between 7 and 9cm)
Plaster	–
Openings (door/window)	–

14.23.10. Room H5/9A

General remarks	Room H5/9A is the corridor to the south of Room H5/9 and the west of H5/10 and H5/11
Measurements	Length: 11.07m
	Width: 1.09m
Surface area	11.05m ²
Entrances	In the north (Room H5/9) and the south (Rue EO4)

14.23.11. Room H5/10

Function	Secondary room
Measurements	Length: 4.16m
	Width: 2.81m (N)
Surface area	12.03m ²
Adjoining rooms/areas	N: Room H5/9 E: Room H5/8 S: Room H5/11 W: Room H5/9A
Entrances	Not preserved, probably in the east from Room H5/8
Northern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.81m
	Width: 0.35m
	Remaining height: 0.39m
Brick format	35 × 15 × 8cm Joints: 1–2cm
Layering technique	Stretcher–header
Plaster	–

Openings (door/window)	–
Eastern wall	
General remarks	Only the southeastern corner is relatively well preserved, otherwise only one or two courses exist
Connected-to/added-on	Connected to the northern and the southern wall The wall continues to the north and the south
Measurements	Length: 4.16m
	Width: 0.61m
	Remaining height: 0.60m
Brick format	36 × 16 × 8cm Joints: 1–2.5cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps Bricks standing on edge in the lowest course
Plaster	Mud plaster in the southeastern corner
Construction joint	0.68m from the southern corner This could indicate the location of a possible entrance
Openings (door/window)	Cannot be determined, but a door to Room 5/8 must have been located in this wall
Southern wall	
Connected-to/added-on	Connected to the eastern and the western wall
Measurements	Length: 2.90m
	Width: 0.35m
	Remaining height: 0.39m
Brick format	35 × 17 × 9cm Joints: 2cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Western wall	
General remarks	Only the middle part of the wall is well preserved
Connected-to/added-on	Connected to the northern and the southern wall The wall continues to the south as the western wall of Room H5/11
Measurements	Length: 4.16m
	Width: 0.35m
	Remaining height: 0.68m
Brick format	35 × 15 × 10cm Joints: 1cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps In the north there is one course of bricks standing on edge
Plaster	Mud plaster with pebbles
Openings (door/window)	–

14.23.12. Room H5/11

Function	Secondary room
Measurements	Length: 5.44m
	Width: 3.02m (S), 2.88m (N)
Surface area	15.98m ²
Adjoining rooms/areas	N: Room H5/10 E: Room H5/8 S: Rue EO4 W: Room H5/9
Entrances	No entrance is preserved, but it was presumably in the east (Room H5/8)
Floor	Remains of the mud pavement exist in the southeastern corner
Northern wall	
Connected-to/added-on	Connected to the eastern and probably the western wall

Measurements	Length: 2.88m
	Width: 0.35m
	Remaining height: 0.39m
Brick format	35 × 17 × 9cm Joints: 2cm
Layering technique	Stretcher–header
Plaster	Mud plaster
Openings (door/window)	–
Eastern wall	
General remarks	Only the southern part of the wall is preserved. The rest can be seen as one course of bricks at ground level
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 5.44m
	Width: 0.61m
	Remaining height: 0.75m
Brick format	36 × 16 × 8cm Joints: 1–2.5cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps Bricks standing on edge at the lowest level
Plaster	Mud plaster in the southeastern corner
Openings (door/window)	–
Southern wall	
Connected-to/added-on	Connected to the eastern wall The western wall is added on
Measurements	Length: 3.02m
	Width: 0.62m
	Remaining height: 0.82m
Brick format	39 × 18 × 6cm Joints: 3cm
Layering technique	Stretcher–header The vertical joints are formed as wide gaps
Plaster	Mud plaster in southeastern corner
Openings (door/window)	–
Western wall	
Connected-to/added-on	Probably connected to the northern wall and added onto southern wall
Measurements	Length: 5.44m
	Width: 0.35m
	Remaining height: 0.80m
Brick format	35 × 15 × 10cm Joints: 1cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps In the north there is one course of bricks standing on edge
Plaster	Mud plaster with pebbles
Openings (door/window)	–

14.23.13. Room H5N

Function	Secondary room
Measurements	Length: 4.45m
	Width: 4.37m
Surface area	20.85m ²
Adjoining rooms/areas	N: Area H4W E: Area H3N S: Rooms H5/1 and H5/9 W: dividing wall to the storage area SAF5
Entrance	Probably from the east (Area H3N)
Northern wall	

Connected-to/added-on	Connected to the eastern wall Added onto the western wall
Measurements	Length: 4.45m
	Width: 0.54m
	Remaining height: 0.74m
Brick format	32 × 15 × 9cm Joints: 1.5–2cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–
Eastern wall	
Connected-to/added-on	Connected to the northern wall
Measurements	Length: 2.85m
	Width: 0.29m
	Remaining height: 0.30m
Brick format	29 × 14 × 7cm Joints: 1.5–2cm
Layering technique	Stretcher–header
Plaster	–
Openings (door/window)	Possible entrance in the south, width: 1.10m
Other remarks	The eastern wall ends in a small southern wall with one brick course remaining (bricks standing on edge) Length: 0.28m, width: 0.29m
Southern wall	See the northern walls of Rooms H5/1 and H5/9
Western wall	Dividing wall to SAF5

14.24. SAF2

Plates	12, 44–51, 59, 60, 61.1, 61.2
Surface area	2,020m ² (reconstructed) Remaining area: 505.45m ²
General remarks	SAF2, the so called governor's palace, is only preserved in its western part, while the northern and eastern part no longer exist. The southern walls can only be seen as imprints in the ground

14.24.1. Room SAF2/1

Function	Main room
Measurements	Length: 5.39m
	Width: 3.78m
Surface area	21.11m ²
Adjoining rooms/areas	E: Room SAF2/2 S: Room SAF2/3 W: Rue NS1
Entrance	In the southeastern corner (from Room SAF2/2)
Floor	The remains of the mudbrick floor still exist across almost the entire room The floor consists of east-west oriented bricks (39 × 19cm) set in a pink mortar
Northern wall	
Connected-to/added-on	Connected to the eastern wall The western wall is added on
Measurements	Length: 3.78m
	Width: 1.16m
	Remaining height: 0.54m
Brick format	39 × 17 × 8cm Joints: 1.5–5cm
Layering technique	Cannot clearly be determined, but probably two headers–one stretcher The vertical joints are formed as wide gaps (up to 10cm)

Plaster	Mud plaster
Openings (door/window)	–
Other remarks	The northern edge of the wall is partly covered with dirt The eastern part of the wall is overbuilt by a secondary wall
Eastern wall	
Connected-to/added-on	Connected to the northern wall
Measurements	Length: 4.03m
	Width: 1.04m
	Remaining height: 0.65m
Brick format	39 × 19 × 10cm Joints: 1.5–4cm
Layering technique	Two headers–one stretcher The vertical joints are formed as wide gaps
Plaster	Sparse remains of mud plaster
Openings (door/window)	Door to Room SAF2/2, width: 1.28m The southern doorjamb is formed by the southern wall
Southern wall	
Connected-to/added-on	Added onto the western wall
Measurements	Length: 4.92m
	Width: 1.06m
	Remaining height: 1.08m
Brick format	39 × 19 × 9cm Joints: 1–4cm
Layering technique	Two headers–one stretcher The vertical joints are formed as wide gaps (6–11cm)
Plaster	Mud plaster
Openings (door/window)	–
Other remarks	On the eastern side the wall concludes with the doorjamb for the door between the rooms SAF2/2 and SAF2/9
Western wall	
Connected-to/added-on	The northern and the southern wall are added on The wall continues to the north and the south
Measurements	Length: 5.39m
	Width: 1.49m
	Remaining height: 1.45m
Brick format	39 × 18 × 10cm Joints: 1.5–4cm
Layering technique	Two headers–one stretcher The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–

14.24.2. Room SAF2/2

General remarks	Only the western and part of the southern wall are preserved In the north is a threshold and part of a wall
Function	Main room
Measurements	Remaining length: 6.35m
	Width: 5.20m
Surface area	31.68m ² (remaining area)
Adjoining rooms/areas	S: Room SAF2/9 W: Room SAF2/1
Entrances	In the south (Room SAF2/9), in the west (Room SAF2/1), in the north
Floor	Much of the mudbrick floor is preserved, especially in the southern part of the room and at the northern wall The bricks (39 × 19cm) are laid in a north-south direction, with one row at the northern wall east-west oriented
	Four schist slabs are situated in the middle of the room, they could stem from a later period

Northern wall	
Connected-to/added-on	Cannot be determined
Measurements	Remaining length: 1.37m
	Width: cannot be determined (the northern part of the wall is covered by rubble)
	Remaining height: one course of bricks
Brick format	39 × 19 × 9cm Joints: 1.5cm
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	Only a threshold remains, leading to an unknown room
Threshold	Measurements: 130 × 35 × 24cm (partly covered by a secondary wall) The hole for a doorpost (10 × 20 × 7cm) is on the western side
Eastern wall	No longer exists
Southern wall	
Connected-to/added-on	–
Measurements	Remaining length: 4.15m
	Width: 1.06m (0.88m at the door)
	Remaining height: 1.10m
Brick format	39 × 19 × 9cm Joints: 1.5–4cm
Layering technique	Two headers–one stretcher The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	Door to Room SAF2/9, width: 1.23m
Threshold	Measurements: 171 × 60 × 16cm The threshold is situated on the northern side of the opening and juts out for 9cm Two holes for the doorposts (26 × 7cm)
Western wall	See eastern wall of Room SAF2/1
General remarks	A secondary wall is situated directly at the eastern edge of this wall (width: 0.60m)

14.24.3. Room SAF2/3

Function	Entrance room
Measurements	Length: 3.78m
	Width: 1.91m
Surface area	7.36m ²
Adjoining rooms/areas	N: Room SAF2/1 E: Room SAF2/9 S: Room SAF2/4 W: Rue NS1
Entrances	In the west (Rue NS1) Entrances to the rooms SAF2/9 (E) and SAF2/4 (S)
Floor	Remains of a mud pavement are located at the southern wall There are bricks on the floor (30 × 19cm) as part of a brick pavement or as a secondary installation
Building phases	Maybe the opening in the west as well as the southern wall were installed at a later time
Northern wall	See southern wall of Room SAF2/1
Connected-to/added-on	Connected to the eastern wall Added onto the western wall
Eastern wall	
General remarks	Only a small part in the north (doorjamb) exists
Connected-to/added-on	Connected to the northern wall
Measurements	Length: 0.61m
	Width: 1.08m
	Remaining height: 0.55m
Brick format	39 × 18 × 9cm Joints: 1.5–4cm
Layering technique	Stretchers–headers The vertical joints are formed as wide gaps

Plaster	Mud plaster
Openings (door/window)	Door to Room SAF2/9, width: 1.29m The southern end of the wall is the northern doorjamb, the southern doorjamb is the eastern wall of Room SAF2/4. Both doorjamb are covered with mud plaster In the east the recess for a threshold is visible
Southern wall	
Connected-to/added-on	Added onto the western wall
Measurements	Length: 2.77m
	Width: 0.70m
	Remaining height: 1.24m
Brick format	32 × 13 × 8cm
Layering technique	Two headers alternating with one stretcher—one header—one stretcher
Plaster	Mud plaster
Openings (door/window)	Door to Room SAF2/4, width: 0.98m There probably was no threshold here The eastern doorjamb is the eastern wall, the western doorjamb is formed by the end of the southern wall
Western wall	
General remarks	Only a small section of the outer western wall of SAF2 exists in this room
Connected-to/added-on	The northern and southern walls are added on
Measurements	Length: 0.35m (N), 0.20m (S)
	Width: 1.50m
	Remaining height: cannot be determined
Brick format	Cannot be determined
Layering technique	Cannot be determined
Plaster	–
Openings (door/window)	Entrance from Rue NS1, width: 1.41m
Threshold	Measurements: 155 × 73 × 20cm Holes for doorposts: 23.5 × 7cm (N), 23,5 × 5cm (S) Further holes: 9 × 9cm (N), 18 × 16cm (S) The threshold juts out on the western side for 7cm. It is longer than the opening and is situated underneath the wall, where there are recesses to fit in the threshold

14.24.4. Room SAF2/4

Function	Storage room
Measurements	Length: 3.78m (E: 1.52m, W: 1.47m)
	Width: 1.35m
Surface area	5.14m ²
Adjoining rooms/areas	N: Room SAF2/3 E: Room SAF2/9 S: Room SAF2/5 W: Rue NS1
Entrance	In the north (Room SAF2/3)
Building phases	The northern wall and the dividing wall could be secondary
Northern wall	See southern wall of Room SAF2/3
Eastern wall	
Connected-to/added-on	Originally connected to the southern wall (the southeastern corner has however crumbled off)
Measurements	Length: 2.05m
	Width: 1.06m
	Remaining height: 1.10m
Brick format	39 × 18 × 9cm Joints: 1–4cm
Layering technique	One stretcher–two headers The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Southern wall	

Connected-to/added-on	Connected to the western wall
Measurements	Length: 3.76m (the southeastern corner does not exist anymore but can be reconstructed)
	Width: 0.88m
	Remaining height: 1.20m
Brick format	39 × 17 × 8cm Joints: 1.5–4cm
Layering technique	Two headers alternating with two stretchers—one header
Plaster	Mud plaster
Construction joint	In the lower part of the wall, up to a height of 0.44m
Openings (door/window)	–
Western wall	
Connected-to/added-on	Connected to the southern wall (upper part, see southern wall)
Measurements	Length: 1.35m (on the outside this section of the wall is 3.05m)
	Width: 1.49m
	Remaining height: 1.42m
Brick format	40 × 18 × 8cm Joints: 1–4cm
Layering technique	Two headers—one stretcher
Plaster	–
Openings (door/window)	–
Dividing wall	
General remarks	There is a north-south oriented wall, which separates the room into two parts
Connected-to/added-on	Connected to the northern wall
Measurements	Length: 0.45m The lower part spans the entire room (one to two courses of brick)
	Width: 0.67m (lower part), 0.32m (upper part)
	Remaining height: 1.24m
Brick format	32 × 13 × 8cm
Layering technique	Two headers alternating with one stretcher—one header—one stretcher
Plaster	Mud plaster
Openings (door/window)	Door between the two parts of the room, width: 0.90m

14.24.5. Room SAF2/5

Function	Entrance room
Measurements	Length: 4.81m
	Width: 1.37m
Surface area	6.79m ²
Adjoining rooms/areas	N: Room SAF2/4 E: Room SAF2/9 S: Room SAF2/6 W: Rue NS 1
Entrances	In the west (Rue NS1) Entrance to Room SAF2/9 in the east
Floor	Four bricks situated on the ground in the middle of the room could possibly be remains of a brick floor
Northern wall	See southern wall of Room SAF2/4
General remarks	The wall is built over four courses of the western wall, underneath is a construction joint
Measurements	Remaining length (measured from Rue NS1): 4.15m
Eastern wall	No eastern wall exists, the room is open to Room SAF2/9 in its entire width
Southern wall	
General remarks	The same construction detail as the northern wall (built over the western wall, construction joint in the lower part) can be observed here
Connected-to/added-on	Connected to the eastern wall of Room SAF2/6
Measurements	Length: 5.12m
	Width: 0.66m
	Remaining height: 1.48m

Brick format	40 × 19 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–one header The vertical joints are formed as wide gaps (up to 10cm)
Plaster	Mud plaster
Openings (door/window)	–
Western wall	
Connected-to/added-on	The wall continues to the north (Room SAF2/4) and the south (Room SAF2/6)
Measurements	Length: 1.35m (on the outside this section of the wall is 3.05m)
	Width: 1.49m
	Remaining height: three courses of brick
Brick format	40 × 18 × 8cm Joints: 1–4cm
Layering technique	Two headers–one stretcher
Plaster	–
Openings (door/window)	Door to Rue NS1, width: 1.37m No threshold remains, but there are recesses in the walls to the north and the south of the entrance A step leads into the room

14.24.6. Room SAF2/6

Function	Storage room
Measurements	Length: 3.76m
	Width: 1.75m
Surface area	6.54m ²
Adjoining rooms/areas	N: Room SAF2/5 E: Room SAF2/9 S: Room SAF2/7 W: Rue NS 1
Entrances	In the south (from Room SAF2/7)
Installations	Storage bin There are three bricks lying in a row, oriented from the north to the south. They are situated 0.63m to the east of the western wall
Northern wall	See southern wall of Room SAF2/5
Eastern wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 1.75m
	Width: 1.06m
	Remaining height: 0.53m
Brick format	40 × 19 × 9cm Joints: 1.5–5cm
Layering technique	Two headers–one stretcher The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–
Southern wall	
Connected-to/added-on	Added onto the eastern and the western wall
Measurements	Length: 2.46m (W), 0.26m (E)
	Width: 0.85m (W), 0.62m (E)
	Remaining height: 1.36m (W), 0.52m (E)
Brick format	38 × 18 × 8cm Joints: 1.5–4cm
Layering technique	One stretcher–one header–one stretcher alternating with two headers The vertical joints are formed as wide gaps (up to 7cm)
Plaster	Mud plaster
Openings (door/window)	To Room SAF2/7, width: 1.04m A threshold was probably situated on one course of bricks On the southern side of the western part is a recess for the threshold The doorjambes are covered with mud plaster

Western wall	
Connected-to/added-on	The wall continues to the north (Room SAF2/5) and the south (Room SAF2/7)
Measurements	Length: 1.75m
	Width: 1.49m
	Remaining height: 1.33m
Brick format	40 × 18 × 8cm Joints: 1–4cm
Layering technique	Two headers–one stretcher
Plaster	Mud plaster
Openings (door/window)	–

14.24.7. Room SAF2/7

Function	Entrance room
Measurements	Length: 3.75m
	Width: 2.97m
Surface area	11.09m ²
Adjoining rooms/areas	N: Room SAF2/6 E: Room SAF2/9 S: Room SAF2/8 W: Rue NS1
Entrances	In the north (Room SAF2/6), east (Room SAF2/9) and west (Rue NS1)
Northern wall	See southern wall of Room SAF2/6
Eastern wall	
Connected-to/added-on	Connected to the southern wall
Measurements	Length: 1.20m (S)
	Width: 1.06m
	Remaining height: 0.70m
Brick format	39 × 19 × 8cm Joints: 1.5–4cm
Layering technique	Two headers–one stretcher The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	To Room SAF2/9, width: 1.31m The southern doorjamb is preserved and covered with plaster, the northern doorjamb is broken off
Threshold	Measurements: 139 × 67 × 27cm The threshold is situated on the eastern side of the wall and juts out for 12cm. Only the southern part is preserved There is a hole for the doorpost on the southern side (28 × 9cm). In the north part of a hole is visible
Southern wall	
Connected-to/added-on	Connected to the western wall
Measurements	Remaining length: 1.88m (W), further to the east the wall can be seen as imprint in the ground
	Width: 0.86m
	Remaining height: 0.60m
Brick format	39 × 16 × 8cm Joints: 1.5–4cm
Layering technique	Two stretchers–one header alternating with two headers The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Western wall	
Connected-to/added-on	Connected to the southern wall The wall continues to the north (Room SAF2/6) and the south (SAF2/8)
Measurements	Length: 0.38m (N), 1.23m (S)
	Width: 1.49m
	Remaining height: 1.08m

