

JULIA BUDKA (ED.)

ACROSSBORDERS I  
THE NEW KINGDOM TOWN OF SAI ISLAND, SECTOR SAV1 NORTH

ÖSTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN  
DENKSCHRIFTEN DER GESAMTAKADEMIE, BAND LXXXII

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Egypt, Nubia and the Levant

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JULIA BUDKA (ED.)

# **ACROSSBORDERS I**

The New Kingdom Town of Sai Island,  
Sector SAV1 North

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# PREFACE

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*by Julia Budka*

The present volume is the first in a series of monographs dedicated to the results achieved within the European Research Council Project AcrossBorders. Sai Island, the prime example for settlement policy of New Kingdom Egypt in Upper Nubia, is the focus of this project. The AcrossBorders project aims to provide new insights on the lifestyle and living conditions in New Kingdom Nubia thanks to new fieldwork and multi-layered research on Sai Island. The main hypothesis tested was whether the settlement on Sai Island can be evaluated as an Egyptian microcosm, despite its location outside of Egypt and its specific topographical, environmental and cultural situation. A detailed comparison of the site with two major 18<sup>th</sup> Dynasty settlement sites located in Egypt proper (Abydos and Elephantine) allows a fresh evaluation of the material culture and architectural remains from Sai. Various approaches – from ceramic analysis to architectural studies, petrographic analysis, ethnoarchaeological approaches to Strontium Isotope Analysis and Instrumental Neutron Activation Analysis (INNA) – were utilised to investigate whether objects refer to the cultural identities of their users or reflect more complicated processes.<sup>1</sup>

The excavation history of the New Kingdom fortified town at Sai Island goes back to the 1950s. Several sectors of the town site were explored by the French mission, particularly the southern area (SAV1) and the surroundings of the small sandstone temple (Temple A) during the 1970s.<sup>2</sup> This volume is dedicated to the sector SAV1 North, situated along the northern enclosure wall. It was excavated by the Sai Island Archaeological Mission (SIAM), directed by Didier Devauchelle and headed in the field between 2008 and 2012 by Florence Doyen. All analyses and studies in preparation for the present publication were undertaken within the framework of AcrossBorders, including a visit and final on-site adjustments to the documentation of the ar-

chitecture by Florence Doyen in 2014. Results from the scientific analyses of the various material types – especially pottery (petrography and Instrumental Neutron Activation Analysis), animal bones and micromorphological samples – as well as new approaches to reconstruct the ancient landscape of Sai Island are still ongoing and will be published in a next volume. The principal focus of the present volume is the material remains of SAV1 North: the architecture and material culture, with emphasis on the pottery and small finds.

Datable to the mid to late 18<sup>th</sup> Dynasty, the so-called Level 3 was the heyday of sector SAV1 North – a time well-attested by several architectural remains, with associated finds and pottery. These are presented in the following. A summary of thoughts on the possible hints preserved in the material remains about the lifestyle and activities at SAV1 North completes this volume. All in all, the evidence from SAV1 North adds to the current understanding of Sai during the 18<sup>th</sup> Dynasty as a complex microcosm with a significant evolution, reflecting aspects of the macrohistory of New Kingdom Nubia. Together with the recent publication on the architectural assessment of the southern part of the New Kingdom town of Sai,<sup>3</sup> this volume therefore underlines the important role Sai plays in understanding settlement patterns in New Kingdom Nubia.

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<sup>1</sup> Cf. BUDKA 2014, 59 and 68; BUDKA 2015b, 50.

<sup>2</sup> Cf. AZIM 1975; VERCOUTTER 1986; GEUS 2004. The label SAV1 for the town was introduced by Vercoutter and stands for "Sai Adou Ville 1".

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<sup>3</sup> ADENSTEDT 2016 (an outcome of Julia Budka's START-prize of the Austrian Science Fund: Y615-G19).

sion of the National Corporation for Antiquities and Museums of Sudan (NCAM). My sincere thanks are in particular due to Abdelrahman Ali Mohamed (Director General) and El-Hassan Ahmed Mohamed (Director of Fieldwork). I am especially grateful to the project director of the Sai Island Archaeological Mission (SIAM) of Charles-de-Gaulle – Lille 3 University (UMR 8164 HALMA-IPEL), France, Didier Devauchelle for allowing AcrossBorders to study, process and publish the results from SAV1 North. Although work on SAV1 North was mainly conducted between 2012 and spring 2014, thanks also go to the current concession holder of Sai, Vincent Francigny (SFDAS Khartoum; since fall 2015). I am furthermore very grateful for all of the support by NCAM during AcrossBorders' field seasons on Sai (2013–2016), especially to Huda Magzoub. Many thanks go also to the Sudanese staff of the dig-house under the supervision of Sid Ahmed and Abdel Fatah.

Special thanks are due to Florence Doyen who acted as the field director of SIAM's work at SAV1 North, was employed by AcrossBorders from 2012–2015 and joined the team on site in 2014. She wishes to thank Nicole Miller and Christine Horton for their assistance with regards to the first version of her written English in this volume. My own work at Sai Island and there at SAV1 North started in 2011 and was only possible through support of Humboldt University Berlin and Frank Kammerzell. Financial support for the 2012 pottery season, which resulted in important insights on the pottery presented in this volume, was granted by the Pollitzer Foundation of the Austrian Academy of Sciences and I am here

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Parts of Chapter V.1 are based on micromorphological analysis conducted within the framework of AcrossBorders, for which I would like to thank Miranda Semple, Sayantani Neogi and Sean Taylor. Ingrid Adenstedt and Martin Fera have composed detailed plans and images of SAV1 North within the context of the entire New Kingdom town. A big load of thanks goes to all of the assistants involved in documenting and analysing pottery and small finds from SAV1 North (in order of their appearance): Nathalie Bozet, Veronika Hinterhuber, Fatma Keshk, Huda Magzoub, Giulia D'Ercole, Victoria Grünberg, Nicole Mosiniak, Sebastian Stiefel, Elke Schuster, Arvi Korhonen, Daniela Wölfl, Meg Gundlach, Kenneth Griffin, Oliver Frank Stephan, Daniela Penzer, Michaela Janker and Lucia Sedlakova. The digitalising of the original drawings of pottery and objects was done by the AcrossBorders student assistants Elke Schuster, Vanessa Becker and Daniela Penzer. For the layout of the pottery figures, thanks go to Oliver Frank Stephan. Last but definitely not least, Meg Gundlach was deeply involved in the realisation of this volume, with editing the English of all chapters, much productive feedback and very useful comments.

Julia Budka  
Munich, September 2016

# I. INTRODUCTION

by Julia Budka

## 1 THE NEW KINGDOM TOWN OF SAI ISLAND

Located just south of the natural barrier at the Second Cataract represented by the Batn el-Haggar, the large island of Sai in Northern Sudan (Pl. 1) has been continuously settled from Prehistory to modern times. Nubian cultures of different periods as well as Egyptians of the New Kingdom have left evidence on the island.<sup>4</sup> As the northern stronghold of the Kerma kingdom, Sai played an important role in the so-called “re-conquest of Nubia” during the early New Kingdom.<sup>5</sup> The common view is that Sai was founded by Ahmose Nebpehtyra<sup>6</sup> as a “bridge-head”<sup>7</sup> towards the south and for the Egyptian campaigns against Kerma. Prior to the work of the French Mission from 2008–2012 this theory rested on epigraphical rather than on firm archaeological evidence.<sup>8</sup>

The fortified Pharaonic town was built on the eastern bank of the large island of Sai in the New Kingdom (Fig. 1, Pl. 2). The town has the shape of a fortified settlement with an orthogonal layout, measuring 238m north–south and 118m east–west, with a total of 27,600m (2.76 ha).<sup>9</sup> In the southern part of the town (SAV1) different quarters were identified in the course of fieldwork by Michel Azim:<sup>10</sup> a palatial or residential quarter (sector SAF2) with a surface area of 2,020m;<sup>11</sup> a central domestic quarter H comprising a cluster of five houses; and a western quarter (sector SAF5), consisting of several rectangular storage rooms and circular silos from an earlier phase.<sup>12</sup> These quarters reflect the orthogo-

nal planning of the town being organised along the north–south and east–west axes. Parallels for such a layout can be found at other New Kingdom towns, especially at Buhen, Amara West and Sesebi.<sup>13</sup> Barry Kemp has stressed the importance of the religious buildings for these Pharaonic foundations in Nubia,<sup>14</sup> introducing the label “temple town” for this specific urban layout.<sup>15</sup> As a common feature domestic space is quite limited, but much room is occupied by storage facilities and magazines.<sup>16</sup>

## 2 EXCAVATIONS IN SECTOR SAV1 NORTH

From 2008–2012, fieldwork was conducted by the Sai Island Archaeological Mission (SIAM) of Lille 3 at a site named SAV1 North, along the northern enclosure wall, unearthing remains dating back to the early 18<sup>th</sup> Dynasty (see IIIH).<sup>17</sup> Nine 10m squares were excavated in SAV1 North (Fig. 3, Pl. 3). Sections of Enclosure Wall N4 as well as several mud brick structures of Egyptian type were exposed and documented. Preliminary reports on these buildings have already been published;<sup>18</sup> the structures of Level 3 are described here in Chapter II.

At SAV1 North, a very complex stratigraphy was encountered. Its analysis is here restricted to a certain degree because excavations were not systematically conducted down to the natural ground or earliest remains in all areas. They were partly left unfinished (see IIE.1) and all assessments of the evolution of the site are therefore limited to preliminary calculations. As nicely illustrated by a Digital

<sup>4</sup> See the summaries by VERCOUTTER 1986; GEUS 2004 and YELLIN 2012.

<sup>5</sup> Cf. BUDKA 2015b, 40–41 with further references.

<sup>6</sup> Hereafter labelled as Ahmose II, taking into account the recent finds from Karnak; see BISTON-MOULIN 2012, esp. 66.

<sup>7</sup> DAVIES 2005, 51.

<sup>8</sup> Cf. DOYEN 2009a; BUDKA 2011a; GABOLDE 2011–2012.

<sup>9</sup> This size is the result of recent fieldwork by AcrossBorders in 2016; for a different/larger size according to the French mission see BUDKA and DOYEN 2013, 171 with note 46; for a first modification see BUDKA 2015b, 41. For the latest description of the town in general: ADENSTEDT 2016.

<sup>10</sup> AZIM 1975.

<sup>11</sup> See ADENSTEDT 2016, 66, fig. 19.

<sup>12</sup> AZIM 1975, 98, pl. 4; DOYEN 2009a, colour pl. 9. See most recently: ADENSTEDT 2016 with a detailed re-assessment of AZIM’s work and a 3D reconstruction.

<sup>13</sup> KEMP 1972a, 651–653. Cf. also DOYEN 2009a; FUCHS 2009, 72–79; STEINER 2008, 151; GRAVES 2011, 55 & 61–63.

<sup>14</sup> KEMP 1972a; KEMP 1972b, 666–667.

<sup>15</sup> KEMP 1972b, 664. See also GRAVES 2011, 63; BUDKA 2015b, 41.

<sup>16</sup> Cf. ADENSTEDT 2016, 54, fig. 16 and *passim*.

<sup>17</sup> DOYEN 2009a, 17–20; DOYEN 2014, 367–375; BUDKA and DOYEN 2013, 168–171.

<sup>18</sup> DEVAUCHELLE and DOYEN 2009; DOYEN 2009a; BUDKA and DOYEN 2013; DOYEN 2014.



Fig. 1 Map of the New Kingdom town of Sai, including field work results up to 2016 (©AcrossBorders, Ingrid Adenstedt)



Surface Model of SAV1 North with topographical features and heights (Pl. 4), the site differs in levels; Post-Pharaonic structures presumably superimposing earlier remains are not always the highest features, but appear partly also in great depths, below the levels of Pharaonic features, when deep pits were cut into existing structures.

The earliest strata at SAV1 North (Levels 5 and 4, see I.3.2), which would be essential for identifying the founder of the town, are only scarce architectural remains and some occupational deposits. The initial sequence of Egyptian occupation on Sai is therefore hard to reconstruct in this area and mostly relies on the ceramic evidence.<sup>19</sup> However, the results from SAV1 North clearly mirror the outcome of Azim's work in the southern sector and attest that the Pharaonic settlement was built in stages. Substantial remains in Level 3 represent the major building phase at the site when the bastioned enclosure wall was built thanks to the ceramic data this level can be dated as mid-18<sup>th</sup> Dynasty, to the reign of Thutmose III and later.<sup>20</sup>

Beside the crucial question of the founder of the Egyptian town on Sai, of much importance is the significance of sector SAV1 North for reconstructing the general layout of the town. The ERC project AcrossBorders has conducted excavation within the town since 2013, aiming to achieve a more complete understanding of the layout of the 18<sup>th</sup> Dynasty occupation at Sai.<sup>21</sup> In line with this, the present volume intends to contextualise SAV1 North, highlighting its meaning for reconstructing life in New Kingdom Sai.

### 3 THE ARCHAEOLOGICAL LEVELS OF SAV1 NORTH

#### 3.1 General remarks and formation processes

Like the island of Sai as a whole, the Pharaonic town is also a multi-period archaeological site. As is well known from the southern part of the town, located partly below the Ottoman fortress, the 18<sup>th</sup> Dynasty town site of Sai experienced an intense use

in Post-Pharaonic eras, with six levels of occupation recorded by Azim. These levels were only roughly dated and assigned to the Pharaonic, Meroitic and Post-Meroitic periods, as well as two Medieval phases and finally the Islamic era (Ottoman fortress).<sup>22</sup> Similar phases of use were observed in sector SAV1 North, where New Kingdom mud brick structures have partly survived, but the archaeological deposits within the structures are mostly formations of later phases of use, destruction and abandonment. The re-use and function as later middens explain why 18<sup>th</sup> Dynasty pottery dominates the ceramics of the site, even in the upper and mixed layers.

In general, both cultural and natural formation processes affected the archaeology of SAV1 North.<sup>23</sup> Whereas the natural ones are comparable to other mud brick sites in arid climate,<sup>24</sup> cultural formation processes require a site-specific approach and may differ considerably throughout SAV1 North and from square to square. In some squares of SAV1 North, pits and disturbances cut through until the natural ground (Pl. 4). Large holes filled with mostly Christian pottery were cut into Enclosure Wall N4 (see Fig. 3).<sup>25</sup> That the Sai fortification suffered from several destructions as well as restoration phases was already observed by Azim.<sup>26</sup> This was not only confirmed by work at SAV1 North, but also at the new sector SAV1 West.<sup>27</sup> From SAV1 West, clear evidence shows that the Pharaonic town wall was partly used as basis for the construction of shelters and other short-lived structures, including stables for animals. The same seems to be true for SAV1 North and probably explains the presence of organic-rich fill deposits between the ancient brickwork. Pharaonic mud brick architecture was partly re-used as standing architecture and partly as building material, resulting in the removal and recycling of mud bricks.

The archaeology of each building in SAV1 North therefore displays a minimum of three and more often four phases of use: A) original phase of

<sup>19</sup> BUDKA 2016b.

<sup>20</sup> BUDKA and DOYEN 2013, 178–179.

<sup>21</sup> BUDKA 2015b.

<sup>22</sup> See AZIM 1975, 93–95; GEUS 2004, 115. For recent finds of the Meroitic epoch see: FRANCIGNY 2014; FRANCIGNY 2015. For Christian (Medieval) sites: HAFSAAS-TSAKOS and TSAKOS 2010; HAFSAAS-TSAKOS and TSAKOS 2012 and the Ottoman fortress: ALEXANDER 1997.

<sup>23</sup> For general aspects of formation processes affecting the archaeological record see SCHIFFER 1972; SCHIFFER 1987; RENFREW and BAHN 2001, 52–70; WARD and LARCOMBE 2003; TASSIE and OWENS 2010, 445.

<sup>24</sup> Cf. RENFREW and BAHN 2001, 57–59; VON PILGRIM 1996a, 18–22.

<sup>25</sup> See DOYEN 2009a, 17–20.

<sup>26</sup> AZIM 1975, 122.

<sup>27</sup> BUDKA 2014, 63–65.

construction and use; B) phase of filling; C) phase of abandonment and D) re-use/re-occupation/reconstruction work. As will be demonstrated in Chapters III and IV, the documentation during the French excavations at SAV1 North does not always allow for differentiating between these distinct phases. Most material was collected as belonging to the same phase as the building unit, when it is actually part of the filling or abandonment phase. Post-excavation re-assignment of such finds must be treated with caution and was not undertaken for all contexts during the processing of the SAV1 North data by AcrossBorders.

Furthermore, as pointed out by Manfred Bietak and others, stratigraphic sequences within Bronze Age sites using mud brick architecture are generally very complex and, e.g., younger walls may appear contemporaneous to older structures.<sup>28</sup> Mud brick walls were frequently levelled and overbuilt, sometimes representing challenges for archaeologists in the field to reconstruct the sequences. As a rule, it becomes more difficult to attribute walls to specific phases if the stratigraphic units overlying and surrounding the architecture are not documented in detail. At SAV1 North, the focus of the excavators was on the architecture only; in combination with the complex stratigraphy of the site, this approach was insufficient for providing a solid sequence in all parts of the excavation.

Because of the long re-use period of the New Kingdom site, pavements and deposits from the original building phases of SAV1 North have been heavily truncated. In most cases, there are no joints of floors or occupation phases across rooms or over longer distances in general. A concise interpretation of the formation processes would rely on a detailed stratigraphic excavation, as is currently undertaken at SAV1 West. At SAV1 North, however, this was not recognised in the field, and it was only in 2014 that remaining New Kingdom deposits and pieces of floors were documented post-excavation. It goes without saying that the interpretation of these scarce leftovers of 18<sup>th</sup> Dynasty stratigraphy must remain tentative, especially as their formation processes were not studied with the same details as the standing architecture. Despite this, the results pre-

sented here will be compared in the future to the full documentation of SAV1 West, where essentially the same formation processes were observed and recorded in detail as single contexts with a running matrix. It needs to be stressed that the processing of the architecture and phases of use for the buildings at SAV1 North (Chapter II) is the outcome of a detailed post-excavation study which provided important new information on the site, but cannot adjust all the shortcomings conducted during excavation.

In general, much potential for the analysis of complicated sites with multiple formation processes like SAV1 North lies in the implementation of a micromorphological sampling programme and geochemical analyses.<sup>29</sup> The first soil samples were taken at SAV1 North as part of AcrossBorders' geoarchaeological research in 2014 and some of the results will be presented here for building unit N12 (V.1), illustrating certain *caveats* for the architectural interpretation in the present publication, but also the rich potential of the site itself and for future work.

### 3.2 Levels at SAV1 North

(Fig. 2)

During the course of excavation of the SIAM, five levels were differentiated by the excavator Florence Doyen based on a variety of features, including the composition of the soil and layers, the character of the archaeological deposits, the stratigraphy of walls and other archaeological sequences.<sup>30</sup> The labelling "Level 1" was used for superficial remains of Post-Pharaonic date, being mostly composed of aeolian sand, pottery sherds and loose mud brick remains. The "Levels 2–5" are discussed below in their chronological order, starting with the earliest remains. Dating of the individual levels derives from the study of the ceramics,<sup>31</sup> but due to the lack of a stratigraphic matrix throughout the site, the attribution of some contexts to certain levels remains unconfirmed. According to the processing of the ceramics, the "Levels" attributed to phases throughout SAV1 North cannot be treated as uniform stratigraphic sequences of layers, but are slightly diverse depending on context/location/building units (see III.1).<sup>32</sup>

<sup>28</sup> BIETAK 1976; see also VON PILGRIM 1996a, 18–22.

<sup>29</sup> Cf. SPENCER 2014a, 202; MALLOL and MENTZER 2015.

<sup>30</sup> For general observations concerning the formation processes at Egyptian domestic sites with mud brick architecture see VON PILGRIM 1996a, 18–22.

<sup>31</sup> For details of the potential and limits of pottery from SAV1 North as dating tool see BUDKA 2016b.

<sup>32</sup> For a general definition of "Level" (German "Bauschicht") see VON PILGRIM 1996a, 16 with references.