Brick format	40 × 18 × 8cm Joints: 1–4cm
Layering technique	Two headers–one stretcher
Plaster	
Openings (door/window)	Door to Rue NS1, width: 1.35m
Threshold	Measurements: 164 × ? × 12cm The threshold is situated on the western side of the opening and juts out for 7cm Only the western part is visible, the rest is covered with rubble It is built into the southern part of the wall, in the north there is a recess (0.40 × 0.21m) for the doorpost

14.24.8. Room SAF2/8

Function	Secondary room
Measurements	Length: 3.75m
	Width: 3.18m
Surface area	11.79m ²
Adjoining rooms/areas	N: Room SAF2/7 E: Room SAF2/9 S: Room SAF2/10 W: Rue NS1
Entrances	From the east (Room SAF2/9)
Floor	Remains of a mud pavement
Northern wall	See southern wall of Room SAF2/7
Eastern wall	
General remarks	Almost nothing is preserved of this wall, only a small piece in the south and one course of bricks on the eastern side
Connected-to/added-on	Connected to the southern wall
Measurements	Length: 0.23m (S)
	Width: 1.06m
	Remaining width: 0.85m
	Remaining height: 1.05m
Brick format	40 × 17 × 7cm Joints: 1.5–4cm
Layering technique	One stretcher–two headers The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	Door to Room SAF2/9, width: 1.34m The southern doorjamb is preserved
Threshold	Measurements: 163 × 59–68 × 20cm The threshold is situated on one course of bricks on the eastern side A hole for the doorpost is in the north (16 × 13 × 8cm)
Southern wall	
Connected-to/added-on	Connected to the western and the eastern wall
Measurements	Length: 3.76m
	Width: 1.06m
	Remaining height: 1.21m
Brick format	40 × 17 × 7cm Joints: 1.5–4cm
Layering technique	One stretcher–two headers The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	–
Western wall	
Connected-to/added-on	Connected to the northern and the southern wall
Measurements	Length: 3.18m
	Width: 1.48m
	Remaining height: 0.78m
Brick format	40 × 18 × 8cm Joints: 1–4cm

Layering technique	Two headers–one stretcher
Plaster	–
Openings (door/window)	–

14.24.9. Room SAF2/9

General remarks	The eastern part of the room is not preserved and can only be reconstructed
Function	Main, central room of the house
Measurements	Length: 16.17m
	Reconstructed width: 15.67m
Surface area	256.84m ² (reconstructed)
Adjoining rooms/areas	N: Room SAF2/2 S: Room SAF2/11 W: Rooms SAF2/3–SAF2/8
Entrances	In the north (Room SAF2/2), south (Room SAF2/11) and west (Rooms SAF2/3, 5, 7, 8)
Floor	About one-third of a brick pavement with a special laying method is preserved, mostly in the northern and western parts of the room It consists of two different brick formats: 39 × 17 and 33 × 15cm The bricks are set in a pink mortar The remains of the floor in the east of the room indicate the position of the eastern wall, which corresponds to the distances between the columns and the walls (c. 5.20m)
Installations	Two column bases are <i>in situ</i> , four more can be reconstructed The first base is situated 5.24m to the east of the western wall and 4.03m to the south of the northern wall Diameter: 89cm on the top, wider at the bottom, height: 0.27m The second base is located 5.14m to the east of the first column base Diameter: 87cm on the top, wider at the bottom
Other remarks	Several walls from later periods exist in this area
	Further to the east are the remains of a wall on a lower level, which is probably the eastern outer wall of the building SAF2. Remaining length: 5.30m, width: 1.86m
Northern wall	See southern wall of Room SAF2/2
Eastern wall	The wall no longer exists, but the position of the wall can be reconstructed through the columns and the remains of the floor pavement
Southern wall	
General remarks	Only the western part is preserved
Connected-to/added-on	–
Measurements	Length: 0.21m (W), 4.15m (E)
	Width: 1.06m
	Remaining height: 0.98m
Brick format	40 × 17 × 9cm Joints: 1.5–4cm
Layering technique	one stretcher–two headers The vertical joints are formed as wide gaps
Plaster	–
Openings (door/window)	Door to Room SAF2/11, width: 1.32m Another opening can be reconstructed further to the east (see Room SAF2/11)
Threshold	Measurements: 148 × 42 × 28cm The threshold is situated on the northern side of the opening and is built into the western side of the wall Holes for doorposts are both in the east (20 × 7.5 × 7cm) and the west (23.7.5cm)
Western wall	See the eastern walls of the rooms SAF2/3–SAF2/8

14.24.10. Room SAF2/10

General remarks	Only the northern wall and the northeastern corner are preserved. Of the western and southern walls only small pieces exist. The room can however be reconstructed
Function	Main room
Measurements	Length: 7.10m
	Width: 4.21m

Surface area	30.22m ²
Adjoining rooms/areas	N: Room SAF2/8 E: Room SAF2/11 S: Room SAF2/12 W: Rue NS1
Entrances	Most probably in the east
Floor	A brick pavement with a special laying method is preserved in large parts. The bricks (33 × 16cm) are east-west oriented
Northern wall	See southern wall of Room SAF2/8
Connected-to/added-on	Connected to the eastern and the western wall
Eastern wall	
General remarks	Only a part in the north is preserved
Connected-to/added-on	Connected to the northern wall
Measurements	Remaining length: 1.87m
	Width: 1.06m
	Remaining height: 0.47m
Brick format	39 × 18 × 8cm Joints: 1.5–4cm
Layering technique	One stretcher–two headers The vertical joints are formed as wide gaps
Plaster	Mud plaster
Openings (door/window)	–
Southern wall	
General remarks	Of this wall only four bricks and an imprint to the west are preserved
Western wall	
General remarks	The wall has for the most part deteriorated. A small section with two courses of bricks is situated c. 5.0m to the south of the northern wall

14.24.11. Room SAF2/11

General remarks	Parts of the northern wall and bits of the western and southern walls are preserved. In the east there is an overbuilt threshold, up to which the pavement is laid. The room can be reconstructed
Function	Main room
Measurements	Length: 7.82m
	Width: 7.10m
Surface area	57.22m ² (reconstructed)
Adjoining rooms/areas	N: Room SAF2/9 S: Room SAF2/13 W: Room SAF2/10
Entrances	Two entrances from Room SAF2/9 (N) One door to the east, possible other entrances in the south and the west
Floor	A mudbrick floor is partly preserved in the northern part of the room. Mortar also exists in the southern part The bricks (38 × 17cm) are east-west oriented with joints of 2cm (E–W) and 4–8cm (N–S) 3.60m to the east of the western wall as well as at the threshold in the east are two rows of smaller bricks (33cm) One north-south oriented brick can be seen 3.02m to the south of northern wall and 3.14m to the east of western wall, maybe this indicates the location of a former column In all the rooms the mud floor pavement is set in a very hard mortar bed (5cm) on a 9cm thick earth layer, beneath are pebbles
Other remarks	To the south of the rooms SAF2/10 and SAF2/11 two further rooms can be reconstructed: SAF2/12 (14.25m ²) and SAF2/13 (28.34m ²)
Northern wall	See southern wall of Room SAF2/9
Openings (door/window)	A second entrance to SAF2/9 can be reconstructed through the floor paving in this area
Eastern wall	
General remarks	Only a threshold remains, indicating the location of a wall
Openings (Door/window)	Door to the east (unknown room)

Threshold	Measurements: 137 × 53 × 10cm The southern end of the threshold is located 1.84m to the south of the northern wall. The threshold is overbuilt by a wall from a later period. The original floor reaches exactly to the threshold
Southern wall	
General remarks	Sparse remains
Connected-to/added-on	–
Measurements	Remaining length: c. 1.20m Width: 1.06m Remaining height: 0.29m
Brick format	39 × 18 × 9cm Joints: 1.5–4cm
Layering technique	One stretcher–two headers
Plaster	–
Openings (door/window)	–
Western wall	See eastern wall of Room SAF2/10
Construction joint	Possibly 0.83m to the south (but only visible from this side of the wall)

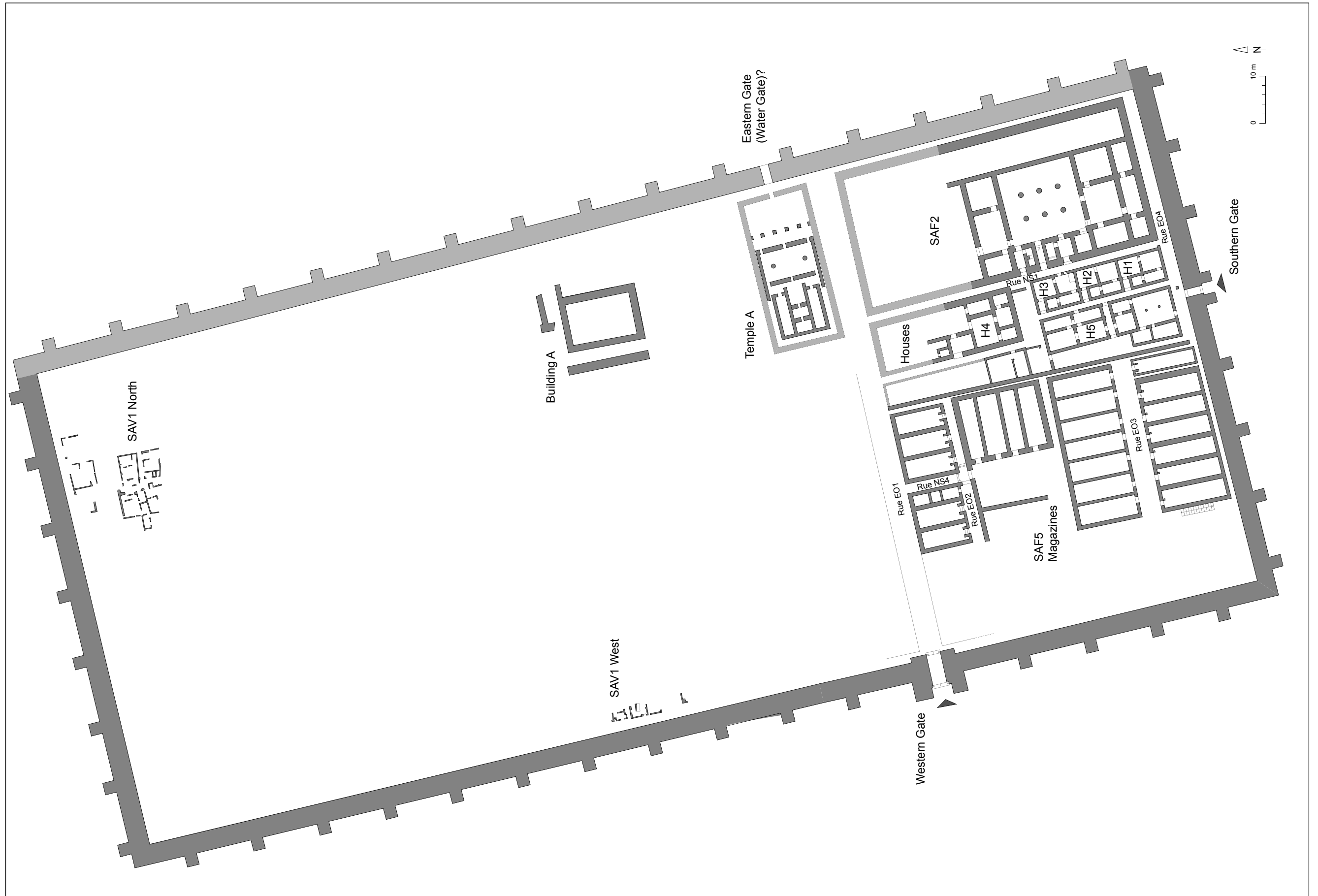
PLANS



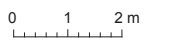
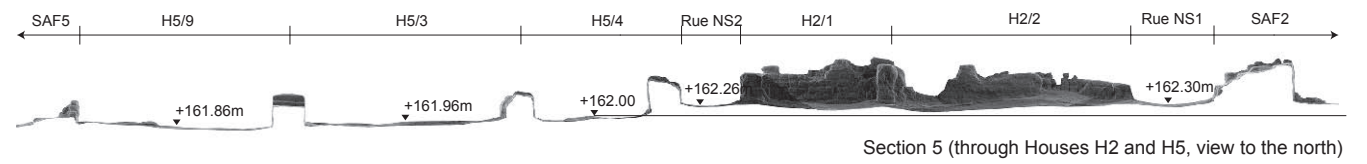
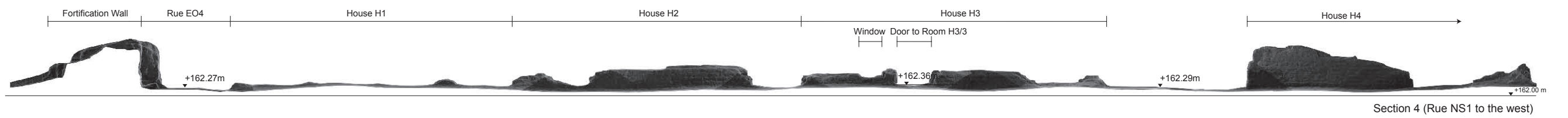
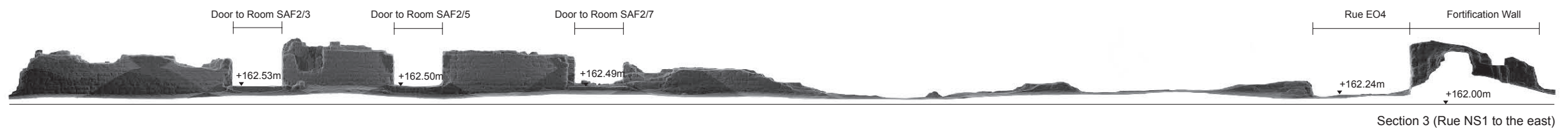
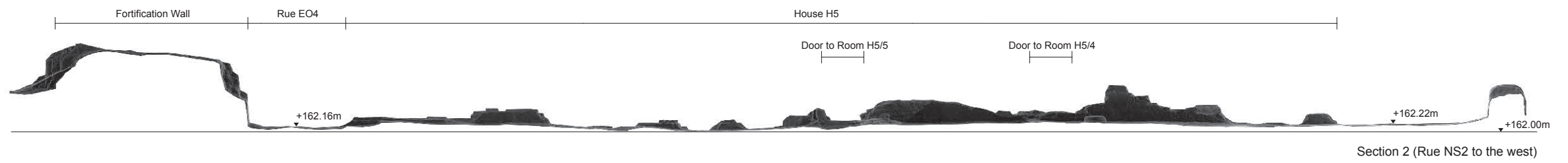
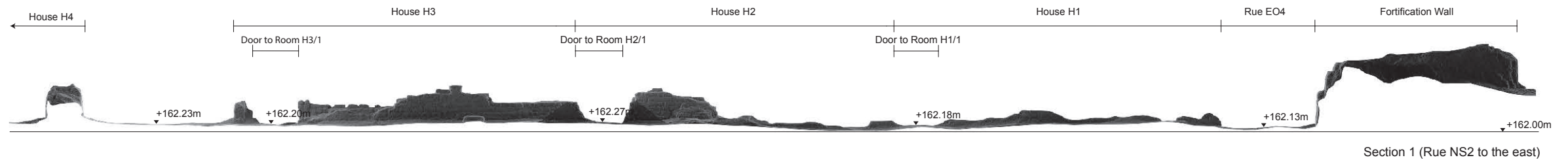
Plan 1 Ground plan of the remains of SAV1



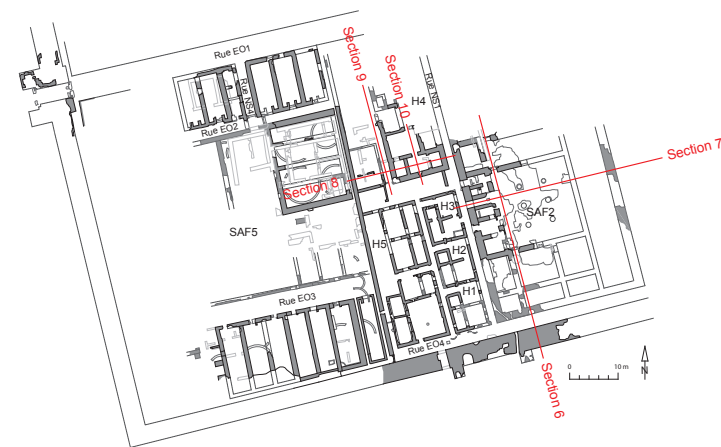
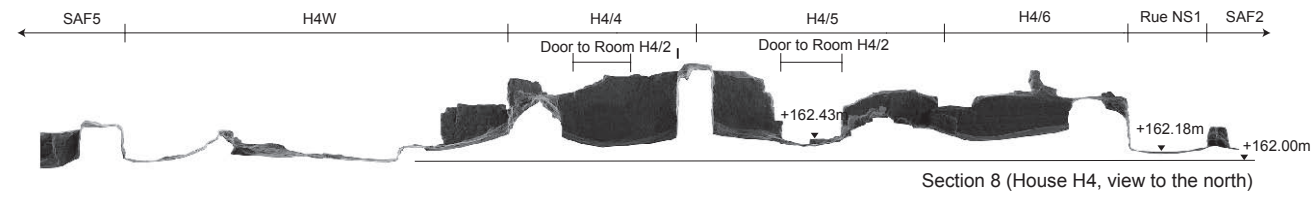
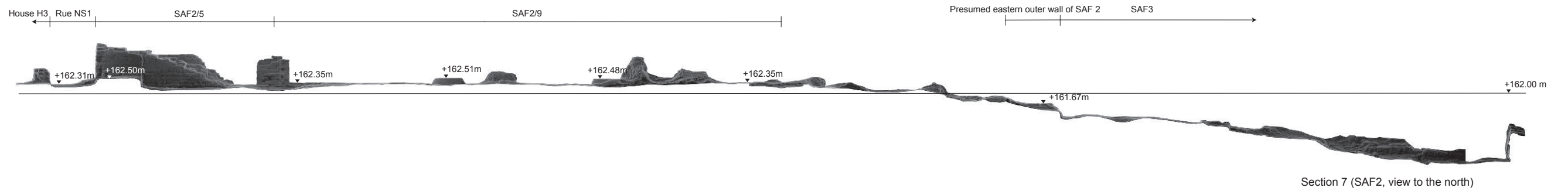
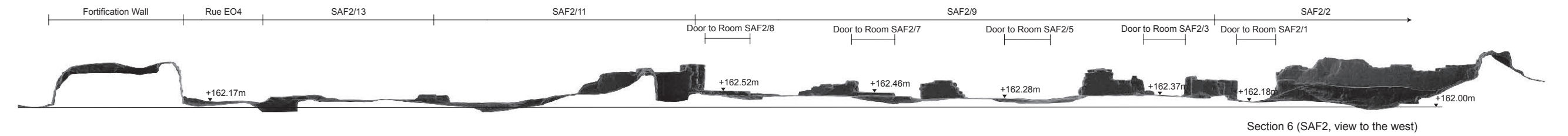
Plan 3 Ground plan of the remains of the Pharaonic town of Sai



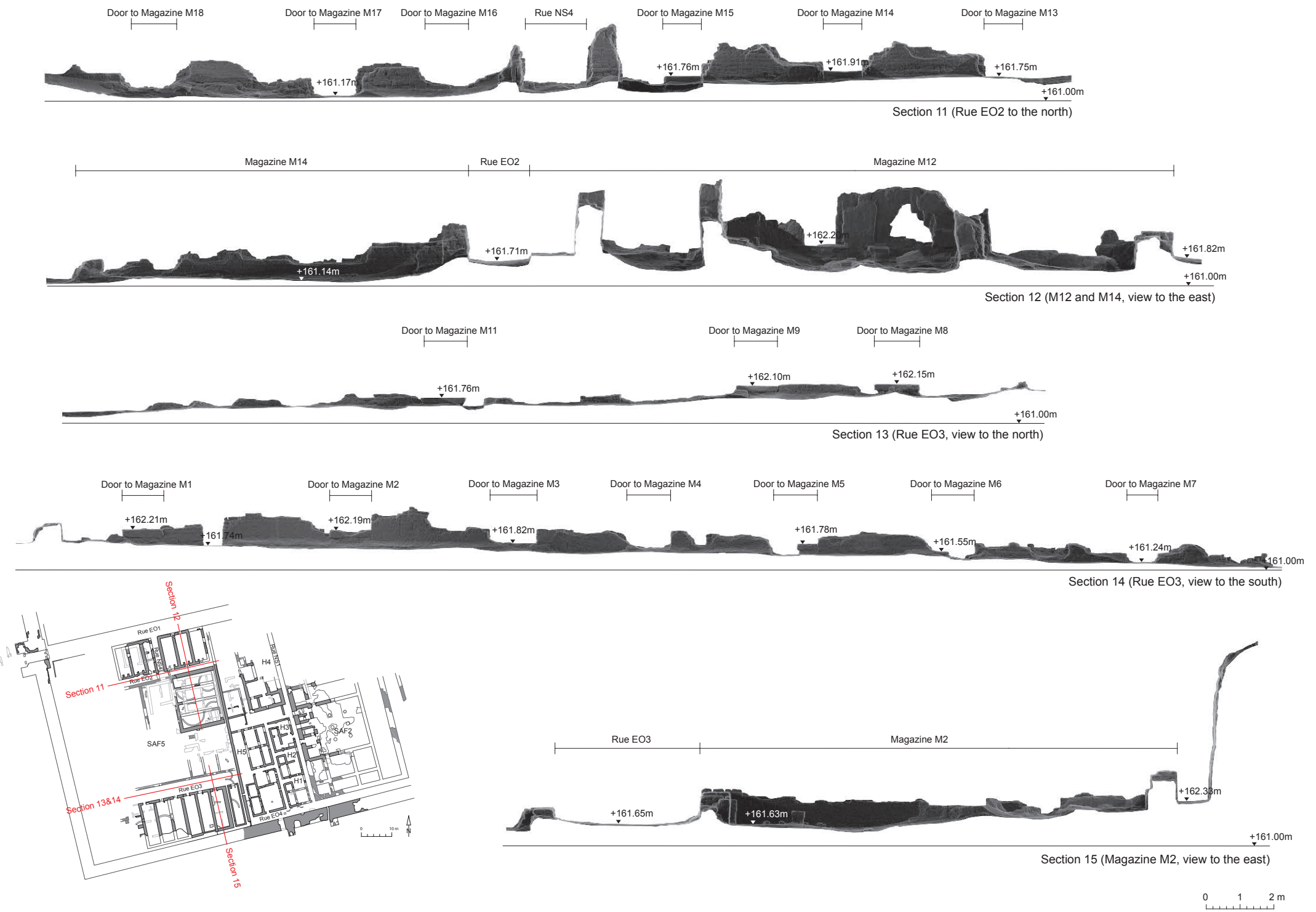
Plan 4 Reconstruction plan of the Pharaonic town of Sai



Plan 5 Sections 1-5

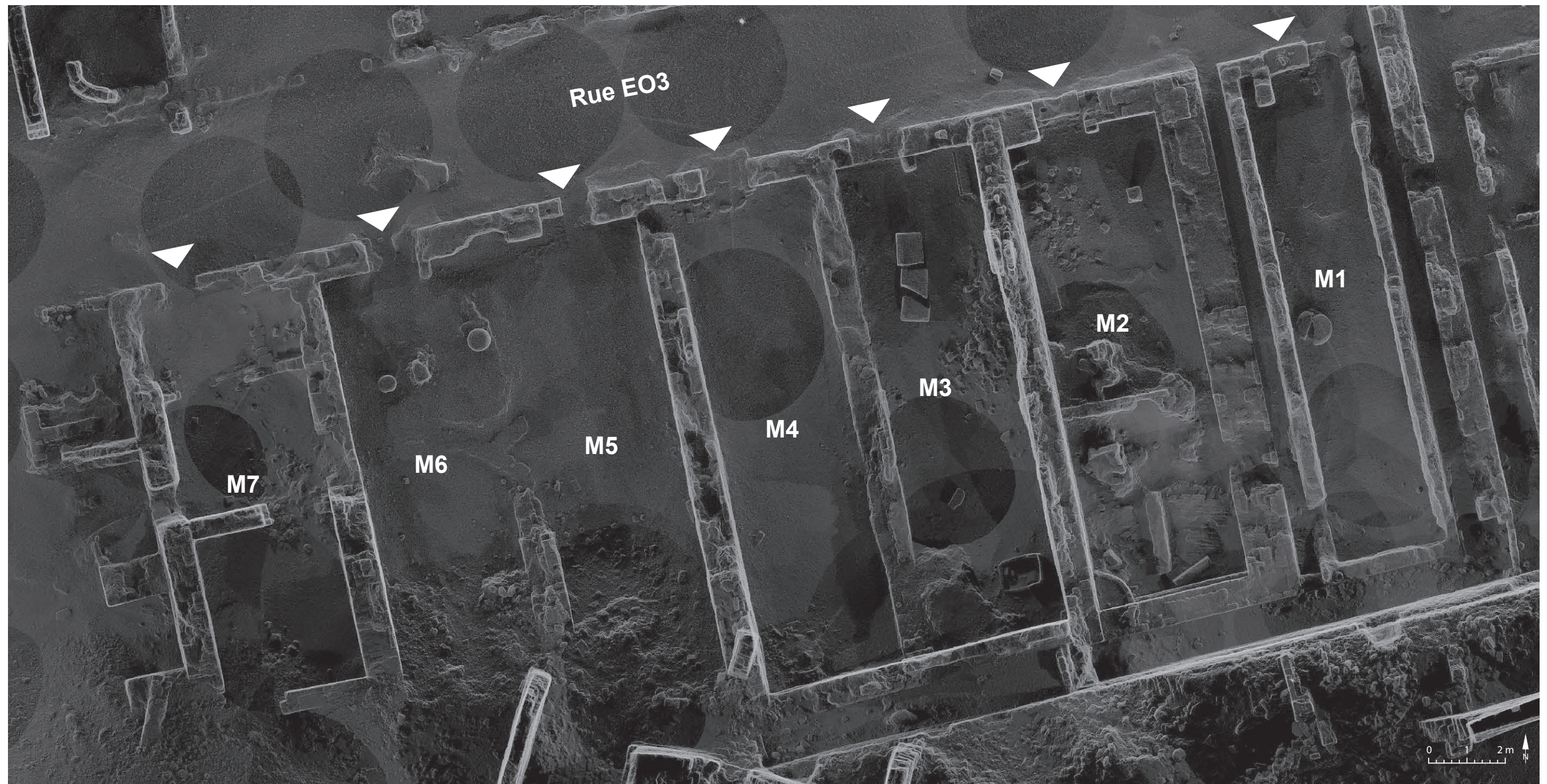


Plan 6 Sections 6–10

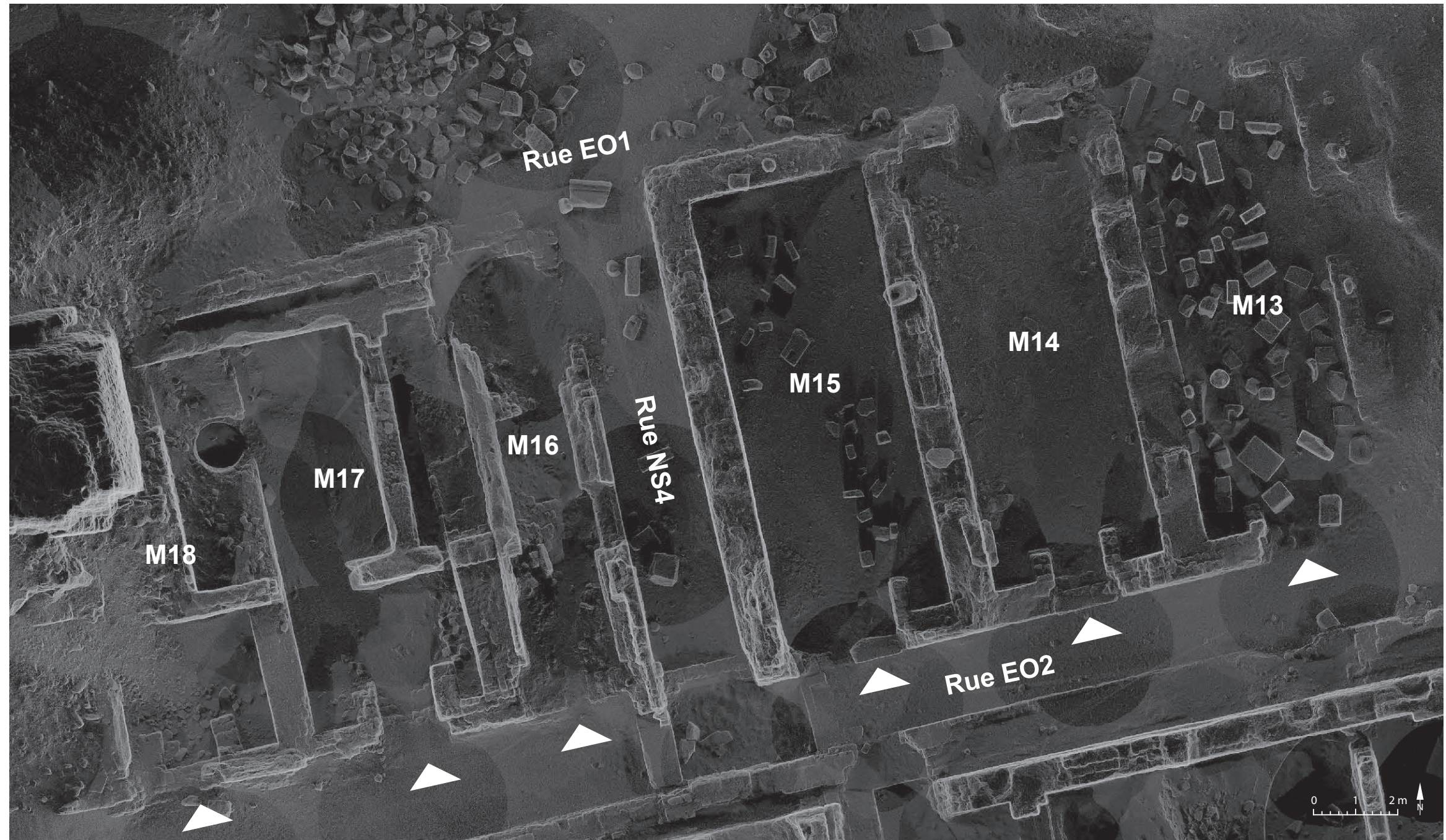


Plan 7 Sections 11-15

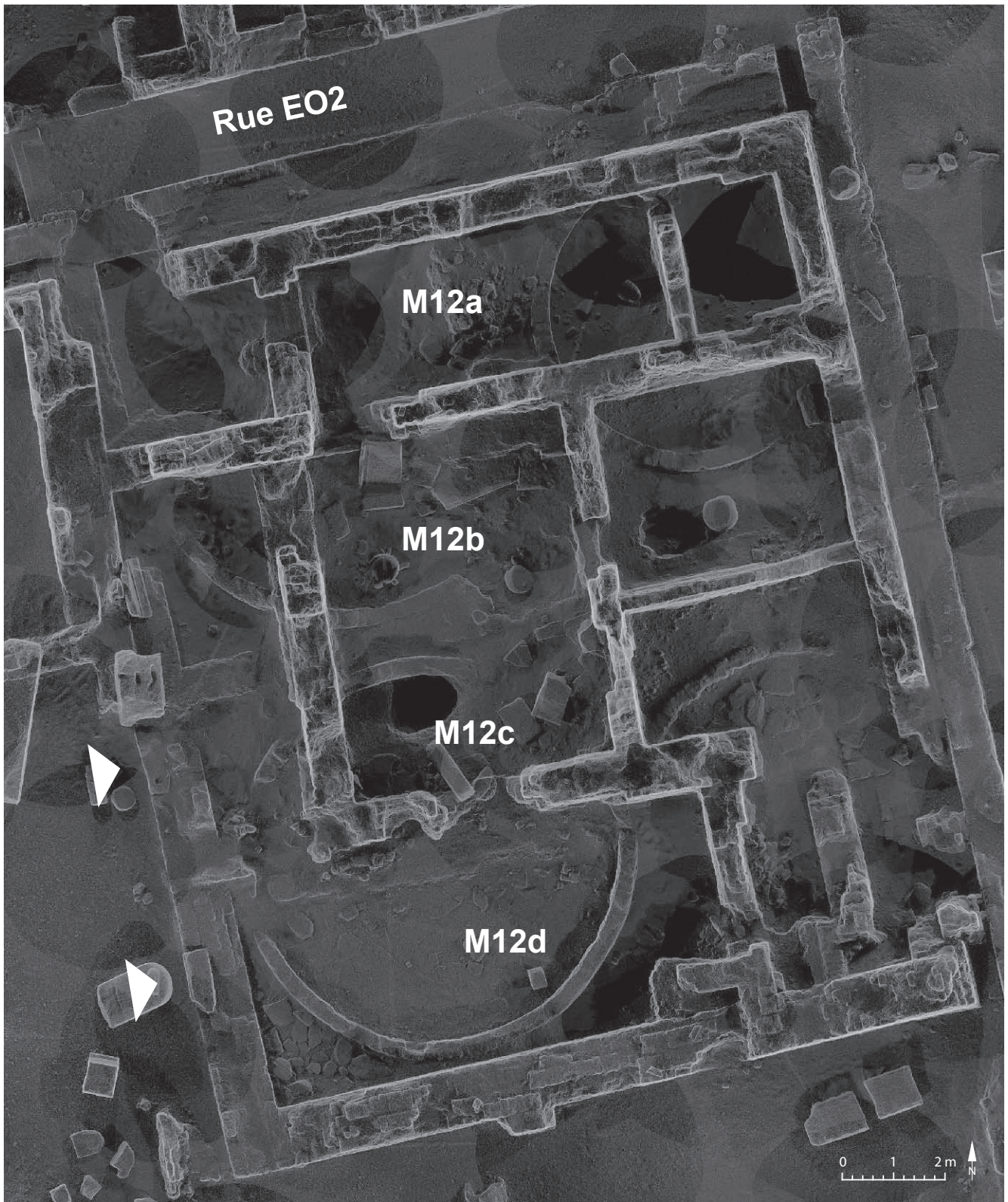
PLATES



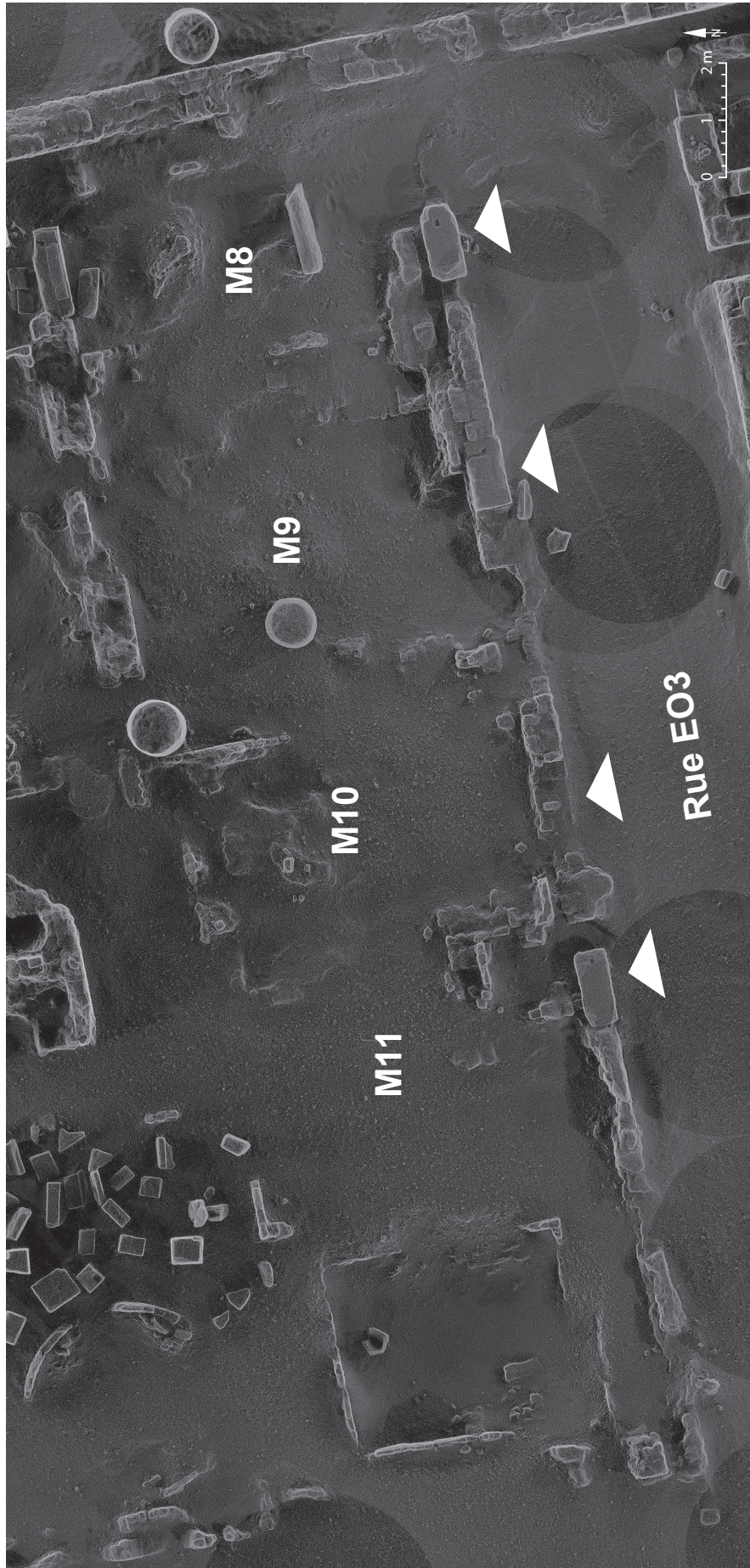
Pl. 1. Ground plan of the storage rooms M1–M7, generated from the 3-D laser scan