Level	Dating	Remains	Remarks
1	Post-New Kingdom	mud brick debris; slag; red bricks; pottery	mixed material from uppermost layers – approx. 30–40 % Post-Pharaonic, mostly Christian (majority still 18 <sup>th</sup> Dynasty)
2	late 18 <sup>th</sup> Dynasty – Ramesside?	Building unit N10; N7?; N2?; debris; filling deposits	19 <sup>th</sup> Dynasty present in small quantity; very few late New Kingdom (20 <sup>th</sup> Dynasty) to Napatan pieces are present; considerable Post-Pharaonic material
3	Thutmose III – late 18 <sup>th</sup> Dynasty	Building units N12, N24, N25, N26, N27; Enclosure Wall N4; occupation and filling deposits	clearly covering reign of Thutmose III and those of later kings (Amenhotep II–Thutmose IV well attested; also Amenhotep III and possibly later)
4	early 18 <sup>th</sup> Dyn.: pre-Thutmose III	walls in Square 180/2260; occupation deposits with charcoal and organic remains	nothing later than early Thutmose; latest possible date: reign of Hatshepsut/early Thut. III
5	early 18 <sup>th</sup> Dyn.	occupation deposits with charcoal and organic remains	Ahmosé II to Thutmose I (in general: material of Second Intermediate Period character is present until Level 4!) NB: Level 5 cannot be separated from Level 4

Fig. 2 Archaeological levels from SAV1 North

In 2012, the earliest level in SAV1 North, Level 5, was identified already as early 18<sup>th</sup> Dynasty in date, thus confirming the foundation of the town in the New Kingdom.<sup>33</sup> No architecture has survived, with only occupation deposits attesting to a period of settlement. One has to assume that the mud brick walls of this phase were all subsequently levelled or have completely decayed. From Level 4, also datable to the early 18<sup>th</sup> Dynasty, first architectural remains of modest size and quantity were documented. The present publication focuses on Level 3, the heyday of Sai under the reign of Thutmose III up to Amenhotep III with the construction of several building units. Some sherds from Level 2 attest to early Ramesside activity, but as yet they cannot be associated with structures.<sup>34</sup>

#### Level 5

As the earliest evidence of occupation in SAV1 North, Level 5 was exposed in Square 180/2270 (Fig. 3) just above the natural soil.<sup>35</sup> It was partially excavated in a small area enclosed by the sections below Walls 18N, 18W and 26S/26W (see Fig. 3).<sup>36</sup> Despite the lack of any architectural remains, archaeological material from the deposits such as ceramics and some small finds allow the attribu-

tion of these earliest remains to the New Kingdom. Although the ceramic material did not allow for a clear distinction from material associated with Level 4 (see III.4.1), Level 5 can firmly be associated with the early 18<sup>th</sup> Dynasty. In the excavated areas at SAV1 North, there is no testimony of an earlier occupation pre-dating the New Kingdom in this sector of the Pharaonic town. Altogether, the deposits attributed to Level 5 attest to the foundation of an Egyptian settlement in the early New Kingdom on Sai, in an area void of any clear traces for earlier occupation and thus also of Kerma remains.

#### Level 4

The earliest remains of mud brick structures within SAV1 North were exposed in Squares 180/2260 and 180/2270 and can be attributed to Level 4 (see below Fig. 48).<sup>37</sup> Sitting partly on deposits of Level 5, they are not the first structures built at the site, but the ones traceable by architecture. The buildings are preserved by short sections of their walls. The poor state of preservation does not allow for a precise reconstruction of the respective architecture in its ground plan, but at least three domestic structures are present in what seems to be an east–west alignment. A common feature of the mud brick structures

<sup>33</sup> See BUDKA 2016b.

<sup>34</sup> BUDKA 2011a, 24. For now, the precise history of Sai in the 19<sup>th</sup> and 20<sup>th</sup> Dynasties and its relation to Amara West remains uncertain; new evidence was recently unearthed in sector SAV1 West and pyramid cemetery SAC5, see BUDKA 2015b.

<sup>35</sup> BUDKA and DOYEN 2013, 171–172.

<sup>36</sup> BUDKA and DOYEN 2013, 173.

<sup>37</sup> See BUDKA and DOYEN 2013, 172–175.



Fig. 3 Complete plan of the site SAVI North

associated with Level 4 is that they are all half-a-brick thick. Occupational deposits with a considerable amount of vegetal remains and ashy material were documented, associated with Level 4 walls.

### Level 3

The most substantial level at SAV1 North comprises successive dump layers and occupation deposits, labelled as Level 3.<sup>38</sup> It was exposed throughout all squares of SAV1 North and is well represented, mostly characterised by a distinctive brown colour. Level 3 is mainly composed of a silty deposit mixed with a large quantity of small vegetal remains, charcoal pieces and numerous potsherds.

There is also abundant evidence for architectural remains of Level 3. The earlier Level 4 walls had been levelled and a new set of structures were built, interestingly not directly on top of the earlier walls, but slightly offset. Most of the Level 3 walls are like the Level 4 ones half-a-brick thick. This new building phase at SAV1 North followed a clear spatial arrangement, with walls oriented north–south towards Enclosure Wall N4, which was also constructed in this building phase. The architectural remains attributed to Level 3 are discussed in Chapter II.

### Level 2

Exposed in all squares of the fieldwork, Level 2 consisted of a destruction layer characterised by numerous collapsed walls and piles of broken and complete mud bricks, which were sometimes burnt.<sup>39</sup> Furthermore, fragments from mud plaster associated with hearths were found, as well as a number of architectural sandstone blocks. The latter were discovered always in disturbed contexts or fillings, both in complete and fragmented condition, and their range of functions is well attested at other Egyptian settlement sites (e.g. doorways and columns).<sup>40</sup> SAV1 North yielded column bases (e.g. a well preserved example from the filling of N12, IID.5.3.2), thresholds and fragments from door-

pivot stones, amongst others. A number of grindstones were also found in Level 2. Since all of these stone blocks cannot be linked to specific structures of Level 2, it is possible that they have been partly re-used from Level 3. Such a recycling of stone architectural elements is well attested at other sites.<sup>41</sup>

Apart from some incomplete structures,<sup>42</sup> two similar architectural features (N6 and N7) belong to the phase of Level 2 (Fig. 3). N6 and N7 are storage pits of a square to rectangular shape, cut into the natural ground soil. The pits are carefully lined with mud bricks and plastered at their interior, obviously a scheme to preserve the pit contents.<sup>43</sup> N6 is located within building unit N10, which is orientated north–south along a narrow lane (Fig. 3). N10 illustrates that most of the preserved walls from buildings of Level 2 are one brick thick. Some of these bricks display marks on their large rectangular surface, well attested already in Level 3 (see IIA.3).

The alignment of the structures associated with Level 2 seems to follow the general ground plan and spatial organisation of Level 3,<sup>44</sup> though notable is the overall increase in the thickness of the structures. The enlargement of the bastion of Enclosure Wall N3 to N2 might also be associated with the phase labelled as Level 2 (see IIA.4.2.2).

### 3.3 The heyday of use: Level 3

Level 3 at SAV1 North represents the heyday of use of the Pharaonic town. It can be associated with the recently reconstructed Phase B of the town, a more advanced state than Phase A, as a simple landing place in the early 18<sup>th</sup> Dynasty.<sup>45</sup> In Phase B, the settlement was enlarged and equipped with an enclosure wall during the time of Thutmose III. The town became an important administrative centre with an Amun-Re temple, a governor's residence and an administrative building (Building A at SAV1 East). The enlargement of the site goes hand in hand with increasing complexity, with varied lifestyles amongst the inhabitants, suggesting a composite so-

<sup>38</sup> BUDKA and DOYEN 2013, 175–177.

<sup>39</sup> For Level 2, see DOYEN 2009a, 18–19; BUDKA and DOYEN 2013, 179–181. Cf. the note by VERCOUTTER (1958, 162) that there were traces of burning at the enclosure wall in the southern part. It is unclear whether these burnt bricks are of the same type as the ones of Level 2 at SAV1 North.

<sup>40</sup> Cf. good examples from Elephantine (VON PILGRIM 1996a, *passim*) and Amarna (e.g. BORCHARDT and RICKE 1980, pls. 11, 14, 26–27).

<sup>41</sup> At Elephantine, the re-use of stone blocks/architectural pieces is attested from the Middle Kingdom throughout the New Kingdom and Third Intermediate Period; see e.g. VON PILGRIM 1996a, H 46, 165–170, figs. 70–72, pls. 29c, 30a.

<sup>42</sup> Level 2 comprised Walls 10, 11, 27, 18N, 18W, 18E, 19 and 30.

<sup>43</sup> For comparable plastered, rectangular storage pits cf. e.g. VON PILGRIM 1996a, 77–80, H 86.

<sup>44</sup> See BUDKA and DOYEN, 179–181, fig. 9.

<sup>45</sup> BUDKA 2015b, 51.

cial stratification.<sup>46</sup> Sai Island was now the administrative headquarter of Upper Nubia and continued to flourish until the reign of Amenhotep III. The fortified town of this stage represents the common type of an Egyptian “temple town”.

#### 4 Contextualising SAV1 North within the New Kingdom town of Sai

As presented in Chapter II by Florence Doyen, the architectural remains documented in SAV1 North are markedly different to the ones uncovered by Michel Azim in the southern part of the town.<sup>47</sup> Rather, the remains in the northern sector find close parallels in SAV1 West and contrast strongly with remains at SAV1 East (Fig. 1).

At SAV1 North, a minimum of five structures can be reconstructed in the excavated part for Level 3. House N12 (see IID) is one of the better preserved buildings of this phase (Fig. 3). It was fully excavated in 2011 and attests to the presence of typical Egyptian tripartite houses on Sai in a rather small scale.<sup>48</sup> With an internal surface area of about 27m, N12 is considerably smaller than examples of tripartite houses at Elephantine<sup>49</sup> or from the workmen’s village at Amarna.<sup>50</sup> Within Nubian fortresses, though, tripartite houses of small size are attested since the Middle Kingdom (e.g. at Uronarti and Buhen).<sup>51</sup> However, the houses from SAV1, the southern sector of the New Kingdom town of Sai, are all considerably larger than N12; at a bit more than 50m, Houses H1–H3 are the smallest within this group and nicely compare to houses in the Amarna workmen’s village. Houses H4 and H5 have a surface area of more than 300m,<sup>52</sup> comparable to some of the houses from the Amarna main city.<sup>53</sup>

As discussed in Chapter V, other buildings units at SAV1 North like N26 and N27 do not find close parallels within Egyptian orthogonal settlements.<sup>54</sup>

They markedly contrast in both size and ground plan to the houses in SAV1. Thus, SAV1 North nicely illustrates that within the town wall of Sai city there are several different sectors which contrast regarding their layout. Apart from functional aspects as possible reasons for these structural differences, a chronological variance has also to be considered. As was illustrated by the neighbouring site of Amara West, real developments within Egyptian towns may differ significantly from theoretical urban planning.<sup>55</sup> In addition, Neal Spencer convincingly argued for the important role of the individual for adjustments beyond the planning of the initial town: for shaping a house, for changing rooms/accesses of buildings or even replacing houses with new ones.<sup>56</sup> It is therefore likely that a dissonance of houses from “standard types” were actually common and integral parts of very dynamic worlds, traceable in both Egypt<sup>57</sup> and Nubia.<sup>58</sup>

For sector SAV1 North, multiple phases of the building units within the 18<sup>th</sup> Dynasty are attested and exhibit the complex evolution of the area. Fine dating of these phases and deposits faces several problems (see I.3.1). The dating of archaeological remains from SAV1 North commenced in 2011 with the study of the ceramics, but more stratified contexts were needed to closely assess the development of the town in general. This was achieved by AcrossBorders with new fieldwork in the sectors SAV1 East and SAV1 West.<sup>59</sup> The present publication is the result of a meticulous study of the architecture and the inventories of some selected building units in SAV1 North. For a number of contexts the dating is still unclear and would have to be reconfirmed by continued excavations – but all in all, the information adds to our understanding of Sai Island as important administrative town during the reign of Thutmose III up to the time of Amenhotep III, with a complex microhistory.<sup>60</sup>

<sup>46</sup> See BUDKA 2016c.

<sup>47</sup> AZIM 1975; see, most lately, ADENSTEDT 2016.

<sup>48</sup> For tripartite houses see VON PILGRIM 1996a, 190–196; VON PILGRIM 1996b, 258–260. For a closely comparable layout cf. H 12 of the Middle Kingdom at Elephantine, VON PILGRIM 1996a, 45–46, fig. 9; VON PILGRIM 1996b, fig. 4.

<sup>49</sup> Cf. VON PILGRIM 1996b, fig. 4.

<sup>50</sup> For an approximate size of 50m at the workmen’s village see EL-SAIDI and CORNWELL 1986, fig. 1.1 and KOLTSIDA 2007, 6.

<sup>51</sup> Cf. BIETAK 1996, 38–39, fig. 16 (Uronarti and Shalfak); EMERY, SMITH and MILLARD 1979, pl. 23 (Buhen, Block C, southern part).

<sup>52</sup> See ADENSTEDT 2016, 66, fig. 19.

<sup>53</sup> For a comparison of the SAV1 houses and houses from selected outer sites see ADENSTEDT 2016, 66, fig. 20.

<sup>54</sup> Parallels named by Doyen to courtyard houses at Elephantine (Chapter II) are debatable.

<sup>55</sup> Cf. SPENCER 2014a.

<sup>56</sup> SPENCER 2014a, 201.

<sup>57</sup> Cf. KEMP and STEVENS 2010a, passim.

<sup>58</sup> SPENCER 2014a, 202. Cf. also BUDKA 2016c.

<sup>59</sup> See BUDKA 2011a, 23–33; BUDKA 2015b.

<sup>60</sup> BUDKA 2015b, 51.

## II. THE ARCHITECTURE OF SAV1 NORTH

by Florence Doyen<sup>61</sup>

### A PROLOGUE

#### A.1 The setting

During five excavation seasons by the Sai Island Archaeological Mission (2008–2012) more than one hundred brick wall segments were exposed within the nine 10m squares of the SAV1 North sector (Fig. 3).<sup>62</sup> The stratigraphic evidence here provided significant new information concerning the development of the town's northern sector, where five occupation levels were subsequently identified (I.3). The dating of these levels is the result of Julia Budka's study of the ceramic material from this area (see Chapter III).<sup>63</sup> The particular phase known as Level 3 – dated to the mid to late 18<sup>th</sup> Dynasty – attests to the period of the construction of Enclosure Wall N4<sup>64</sup> and five distinct building units, N24, N25, N12, N26 and N27. The latter are all described in further detail in the Sections B to F.

Within the SAV1 North area the buildings are modest in size, ranging from 23 to 30 square meters. None of the five identified structures complies with a standardised size, type of plan, design or arrangement of the rooms. These structures are thus not part of a modular plan, instead showing a loosely planned and individualised accommodation organisation. Despite this, each of the building units runs fairly parallel to the Enclosure Wall N4; this alignment indicates that their layout falls into the pattern of the settlement grid displayed in the southern sector of the Pharaonic town.

The lack of available space for a staircase and the narrowness of the mud brick walls, mostly half-a-brick thick, call into question the presence of an additional story. No ceiling features were unearthed, though this need not imply that smallest rooms were not, at least lightly, roofed. A facing of plaster covers some of the walls, but no decoration was apparent. Inside the building units, well-known installations such as storage bins, grinding equipment or fireplaces can be found, but there is no sign of mastabas<sup>65</sup>. Together, these features suggest that SAV1 North's compounds were intended as temporary domestic spaces for the purpose of production/food-processing tasks, rather than for permanent residential housing.

Overall, the walls of the Level 3 structures are preserved to less than 1m in height, eliminating potential evidence for windows.<sup>66</sup> In most cases the walls were not set in foundation trenches,<sup>67</sup> instead built directly onto the natural gravel ground or over an earlier layer of occupation, made of backfill pebble or earlier brick courses. At Sai, it is usual for the narrow walls to be reinforced with pilasters.<sup>68</sup> Most of the half-a-brick thick walls were constructed using layers of staggered mud brick stretchers in the traditional running bond pattern, yet irregularities in the bricklaying are not uncommon in SAV1 North,<sup>69</sup> especially in the massive masonry of Enclosure Wall N4 or the bastions N3 and N2.

The site SAV1 North illustrates several aspects of the interrelationship between Pharaonic mud-

<sup>61</sup> Université Libre de Bruxelles (ULB). The present study was undertaken from 2012–2015, while working as a researcher for AcrossBorders (Austrian Academy of Sciences).

<sup>62</sup> See preliminary reports: DOYEN 2009a; DEVAUCHELLE and DOYEN 2009; BUDKA and DOYEN 2013; DOYEN 2014.

<sup>63</sup> BUDKA 2011a, 29–31 and Table 3; BUDKA and DOYEN 2013, 182, 192–193, 201.

<sup>64</sup> See BUDKA and DOYEN 2013, 178–179.

<sup>65</sup> The lack of staircase and mastaba is particularly relevant to the interpretation of a building as a house or a workshop. See the discussion of “house versus workshop” in KEMP and STEVENS 2010a, 492–496, esp. 492.

<sup>66</sup> However, it has to be stressed that a window in the considerable low height of 0.26m above ground level was documented in House H3 in SAV1, the southern part of the New Kingdom town; it is the only known example from Sai; see ADENSTEDT 2016, 49.

<sup>67</sup> See parallels at Amarna: KEMP and STEVENS 2010a, 299, or at Deir el-Medina: BONNET and VALBELLE 1976, 320.

<sup>68</sup> KEMP 2000, 88.

<sup>69</sup> KEMP 2000, 88–92. Stretcher and header bricks are laid on their bed while bull headers are laid on edge. Occasionally, bricks are laid on end; see TASSIE and OWENS 2010, 254, fig. 96; MONNIER 2013, 27–36.

brick architecture and the local topography. With the construction of the enclosure wall, the workers had to contend with the natural slope of the ground soil, which was composed of alluvial pebbles mixed with crumbled yellow sand. Inside the town itself, the lowest occupation layers demonstrated that some works of levelling were carried out in the area, by dumping pebbles as a backfill or by adjusting the irregular slope of the soil with a coating layer mixed with pebbles. However, it must be noted that it can be quite difficult to discern whether the pebble content of the ground is due to the process of intentional backfilling or the naturally gravelly geological environment, an issue already emphasised by Michel Azim.<sup>70</sup>

### A.2 Presentation of the architectural report of SAV1 North and conventions in use

The architectural report of SAV1 North will focus on five building units from the Level 3 phase of the town: N24, N25, N12, N26 and N27 (Fig. 3). The label of each building unit gives the number of the structure with the prefix “N”, referring to the northern sector of the site SAV1 (Fig. 4). When another number follows the name, e.g. N12/2, this represents the specific room within the building unit. When a capital letter is added to the structure’s name, e.g. N12D, this gives the designation of an installation.<sup>71</sup> This report is substantiated through analysis of building techniques such as bricklaying of walls and their buttresses, the size and bonding pattern of mud bricks, plastering of walls, and the coating of the floors. Each chapter begins with a description of both the perimeter and internal walls, and a presentation of the compound’s installations. A description of the related coated floor surfaces follows next, identified using underlined format, e.g. N25F11W, and their intervening deposit written between brackets, e.g. (N12De2g). Finally, the ac-

count of the building phasing and flooring sequence is written with a hyphen and a small letter, e.g. N26-b. Additionally, this report also presents the description of the structures built outside the northern enclosure wall of the town (IIA.4).

The walls in sector SAV1 North are designated by a number according to the chronology of their respective exposure, and the adjoining letter N, E, S or W corresponds to the orientation of the individual wall. In case no additional letter was used, it means that the wall is an isolated segment showing no structural link with near brickwork. Because not all areas were excavated to the foundation (see in particular II.E), counting of brick courses is primarily made from the preserved top. Though counting may occasionally be taken from the bottom, it is reserved for cases when a basal course is visible above a preserved floor, while the lower footing course was not exposed.