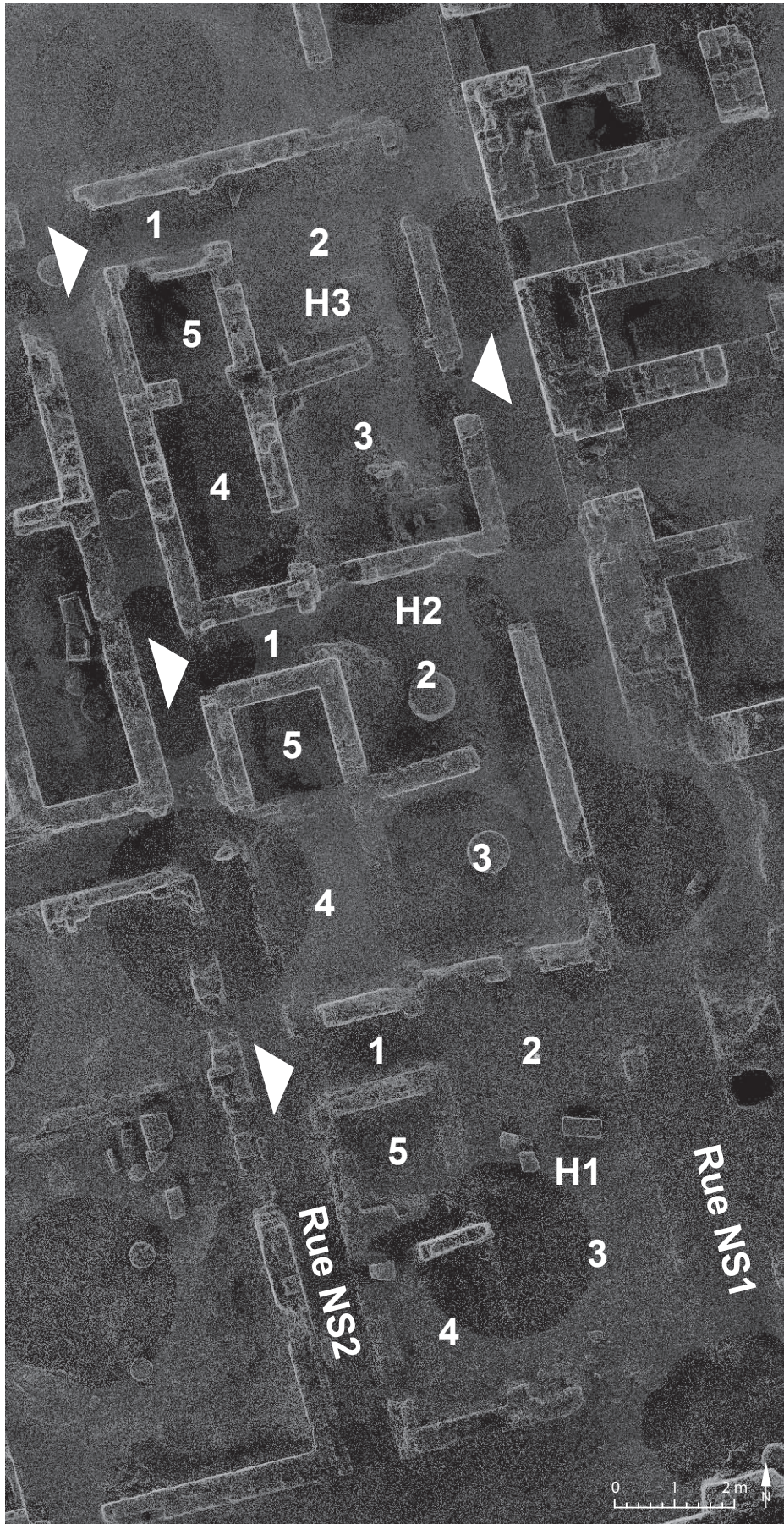
Pl. 2. Ground plan of the storage rooms M13–M18, generated from the 3-D laser scan



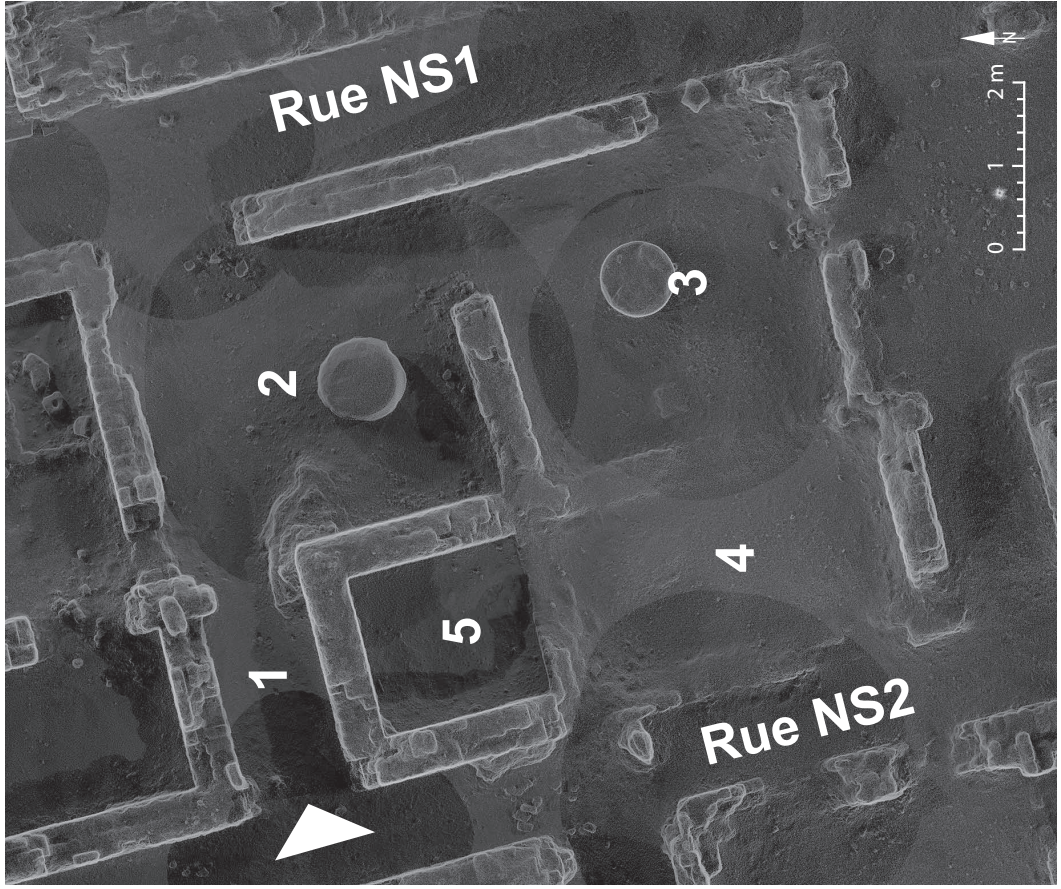
Pl. 3. Ground plan of the storage room M12, generated from the 3-D laser scan



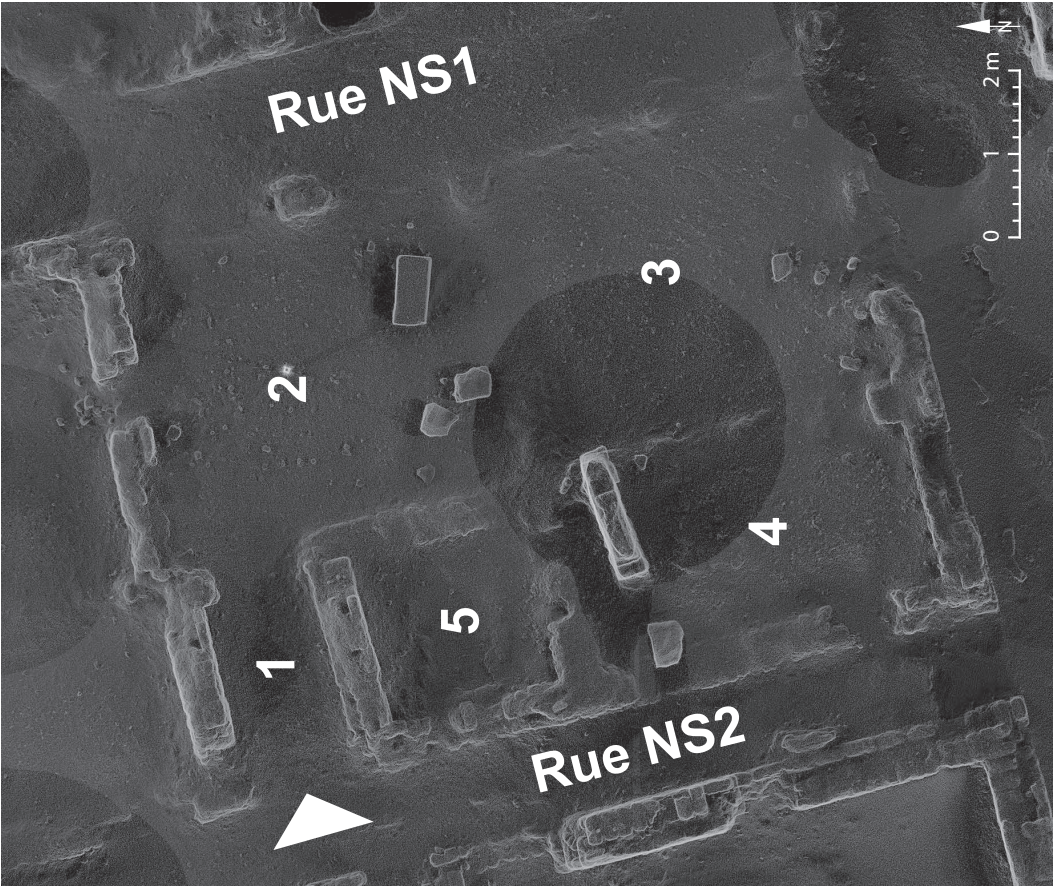
Pl. 4. Ground plan of the storage rooms M8–M11, generated from the 3-D laser scan



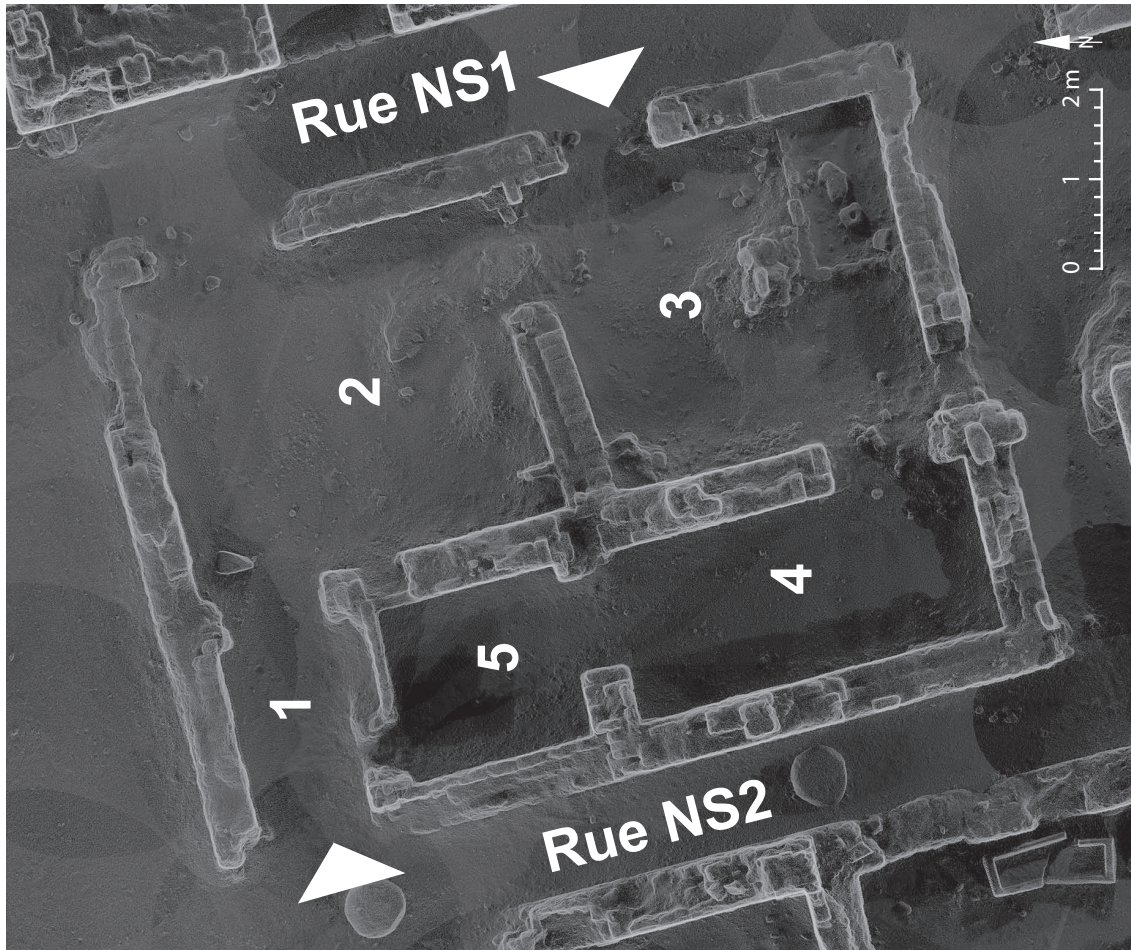
Pl. 5. Ground plan of the houses H1–H3, generated from the 3-D laser scan



Pl. 6.2. Ground plan of House H2, generated from the 3-D laser scan



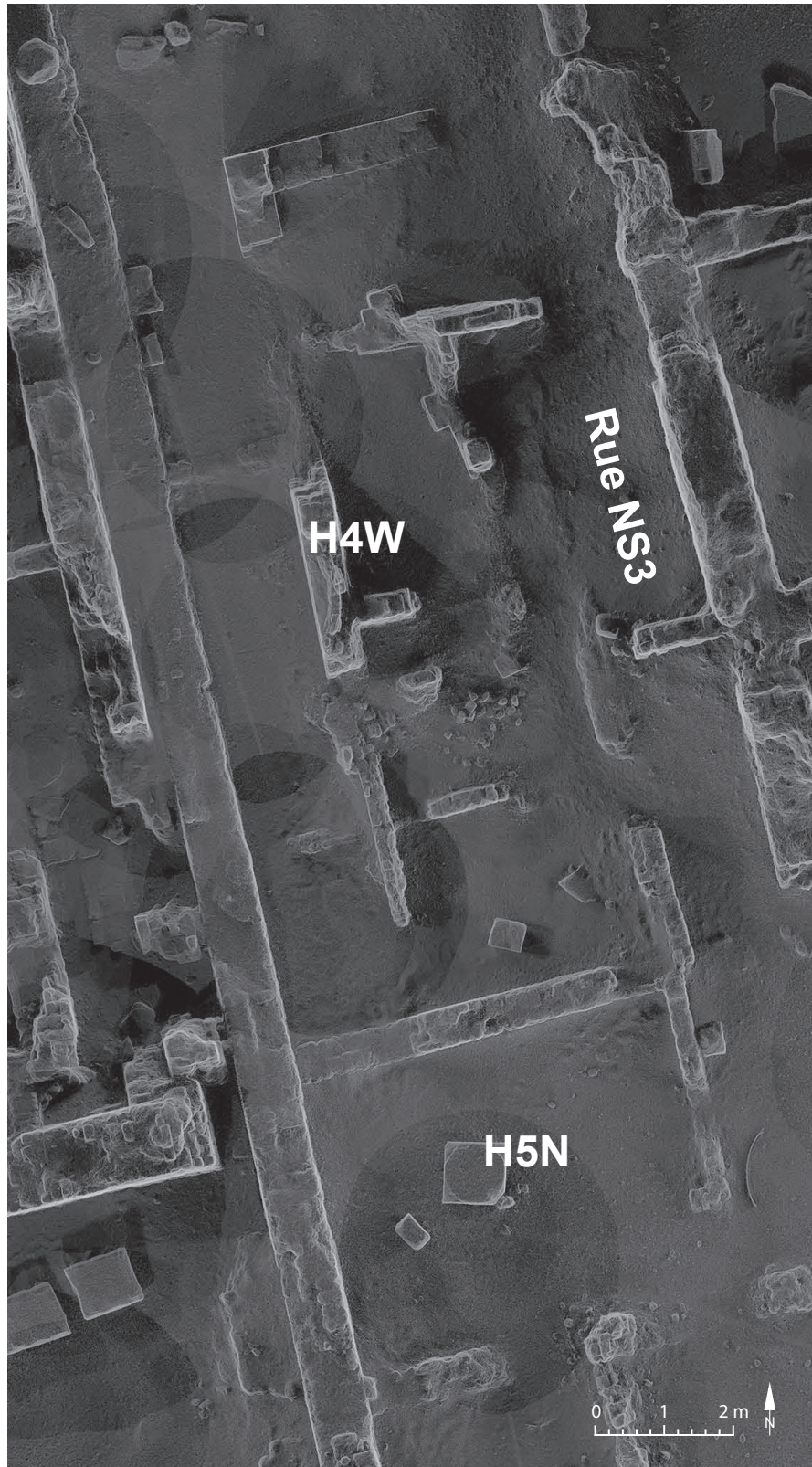
Pl. 6.1. Ground plan of House H1, generated from the 3-D laser scan