Fig. 14 presents the building units’ measurement data in accordance by the International System of Units.<sup>72</sup> All measurements of altitude recorded during the SIAM seasons relate to the temporary benchmark<sup>73</sup> situated at the southwest corner of the dig-house. Levelled at 160.306m, this benchmark has been designated as 0m.<sup>74</sup> Each altitude mentioned in the text keeps to this local system, and is thus an absolute altitude according to the benchmark reference.

### A.3 The mud bricks from SAV1 North

At the SAV1 North site, mud bricks from the building units assigned to Level 3 are composed principally of mud, without pebble or gravel inclusions. In contrast with this homogeneous raw material use, the size of the bricks is definitely not standardised. Many brick formats were documented (Figs. 5–7), ranging from the smallest at  $32 \times 15 \times 8\text{cm}^{75}$  to the largest,  $45 \times 18 \times 9\text{cm}^{76}$ .

<sup>70</sup> See the final report at the end of Azim’s four seasons of excavation in the southern part of the Pharaonic town: AZIM 1975, 95–99. See also BUDKA and DOYEN 2013, 178.

<sup>71</sup> This nomenclature was created while preparing this volume; the preliminary report from 2012 (BUDKA and DOYEN 2013) and other papers (e.g. BUDKA 2016b) still give the original field labels; e.g. N17 (silo within N12) is here newly labelled as N12D; see Fig. 4 for the concordance of the designations.

<sup>72</sup> In Fig. 14 the reader will find decimal measurements converted into Egyptian units, *i.e.* cubits and palms. Since major building activities in the Pharaonic town of Sai are dated to the reign of Thutmose III (see BUDKA 2015a, 67

and Chapter I.3.3), it is assumed that the unit in use was the great royal cubit (52.5cm long), comprising seven palms (each 7.5cm long): see CARLOTTI 1995, 140, pl. I; CARLOTTI 2005, 190. Regarding the ancient Egyptian cubit, see HIRSCH 2013 and related discussion and bibliography.

<sup>73</sup> The geographic coordinates of the bench mark are E=  $30^{\circ}19'53.90''$  and N=  $20^{\circ}44'19.69''$ .

<sup>74</sup> GPS data collected by AcrossBorders illustrate that this local system is 35m (+/-5m) lower than the height according to the World Geodetic System 1984 (WGS84).

<sup>75</sup> In the western section of Wall 43N, building unit N26 (IIE.2.3) or in Wall 52W, building unit N12 (IID.2.4).

<sup>76</sup> In the northern segment of Wall 45E in N26 (IIE.2.2).



SAV1N concordance list (installations and rooms)				
	old N-name	new N-name	perimeter walls	internal walls
<b>Building unit N24</b>			08N, 08N, 07E, 03E, 03S	08S, 07S
		N24A (installation)		
		N24B (installation)		
		N24C (installation)		
		N24D (installation)		
		N24E (installation)		
	N8A (installation)	N24F		
<b>Building unit N12</b>			42N, 42E, 42S, 52W	46W, 53E, 57
	N16 (installation)	N12C		
	N17 (installation)	N12D		
	N19 (installation)	N12E		
	N20 (installation)	N12F		
		N12/1 (front room)		
		N12/2 (central room)		
		N12/3 (rear room)		
<b>Building unit N26</b>			43N, 45E, 47S, 44W, 47W	44S, 43E, 47N, 47E, 44E
		N26/1 (main larger space)		
	N18 (north–western side room)	N26/2		
	N21 (south–western side room)	N26/3		
	N14 (room of N26-a, third building phase)	N26/4		
<b>Building unit N27</b>			33N, 35W, 54E, 36E, 34S, 33W, 31E	39W, 38E, 36N, 34N, 34E
		N27/1 (main larger space)		
	N8 (western side room)	N27/2		
	N11 (eastern side room)	N27/3		
	N22 (installation)	N27A		

Fig. 4 SAV1 North concordance list: N-numbers (installations and rooms)

Three format categories – small, medium and large – have been arbitrarily established according to the total that results from the addition of the three sides' measurements: length + width + thickness. The bricks for which the total of the sides is less than 60cm fall into the small format category (Fig. 5); if the total ranges from 60cm to less than 65cm, the bricks fall into the medium format category (Fig. 6); if the total is equal to or greater than 65cm, the

bricks fall into the large format category (Fig. 7). The frequency of these formats differs and from this classification it can be seen that bricks falling into the medium format category were the most often in at SAV1 North.

From the Middle Kingdom onwards, there is evidence of various finger marks in different types of mud brick masonry in Egypt and Nubia, such as pyramids, defensive walls of the fortresses, temples

Small format category of bricks' size	Wall/Pilaster	Length (cm)	Width (cm)	Thickness (cm)	Total l + w + t
<b>A. N3 bastion area</b>					
Large Bastion N2		32/35	13/15	8	55.5cm
<b>B. Building Unit N24</b>					
<b>C. Building Unit N25</b>					
Perimeter walls	02N	33	15	10.5	58.5cm
	25W	33	15/16	10	58.5cm
<b>D. Building Unit N12</b>					
Perimeter walls	42S	32/33	16	10	58.5cm
	N12Pil1	32	17	9	58cm
	N12Pil9	34	15/17	9	59cm
	42N	34	14	9	57cm
	42N	33	17	9	59cm
	N12Pil7	34	16	9	59cm
	52W	32	15	8	55cm
Internal walls	46W	32	17	9	58cm
	N12Pil5	34	16	9	59cm
	53E	33	15/16	8	56.5cm
	N12Pil11	34	15	10	59cm
	42Sa	32	15	10	57cm
<b>E. Building Unit N26</b>					
Perimeter walls	43N (west. segment)	32	15	8	55cm
Internal walls	44S	33	16	8	57cm
<b>F. Building Unit N27</b>					
Perimeter walls	33N	33	16	8	57cm
Internal walls	N27Pil2	35	16	7/8	58.5cm

Fig. 5 Small brick format category

and settlements.<sup>77</sup> Some of the mud bricks from SAV1 North display different finger grooves that are sorted as follows:

- Type A: 1 central oblique groove
- Type B: 2 central oblique grooves
- Type C: 3 central oblique grooves
- Type D: 1 diagonal groove
- Type E: 2 diagonal grooves
- Type F: 2 finger holes
- Type Ga: 3 finger holes (fan)
- Type Gb: 3 finger holes (triangle)
- Type H: 5 finger holes (fan)
- Type J: 1 finger hole
- Type K: 2 central grooves (cross)
- Type L: parallel longitudinal grooves

<sup>77</sup> For selected parallels see ARNOLD 1979, 6, fig. 1 and pl. 2 (Deir el-Bahari, temple of Mentuhotep); CHARLIER 2012, 180, fig. 9.5 (Qaret el-Toub, Roman fort); JARITZ 1993, 112–113, pl. 25c (Gebel el-Granite); LACOVARA 1990, 5 and pl. VIIIa (Deir el-Ballas, South Palace); NICHOLSON 1989,

68, fig. 3.4 (Amarna, building Q.48.4); VON PILGRIM 1996a, 131, fig. 48 and pls. 31d–e (Elephantine, House H69); SECO ÁLVAREZ and GAMARRA CAMPUZANO 2015, 63–66, fig. 7 (Luxor West Bank, Thutmose III temple of Millions of Years).

Medium format category of bricks' size	Wall/ Pilaster	Length (cm)	Width (cm)	Thickness (cm)	Total l + w + t
<b>A. N3 bastion area</b>					
<b>Enclosure Wall N4</b>		38	17	7/8	62.5cm
<b>Structure N28</b>	12	34/36	15/18	8.5	60cm
	01W	36	17	8.5	61.5cm
<b>B. Building Unit N24</b>					
<b>Perimeter walls</b>	03S	38	16/18	8	63cm
	03E	38	16/18	8	63cm
	08N	35	17/18	8	60.5cm
	08N	36	17	10	63cm
	08W	36	17	10	63cm
	N24Pil4	37	17	8	62cm
<b>Internal walls</b>	07S	35	17	8	60cm
	08S	34/38	16	8	60cm
	N24Div2	38?	16	10	64cm
<b>C. Building Unit N25</b>					
<b>Perimeter walls</b>	02E	35	16	10.5	61.5cm
	N25Pil1	35	16	10.5	61.5cm
	N25Pil2	35	16	10.5	61.5cm
<b>D. Building Unit N12</b>					
<b>Perimeter walls</b>	42S	36/37	17	10	63.5cm
	N12Pil3	34	16	10	60cm
	N12Pil4	37	15	10	62cm
	42E	36	16	10	62cm
	N12Pil8	35	17	9	61cm
<b>Internal walls</b>	N12Pil6	35	17	9	61cm
	N12Pil10	34	17	9	60cm
	N12Pil2	34	16	10	60cm
<b>E. Building Unit N26</b>					
<b>Perimeter walls</b>	47S	36	15	10	61cm
	45E (south)	35	15/16	10	60.5cm
	44W	35	16	9	60cm
	47W	36	15	10	61cm
<b>Internal walls</b>	43E	35	15/16	10	60.5cm
	44E	35/37	16/17	9/10	62cm
	47E	33/35	18	10	62cm
	47N	35/37	18	10	64cm
<b>F. Building Unit N27</b>					
<b>Perimeter walls</b>	34S	38	16	7/8	61.5cm
	35W	35	17	8	60cm
	33W	35	17	10	62cm
	31E	36	18	9	63cm
<b>Internal walls</b>	38E	36	18	9	63cm
	39W	36	18	9	63cm
	N27Pil1	36	18	9	63cm
	34N	38	16	7/8	61.5cm
	34E	38	16	7/8	61.5cm
	36N	38	16	7/8	61.5cm

Fig. 6 Medium brick format category

Large format category of bricks' size	Wall/Pilaster	Length (cm)	Width (cm)	Thickness (cm)	Total l + w + t
<b>A. N3 bastion area</b>					
<b>Enclosure Wall N4</b>		40	20	11	71cm
		44	16	10	70cm
<b>Small Bastion N3</b>		40	20	11	71cm
<b>Structure N28</b>	01S	38	20	9.5	67.5cm
<b>B. Building Unit N24</b>					
<b>Perimeter walls</b>	07E	39	18	8.5	65.5cm
	N24Pil1	40	17	9	66cm
	N24Pil2	38	17	10	65cm
	N24Pil3	38.5	19	9/10	67cm
<b>Internal walls</b>	N24Div1	39	17	10	66cm
<b>C. Building Unit N25</b>					
<b>D. Building Unit N12</b>					
<b>Perimeter walls</b>	42E	38	18	10	66cm
<b>E. Building Unit N26</b>					
<b>Perimeter walls</b>	45E (north. segment)	45	18	9	72cm
	43N (east. and central segments)	38	19	9	66cm
<b>F. Building Unit N27</b>					
<b>Perimeter walls</b>	36E	37	18	10	65cm

Fig. 7 Large brick format category

For the walls and structures under investigation – *i.e.* assigned to the Level 3 phase of the mid-18<sup>th</sup> Dynasty – it is possible to identify only four of these types:

- Type A, in building unit N26's perimeter walls 47S and 44W (see Fig. 45)
- Type B, in building unit N24's perimeter wall 08N (see Fig. 25),  
in building unit N25's perimeter walls 02E, 02N and 25W (see Fig. 29)
- Type F, in small Brick Tower N3 (see Fig. 8)
- Type L, in Enclosure Wall N4 (see Fig. 8)  
in building unit N24's perimeter walls 03E and 07E (see Fig. 25)  
in building unit N27's internal wall 36N (see Fig. 50).

In the southern sector of the New Kingdom town on Sai Island, Azim documented up to twenty types of digital grooves.<sup>78</sup> His Type 06<sup>79</sup> corresponds to our Type L, and his Types 04 and 08<sup>80</sup> are identical to the SAV1 North Types F and B respectively. So far, it has not been possible to define a comprehensive pattern of distribution of the walls where the bricks display a grooved feature.

#### A.4 The N3 bastion area

##### A.4.1 Introduction

Outside the northern Enclosure Wall N4, the N3 bastion area includes the following structures, described below: small Brick Tower N3, large Brick Tower N2 and Structure N28.

From 16–19 December 1973, Azim undertook a brief survey of the location SAV1A, on the east-

<sup>78</sup> AZIM 1975, 102–105, pls. VI and VII.

<sup>79</sup> AZIM 1975, 102, pl. VI (top left).

<sup>80</sup> Michel Azim, personal communication, 29 Oct 2012.

ern part of the Pharaonic town's northern enclosure wall. The French architect explained his preliminary observations as follows: *Le mur nord de la ville, totalement invisible sur le terrain, a pu également être retrouvé par sondage. Un de ses redans a été dégagé: il est identique à ceux du mur sud, mais enrobé ultérieurement par un bastion plus grand fondé sur des briques tombées. Le mur nord au moins a donc été détruit, puis restauré et renforcé.*<sup>81</sup> His entire excavation took place in four days, barely enough time to document findings (Pls. 5a, b and c).<sup>82</sup> Following the approval of Azim, the Sai Island Archaeological Mission decided to continue the fieldwork from where he left off. The fieldwork thus resumed on 16 January 2008 at the place of the earlier dig (Pl. 5d). During the dig hiatus, this area was progressively refilled with modern construction or organic waste, leaving only a few rows of mud bricks still visible at the surface by 2008. At the end of the first season at SAV1 North, one of the distinct outcomes reached by the SIAM excavation was to have completed the clearance of the entire large Brick Tower that had been only partially exposed during the 1973 survey.

A 20m long section of the northern enclosure wall was cleared for the second time by the SIAM. This city wall, N4, is 4.26m wide and features regular bonding of mud brick courses composed of headers and stretchers in alternating layers.<sup>83</sup> One may also find bricks laid in various irregular positions – bull headers or bricks in fishbone patterns – to adjust the masonry to the undulating natural gravel substratum. Furthermore, it is worth noting that in this sector of SAV1 North, the ground soil is uneven and characterised by two distinct downward slopes from east to west or from south to north.<sup>84</sup> Hence, it can be assumed that no major levelling work was completed prior to the building of the enclosure wall and that the setting of the masonry courses thus served to suit the irregular gravel soil. As a consequence of this distinctive feature, the coated floor covering

the fill of the foundation trenches is also slightly inclined (IIA.4.3.2).

#### A.4.2 Description of the structures from the N3 bastion area

##### A.4.2.1 The Brick Tower N3 (Fig. 8 and Pl. 6)

This external Bastion N3 abuts the northern face of Enclosure Wall N4 and is preserved up to a maximum height of 1.45m or eleven mud brick courses.<sup>85</sup> N3's emplacement footprint covers the ground with a roughly square outline (2.20 × 2.61m)<sup>86</sup> that corresponds to the type and proportions of the Brick Towers exposed along SAV1's southern enclosure wall.<sup>87</sup> N3 is made of bricks that are 40 × 20 × 11 cm in size (see Figs. 7 and 12). Some of these bricks feature two fingertips holes.<sup>88</sup> N3's brickwork consists of alternating courses, with five rows of headers running north–south and six stretchers running east–west. The Brick Tower N3 was an original part of the masonry of the enclosure wall itself – and thus contemporaneous – as can be seen from N3's western, southern and eastern faces, where brick courses are unevenly bonded to Wall N4. The adjacent Wall N4 is 4.26m thick at its base, both of its facings are bonded, and its core is composed of ten north–south running rows of mud brick headers of at least three different sizes (Fig. 12): 40 × 20 × 11cm, 44 × 16 × 10cm (Fig. 7) and 38 × 17 × 7/8cm (Fig. 6).<sup>89</sup> In addition, it can be noted that some of the smaller bricks show longitudinal prints that may correspond either to finger marks printed in the brick or grooved in the horizontal bed mortar.<sup>90</sup>

In contrast to the straight vertical eastern face of N3, the five lowest courses of the western face, up to 60cm high, project outward (Pl. 6a). From the west side of the small Brick Tower, it can also be observed that the base of N3's footing course coincides with the base of Enclosure Wall N4. The base

<sup>81</sup> AZIM 1975, 122.

<sup>82</sup> After a meeting held in June 2007 between Azim and the author, the Sai Island Archaeological Mission was granted several photographs and sketches from Azim's unpublished personal collection of field notes and documents.

<sup>83</sup> BUDKA and DOYEN 2013, 178.

<sup>84</sup> Regarding the south–north slope below the footing course of small Brick Tower N3, see Fig. 11.

<sup>85</sup> The top of the upper course is levelled at 160.83m and base of the N3's northeastern corner at 159.38m.

<sup>86</sup> The sides of N3 are slightly battered. The top course's outline measures 2.00 × 2.48m.

<sup>87</sup> AZIM 1975, 122; see quotation above.

<sup>88</sup> This finger mark falls into the Type F category = Azim Type 4 (IIA.3).

<sup>89</sup> See AZIM 1975, 120 regarding the southern enclosure wall: “les parements sont fondés dans la terrasse de gravier plus profondément que la masse centrale.” This statement is verified in the case of the northern enclosure wall, see Pl. 3.

<sup>90</sup> This finger mark falls into the Type L category = Azim Type 6 (IIA.3).

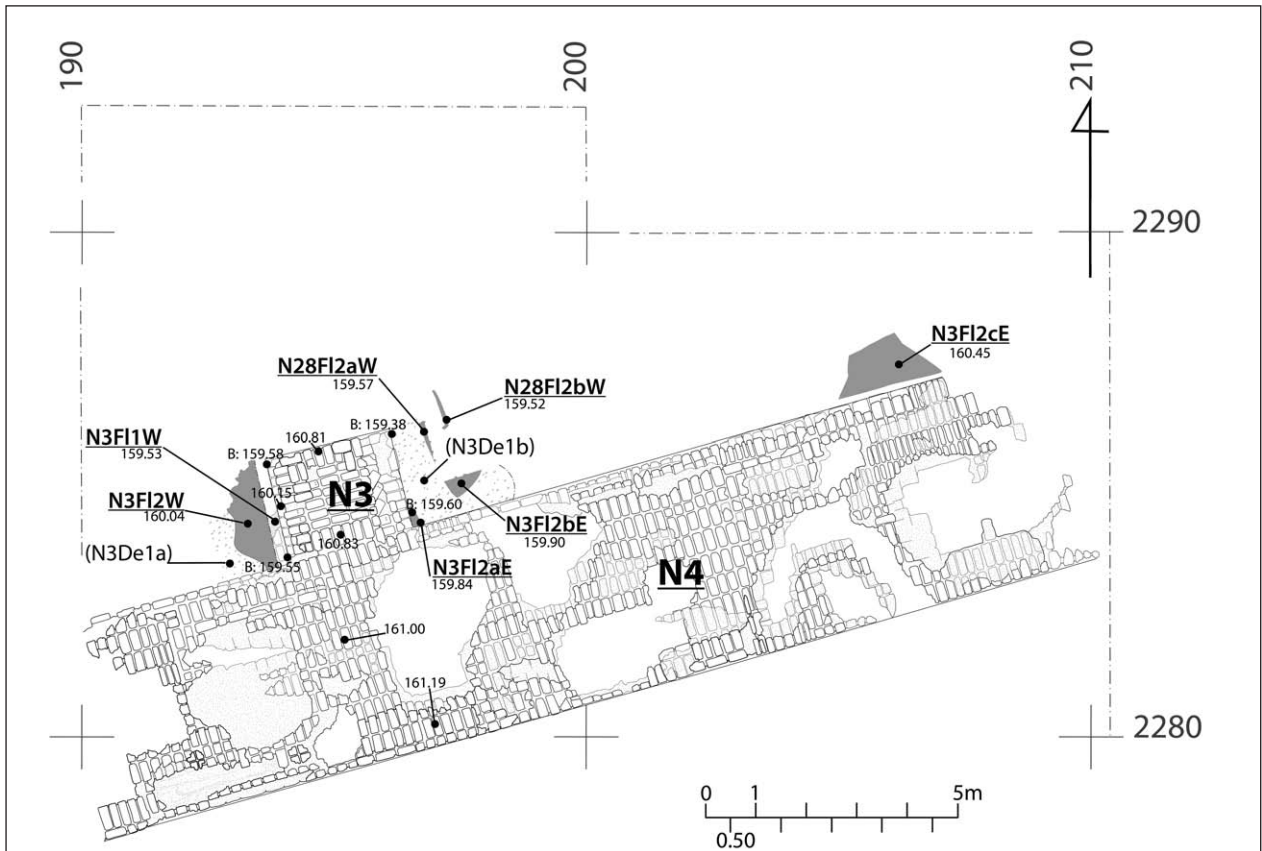


Fig. 8 Plan of Phase N3-b: levels of Structures N3, N4 and associated floors

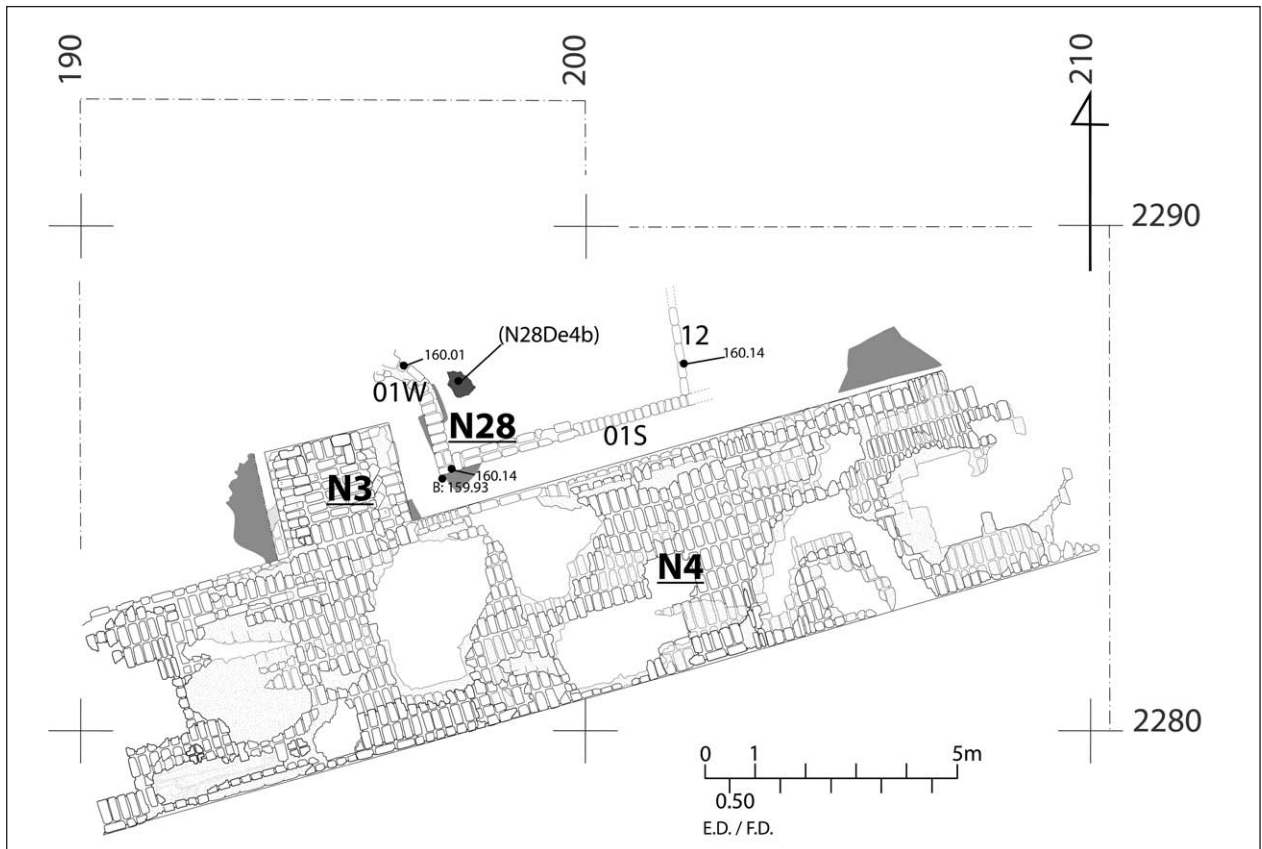


Fig. 9 Plan of Phase N3-a: levels of Structure N28

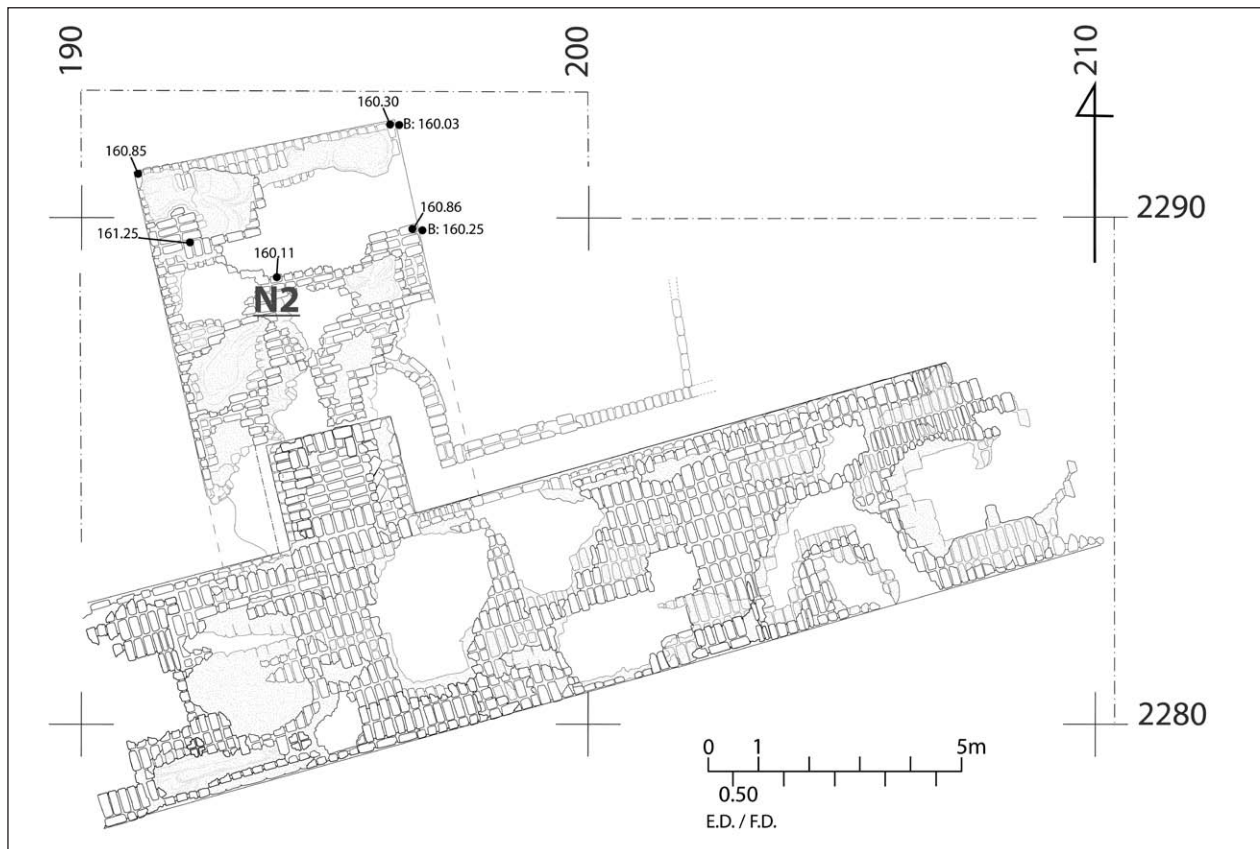


Fig. 10 Plan of N3 including Structure N2

of N3's southwestern corner, abutting the northern facing of N4, is levelled at 159.55m while the baseline of its opposing northwestern corner is measured at 159.58m. On the eastern side of N3, the baseline of the footing course follows the downward sloping ground (Fig. 11) and has two distinct level measurements. At its southern end, in the corner joining N3's eastern face and N4's northern facing, the footing course of the Brick Tower is levelled at 159.60m.<sup>91</sup> At its northern end, the baseline of the opposing northeastern corner is measured at 159.38m.

From the western face of N3, at the fifth course from the top (Pl. 6b), it can be seen that one stretcher brick bonds the Brick Tower N3 to Enclosure Wall N4. On the eastern side of N3 at the same level, here the third course from the top, there is also a brick showing the same bonding character (Fig. 11).

As was previously observed by Azim (IIA.4.1), the small Brick Tower N3 was found partially cov-

ered by a larger Brick Tower running north of N3, i.e. N2 (Pl. 5b). The northern edge of N3<sup>92</sup> was hidden by the masonry of Structure N2 while part of the broken mud brick rubble underlying this masonry covered the damaged northeastern corner of N3.

#### A.4.2.2 The Brick Tower N2 (Figs. 10 and 12)

To restore the smaller Brick Tower N3, a roughly rectangular shaped new bastion, N2, was built with a larger scale and proportions. The structure, measuring at the base c. 7.85 × 5.30m, significantly enlarges N3 by slightly more than to seven times.<sup>93</sup> Severely damaged by large holes dug into it,<sup>94</sup> the remaining perimeter of the Structure N2 is partial.<sup>95</sup> Brick tower N2 culminates at 161.25m and is preserved up to six layers of mud bricks that are 32/35 × 13/15 × 8cm in size (Fig. 5). The altitudes of its northwestern and northeastern corners are measured

<sup>91</sup> The baseline in this corner was not cleared completely. The base of the adjacent Enclosure Wall N4's footing course is levelled at 159.84m.

<sup>92</sup> The top of N3's northern edge is levelled at 160.81m.

<sup>93</sup> BUDKA and DOYEN 2013, 178.

<sup>94</sup> The date of the digging activity remains uncertain.

<sup>95</sup> The Brick Tower N2 surrounds the original small Bastion N3 and was possibly abutting Enclosure Wall N4.

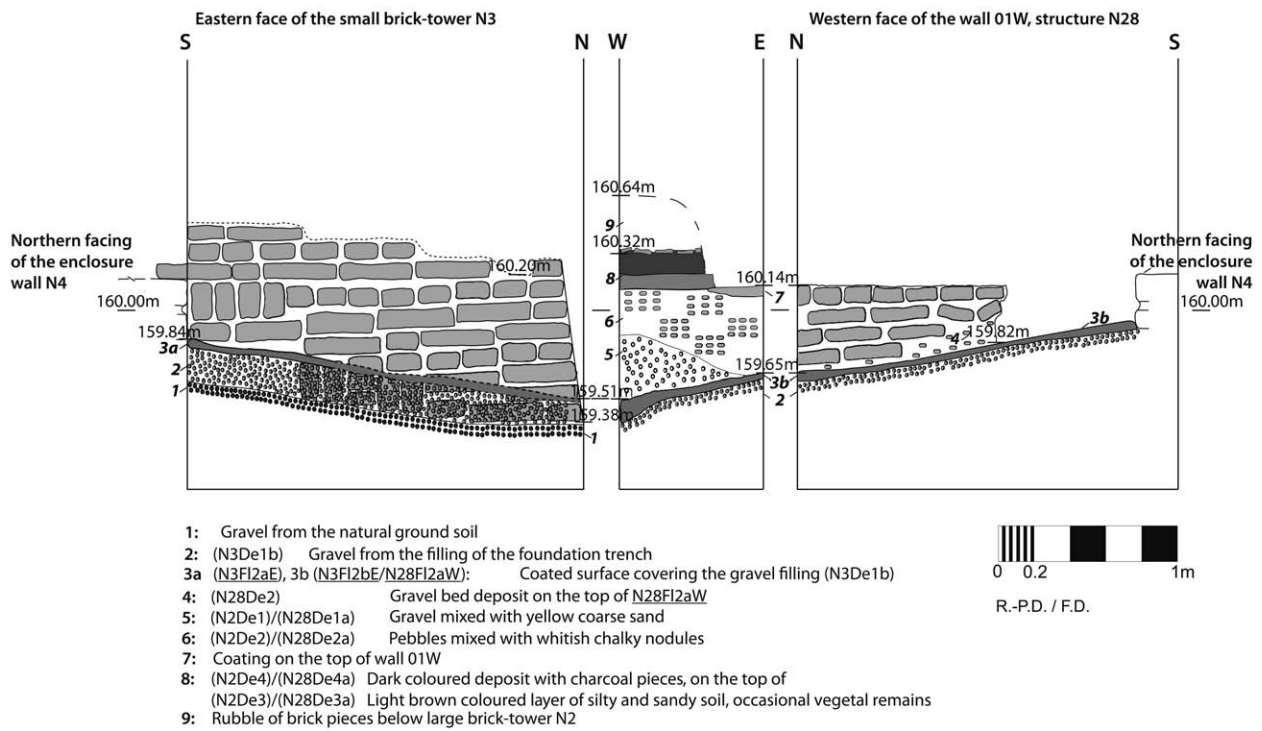


Fig. 11 Section drawing 007/2008 (east face of Brick Tower N3 and west face of Wall 01W)

N3 bastion area		Length (cm)	Width (cm)	Thickness (cm)	Total l + w + t	Format
Enclosure Wall N4		40	20	11	71cm	large
		44	16	10	70cm	large
	finger mark Type L	38	17	7/8	62.5cm	medium
Small Bastion N3	finger mark Type F	40	20	11	71cm	large
Structure N28	01S	38	20	9.5	67.5cm	large
	01W	36	17	8.5	61.5cm	medium
	12	34/36	15/18	8.5	60cm	medium
Large Bastion N2		32/35	13/15	8	55.5cm	small

Fig. 12 Structures of N3 bastion area: brick sizes

at 160.85m and 160.30m respectively. The base of the latter corner was exposed during the 2008 season and subsequently measured at 160.03m. The damage caused by pitting exposed the inner core of the large bastion, which was made further accessible through the excavation of a trench cut through the

eastern side. This trench, located north of the smaller Brick Tower N3, revealed that N2 was built upon a layer of rubble composed of mud brick crumble (Pls. 10a, b, c).<sup>96</sup> This layer in turn overlies a blackened deposit that once covered and concealed the earlier Structure N28 (IIA.4.3.5).

<sup>96</sup> Against the northern face of N3, the rubble layer is c. 0.30m thick, lying between 160.61m and 160.30m (Fig. 11: 9).



### A.4.2.3 The Structure N28 (Figs. 9 and 12)

Structure N28 is composed of two walls: Wall 01S (east–west oriented and running parallel to Wall N4) and Wall 01W (running north and slightly curving to the west, on the east side of Brick Tower N3).

Wall 01S is only preserved up to a maximum height of two courses of mud bricks that are  $38 \times 20 \times 9.5\text{cm}$  in size. This wall is *c.* 5.20m long (around 15 stretcher bricks) and runs 0.68m parallel to the northern facing of N4. Its footing course is mostly made of header bricks while its current top course is mainly composed of stretchers, resulting in a one-brick-thick wall masonry.

Wall 01W is also one brick thick and is bonded at right angle to the western end of Wall 01S. It is preserved up to four brick courses and the bricks used for the construction of Wall 01W are, exactly like Wall 12, of a slightly smaller format than 01S, at  $36 \times 17 \times 8.5\text{cm}$ .<sup>97</sup> This wall extends 1.60m long, running 0.72m from and parallel to the eastern face of Brick Tower N3. At the northern end of its rectilinear segment, Wall 01W curves westwards and stretches around the northeastern corner of the small bastion and alongside its northern face (Pls. 10b, c).

Further east, the much eroded footing course of Wall 12 lies less than 5.00m from the western end of Wall 01S. This wall, of which only five footing stretcher bricks have been exposed, is half-a-brick thick, *c.* 1.80m long and runs perpendicular to the inner/northern face of Wall 01S. These brick remains are of a smaller size,  $34/36 \times 15/18 \times 8.5\text{cm}$ . At the southern end of Wall 12, the footing brick abuts the masonry of Wall 01S; though it is adjacent, the absence of visible bonding features may indicate that Wall 12 does not belong to the layout of N28.

Structure N28 was built upon fill deposit, overlying a coated surface that floors the gravel fill of the N3 and N4 foundation trenches (IIA.4.3.4). The setting of Structure N28 thus belongs to Phase N3-a, a different and subsequent phase than the foundation of Enclosure Wall N4 and its external Brick Tower N3. N28 might be tentatively interpreted as a ram-

part wall lining the town enclosure and surrounding its original bastion.<sup>98</sup>

Before constructing the later larger Brick Tower N2<sup>99</sup> over the smaller Brick Tower N3 and the Structure N28, levelling works were carried out in the area. Once out of use, former Structure N28 was levelled and the gap between the western wall of this structure and N3's northeastern face was filled with gravel (Figs. 11:5 and 6) (IIA.4.3.5).

### A.4.3 Coated surfaces associated with the structures from the N3 bastion area (Fig. 13)

#### A.4.3.1 On the west side of Brick Tower N3 (Fig. 8)

From the base of the uppermost projecting course of N3 (*i.e.* the fifth course from the base), a mud-coated floor lips out from both N3's western face and N4's northern face (Pl. 6b). This 3–4cm thick surface, N3F12W,<sup>100</sup> lies on the path outside the city enclosure and tops the gravel deposit (N3De1a),<sup>101</sup> which is itself likely the rubble of gravel filling the foundation trenches of both the Bastion N3 and Enclosure Wall N4. The gravel deposit (N3De1a) thus conceals the basal courses that project out from the western face of N3.

Underlying Deposit (N3De1a), there is a remaining patch of another flooring surface, lying against the base of N3's footing course. This floor, N3F11W, is levelled at 159.53m and was laid in N3's first building phase of Level 3 of N3, namely N3-b.

#### A.4.3.2 On the east side of Brick Tower N3 (Figs. 8 and 11)

To the east of Brick Tower N3, there are also remnants of a coated surface, N3F12E, which may correspond to Floor N3F12W identified on the opposite side of N3. The surface N3F12E also overlies Deposit (N3De1b), *i.e.* the gravel that fills the foundation trenches of both N3 and N4. Against the eastern face of N3 and further east on the path outside the northern Enclosure Wall N4, additional pieces of the 4cm thick Floor N3F12E were also documented:

<sup>97</sup> At the southern end of Wall 01W, where this wall is bonded to Wall 01S, the top of the upper course is levelled at 160.11m. In the exposed segment running westwards, the top of 01W is levelled at 160.01m and the base of the footing course at 159.59m.

<sup>98</sup> See BUDKA and DOYEN 2013, 178 and n. 73; MONNIER 2013, 203 and 246, n. 383.

<sup>99</sup> For the ceramic material from the filled area below the Brick Tower N2 and its possible dating by Budka, see BUDKA and DOYEN 2013, 178.

<sup>100</sup> The top of N3F12W ranges from 160.01m to 160.05m.

<sup>101</sup> Deposit (N2De1) is 0.47m thick between 160.00m and 159.53m.

West of N3, north of N4	East of N3, north of N4	North of N3	N28, Wall 01W	West of N28's Wall 01W	N2, north of Wall 01W	East of N28's Wall 01W	Building phases of N3's area
			Brick pieces rubble				Large Bastion N2 building phase
			(N2De4)	(N28De4a)	(N2De4)	(N28De4b)	
			(N2De3)	(N28De3a)	(N2De3)	(N28De3b)	
					<u>N2F13N</u>		
				(N28De2a)	(N2De2)	(N28De2b)	
				(N28De1a)	(N2De1)	(N28De1b)	
			<b>01W/N28</b> <i>(N28De2)</i>				N3-a Second building phase
<u>N3F12W</u>	<u>N3F12E</u>	<u>N3F12N</u>	<u>N28F12W</u>	<u>N28F12aW</u>		<u>N28F12bW</u>	N3-b First building phase
(N3De1a)	(N3De1b)		(N3De1b)				
<u>N3F11W</u> N3-N4	N3-N4	N3					
Natural ground							

Fig. 13 Structures of N3 bastion area: floors, fills and building phases

- N3F12aE (Fig. 11:3a) is a small patch of floor lying in the area of the corner joining the eastern face of Bastion N3 to the northern face of Wall N4. This patch, levelled at 159.84m, abuts both the base of Wall N4's footing course and the base of N3's sixth course from the top.
- N3F12bE (Fig. 11:3b) levelled at *c.* 159.90m, projects out the southern side of Wall 01S and is about 0.2m in surface area. To the south, the connection of the patch N3F12bE to N4's footing course is truncated, while to the north, it can be clearly seen that this patch of flooring material underlies the southwestern corner of Structure N28 (IIA.4.3.4).
- N3F12cE (Pl. 7) is a larger section of flooring, preserved up to 2m in surface area. It is levelled

at *c.* 160.45m and lies next to the outer facing of N4, 8.60m away from the corner joining the eastern face of N3 and the northern facing of Wall N4.