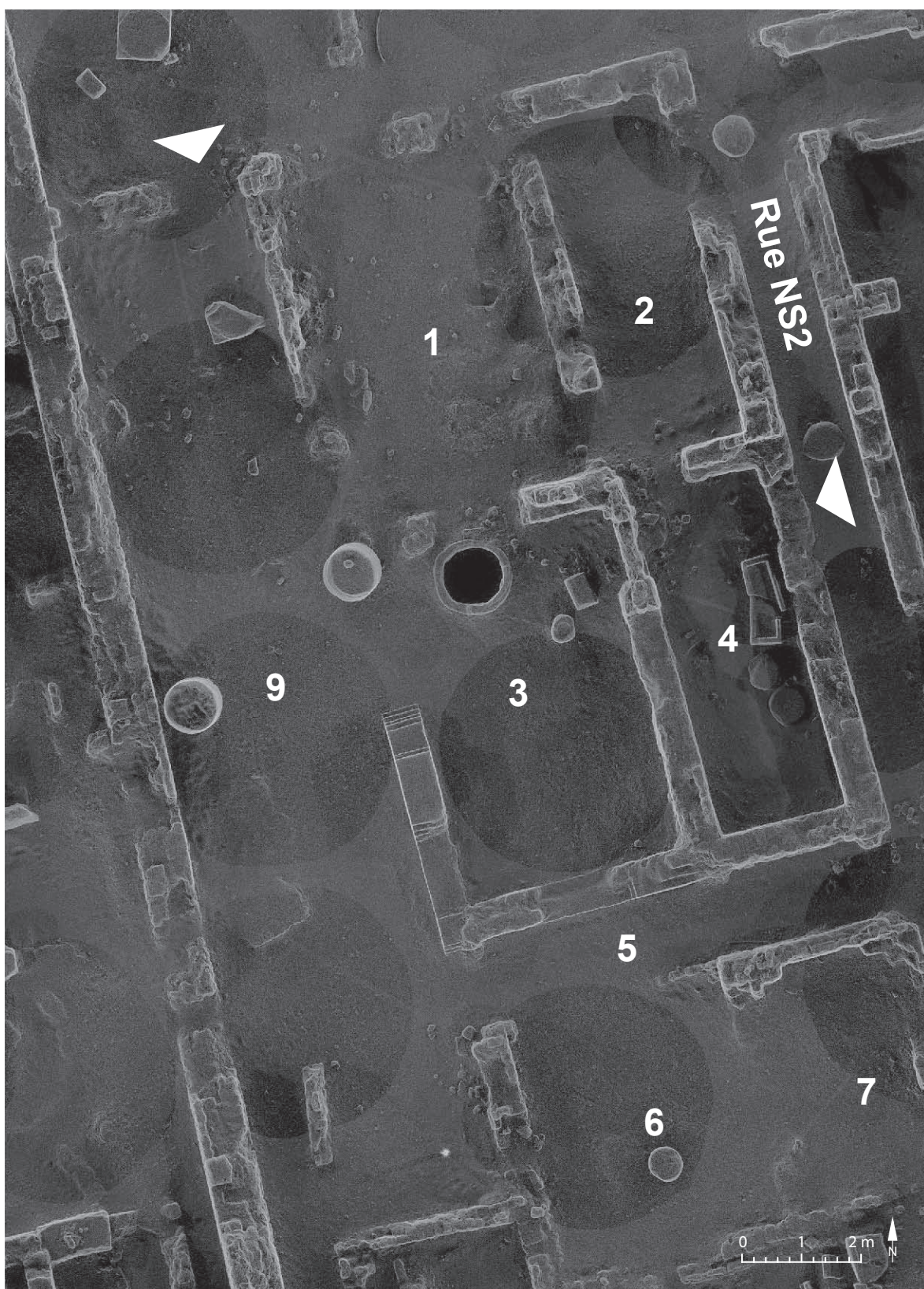
Pl. 7. Ground plan of House H3, generated from the 3-D laser scan



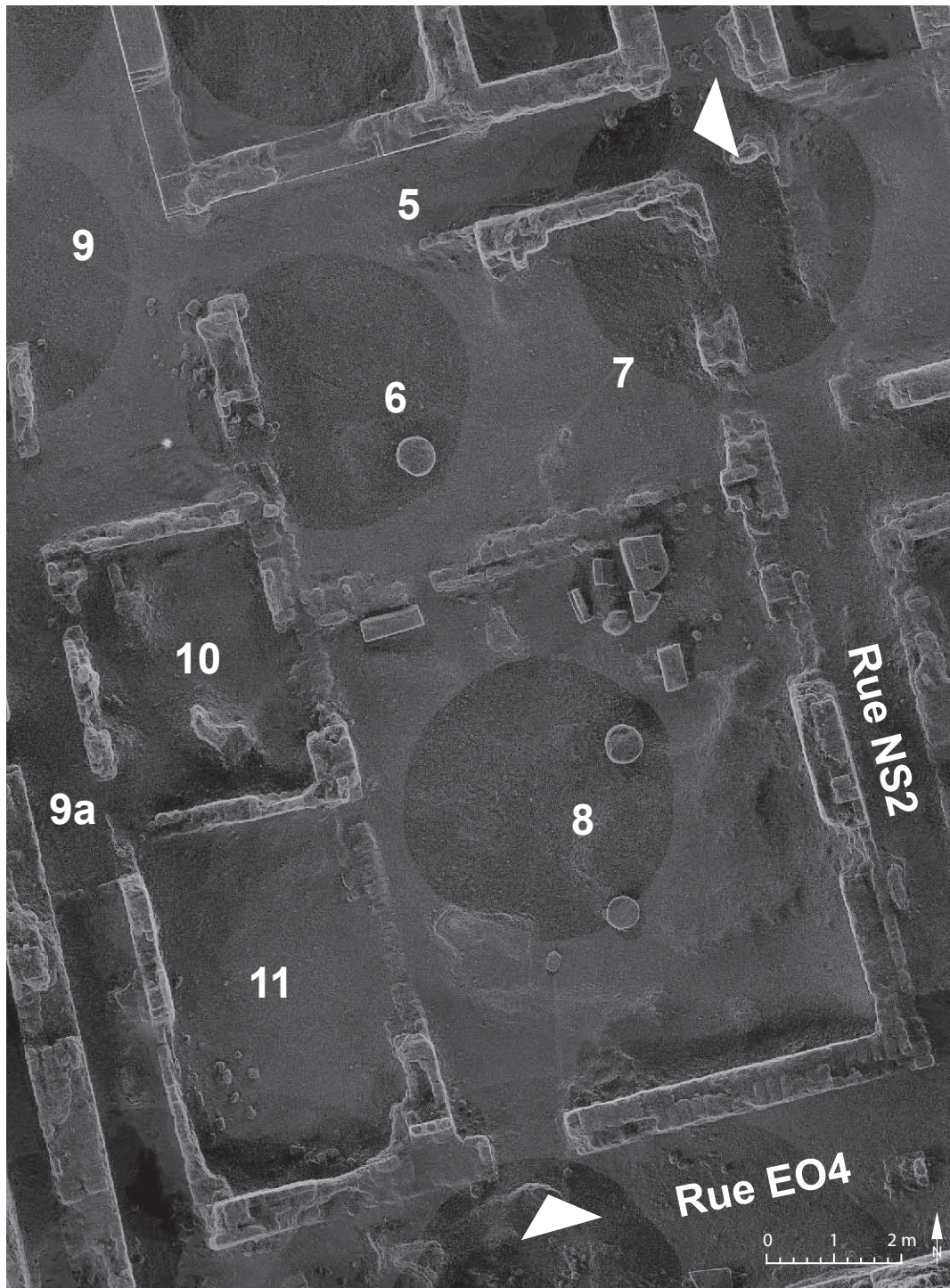
Pl. 8. Ground plan of House H4, generated from the 3-D laser scan



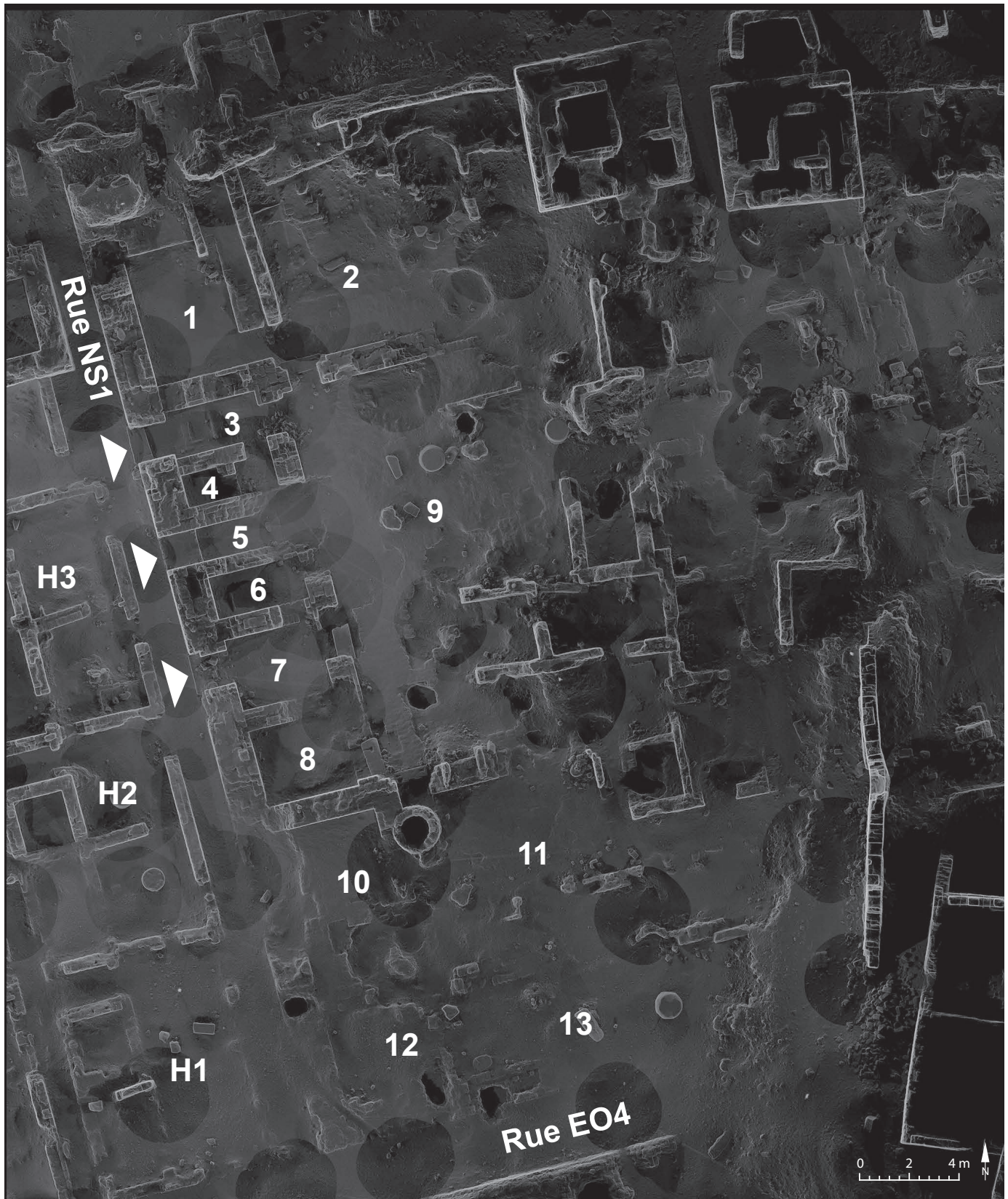
Pl. 9. Ground plan of the area H4W, generated from the 3-D laser scan



Pl. 10. Ground plan of House H5 – northern part, generated from the 3-D laser scan



Pl. 11. Ground plan of House H5 – southern part, generated from the 3-D laser scan



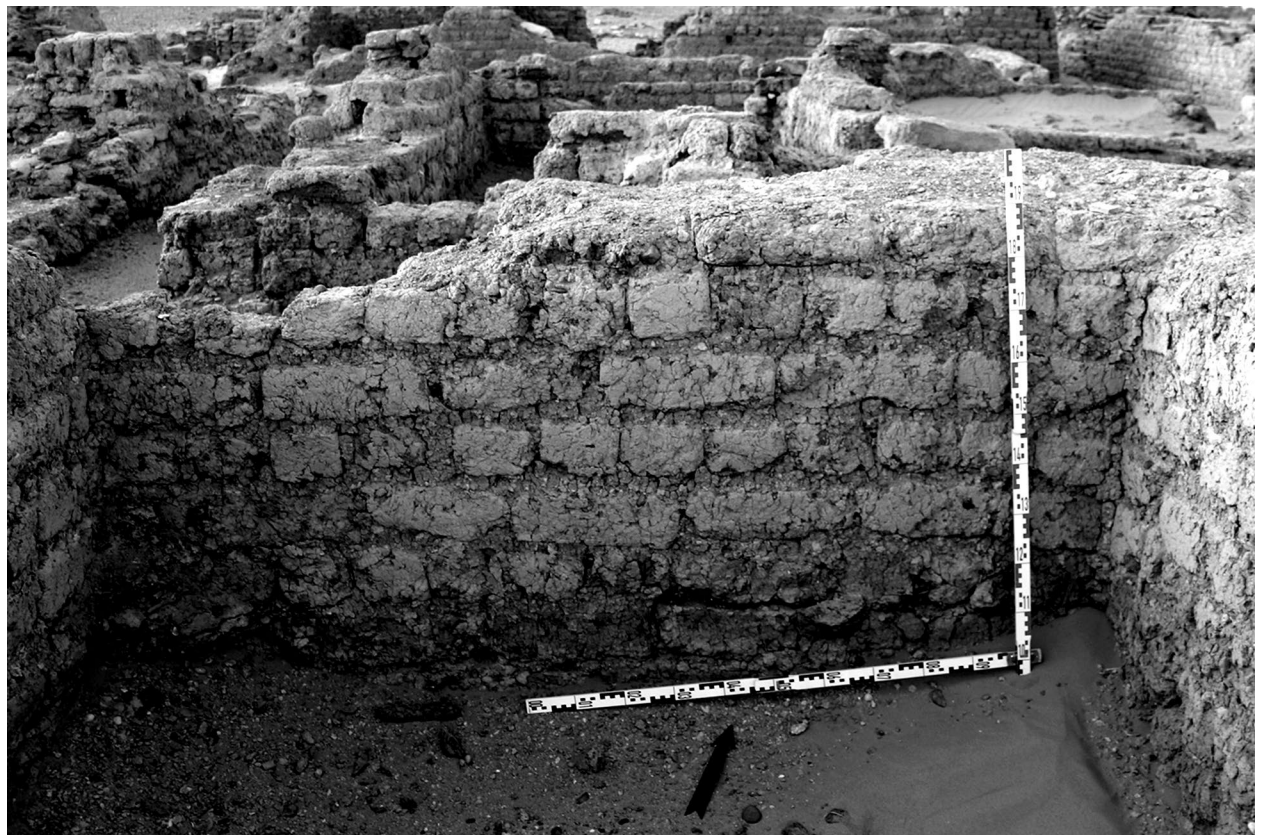
Pl. 12. Ground plan of SAF2, generated from the 3-D laser scan



Pl. 13.1. Bricklaying technique – vertical section through a 1.06 m thick wall in SAF2



Pl. 13.2. Bricklaying technique – horizontal section through a 0.90 m thick wall in M14



Pl. 13.3. Bricklaying technique – view of a wall in House H2



Pl. 14.1. View of the northern wall of the storage room M2 with a steadying method of the wall



Pl. 14.2. Bricks standing on edge – southern wall of the storage room M8



Pl. 15.1. Sandstone threshold between Rooms SAF2/7 and SAF2/9



Pl. 15.2. Sandstone threshold between Rooms SAF2/8 and SAF2/9



Pl. 15.3. Part of the mudbrick floor in Room SAF2/9



Pl. 15.4. Collapsed vault in the storage room M2



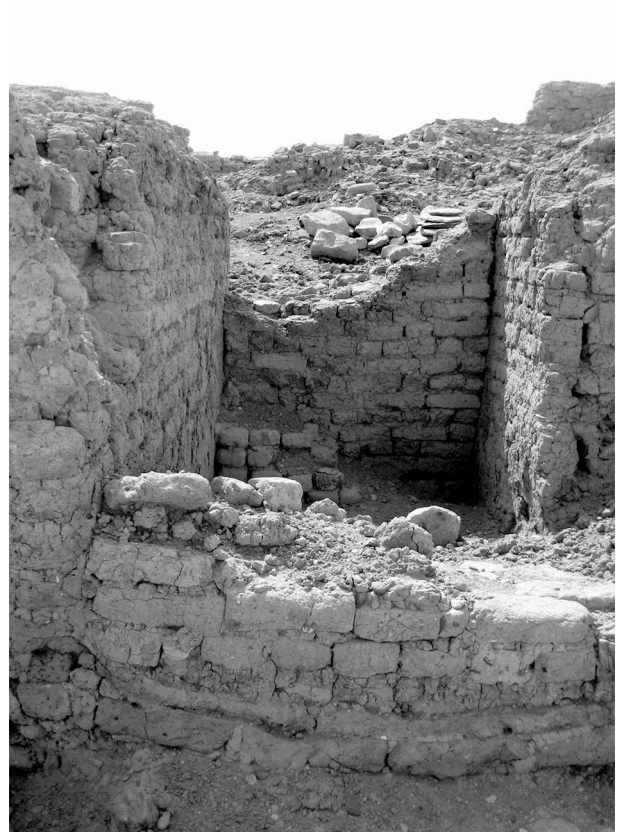
Pl. 16.1. Southern fortification wall, view from the north



Pl. 16.2. Southern fortification wall, view from the south



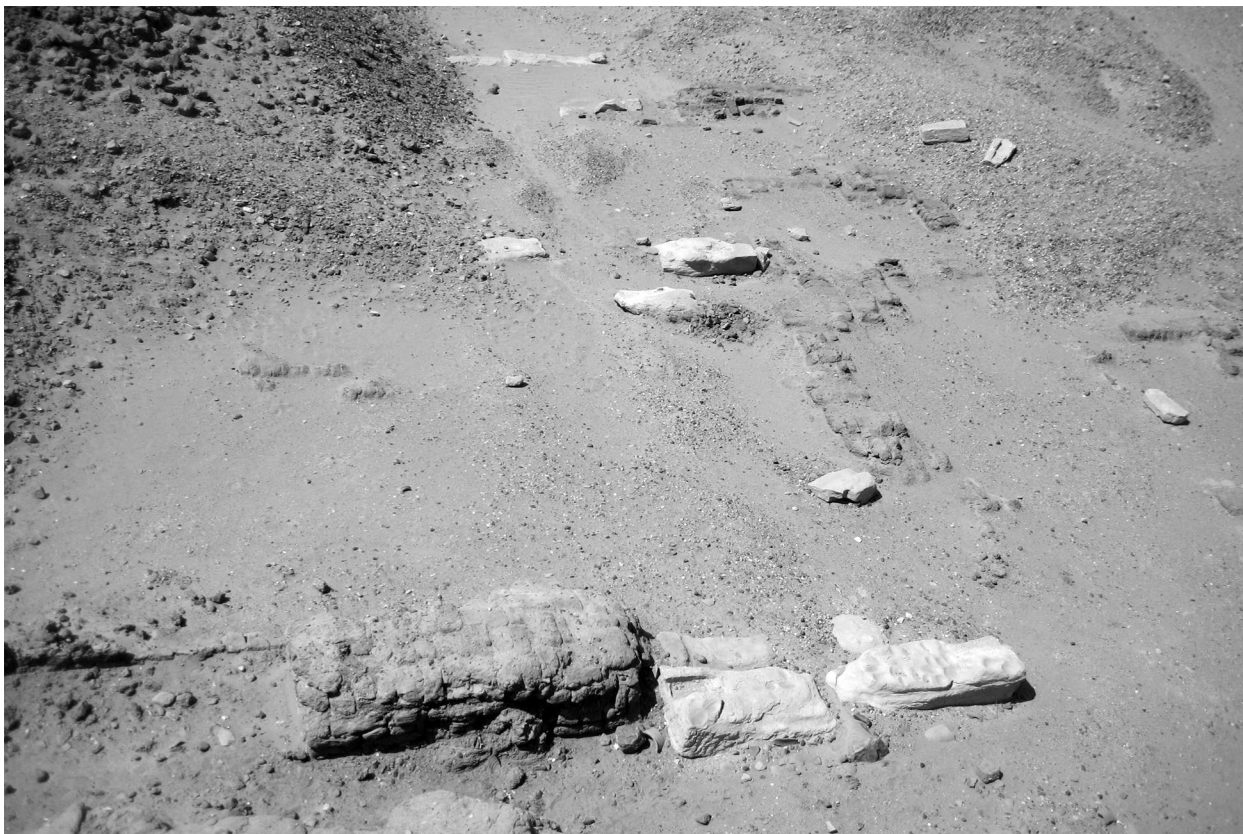
Pl. 17.1. Southern fortification wall, view from the east