#### A.4.3.3 On the north side of Brick Tower N3 (Pl. 9)

A further piece of flooring abuts the footing course of the northern face of Brick Tower N3, N3F12N. This patch of floor is levelled at 159.42m<sup>102</sup> and might have been related to the coated surfaces mentioned above, N3F12aE and N3F12bE. Actually, patch N3F12aE belongs to a surface documented during the 2008 season that was truncated during the excavation on the eastern side of N3 (Fig. 11). This surface gradually sloped downward to the

<sup>102</sup> The base of N3's northeastern corner is levelled at 159.38m (IIA.4.2.1).

north, where it once might have been connected to Floor N3F12N. Despite the truncation between the floor pieces N3F12aE, N3F12bE and N3F12N, it can be assumed that these pieces were part of a single flooring surface, topping the gravel fill of N3's foundation trench.

#### A.4.3.4 Below the Structure N28

At the second building phase (N3-a) Structure N28 was built upon a 6–10cm thick gravel bed, Deposit (N28De2), which overlies a patch of flooring material. The patch N3F12bE (IIA.4.3.2) that projects out the N28's southwestern corner, is part of a mud-coated surface, N3F12bE/N28F12W, underlying Deposit (N28De2) of Wall 01W (Fig. 11). Floor N28F12W gradually slopes downward to the north. Two pieces of flooring, N28F12aW and N28F12bW protrude slightly from below each side of Wall 01W's straight segment, and are levelled at 159.57m and 159.52m respectively. The patches labelled N3F12bE, N28F12W, N28F12aW and N28F12bW are thus part of a single surface, recognised below Structure N28's western Wall 01W (Pl. 5 and Fig. 8). It can be assumed that this surface once joined the Floors N3F12aE and N3F12N, built atop the gravel filling the foundation trenches of the Bastion N3 and Enclosure Wall N4. These floors therefore belong – like N3 and N4 – to the first building phase (N3-b) and predate Structure N28 of the second building phase (N3-a).

#### A.4.3.5 Below the Brick Tower N2 (Fig. 11 and Pl. 8)

As mentioned above, later construction of the larger Brick Tower N2 required some levelling works levelling in the area of N3 and N28. The former Structure N28, in particular, was dismantled down to its foundation courses and the gap between the Wall 01W and Bastion N3's northeastern face was filled. This backfill, identified on either side of N28's Wall 01W, consists of two layers of deposit: the lower (N2De1) is composed of abundant gravel

mixed with coarse yellow sand,<sup>103</sup> while the upper (N2De2) is characterised by frequent pebbles mixed with a number of whitish chalk nodules.<sup>104</sup>

Over the backfill concealing the northern face of Wall 01W's curved segment was subsequently laid the mud-coated Floor N2F13N, which may originate from the time of N28's dismantling. Because this surface, levelled at 159.98m, was hidden and protected below the later large Brick Tower N2, it was found intact (Pl. 10b). On top of Floor N2F13N, two successive layers of occupational deposit developed, overlying the area of the Structure N28 and covering the bricks of Wall 01W. The lowest deposit (N2De3) consists of a light brown layer of silty and sandy soil, mixed with occasional vegetal remains.<sup>105</sup> This deposit underlies the loose upper deposit (N2De4), characterised with a dark colour, abundant charcoal pieces and occasional ashy lenses.<sup>106</sup> It can be assumed that the two layers of deposits, (N2De3) and (N2De4), match with the final phase of occupation assigned to Level 3. Following this stage, the area was concealed below the broken mud brick rubble underlying the masonry of the later Brick Tower N2 (Pl. 10a).

## B BUILDING UNIT N24

### B.1 Introduction

Located in the northern part of SAV1 North, next to Enclosure Wall N4, building unit N24 (Pl. 11) is delineated by Walls 08N and 08W to the west and Walls 07E, 03E, and 03S to the east. All of these walls were constructed using layers of mud brick stretchers in the traditional running bond pattern, generally half-a-brick thick. Although none of these five walls is preserved to its full extension or height, the two opposing intact corners of the building unit remain: to the northwest, the bonding of Walls 08N and 08W and to the southeast, the bonding of Walls 03S and 03E.

The walls of building unit N24 were reinforced by four pilasters. Each of the opposing north–south

<sup>103</sup> This *c.* 30cm thick deposit corresponds to Deposit (N28De1a) whose top is levelled at 159.86m to the west of Wall 01W, and to Deposit (N28De1b) whose top is levelled at 159.80m to the east of the same wall (Pl. 8).

<sup>104</sup> The thickness of Deposit (N2De2) varies from 15cm (from 159.96–159.80m to the east of Wall 01W, *i.e.* Deposit (N28De2b), Pl. 8) to 40cm (from 160.10–*c.* 159.70m to the west of Wall 01W, *i.e.* Deposit (N28De2a)).

<sup>105</sup> The thickness of Deposit (N2De3) varies from 8cm (from 160.20–160.12m to the west of Wall 01W, *i.e.* Deposit (N28De3a), Pl. 8) to 20cm (from 160.16m–*c.* 159.96m to the east of Wall 01W, *i.e.* Deposit (N28De3b)).

<sup>106</sup> Deposit (N2De4) varies from 5–15cm in thickness. West of Wall 01W, it corresponds to Deposit (N28De4a) levelled between 160.34–160.20m. On the other side of the same wall, the corresponding Deposit (N28De4b) is levelled between 160.21–160.16m (Pl. 8 and Fig. 9).

north, where it once might have been connected to Floor N3F12N. Despite the truncation between the floor pieces N3F12aE, N3F12bE and N3F12N, it can be assumed that these pieces were part of a single flooring surface, topping the gravel fill of N3's foundation trench.

#### A.4.3.4 Below the Structure N28

At the second building phase (N3-a) Structure N28 was built upon a 6–10cm thick gravel bed, Deposit (N28De2), which overlies a patch of flooring material. The patch N3F12bE (IIA.4.3.2) that projects out the N28's southwestern corner, is part of a mud-coated surface, N3F12bE/N28F12W, underlying Deposit (N28De2) of Wall 01W (Fig. 11). Floor N28F12W gradually slopes downward to the north. Two pieces of flooring, N28F12aW and N28F12bW protrude slightly from below each side of Wall 01W's straight segment, and are levelled at 159.57m and 159.52m respectively. The patches labelled N3F12bE, N28F12W, N28F12aW and N28F12bW are thus part of a single surface, recognised below Structure N28's western Wall 01W (Pl. 5 and Fig. 8). It can be assumed that this surface once joined the Floors N3F12aE and N3F12N, built atop the gravel filling the foundation trenches of the Bastion N3 and Enclosure Wall N4. These floors therefore belong – like N3 and N4 – to the first building phase (N3-b) and predate Structure N28 of the second building phase (N3-a).

#### A.4.3.5 Below the Brick Tower N2 (Fig. 11 and Pl. 8)

As mentioned above, later construction of the larger Brick Tower N2 required some levelling works levelling in the area of N3 and N28. The former Structure N28, in particular, was dismantled down to its foundation courses and the gap between the Wall 01W and Bastion N3's northeastern face was filled. This backfill, identified on either side of N28's Wall 01W, consists of two layers of deposit: the lower (N2De1) is composed of abundant gravel

mixed with coarse yellow sand,<sup>103</sup> while the upper (N2De2) is characterised by frequent pebbles mixed with a number of whitish chalk nodules.<sup>104</sup>

Over the backfill concealing the northern face of Wall 01W's curved segment was subsequently laid the mud-coated Floor N2F13N, which may originate from the time of N28's dismantling. Because this surface, levelled at 159.98m, was hidden and protected below the later large Brick Tower N2, it was found intact (Pl. 10b). On top of Floor N2F13N, two successive layers of occupational deposit developed, overlying the area of the Structure N28 and covering the bricks of Wall 01W. The lowest deposit (N2De3) consists of a light brown layer of silty and sandy soil, mixed with occasional vegetal remains.<sup>105</sup> This deposit underlies the loose upper deposit (N2De4), characterised with a dark colour, abundant charcoal pieces and occasional ashy lenses.<sup>106</sup> It can be assumed that the two layers of deposits, (N2De3) and (N2De4), match with the final phase of occupation assigned to Level 3. Following this stage, the area was concealed below the broken mud brick rubble underlying the masonry of the later Brick Tower N2 (Pl. 10a).

## B BUILDING UNIT N24

### B.1 Introduction

Located in the northern part of SAV1 North, next to Enclosure Wall N4, building unit N24 (Pl. 11) is delineated by Walls 08N and 08W to the west and Walls 07E, 03E, and 03S to the east. All of these walls were constructed using layers of mud brick stretchers in the traditional running bond pattern, generally half-a-brick thick. Although none of these five walls is preserved to its full extension or height, the two opposing intact corners of the building unit remain: to the northwest, the bonding of Walls 08N and 08W and to the southeast, the bonding of Walls 03S and 03E.

The walls of building unit N24 were reinforced by four pilasters. Each of the opposing north–south

<sup>103</sup> This *c.* 30cm thick deposit corresponds to Deposit (N28De1a) whose top is levelled at 159.86m to the west of Wall 01W, and to Deposit (N28De1b) whose top is levelled at 159.80m to the east of the same wall (Pl. 8).

<sup>104</sup> The thickness of Deposit (N2De2) varies from 15cm (from 159.96–159.80m to the east of Wall 01W, *i.e.* Deposit (N28De2b), Pl. 8) to 40cm (from 160.10–*c.* 159.70m to the west of Wall 01W, *i.e.* Deposit (N28De2a)).

<sup>105</sup> The thickness of Deposit (N2De3) varies from 8cm (from 160.20–160.12m to the west of Wall 01W, *i.e.* Deposit (N28De3a), Pl. 8) to 20cm (from 160.16m–*c.* 159.96m to the east of Wall 01W, *i.e.* Deposit (N28De3b)).

<sup>106</sup> Deposit (N2De4) varies from 5–15cm in thickness. West of Wall 01W, it corresponds to Deposit (N28De4a) levelled between 160.34–160.20m. On the other side of the same wall, the corresponding Deposit (N28De4b) is levelled between 160.21–160.16m (Pl. 8 and Fig. 9).

	N24	N25	N12	N26	N27
Estimated length of the outer southern side	5.45m 10 cubits and 3 palms	4.75m 9 cubits	6.98m 13 cubits and 2 palms	6.15m 11 cubits and 5 palms	5.37m 10 cubits and 2 palms
Inner length of the southern side	5.06m 9 cubits and 4 palms	4.30m 8 cubits and 1 palm	6.64m 12 cubits and 5 palms	5.70m 10 cubits and 6 palms	4.88m 9 cubits and 2 palms
Estimated length of the outer eastern side	5.65m 10 cubits and 5 palms	5.80m 11 cubits	intact 4.28m 8 cubits and 1 palm	3.85m 7 cubits and 2 palms	5.50m 10 cubits and 3 palms
Inner length of the eastern side	5.26m 10 cubits	5.45m 10 cubits and 3 palms	intact 3.86m 7 cubits and 2 palms	3.38m 6 cubits and 3 palms	4.96m 9 cubits and 3 palms
Estimated length of the outer northern side	5.46m 10 cubits and 3 palms	4.55m 8 cubits and 4 palms	7.12m 13 cubits and 4 palms	5.85m 11 cubits and 1 palm	intact 5.42m 10 cubits and 2 palms
Inner length of the northern side	5.05m 9 cubits and 4 palms	4.15m <i>c.</i> 8 cubits	6.70m <i>c.</i> 12 cubits and 5 palms	5.35m 10 cubits and 1 palm	4.63m 8 cubits and 6 palms
Estimated length of the outer western side	5.35m 10 cubits and 1 palm	5.60m 10 cubits and 4 palms	3.78m 7 cubits and 1 palm	3.30m 6 cubits and 2 palms	5.70m 10 cubits and 6 palms
Inner length of the western side	4.94m 9 cubits and 3 palms	5.25m 10 cubits	3.42m 6 cubits and 4 palms	3.05m 5 cubits and 6 palms	5.35m 10 cubits and 1 palm
External surface area	30.00m	26.78m	30.69m	22.92m	30.22m
Internal surface area	25.78m	22.92m	26.57m	19.09m	24.55m

Fig. 14 Dimensions of SAV1 North building units

oriented walls has a pilaster buttressing it from the outside of the wall: N24Pil1 is located along the outer face of Wall 07E to the east and N24Pil4 along the outer face of Wall 08W to the west. The two other pilasters (N24Pil2 and N24Pil3) stand along the inner faces of the opposing east–west oriented walls, protruding from the inner faces of southern Wall 03S and northern Wall 08N respectively.

N24 covers an approximately square area of 30.00m. Beyond its walls, two lanes run outside N24. The first, running between Enclosure Wall N4 and the northern perimeter wall of N24, has an east–west orientation and a width of 1.50–1.60m. The second, lying along the eastern perimeter wall, has

a north–south orientation and a width of *c.* 1.35m. This lane runs between building units N24 to the west and N25 to the east. The southern side of N24 is bordered by an open space that is nearly 5.00m wide, lacks construction and extends to the northern side of building unit N12.

Based on its six installations (IIB.3) and layout, it is suggested that building unit N24 operated as an open-air courtyard for the preparation of food and other cooking activities. All extant features related to storage facilities or pertaining to the use of the room as a workspace will be defined below, as will the two successive building phases, N24-b and N24-a.

**B.2 Description of N24's perimeter walls**  
(Fig. 15)

*B.2.1 Wall 03S*

Wall 03S, the southern perimeter wall of N24, has an east-west orientation. The majority of its footing layer, 4.87m in length, is quite intact and is comprised of a dozen mud brick stretchers  $38 \times 16/18 \times 8$ cm in size. At present, the western end of Wall 03S is missing the length of only one stretcher brick. Its eastern end, however, is undamaged and is bonded at a right angle to Wall 03E, running to the north. If one assumes that Wall 03S once formed a corner with the western perimeter wall of N24, it is then possible to estimate its length. The outer and inner lengths of the wall are thus 5.45m and 5.06m respectively and would have been composed of 14 stretcher bricks.

Consisting of mostly staggered stretchers laid on their broad side, Wall 03S is half-a-brick thick. The preserved height of the southern wall of N24 ranges from one to five bricks. Its base level varies from 160.47m (footing base on the eastern end) to 159.94m (bed plaster on the western end). On the southern side of the building unit, one can observe that the ground soil slopes gradually downward, from east to west (IIB.5.2.1).

*B.2.1.1 Facing plasters of Wall 03S*

There is no trace of a surface addition covering the faces of Wall 03S. However, fire activity has left black burn marks on the inner face of the mud bricks of Wall 03S. Stains from burning extend over a surface 1.15m long and 0.52m high, on the northern face of Wall 03S and the east side of the north-

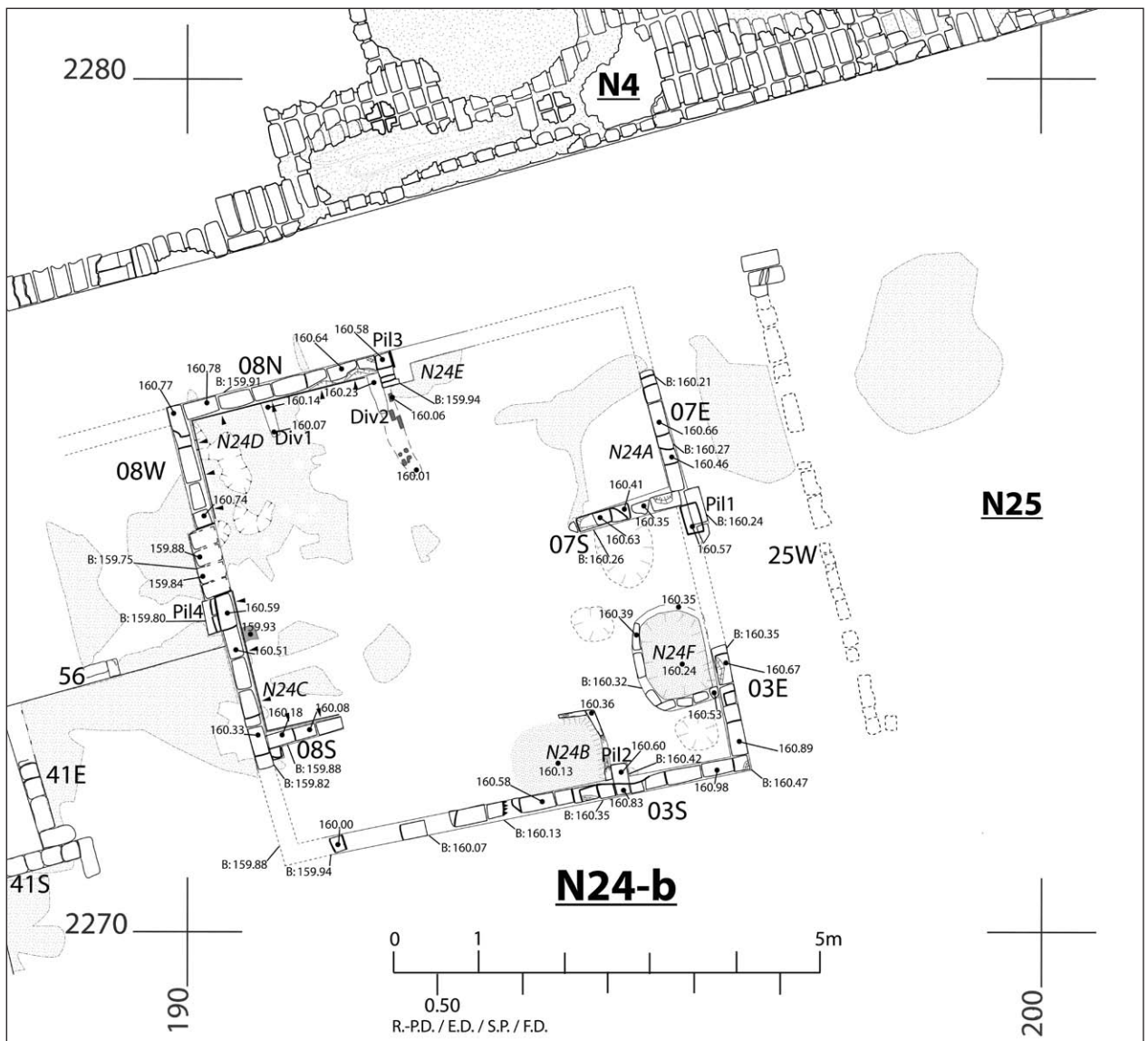


Fig. 15 Plan of Phase N24-b: levels of the perimeter/internal walls and installations

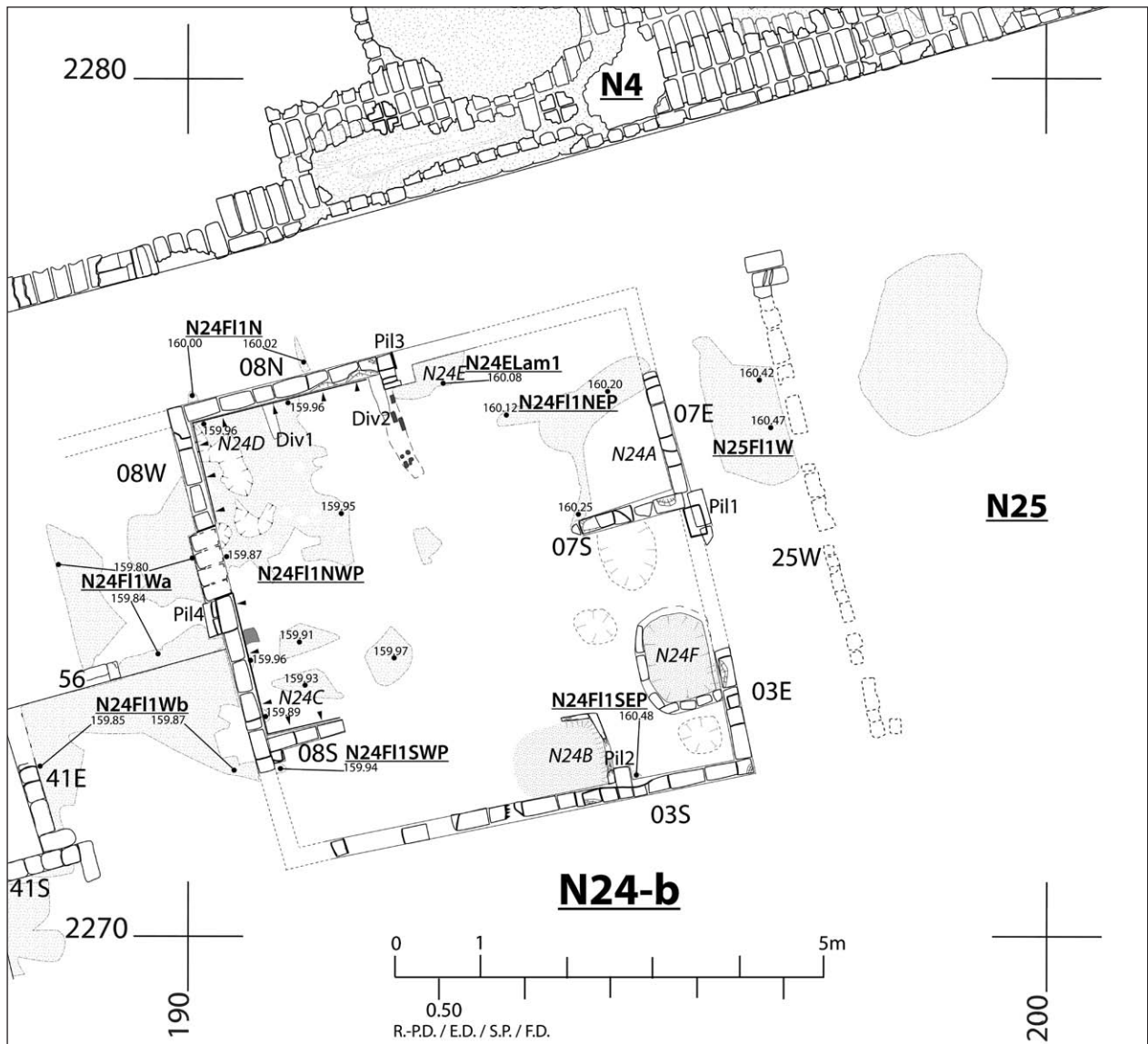


Fig. 16 Plan of Phase N24-b: levels of floors

projecting Pilaster N24Pil2. Farther west, where the brick face is not weathered, similar dark traces are also noticeable.

#### B.2.1.2 Pilaster of Wall 03S: N24Pil2

At a distance of *c.* 1.20m from the inner corner joining Walls 03S and 03E, Pilaster N24Pil2 (see Pl. 12) expands northward towards the inside of building unit N24. Perpendicular to Wall 03S, this narrow pilaster is 17 × 38cm in size and has a remaining

height of four courses of bricks (0.41m).<sup>107</sup> The top course remaining of N24Pil2 may have consisted of a header brick, now broken on the northern end, as can be judged from the small end of brick still visible from the southern face of the wall. In the second course from the top – where most of the bricks are positioned with the long faces visible – a small brick end may be evidence of a header brick, bonded to Wall 03S.<sup>108</sup> Below this possible header brick, the remaining two courses shaping Pilaster N24Pil2

<sup>107</sup> The top header brick of N24Pil2 is levelled at 160.83m, the base of the pilaster at 160.42m.

<sup>108</sup> Lacking any type of render, Wall 03S's regular coursing (made mostly of running stretcher bricks) is quite discernible from both faces.

are made of half bricks set against the northern face of the wall, not bonded to it.

### B.2.2 Wall 03E

Bonded at a right angle to Wall 03S, the north–south oriented Wall 03E is 1.50m long. Half-a-brick thick, four running stretcher bricks of  $38 \times 16/18 \times 8$ cm are preserved fairly intact; the state of preservation of Wall 03E ranges from two to four courses in height.<sup>109</sup>

#### B.2.2.1 Facing plasters of Wall 03E

As in the case of the bonded Wall 03S, there is no plaster addition on either the east or west faces of north–south Wall 03E. Also similar to Wall 03S, the inner face of Wall 03E also has black burn marks, with dark stains spread over the extent of the wall segment. Black burn marks left by fire activity in the area of N24's southeastern corner might be related to the ash filling unearthed in Installation N24F (IIB.3.2.1 and IIB.5.2.1).

#### B.2.2.2 Pilaster of Wall 03E

There is no evidence of any pilaster associated with Wall 03E.

### B.2.3 Wall 07E

The north–south oriented Wall 07E is 1.58m long, with the preserved height ranging from one to four courses, and is made of around four staggered stretcher bricks of  $39 \times 18 \times 8.5$ cm. At its southern end, Wall 07E is bonded to the internal wall 07S, which protrudes perpendicularly at an east–west orientation.

Wall 07E is roughly aligned with Wall 03E running north–south. Between the northern end of Wall 07E and N24's southeastern outer corner, the span of 07E is 4.70m long. A possible corner between the northern end of Wall 07E and eastern end of Wall 08N is now lost, along with part of the masonry of each of these walls.

Although Walls 03E and 07E are no longer intact, together they may outline the eastern perimeter wall of building unit N24. One can thus estimate the length of the outer face of N24's eastern side to be 5.65m. Both segments of Walls 03E and 07E

are half-a-brick thick and bricks from their preserved upper course display parallel longitudinal grooves.<sup>110</sup> This distinct feature on both wall segments 03E and 07E may be indicative of a corresponding phase of bricklaying.

#### B.2.3.1 Facing plasters of Wall 07E

No surface treatment over the faces of Wall 07E is identifiable.

#### B.2.3.2 Pilaster of Wall 07E: N24Pil1

From the bonded corner between Walls 07E and 07S, a footing stretcher brick of  $40 \times 17$ cm abuts against Wall 07E running north–south (Pl. 12). A further brick,  $35 \times 19$ cm in size, lies on top of the footing brick and is staggered toward the west. These two damaged layers of bricks are quite puzzling due to their poor condition and the lack of bonding evidence to the masonry of Walls 07E and 07S. The placement of these two out-of-alignment bricks, precisely opposite of N24Pil4 – the pilaster buttressing the outer face of western perimeter wall 08W – may suggest the presence of a possible external pilaster, N24Pil1, to the outside of the eastern face of N24.<sup>111</sup>

Between the southern end of N24Pil1's upper brick and the northern end of Wall 03E's footing brick, brickwork is lost over a distance of 1.30m. Whether or not brickwork was permanently interrupted between the two wall sections 07E and 03E is difficult to assert. One possible explanation could be that Wall 03E at some stage ran to the northern edge of Installation N24F, and thus was around 2.10m long. In this case, an access point would possibly have separated the two wall segments of N24's eastern side. A second possibility is that Walls 03E and 07E formed a single wall, shaping the eastern perimeter wall of N24 building unit.

### B.2.4 Wall 08N (Fig. 17)

On the northern side of building unit N24, Wall 08N culminates at a maximum height of 160.78m<sup>112</sup> with eight courses of mud bricks ( $35/36 \times 17/18 \times 8/10$ cm).<sup>113</sup> The part of Wall 08N that once extended eastwards is lost, along with the presumed joint shaped between Walls 08N and 07E at the north-

<sup>109</sup> The top of the preserved courses is levelled at 160.89m. The base of Wall 03E varies from 160.47m at its southern end to 160.35m at its northern end.

<sup>110</sup> Type L category = Azim Type 6 (IIA.3). See KEMP and STEVENS 2010a, 369.

<sup>111</sup> The top of N24Pil1 is levelled at 160.57m; its base at 160.28m.

<sup>112</sup> The base of Wall 08N is levelled at 159.95–159.90m.

<sup>113</sup> Some of the smallest bricks,  $35 \times 17/18 \times 8$ cm in size, bear two central oblique grooves (Type B, IIA.3).



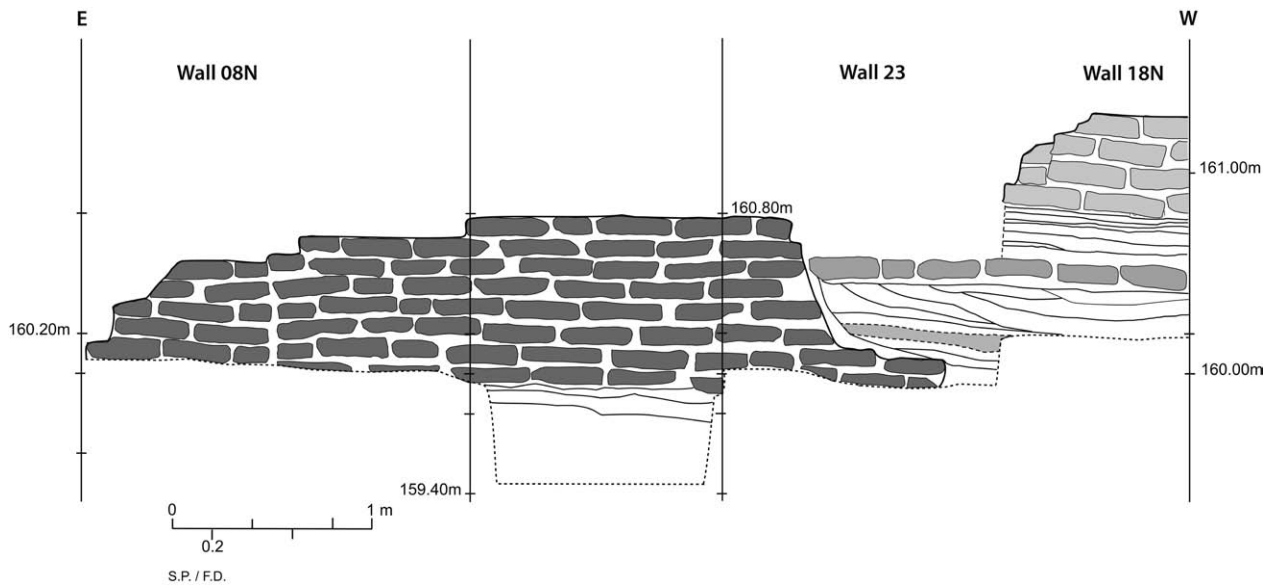


Fig. 17 Section drawing of Wall 08N's northern face

eastern corner of N24 building unit. At the opposite end of the wall, the northwestern corner of N24's bonded masonry is intact between 08N and 08W, running east–west and north–south respectively.

The two lowest courses of Wall 08N were partially uncovered during excavation. They show that the lower masonry of this wall continues westwards,<sup>114</sup> beyond the corner with Wall 08W. As far as can be determined, these basal courses are over 4.28m long, or nearly twelve stretchers. The base of the lowest course of Wall 08N's western span was partly exposed on its southern side, levelled at 159.78m.<sup>115</sup>

From the outer corner between Walls 08N and 08W, the intact section of Wall 08N is 3.51m long. The same section of wall is 3.30m long from the inner western corner of N24 building unit. Assuming that there was possibly a corner on the eastern side of this building unit, the outer and inner lengths of N24's northern side can be measured as 5.46m and 5.05m long respectively from the reconstructed northeast corner to the bonded northwest one. An anomaly in the coursing pattern is visible 2.61m

from the bonded outer northwestern corner of N24 – a running perpend joint that separates the five eastern courses from the wall's masonry, where bricks are otherwise bonded and staggered. The lack of bonding between the two parts of Wall 08N suggests that they were built at different stages. The initial outline of the N24's northern perimeter wall might have been planned with an entranceway alongside the half-a-brick thick pilaster, N24Pil3 (western part), running perpendicular to the wall. At the second phase of construction (N24-a, IIB.5.3) this access was filled with 0.90m long brick masonry, including another bonded half-a-brick thick pilaster, N24Pil3 (eastern part), built abutting the former one.

Similar to the walls delineating the southern and eastern sides of building unit N24, the half-a-brick thick Wall 08N (0.20m wide) shows a quite even coursing made of mostly running stretcher bricks with staggered beds. The joint width between the bricks varies from 2–10cm. The colour of the bonding material between the courses contrasts with the medium light brown mud bricks and consists of light greyish brown silt with occasional chalk particles.

<sup>114</sup> According to the section drawing of the outer/northern face of Wall 08N (Fig. 17), the westward extension is visible 0.76m beyond the corner. On Fig. 21, the section drawing shows the inner/southern face of the westward extension with its lowest courses of uncoated mud bricks running *c.* 1.30 m beyond the corner.

<sup>115</sup> Sondage B, east of the bonded corner with Wall 08W (Fig. 24), exposed part of the northern face of Wall 08N, down to its footing course. At that point, it can be observed that the base of the footing course is levelled from 159.95–159.90m. These footing bricks overlay two successive layers of compact sand (5cm thick each) and a gravel backfill (10cm thick) upon the natural soil, levelled from 159.86–159.77m.

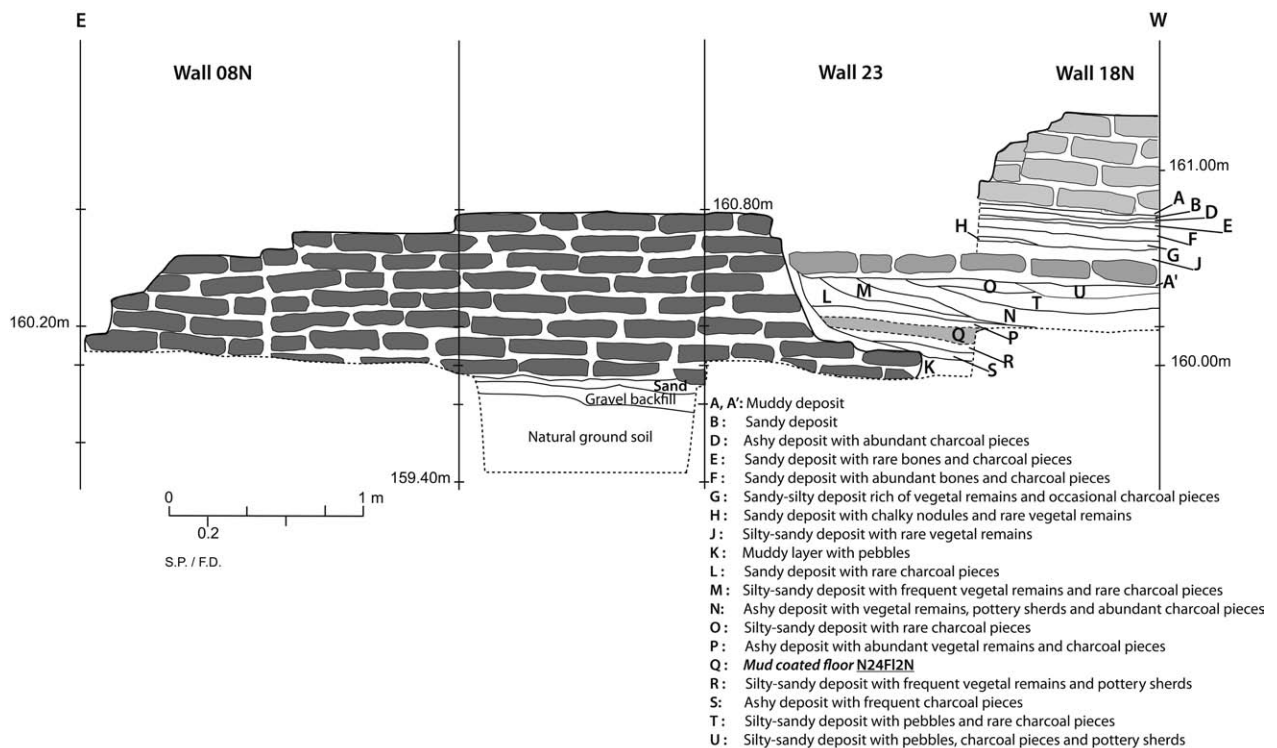


Fig. 18 Section drawing 021/2010 (Squares 190/2270 and 180/2270, north face of Walls 08N, 23 and 18N's eastern end)

#### B.2.4.1 Facing plasters of Wall 08N

The inner and outer faces of Wall 08N were coated with rather well-preserved plaster. To the outside of Wall 08N, the plaster extends down to a floor level of 160.17m.<sup>116</sup> Coating was applied over its internal side down to the occupation floor levelled at 159.95m (see Fig. 22 and IIB.5.2.4).

The northern face of Wall 08N was fully covered with a smooth greyish sandy-silt wash, including some medium-size pebbles. Now removed in order to draw the bricklaying pattern, this surface addition extended down to the base of the wall, leaving the two lowest courses uncoated since they were concealed by the floor (see Fig. 18: layer Q) that overlays an earlier deposit occupying the space of the wall street between Wall 08N and the inner face of Enclosure Wall N4.

The southern face of Wall 08N shows a similar type of render to its outer face. The smooth greyish sandy-silt wash with occasional medium-size pebbles (Plaster A) extends *c.* 2.20m eastwards from

the inner corner of building unit N24 to mud divider N24Div2. This divider is bordering Installation N24E against N24Pil3 further east. It is noteworthy, however, that from the limit of the running joint in the middle of this pilaster, the southern face of 08N masonry is free of any surface addition (Pl. 11).

Along the edge of mud divider N24Div2 (IIB.3.3.2), the southern face of Wall 08N features a distinctive surface treatment with additional layers of render (Plaster A', see Fig. 19).<sup>117</sup> It is worth noting that the lipping out inferior limit<sup>118</sup> of extra wall Plaster A' matches the inferior extent of the original one (Plaster A) against the basal course of the wall, *i.e.* the sixth course from the top.

#### B.2.4.2 Pilaster of Wall 08N: N24Pil3 (Fig. 19)

Pilaster N24Pil3 stands 2.22m east of the inner northwestern corner of building unit N24. This pilaster measures 38.5 × 40cm and is bonded to Wall 08N, as can be clearly seen from the northern face

<sup>116</sup> Layer Q from the section drawing, Fig. 18.

<sup>117</sup> Plaster A' predates the final plaster wash covering the mud divider 2 against N24Pil3.

<sup>118</sup> The inferior limit of plasters A and A' is levelled at 160.01m. The inferior limit of the render over N24Div2's western face also lips out, and is correspondingly levelled from 160.00–160.04m.