Pl. 17.2. Southern gate, view from the north



Pl. 17.3. Remains of the fortifications at SAV1 North, view from the east



Pl. 18.1. Overview of the remains of the western gate SAF4 from the east



Pl. 18.2. Sandstone threshold of the western gate SAF4, view from the east



Pl. 19.1. Rue NS4, view from the south



Pl. 19.2. Rue EO2, view from the west



Pl. 20.1. Rue EO2, view from the east



Pl. 20.2. Doorjamb with an inscription of Nehi in Rue EO2



Pl. 20.3. Rue EO2, threshold and doorjamb with an inscription of Nehi, eastern side



Pl. 21.1. Rue NS1, view from the south



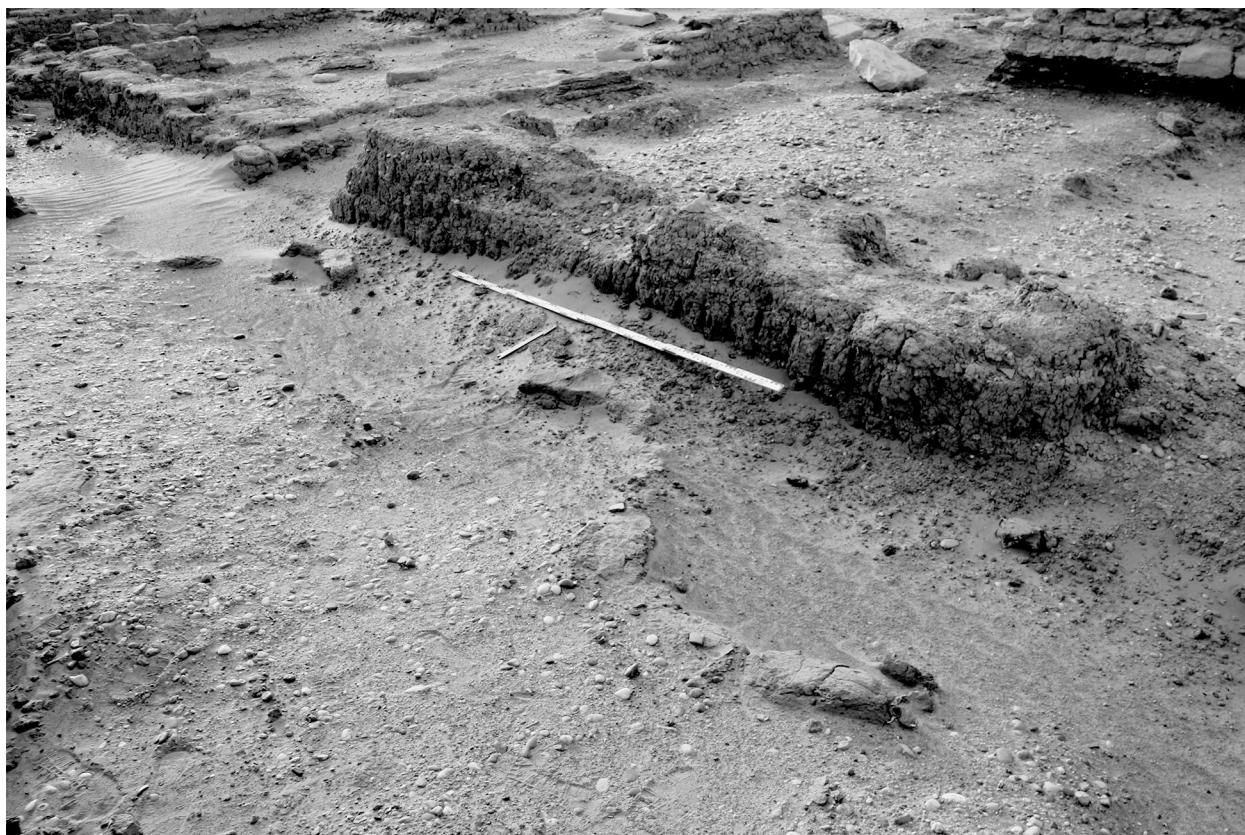
Pl. 21.2. Rue EO4, view from the east



Pl. 22.1. Serpentine wall in Rue EO4, view to the west



Pl. 22.2. Serpentine wall in Rue EO4, view to the east



Pl. 22.3. Serpentine wall in Rue EO4



Pl. 23.1. Temple A, view from the southeast



Pl. 23.2. Temple A, view from the west



Pl. 24.1. Storage room M1, view from the south



Pl. 24.2. Storage room M2, view from the south



Pl. 24.3. Storage room M3, view from the south



Pl. 24.4. Storage basin installed in the storage room M3



Pl. 25.1. Storage room M4, view from the north



Pl. 25.2. Storage room M5, view from the north



Pl. 26.1. Storage room M6, view from the south



Pl. 26.2. Storage room M7, view from the north



Pl. 27.1. Overview of the remains of the storage rooms M8 and M9 from the northwest



Pl. 27.2. Remains of the southern wall of the storage rooms M8 and M9, view from the south



Pl. 28.1. Southern wall of the storage rooms M8 and M9, view from the west



Pl. 28.2. Remains of the northern wall of storage room M10, view from the west



Pl. 28.3. Southern wall of the storage rooms to the west of M11, view from the west



Pl. 29.1. Overview of the storage area M12 from the northwest with predominantly Meroitic remains



Pl. 29.2. Remains of a silo built into the storage area M12, view from the west



Pl. 30.1. Western wall of the storage area M12,
view from the south



Pl. 30.2. Remains of the eastern wall of the storage area M12,
view from the north



Pl. 30.3. Remains of the Pharaonic structures in the north of M12, overbuilt by Meroitic walls (view from the north)



Pl. 31.1. Doorjamb with an inscription of Nehi, re-used as a threshold in a later building period



Pl. 31.2. Storage room M13, view from the south



Pl. 32.1. Storage room M14, view from the south



Pl. 32.2. Entrance situation of the storage room M14, view from the north



Pl. 33.1. Storage room M15, view from the south



Pl. 33.2. Storage room M16, view from the north



Pl. 34.1. Western wall of the storage room M16,
view from the north



Pl. 34.2. Storage room M17, view from the north



Pl. 34.3. Storage room M17, view from the south



Pl. 35.1. Storage room M18, view from the southwest



Pl. 35.2. Presumed northwestern corner of the storage area SAF5, located at the western gate



Pl. 36.1. Overview of Houses H1–H3 and H5 from the south



Pl. 36.2. Overview of House H1 from the southeast



Pl. 37.1. House H2, view from the south



Pl. 37.2. House H2, view from the north (Rooms H2/2, H2/3 and H2/4)



Pl. 38.1. Overview of House H3 from the north



Pl. 38.2. House H3, view from the southeast



Pl. 39.1. Room H3/2 with the mastaba and the window, view from the northwest



Pl. 39.2. Mastaba in Room H3/2



Pl. 40.1. Window in Room H3/2, view from the west



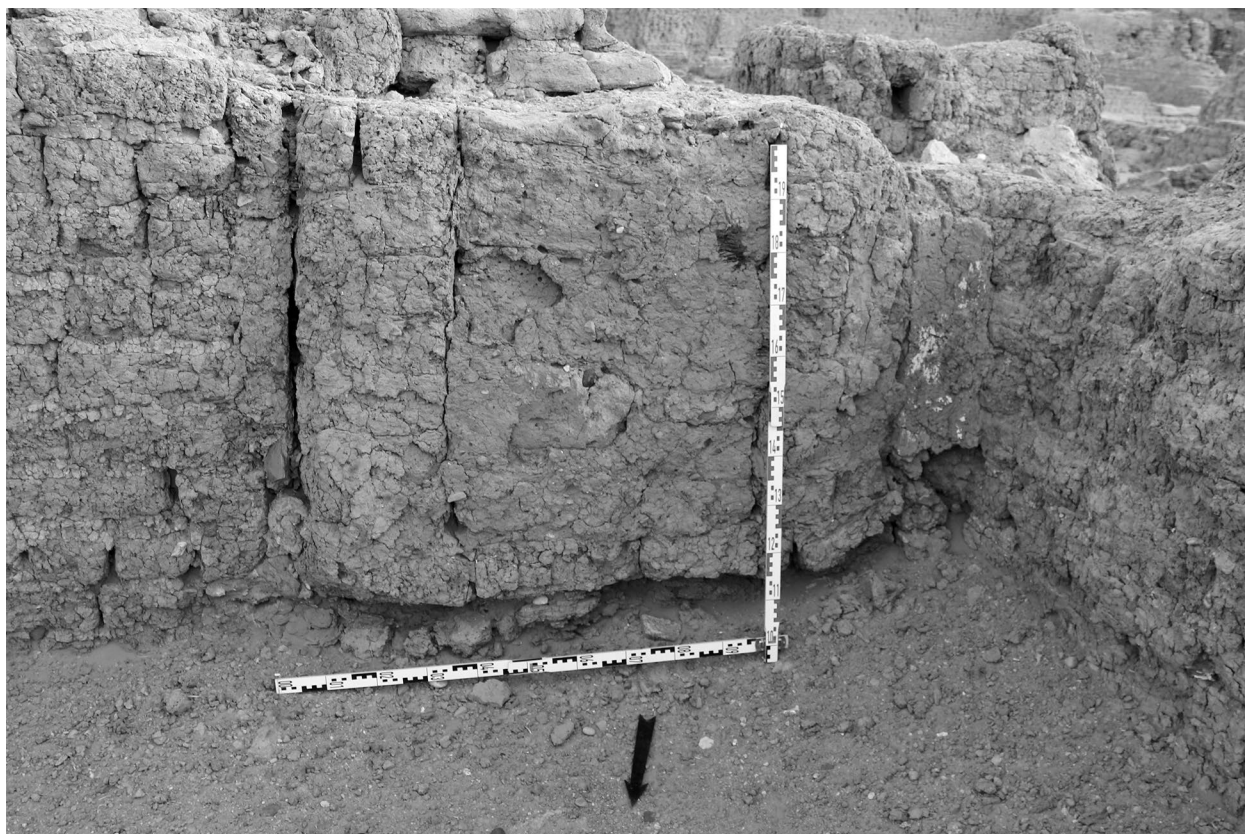
Pl. 40.2. Window in Room H3/2, view from the east



Pl. 41.1. House H4, view from the south



Pl. 41.2. Overview of the rooms H4/4, H4/5 and H4/6 from the east



Pl. 42.1. Closed off door between Rooms H4/2 and H4/4, view from the north



Pl. 42.2. House H5, view from the south



Pl. 43.1. Rooms H5/1 and H5/2, view from the southwest



Pl. 43.2. Room H5/8, view from the north



Pl. 44.1. Overview of SAF2 from the northwest



Pl. 44.2. Overview of SAF2 from the southwest



Pl. 45.1. Horizontal construction joint in Room SAF2/5



Pl. 45.2. Room SAF2/3, view from the east



Pl. 45.3. Room SAF2/3, view from the west



Pl. 46.1. Rooms SAF2/4 and SAF2/5, view from the east



Pl. 46.2. Room SAF2/4, northern wall and dividing wall, view from the southeast



Pl. 47.1. Rooms SAF2/6 and SAF2/7, view from the east



Pl. 47.2. Storage bin in Room SAF2/6



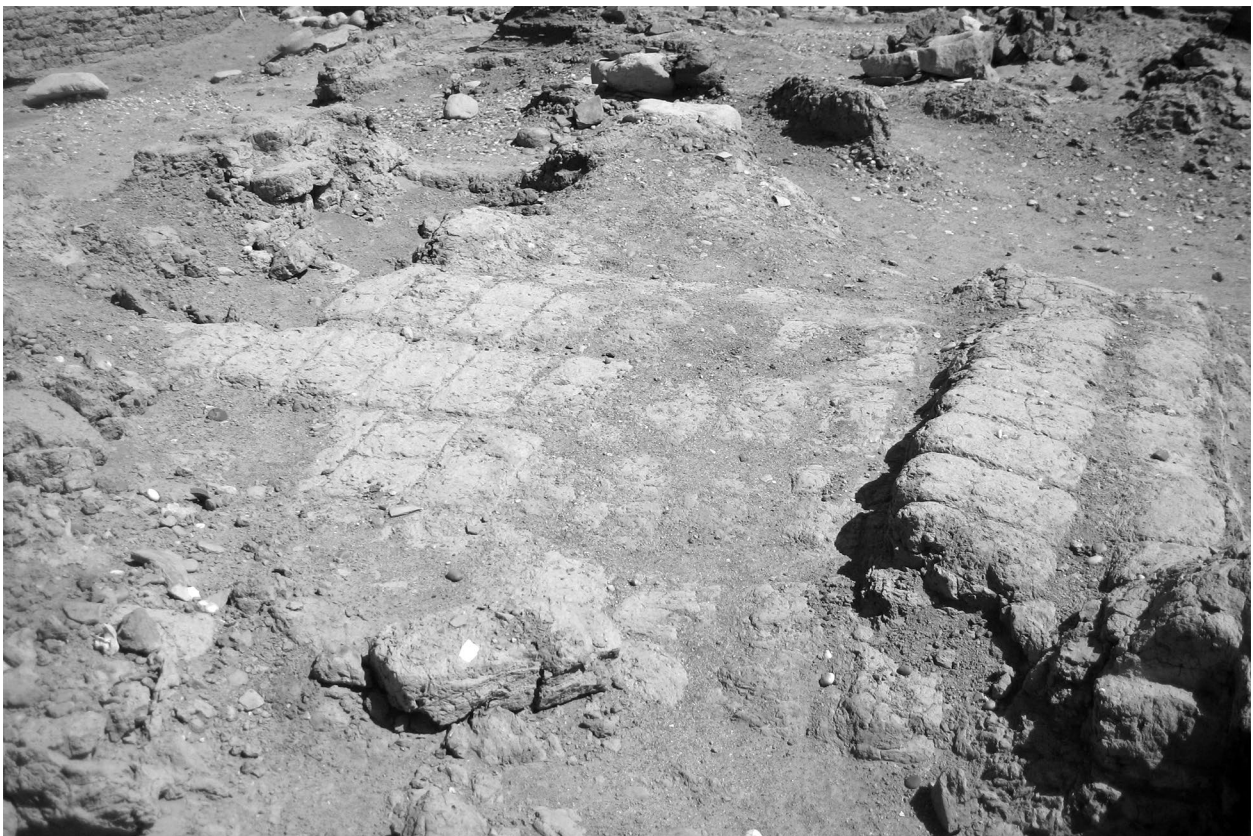
Pl. 48.1. Threshold in Room SAF2/7, view from the southwest



Pl. 48.2. Room SAF2/8, view from the east



Pl. 49.1. Room SAF2/9, view from the southwest



Pl. 49.2. Remains of the brick pavement on the eastern side of Room SAF2/9



Pl. 50.1. Room SAF2/1, view from the southwest



Pl. 50.2. Threshold on the eastern side of Room SAF2/11



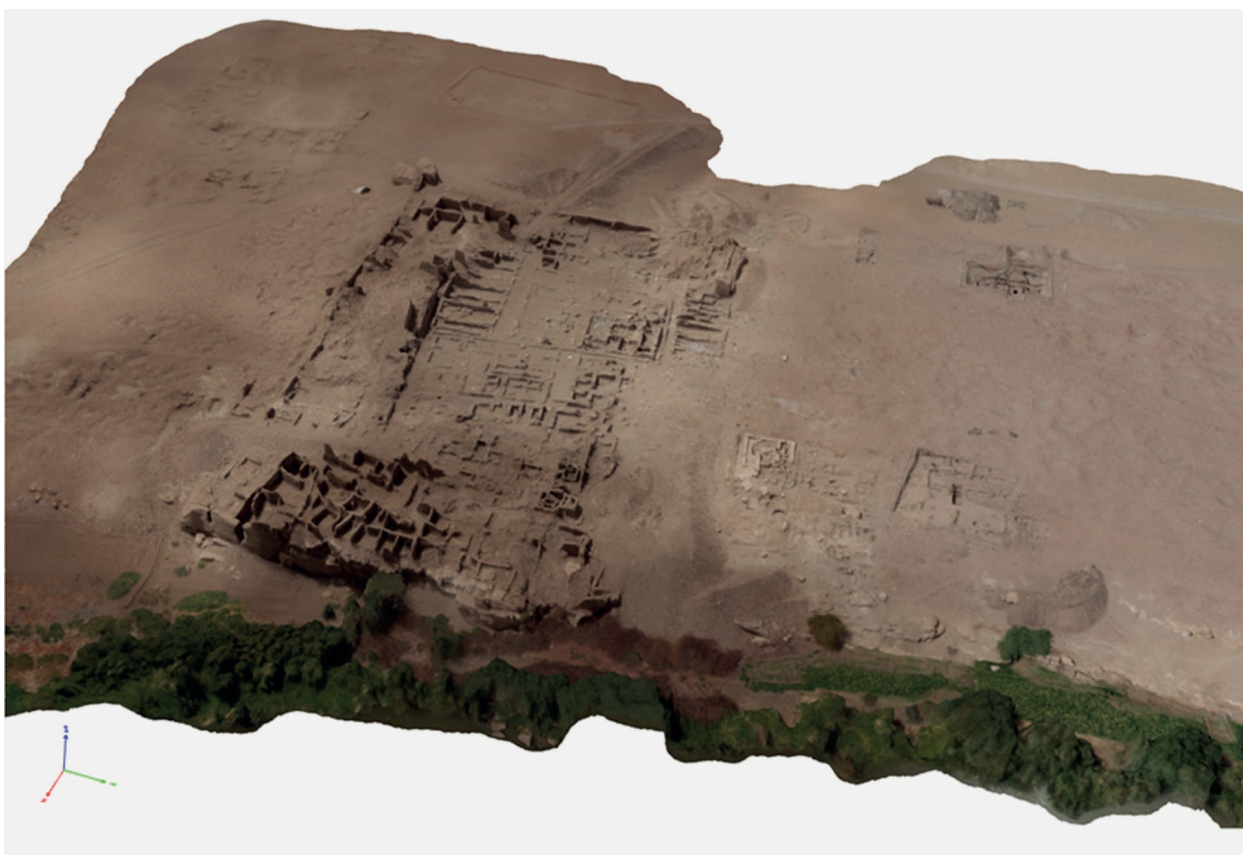
Pl. 51.1. Southern part of SAF2, view from the northwest



Pl. 51.2. Eastern wall of SAF2, view from the north



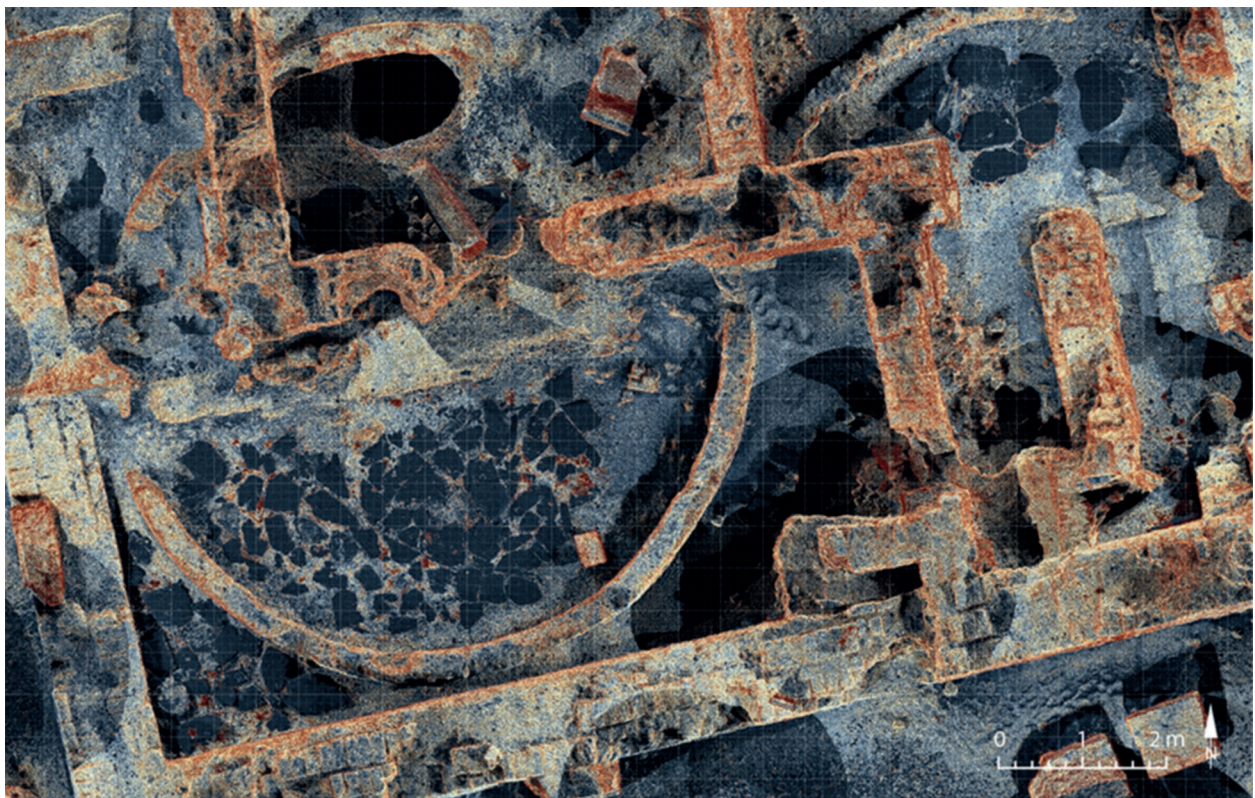
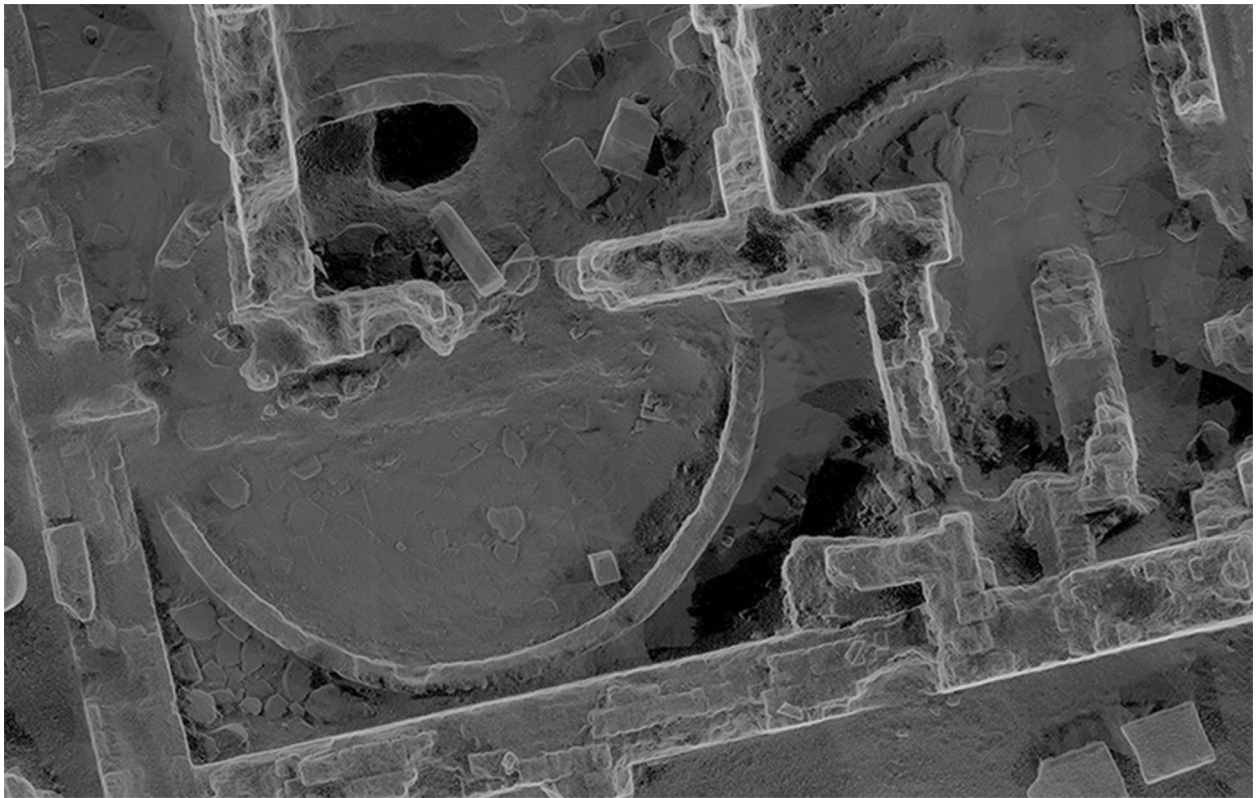
Pl. 51.3. Eastern wall of SAF2, view from the south



Pl. 52.1. Overview of SAVI from the east (Structure from Motion model)



Pl. 52.2. Aerial view of the Pharaonic town of Sai combined with a digital terrain model



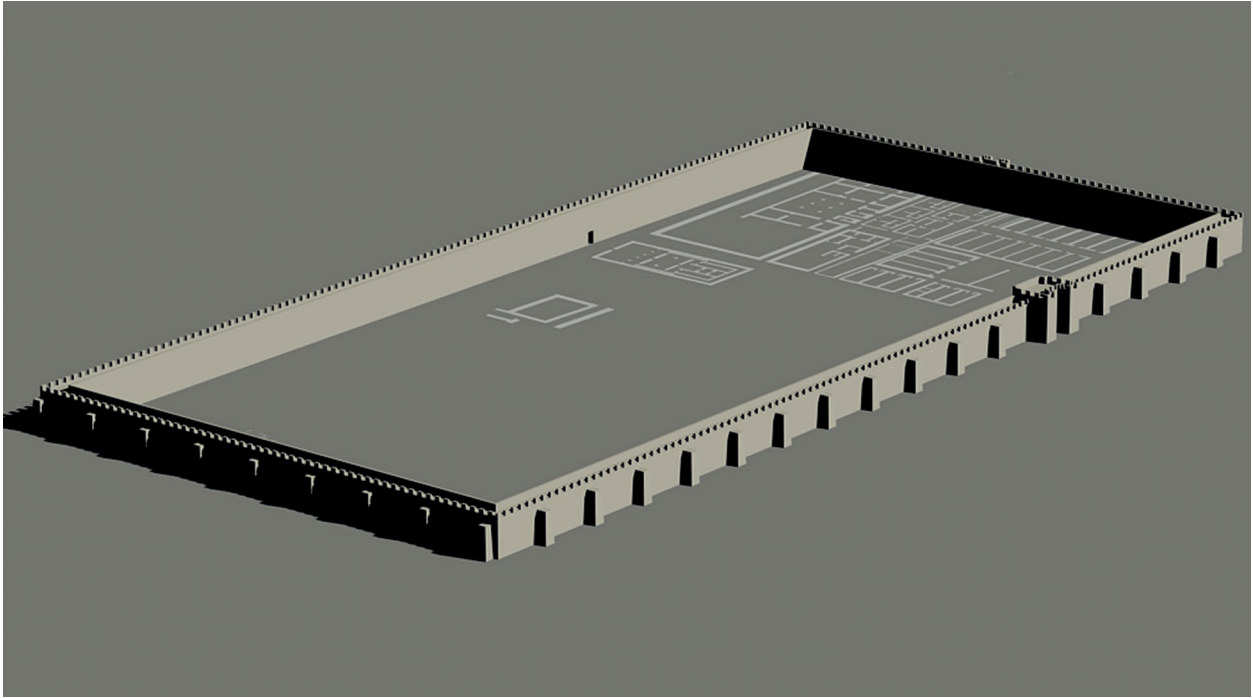
Pl. 53. Comparison between the point cloud (1) without and (2) with color intensity and reflectivity of the different textures.
Extract from the 3-D ground plan, part of SAF5/M12



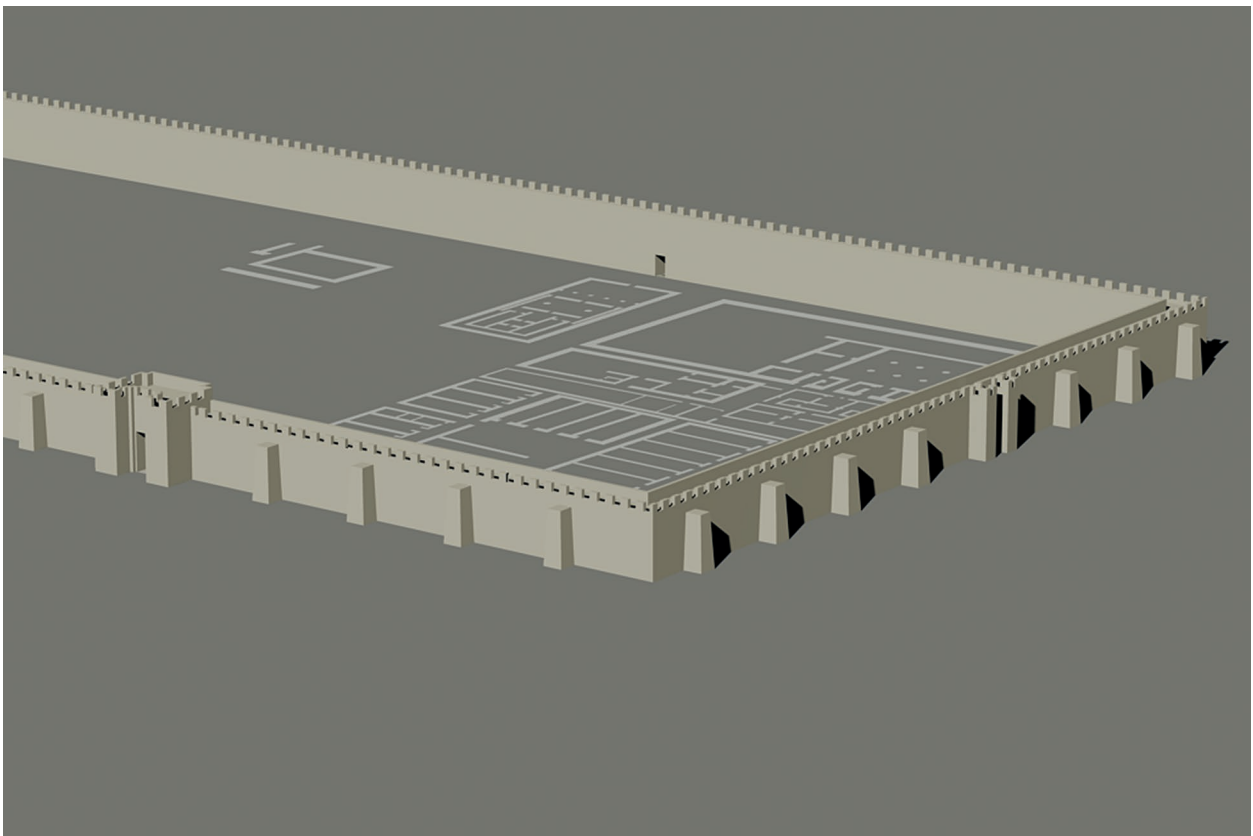
Pl. 54.1. Overview of the eastern part of SAV1 (Houses H1–H5, SAF2) from the southwest



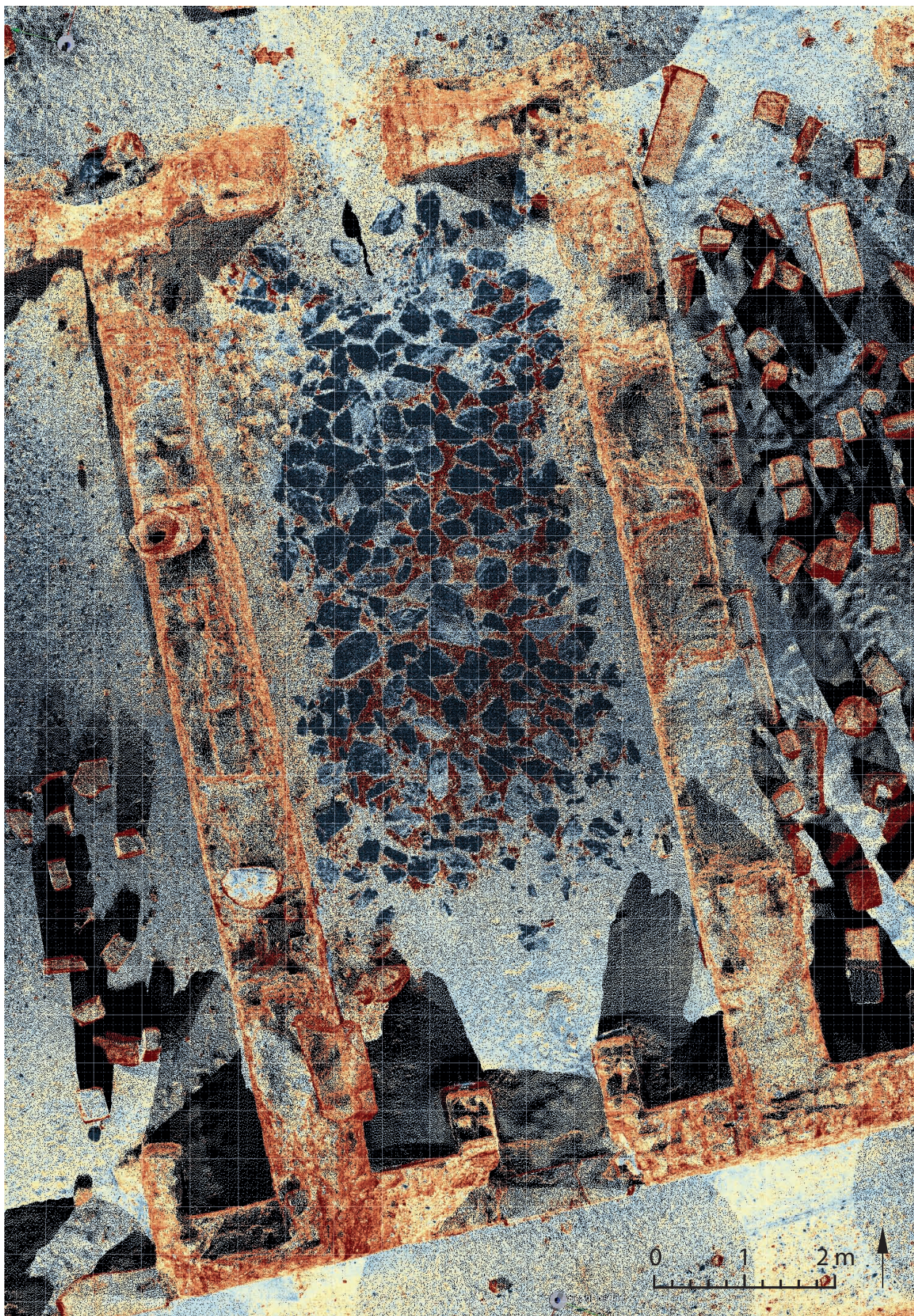
Pl. 54.2. Overview of the western part of SAV1 (SAF5) from the northwest



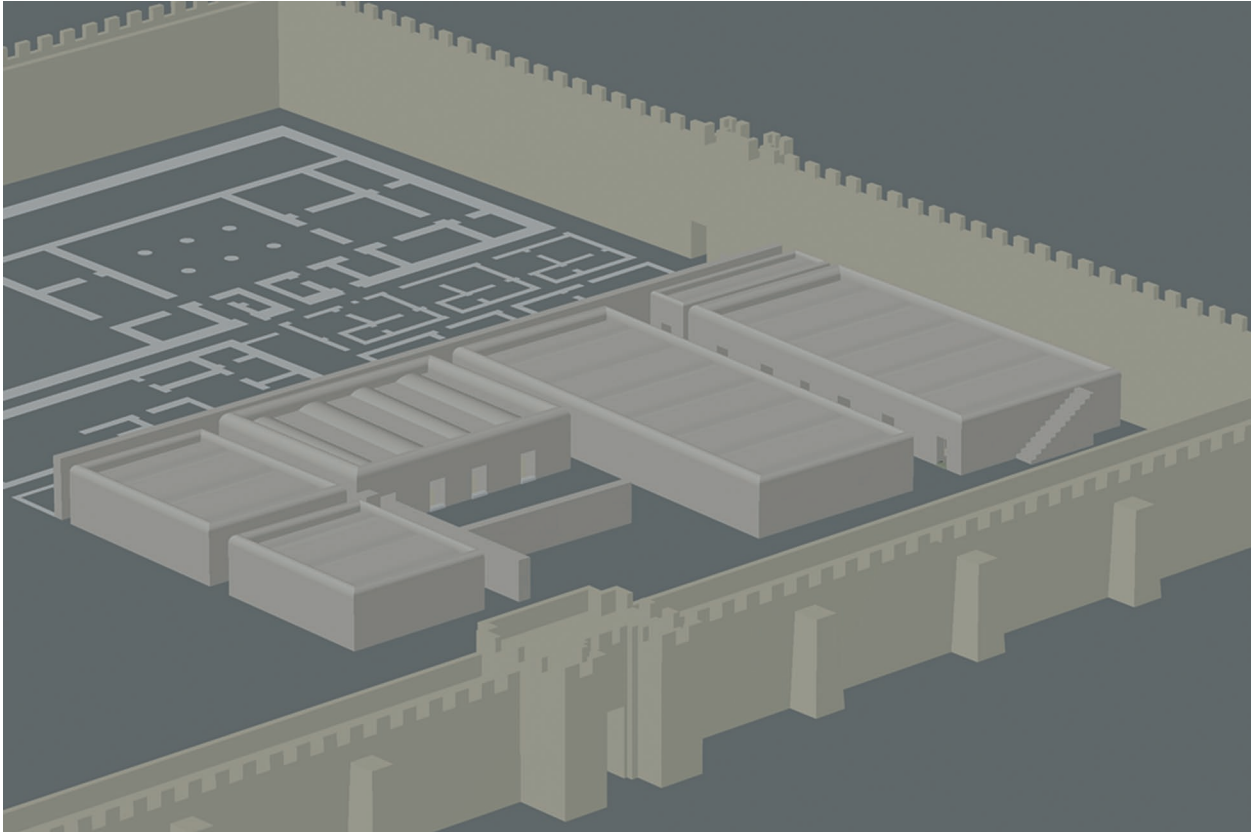
Pl. 55.1. 3-D reconstruction of the fortifications, view from the northwest