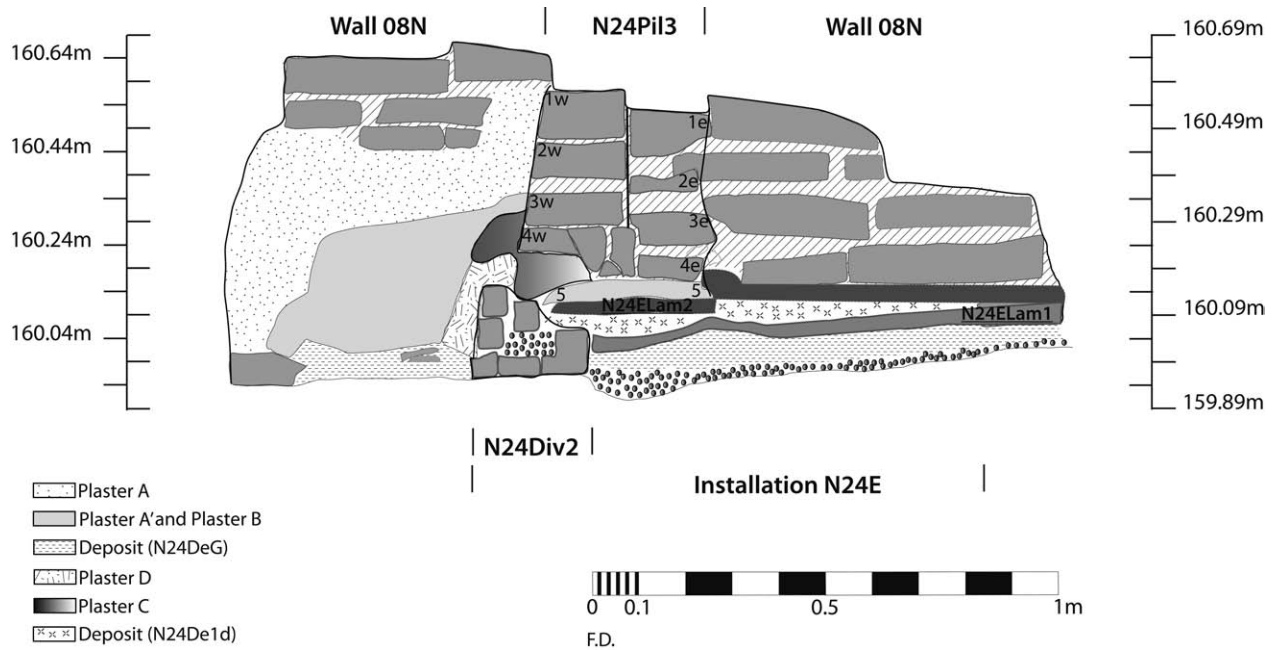


Fig. 19 Elevation drawing of Pilaster N24Pil3

of the wall. Where the pilaster was inserted into the wall, the masonry features headers instead of the more commonly used of stretcher courses. The bonding of the wall to the pilaster alternates courses consisting of a pair of projecting headers with courses of running stretchers. A striking running perpendicular joint separates the two halves of the pilaster. As suggested above (IIB.2.4), this lack of bonding results from two distinct construction phases for each half of the pilaster. N24Pil3's western half is bonded to the earlier built western part of the wall masonry while the eastern half of the pilaster is bonded to the east part of the brickwork, filling the entranceway at later stage of construction (N24-a).

When considering Wall 08N's southern face, one can observe N24Pil3 expanding southwards and perpendicular to the wall. The western courses of this pilaster consist of bricks described below (Fig. 20):

- Levelled at 160.58m, the top brick of the pilaster's western half is a broken header, as can be seen from its small rectangular end apparent from the northern face of the wall.
- The second course from the top of the wall itself is a stretcher. The pilaster's corresponding brick is therefore not bonded to the wall but was

instead a brick piece that was added against the southern face of Wall 08N.

- The brick of the third course,  $33 \times 19\text{cm}$  in size, is a header protruding out of the southern face of the wall and levelled at 160.35m.
- As the fourth course from the top of the wall is a stretcher, the pilaster itself is most probably made of a brick piece added against the wall. A render hides this brick piece.
- Like the third course, the fifth course from the top is also a header placed perpendicular to the wall,  $38 \times 17\text{cm}$  in size, and levelled at 160.12m.

What is still visible on the eastern half of N24Pil3 is a similar arrangement with a broken top header levelled at 160.51m. The second brick piece from the top is partly missing while the bonded header of the third course is fairly intact. This latter brick stretches out on the brick piece from the fourth course, against the stretcher of the wall. In contrast to the bricks of Pilaster 3's four upper courses that are partly damaged, lack rendering and possess visible perpend, the fifth course consists of two adjacent header bricks joined together by a common layer of plaster (Fig. 19: Plaster B) that conceals the composite character of the pilaster's course. The sixth course<sup>119</sup> of the pilaster is fully hidden by Installation N24E (IIB.3.3.2)

<sup>119</sup> The inferior limit of the pilaster footing is estimated at 159.94m according to the inferior limit of the brick wall, visible c. 0.50m further west.

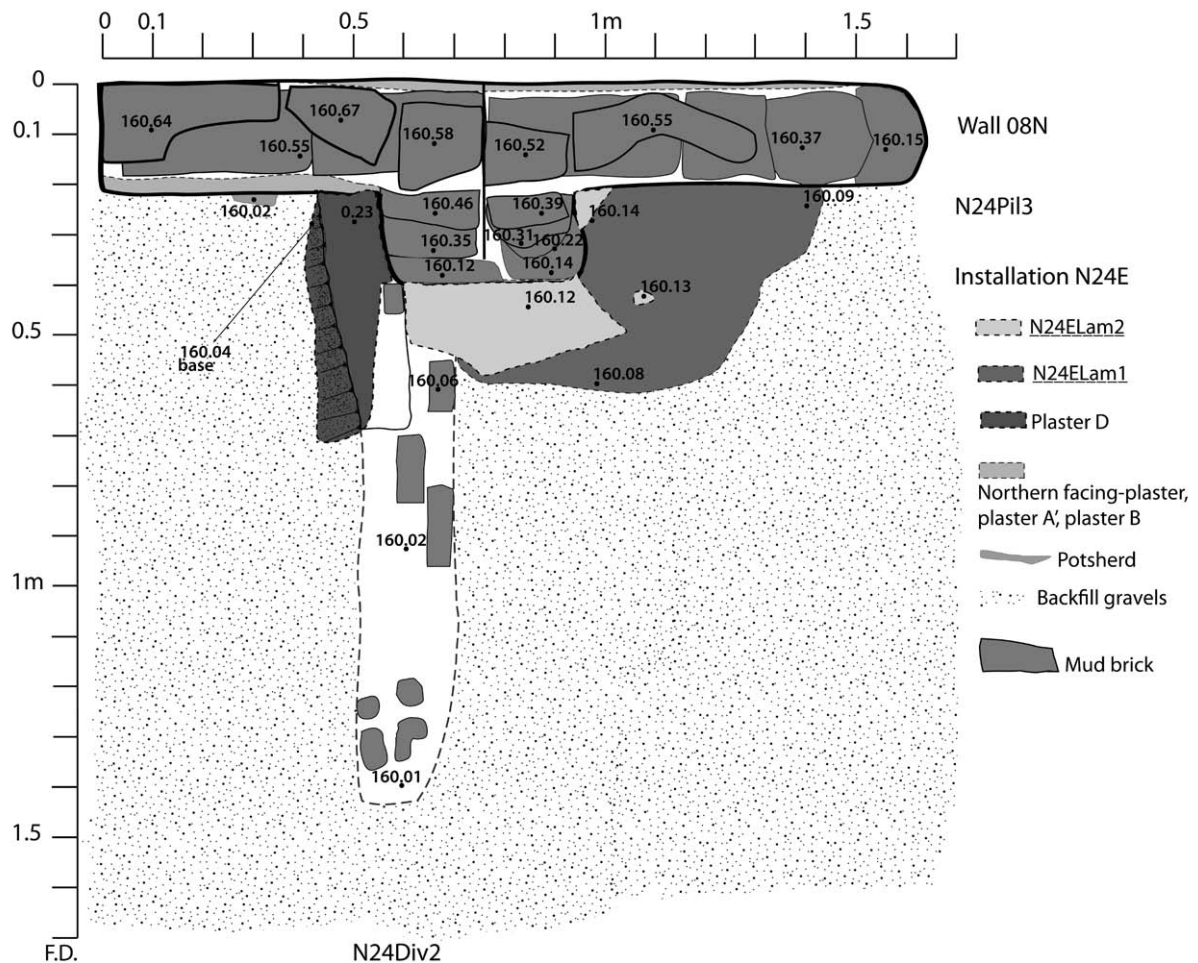


Fig. 20 Plan of Pilaster N24Pil3

against the southern face of both Wall 08N and Pilaster N24Pil3. Resulting from the two distinct building phases, this pilaster's lowest course should have been made of two brick pieces against stretcher footing bricks of Wall 08N. Presumably, the faces of the sixth (footing) course of the pilaster would also have been coated as well, as indicated by the remains of Plaster B over the fifth course.

### B.2.5 Wall 08W (Pl. 11)

On the western side of N24, Wall 08W, is made of three to nine intact courses of staggered mud brick stretchers,<sup>120</sup> half-a-brick thick and north-south oriented. At the bonded corner with perpendicular Wall 08N, the maximum height of 08W culminates at

160.78m. Composed of bricks  $36 \times 17 \times 10$ cm in size, the intact part of Wall 08W is 4.26m long, nearly twelve stretchers. Next to the present southern end of Wall 08W, 3.65m from the inner northwestern corner of N24, an internal wall 08S extends perpendicularly. East-west oriented the internal wall 08S is not bonded to the western perimeter wall 08W.

As evidenced by a threshold<sup>121</sup> (Fig. 21) made of four mud brick headers projected to the west within the brickwork's lowest course, a doorway 0.78m wide once opened into building unit N24 through Wall 08W. Clearly visible from both the inner and outer faces of the wall, an anomaly of the coursing pattern consists of two perpendicular joints, situated 1.20m and 2.00m from the inner corner joining Walls 08W and 08N. At some stage this opening

<sup>120</sup> Including foundation courses whose inferior limit is levelled at 159.79m (see Fig. 11 and IIB.5.1.4).

<sup>121</sup> The top of the threshold levelled at 159.87m and its base at 159.75m.

was sealed with mud brick, filling in the space between the two running joints and completing Wall 08W's masonry.

The southern end of Wall 08W's brickwork is lost. Presumably it might have shaped the south-western corner of building unit N24 by joining Wall 03S at a right angle. Next to this possible corner, a *c.* 20cm patch of bedding joint plaster lying in the alignment with Wall 08W could be an indication of a footing course, which is today missing over a length of 1.12m. From the reconstructed southwest corner to the bonded northwest one, the outer and inner lengths of N24's western side are measured as 5.35m and 4.94m respectively.

In order to make it easier to describe Wall 08W's features, one must consider three distinct sections within this wall (Pl. 11):

- The northern section, from the inner bonded corner between Walls 08W and 08N to the northern running joint adjoining the blocked door area
- The middle section consisting of the blocked door area
- The southern section, from the southern running joint adjoining the blocked door area to perpendicular internal wall 08S. This section includes Pilaster N24Pil4 stretching outside Wall 08W.

#### B.2.5.1 Facing plasters of Wall 08W

There is evidence of surface treatment on both faces of Wall 08W. Viewed from its western side, Wall 08W's masonry was fully obscured by surface treatment made of a smooth greyish sandy-silt wash with occasional medium-sized pebbles.<sup>122</sup> Facing plaster covered the six upper courses of bricks and extended down to 160.10m, the level of a coated floor surface (IIB.5.1.4) labelled layer E. On its western face, the three lowest courses of Wall 08W are thus left uncoated.

On the eastern side of 08W, the surface treatment varies according to the section of the wall (IIB.2.5). The eastern face of Wall 08W's northern section reveals bricks that are not completely hidden by patchy and sparse wall plaster. On the other hand, a thicker greyish sandy-silt wash with occasional

pebbles thoroughly covers the wall's medial section, made of the blocking masonry. Over the east face of 08W's southern section, the surface addition to the brickwork is also made of such a wash.

As already seen from the western face of the wall (Fig. 21), the northern part of Wall 08W consists of a maximum of nine preserved brick courses. On the eastern face of the wall plaster wash extends roughly down to the base of the eighth course from the top. By joining the lowest lip of the plaster wash, the coated floor levelled at 159.96m (IIB.5.2.4) hides the footing course of the wall, *i.e.* the ninth course from the top.

The blocking of the access point through N24's western wall by an addition between two running joints belongs to a later phase of construction (N24-a) than the building of Wall 08W itself (N24-b). This part of the wall shows eight courses of mud bricks<sup>123</sup> largely hidden by a thick facing plaster that covers its eastern face and extends down to the base of the seventh course from the top.

A render was identified on both faces of Wall 08W's southern section. Viewed from the eastern side of the wall, the facing plaster extends down to the top of the penultimate brick course.<sup>124</sup> At that point, levelled at 159.96m, the lipping plaster wash may correspond to the joint with the coated surface floor, presently truncated. The basal course of bricks is thus left uncoated below the lowest point of wall coating.

Moreover, at the southern end of the western perimeter wall 08W, a corner is formed with east–west Wall 08S. The lack of bonded masonry between these two walls supports the hypothesis that the internal wall 08S was a later addition that abutted against the north–south wall. However, Wall 08W's facing plaster extends on to the inner corner joining the two walls. This surface addition conceals the corner itself and corresponds to the same phase of plastering as the eastern face of Wall 08W.

#### B.2.5.2 Pilaster of Wall 08W: N24Pil4

Around 2.00m<sup>125</sup> from the northwestern corner and 2.70m from the reconstructed southwestern corner of N24, Pilaster N24Pil4 stands next to the blocked doorway of Wall 08W's medial section. As men-

<sup>122</sup> For drawing purpose, facing plaster was removed from the western face of 08W's northern and medial sections.

<sup>123</sup> We know from the western view that the masonry actually consists of nine brick courses. The lowest inferior level of the threshold/footing bricks is levelled at 159.75m.

<sup>124</sup> South of N24Pil4, Wall 08W's southern section culminates at 160.51m. The base of this section of the wall is levelled at 159.87m.

<sup>125</sup> N24Pil4 stands 2.25m from the outer corner of Walls 08W and 08N.

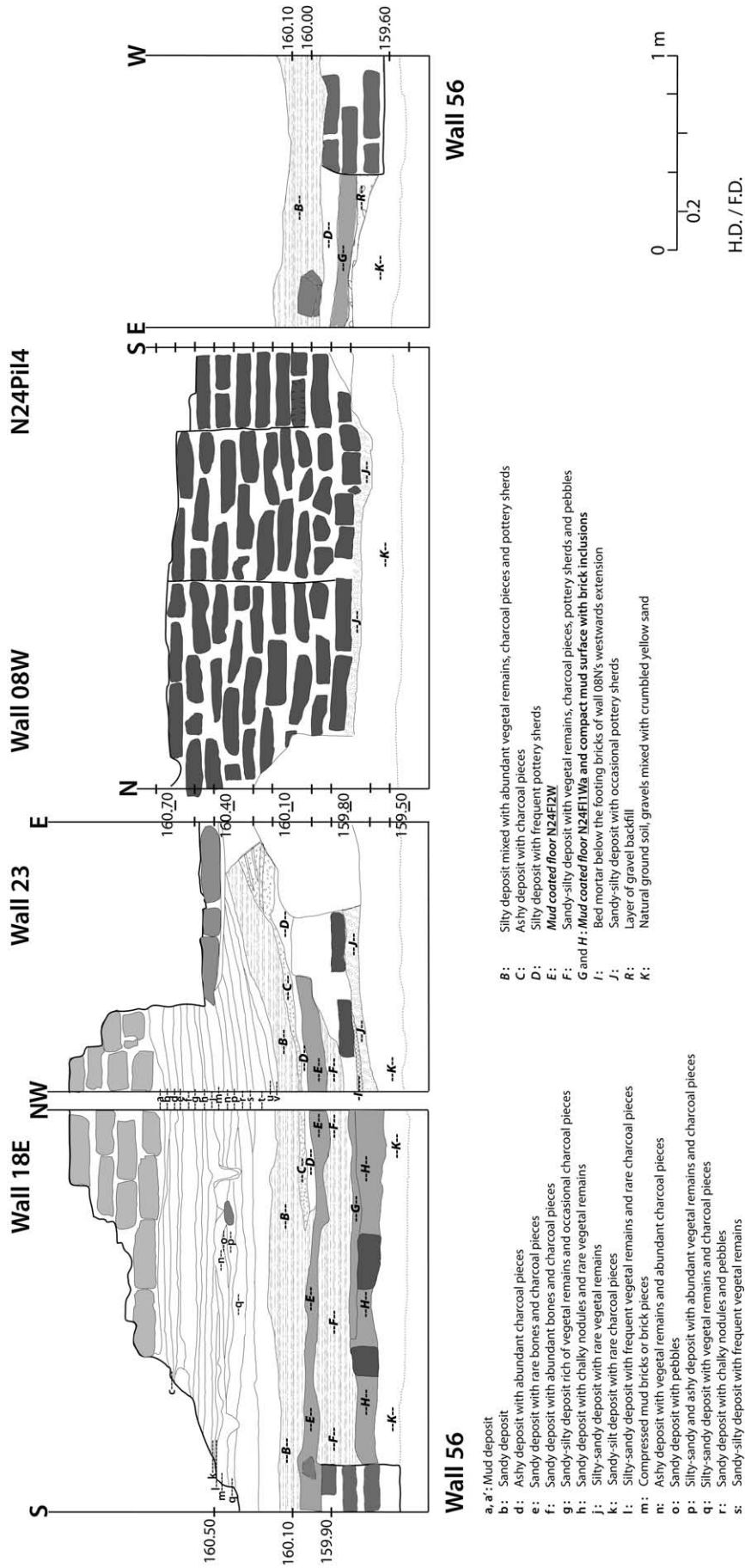


Fig. 21 Section drawing 35/2012 (Square 180/2270, sondage west of Wall 08W)

tioned, N24Pil4 protrudes out from the external face of Wall 08W and its location correlates with N24Pil1's position outside N24's eastern perimeter wall, *c.* 2.75m from the southeastern corner of the building unit (Fig. 15).

N24Pil4 is bonded to Wall 08W, as can clearly be seen from its western face (Fig. 21). Made of eight brick courses, this pilaster rises 0.82m.<sup>126</sup> At the emplacement of N24Pil4, the stretcher top brick actually belongs to Wall 08W and is 39 × 19cm in size. The dimensions of the bricks used to build Pilaster 4 are, therefore, slightly larger than the brick format used for the majority of Wall 08W. The second and sixth courses from the pilaster's top, and possibly the footing course, consist of a pair of headers projecting westwards out of Wall 08W. Other preserved courses of Pilaster 4 are made of stretcher bricks running north–south along the outer face of Wall 08W.

### B.3 Description of N24 installations

(Fig. 15)

#### B.3.1 Along the southern perimeter wall (03S)

(Pl. 12)

##### B.3.1.1 N24B

Installation N24B (inner dimensions 1.10 × 0.78m) is most probably a storage pit cut into the gravel soil. It is set along the northern or inner face of Wall 03S and is orientated east–west. To the west of Pilaster N24Pil2, 1.38m from the inner corner between Walls 03S and 03E, a plastered mud brick margin frames the eastern edge of an installation along the southern side of building unit N24. This margin runs north–south and measures 82cm long, 8–12cm thick, and 21cm high. It is made of mortared bull headers that culminate at 160.49m.

The only remnant of this installation, the plastered mud brick boundary, abuts both the northern side of Wall 03S and the western side of Pilaster N24Pil2. Nothing remains of N24B's northern and western edges. The bottom of N24B is levelled at 160.13m; the eastern side of this installation is set against the gravel soil whose level, measured at 160.30m, drops abruptly at this particular point

(IIB.5.2.1). Parts of the inner lining of bin N24B cover the eastern and southern inner sides of the bin itself, hiding the basal courses of Wall 03S and its gravelled substratum.

#### B.3.2 Along the eastern perimeter wall (03E)

(Pl. 12)

##### B.3.2.1 N24F

Feature N24F is located alongside the western or inner face of Wall 03E. North–south oriented, this installation is a sub-rectangular mud-coated bin (inner dimensions 1.00 × 0.65m), whose bottom is levelled at 160.24m. The edge of N24F is made of mortared bull header mud bricks, found *in situ* on both the southern and western sides. N24F is a shallow storage pit cut into the natural gravel soil 0.68m north of the inner southeastern corner of building unit N24.

The top of N24F's southern edge abutting Wall 03E is levelled at 160.53m. Each brick of the boundary stands on a mortar joint running above the natural gravel soil surface.<sup>127</sup> Up to six bull headers surround the pit, whose inner surface is coated with plaster stained by ashy and black traces of fire activities<sup>128</sup>. The lining covers both the gravelled substratum, the mud brick margin on the southern and western sides of the container and the footing bricks of Wall 03E on the eastern side of N24F.