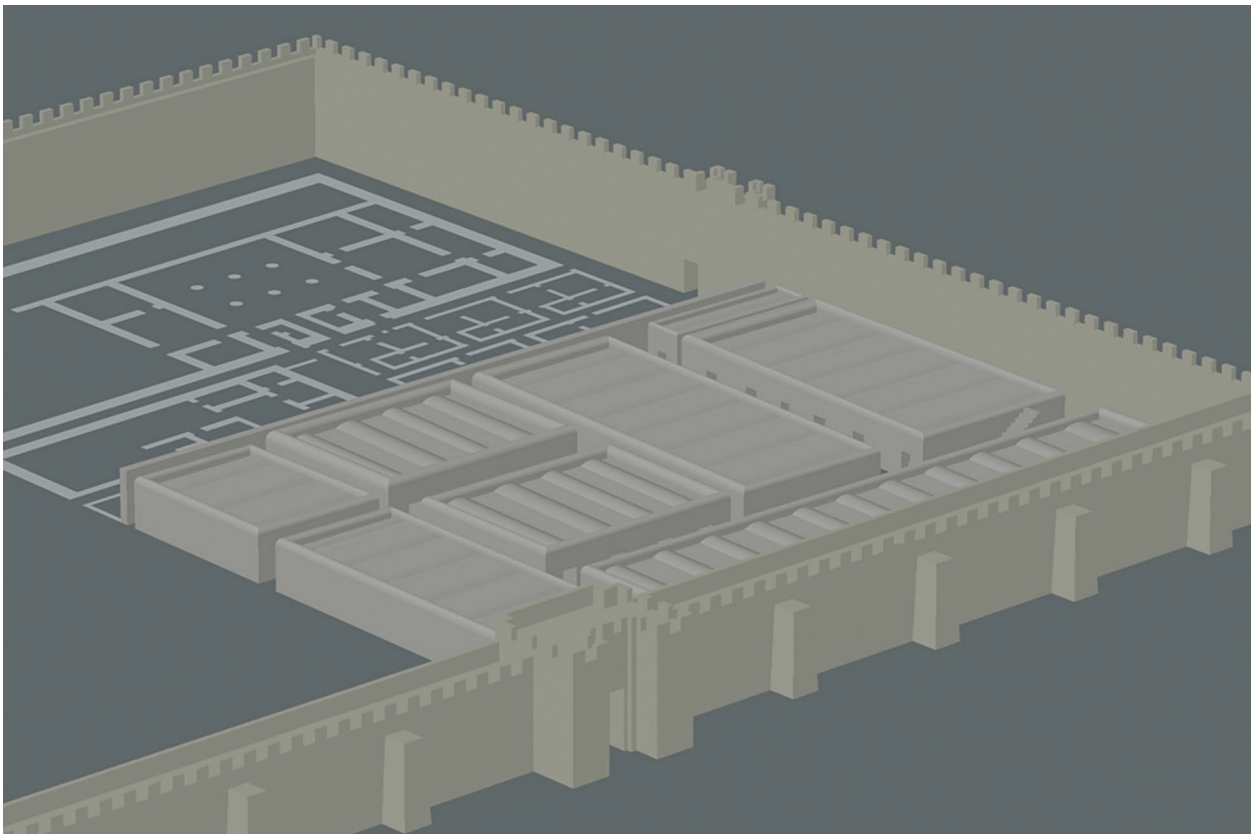
Pl. 55.2. 3-D reconstruction of the southern part of the fortifications, view from the southwest



Pl. 56. Schist floor of storage room M14, extract from the 3-D laser scan



Pl. 57.1. 3-D reconstruction of the storage area SAF5, view from the northwest



Pl. 57.2. 3-D reconstruction of the storage area SAF5 with a suggested row of magazines in the western part



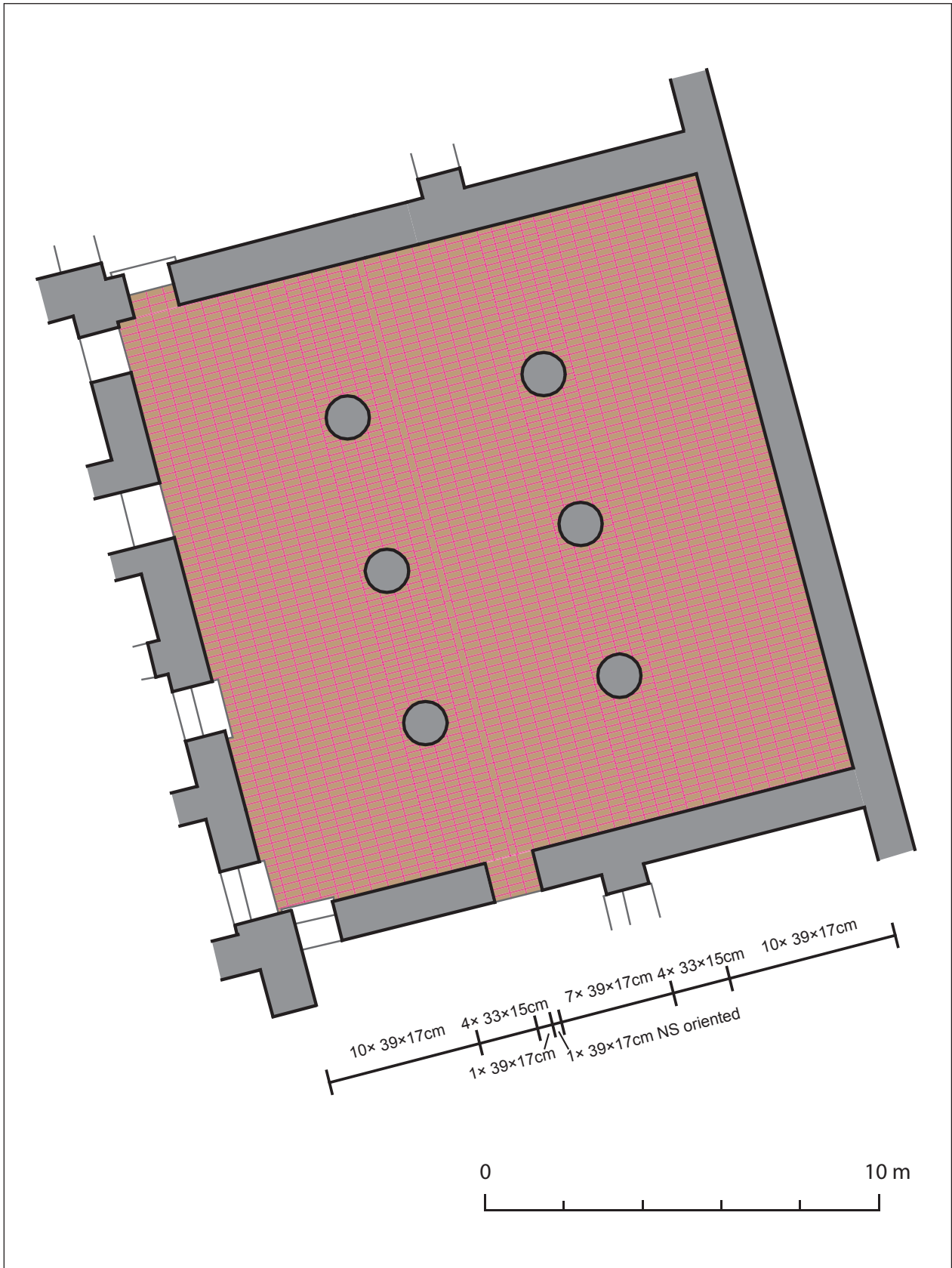
Pl. 58.1. 3-D reconstruction of the houses H1–H3 and H5 (separated into two houses) without roof, view from the northeast



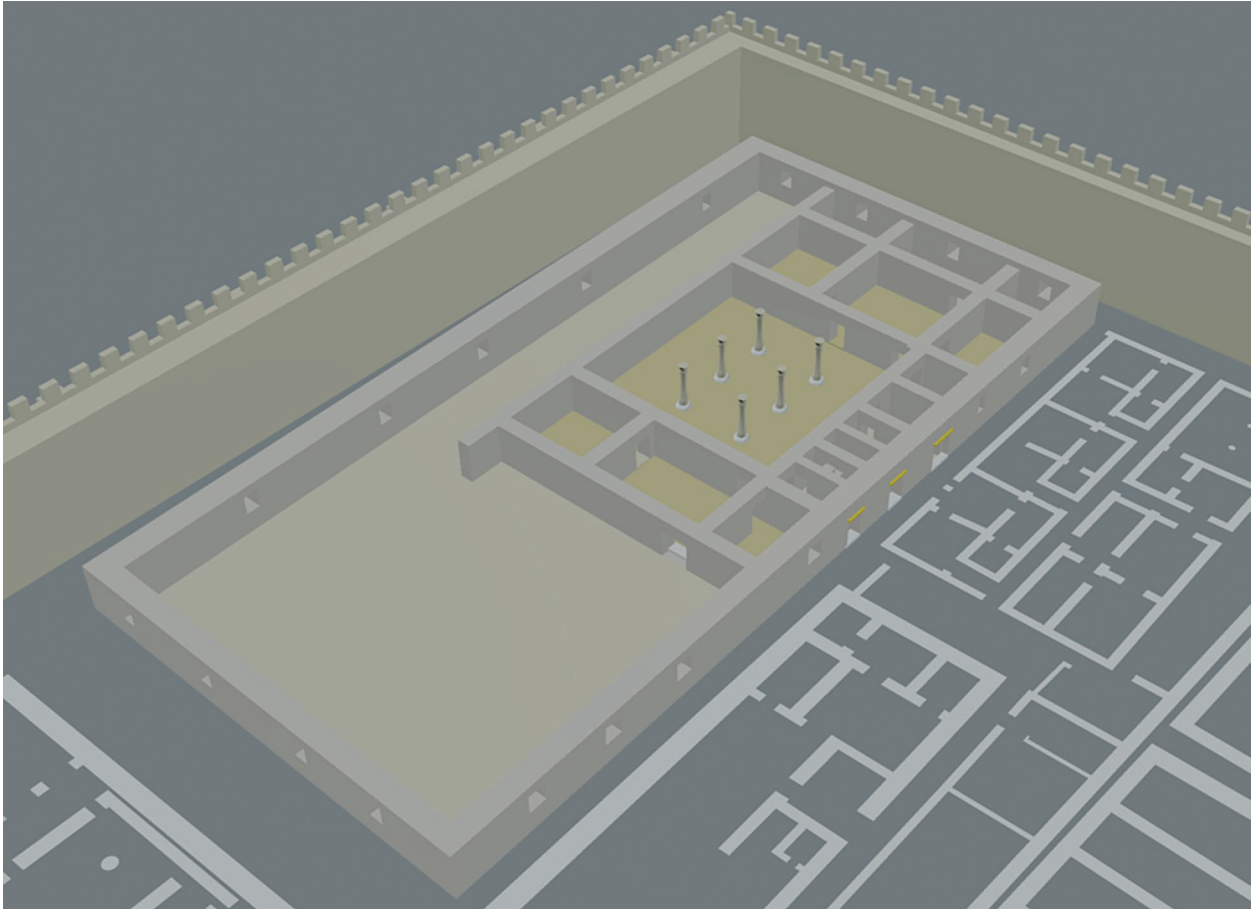
Pl. 58.2. 3-D reconstruction of the houses H1–H5, view from the east



Pl. 59. Orthophoto of Room SAF2/9, showing the mudbrick pavement



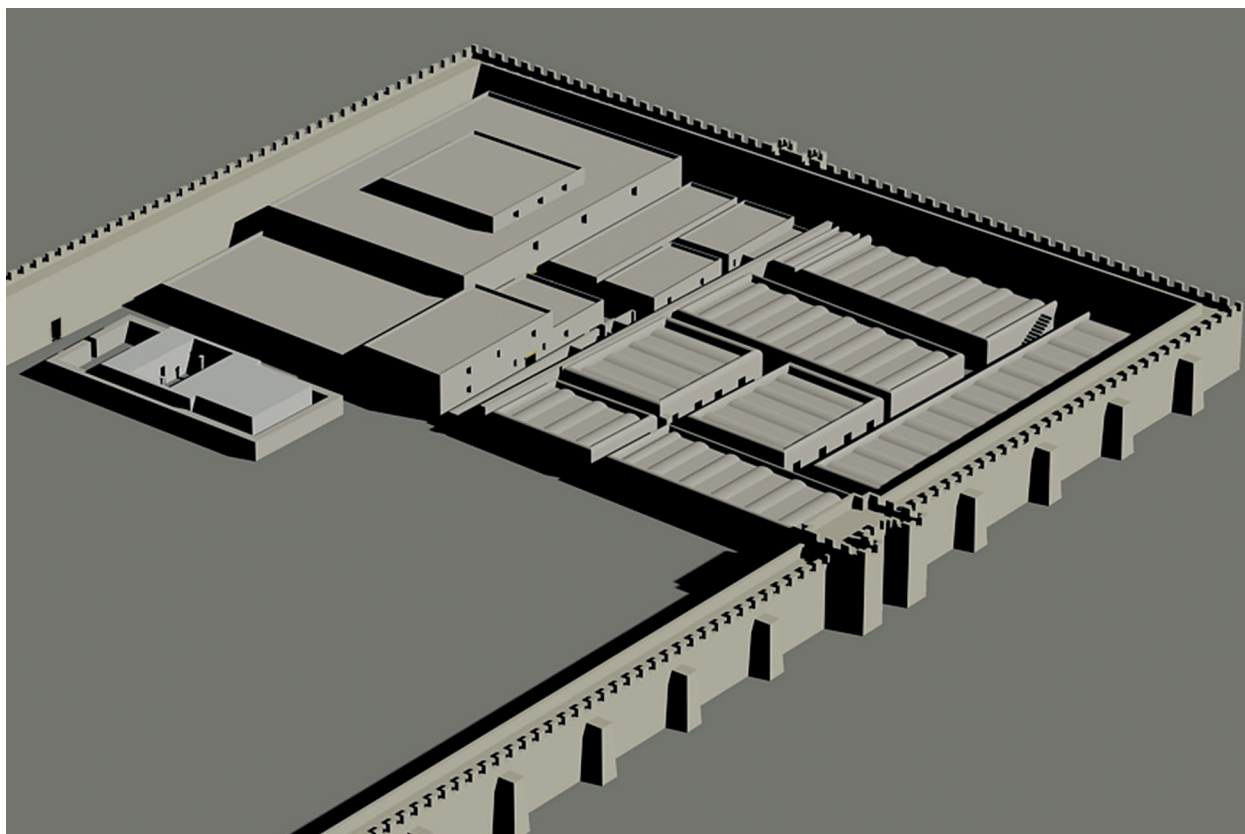
Pl. 60. Reconstruction drawing of the mudbrick pavement in Room SAF2/9



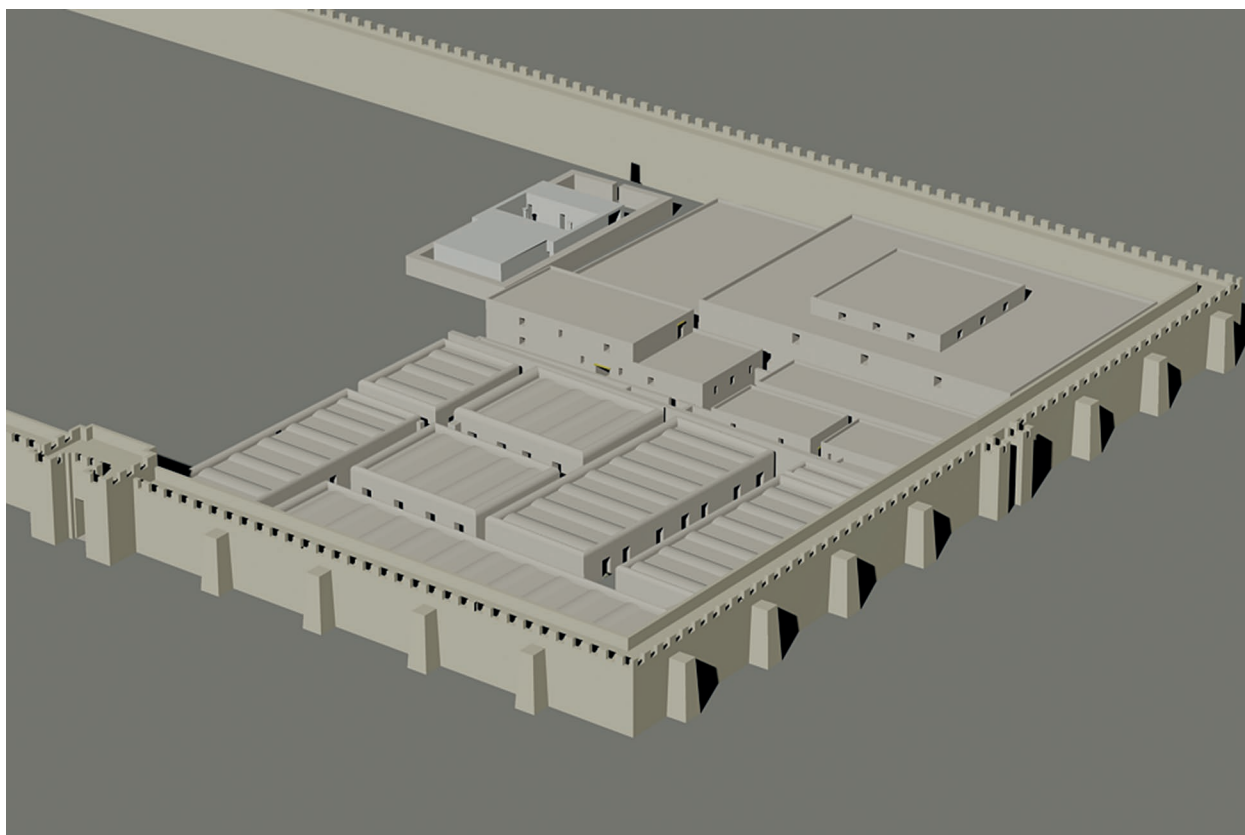
Pl. 61.1. 3-D reconstruction of the ground floor of SAF2, view from the northwest



Pl. 61.2. 3-D reconstruction of SAF2, view from the northwest



Pl. 62.1. 3-D reconstruction of SAV1, view from the northwest



Pl. 62.2. 3-D reconstruction of SAV1, view from the southwest.

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ABBREVIATIONS

Ä&L	Ägypten & Levante
BARIntSer	British Archaeological Reports. International Series
BdE	Bibliothèque d'études, Institut français d'archéologie orientale, Cairo
CAENL	Contributions to the Archaeology of Egypt and the Levant
cm	centimetres
E	east
JEA	Journal of Egyptian Archaeology
km	kilometres
m	metres
m ²	square metres
MDAIK	Mitteilungen des Deutschen Instituts, Abteilung Kairo
N	north
PolAMed	Polish Archaeology in the Mediterranean
S	south
UZK	Untersuchungen der Zweigstelle Kairo des Österreichischen Archäologischen Institutes
W	west

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