##### B.3.2.2 N24A

Located alongside the western or inner face of Wall 07E, Feature N24A, a possible storage bin, is 1.00m north of Installation N24F. The eastern perimeter wall of building unit N24 is thus bordered by two installations, both of them north–south oriented. The southern limit of N24A is a 1.32m long internal wall, 07S. Preserved from one to four brick courses in height, Wall 07S culminates at 160.63m. Though the southeastern corner of N24A is in poor condition, it is still possible to estimate from here that Wall 07S, bonded to Wall 07E, is half-a-brick thick and runs east–west. The dimensions of its mud bricks (35 × 17 × 8cm) are slightly smaller than those used in Wall 07E (Fig. 25). There is no render on either face of the internal wall 07S.

<sup>126</sup> The maximum height of N24Pil4 is levelled at 160.62m, its base at 159.80m.

<sup>127</sup> The bedding mortar joint, levelled at 160.36m, overlays the gravelled soil levelled at 160.33m.

<sup>128</sup> Similar mud-coated bin installations have been noted elsewhere in SAV1 North, including N12E (IID.5.2.1) and N12F (IID.5.3.2). Furthermore, N27A (IIF.5.3) also demonstrates additional evidence of heating activity inside the bin. See BUDKA and DOYEN 2013, 173 and note 55 for parallels in other sites.

Culminating at 160.63m, mediocre and uneven masonry abutting the north face of Wall 07S' western end forms the western side of Feature N24A. On the northern side of N24A no proper wall is preserved, but rather a mix of solid rubble-brick and ceramic debris,<sup>129</sup> running west at an oblique angle to the western face of Wall 07E. The presently composite character of N24A's side walls gives a roughly rectangular shape (inner dimensions 0.90 × 0.65m).

In contrast to Installations N24B and N24F, which are storage bins cut into the gravelled natural soil, Installation N24A, though possibly also used

for storage purpose, was placed at ground level. Both its brick sides, to the east and to the south, stand on natural soil and have a correlated foundation course level that ranges from 160.30m to 160.21m.

### B.3.3 Along the northern perimeter wall (08N) (Pl. 12)

#### B.3.3.1 N24D (Fig. 22)

Potentially a small enclosed area within the structure, N24D is formed by combining two types of ev-

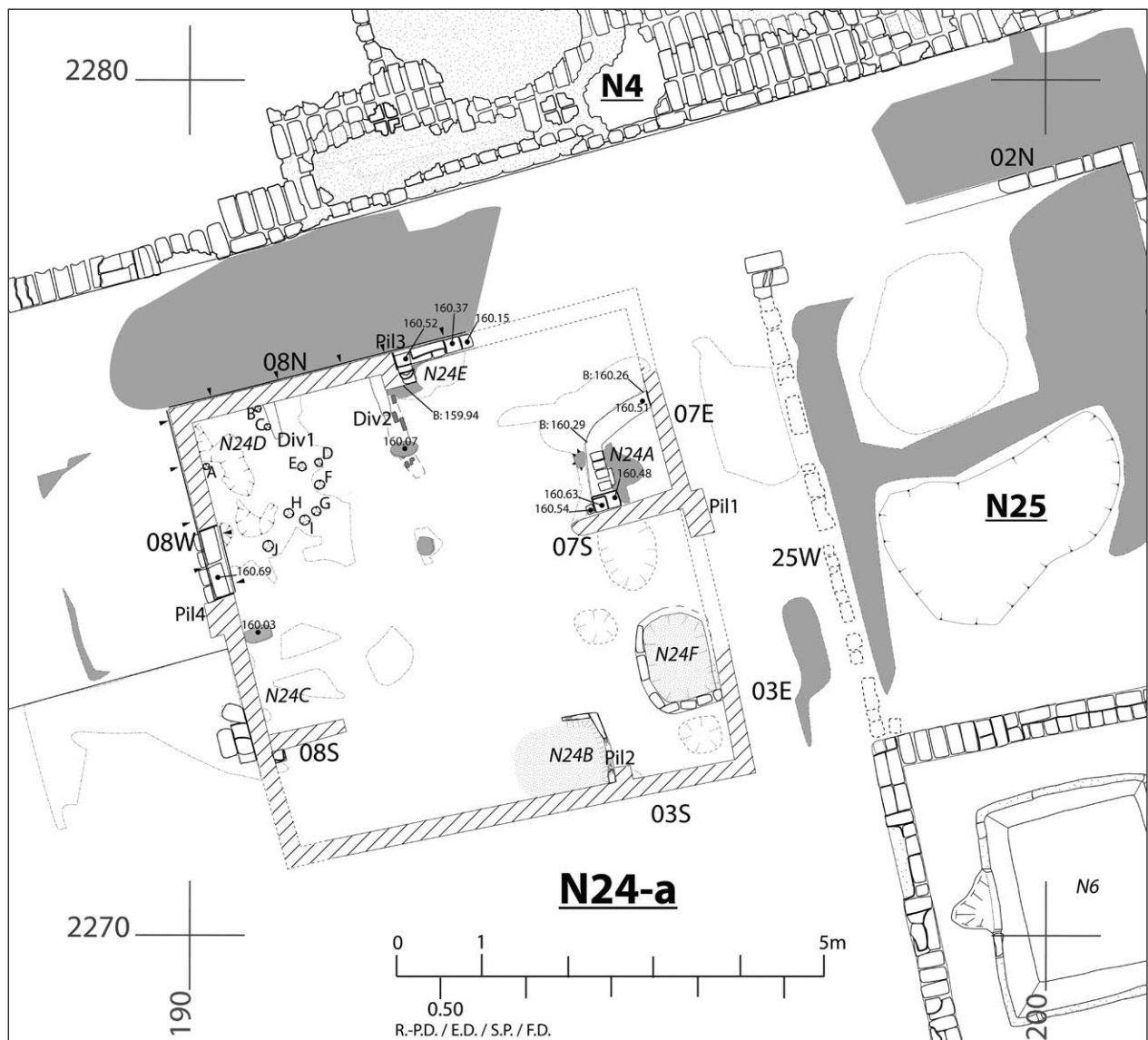


Fig. 22 Plan of Phase N24-a: levels of additional wall segments

<sup>129</sup> The top of the northern side of N24A is levelled at 160.51m and base at 160.26m. The lower layer of pottery fragments is levelled between 160.30–160.26m.



idence: a low dividing wall (N24Div1) and a series of shallow holes (A–J). The mud divider N24Div1 (l: 0.40m; max. w: 0.14m; max. h: 0.19m) abuts perpendicularly the lowest courses of Wall 08N, 0.83m from the northwest inner corner of N24.<sup>130</sup> Possibly made of a bull header brick laid on edge, N24Div1 is entirely covered with plaster. From the coating over both the floor<sup>131</sup> and the facing plaster of Wall 08N's southern face, the plastering of this divider appears to be consistent with the later phase of setting Installation N24D. Though similarly placed bricks have previously been attributed to storage facilities<sup>132</sup>, identifying N24D by isolating N24Div1 is insufficient.

In the vicinity of N24Div1, a series of ten holes (labeled A–J) were cut into the coated surface of the ground (Fig. 22). Two of these depressions (B and C) are located at the foot of N24Div1's western side, while another (A) is in the northwestern corner of the structure. Together, the holes A, B, D, and J encircle a surface area of *c.* 1m. At a radius of about 1.60m from the corner of building unit N24, the five more distant holes (D, F, G, I, J from north to west) follow a curving line. Just outside this outer line, an additional pair of holes (E and H) complete two triangular outlines. The group D/E/F and group G/H/I are approximately 40cm away from each other and the sides of the triangles all range from 10–20cm. Though no traces of wood have been identified here, it is possible that these are the remains of post or stake holes – the scattered pattern and irregular spacing of the holes may be evidence of a wattle work fence or shelter, possibly part of Installation N24D located in the northwestern corner of building unit N24.

### B.3.3.2 N24E (Fig. 19)

Feature N24E is situated 1.12m east of N24D, running east along the inner face of Wall 08N. Just next to N24Pil3, Installation N24E is fringed by N24Div2, a dividing brick alignment. The mud divider runs perpendicular to the lowest courses of Wall 08N, 2.06m from the northwestern inner corner of N24. Abutting the western side of N24Pil3's

basal courses, N24Div2 consists of approximately three rows of brick pieces turned on edge (Fig. 19) and is max. 0.25m in width and max. 0.27m in height. Its full extent measures 1.22m, including the brick arrangement of the last 0.50m, which is badly degraded due to grinding implements used during occupation attested by Deposit (N24De1d) (Pl. 12).

The base level of this dividing wall is at 159.96m, coinciding with the assumed footing of N24Pil3 (IIB.2.4.2). On the other hand, N24Div2's top level culminates at 160.23m, corresponding to approximately halfway up the pilaster's fourth course. A facing plaster (Plaster D) spreads over the intact portion of N24Div2, extending down its western face to 160.04/160.00m. Plaster D's lowest point matches the lowest levels of both Wall 08N's facing plasters A and A', *i.e.* at the height of the top of the footing course (IIB.2.4.1).

The corner of N24E formed between Pilaster 3 and N24Div2 defines an area filled with successive features. These are, from bottom to top:

- A 2–3cm thick uneven coating surface labelled N24ELam1,<sup>133</sup> which expands *c.* 2.8m over a soil mixed with pebbles, connecting to the base of the footing course of Wall 08N's eastern part.
- A max. 4cm thick lens of occupation deposit (N24De1d).
- A 2–3cm thick patch of coating surface, N24ELam,<sup>134</sup> lying *c.* 0.65m on top of the former deposit. This joins the facing plaster at the bottom of N24Pil3's fifth course from the top, covering the corner between the pilaster's east side and the footing course of Wall 08N.

This sequence highlights two coating episodes: the lowest one is connected to the Wall 08N's footing course, east of N24Pil3, and the upper one is joined to the base of N24Pil3 and lips out from the basal course of the wall (IIB.5.2.4).

The corner between N24Div2 and Wall 08N (west of Pilaster 3) is also covered with a facing plaster (Plaster C), starting 160.32m or roughly halfway up the pilaster's third brick course, down to the top of N24Div2. Plaster C extends down to

<sup>130</sup> The top of N24Div1 is levelled at 160.14m at its northern end against Wall 08N, and at 160.07m at its southern end.

<sup>131</sup> Here the coated floor is levelled at 159.95m. On both sides of N24Div1, the connection between the facing plaster of Wall 08N and the coated floor is quite intact at 159.96m (IIB.5.2.4).

<sup>132</sup> See at Amarna, in Room 4 of House 50.40, a "single brick" similarly "turned on edge and mortared to the southern wall" is defined as "perhaps as the edge of a bin-like emplacement", KEMP and STEVENS 2010a, 333.

<sup>133</sup> The coated surface N24ELam1 is levelled at 160.08m.

<sup>134</sup> The coated surface N24ELam is levelled at 160.12m.

160.12m, partly covering Pilaster 3's large southern face.<sup>135</sup>

Against Pilaster N24Pil3, the masonry of N24Div2 is much degraded. This partition-like brickwork is neither bonded to the northern perimeter wall 08N nor to Pilaster N24Pil3. Nevertheless, N24Div2 demarcates an area where there is evidence of occupation, altered from the entranceway that is assumed at the first phase of construction, N24-b (IIB.2.4). Furthermore, the presence of a grindstone associated with the occupation deposit (N24De1d) may suggest that the area was probably designated for grinding activities.

#### *B.3.4 Along the western perimeter wall (08W)* (Pl. 12)

##### B.3.4.1 N24C

On the west side of N24, close to the intact southern end of Wall 08W, internal wall 08S extends east–west, perpendicular to the inner side of Wall 08W. Wall 08S is the main feature of Installation N24C, outlining an area possibly used for grinding activities. Wall 08S is half-a-brick thick and 0.86m long. Its length consists of a minimum of three staggered stretchers bonded to one header against the perpendicular western wall. From the two to three courses preserved in height, the top brick is levelled at 160.18m. The mud bricks themselves are  $34/38 \times 16 \times 8$ cm in size.

The southern face of 08S's masonry was left uncoated. In contrast, the northern side shows patchy remains of facing plaster or bonding material that is pointed and extruded. A piece of wall plaster covering the corner between Wall 08W's east side and Wall 08S's north face indicates that building of internal wall 08S precedes plastering of the interior of perimeter wall 08W.

1.00m north of Wall 08S, two plaster clumps holding a grinding implement adhere to the facing plaster of Wall 08W. This feature is composed of an almost intact grindstone (SAVIN 2432,  $30.7 \times 17.4 \times 11$ cm, see IV.4.1), set perpendicular to 08W. The top of the grindstone is levelled at 160.03m, while its base lies at 159.96m. Below this is evidence of

a 3cm thick occupational deposit that separates the intact grindstone from a second, fragmentary example,<sup>136</sup> lying parallel to the western wall.

#### **B.4 Layout and dimensions of N24 building unit**

Building unit N24 is a roughly square freestanding building. The northern wall of N24 (08N), like that of its neighbour N25 (02N) lies parallel to Enclosure Wall N4, separated by a *c.* 1.50m wide wall street. The external surface area<sup>137</sup> of N24 is 30.00m ( $5.45 \times 5.65 \times 5.46 \times 5.35$ m) while the internal surface area is 25.78m ( $5.06 \times 5.26 \times 5.05 \times 4.94$ m) (see Fig. 14).

From the seven documented walls encompassing and partitioning N24, a total of six different brick formats were identified (see Fig. 25); occasionally, bricks of slightly different sizes could be used in the construction of a single wall. Only the bricks from Wall 07E fall into the large format category, while the bricks from all the other walls (07S, 08N, 08W, 08S, 03S and 03E) fall into the medium format category. The diversity of brick types thus signifies that no specific format was considered more suitable for the construction of a perimeter or internal wall, or even of a pilaster. Finally, some bricks from Wall 08N bear two central oblique grooves, while bricks from Walls 07E and 03S display longitudinal shallow channels that may correspond to finger grooves imprinted in either the brick or the bed of mortar.<sup>138</sup>

From the segment of northern Wall 08N that runs west beyond the northwestern corner of N24 (see Figs. 17 and 21), it may be reasoned that there was an adjacent western room next to building unit N24. It is thus likely that the access point through Wall 08W dates to the foundation phase of the western perimeter wall, in order to allow circulation from the western room to the inside of N24. Mud brick headers from the threshold and a connected flooring surface (N24F11Wa or Layers G and H documented within the western space, IIB.5.1.4) correspond to this foundation stage N24-b. At the opposite end of Wall 08N, the running perpendicular joint separating the two halves of

<sup>135</sup> Plaster C slightly coats Pilaster 3's large southern face, from 160.18m down to 160.12m.

<sup>136</sup> The lower grindstone is  $18 \times 16 \times 5$ cm in size. Its top is levelled at 159.93m and its base at 159.88m, lying over the gravelled ground.

<sup>137</sup> The external surface area encompasses the perimeter wall thickness.

<sup>138</sup> These finger marks fall into the Type B category (Azim Type 8) and the Type L category (Azim Type 6) respectively (IIA.3).

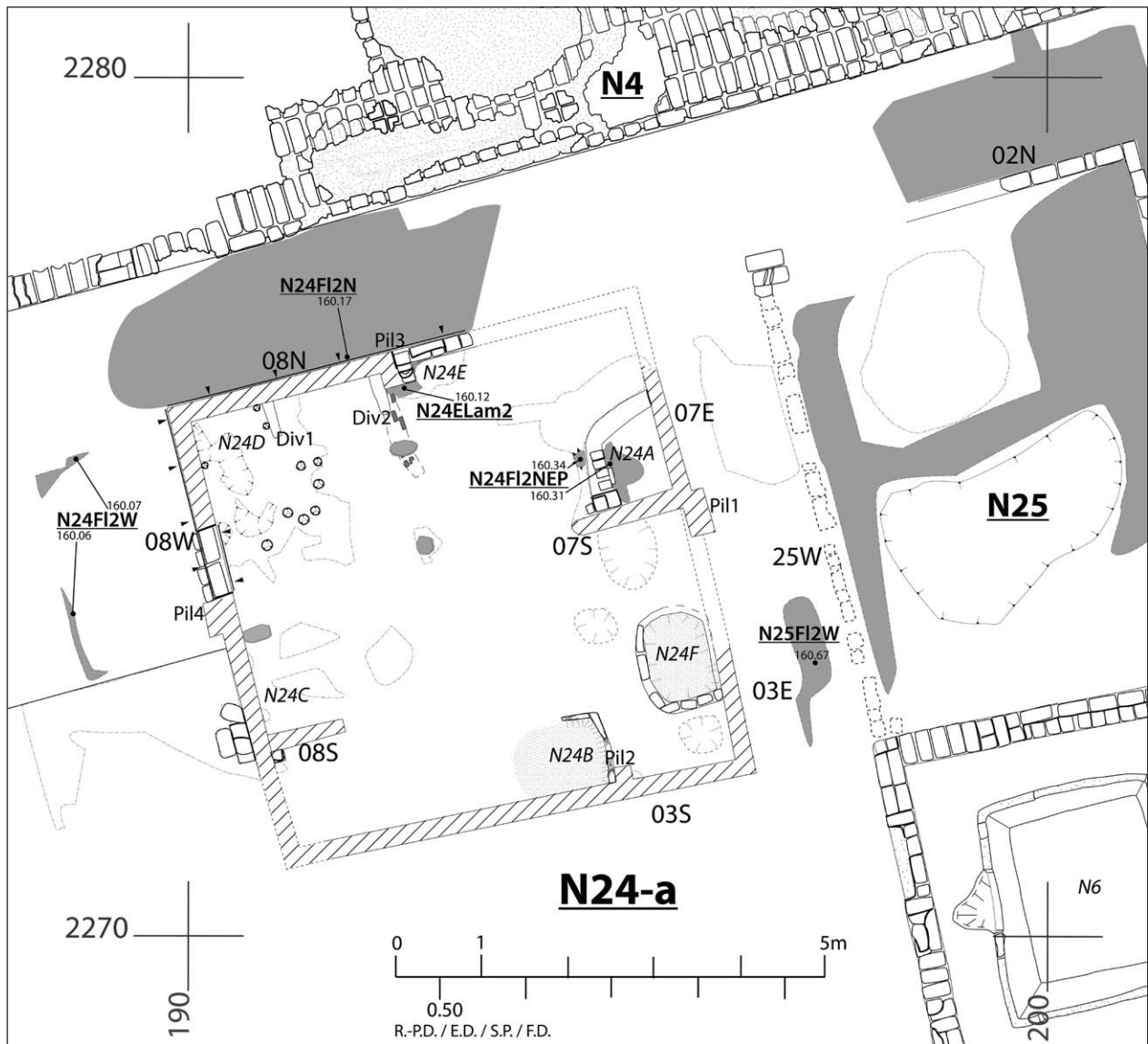


Fig. 23 Plan of Phase N24-a: levels of floors

Pilaster 3 (IIB.2.4.2) indicates that an entranceway through the northern perimeter wall was included in the earliest stage of building.

The sealing of the doorways in Walls 08W and 08N belongs to a second phase of construction, N24-a, at which time building unit N24 must have had another access point. All the masonry from N24's southwestern corner has vanished, except for the bedding joint mortar below the footing bricks. This mortar feature points to the presence of built brickwork, with no further evidence supporting an access route to N24 in this area.<sup>139</sup>

At the opposite end of N24, the northern and eastern perimeter walls have two other points where a span of wall is missing. From this lack of evidence, it is difficult to draw conclusions as to whether brickwork was possibly built across the length of the wall or whether an opening was planned for an access point. Nevertheless, it can be tentatively suggested that a probable access was either built through the east side of the building unit or its northern side. Opposing the outer Pilaster N24Pil4, the remnant remains of possible Pilaster N24Pil1, outside the eastern perimeter wall 07E, may favour the loca-

<sup>139</sup> For discussion on the problem of access identification, see KEMP 2000, 88; KEMP and STEVENS 2010a, 387.

tion of an access point at that place. In support of this, throughout the SAV1 North site such a feature, namely a pilaster, is usually found standing next to an access point.

## **B.5 The coated surfaces and floors associated with N24 (Figs. 16 and 23)**

### *B.5.1 Outside N24*

#### B.5.1.1 To the south of N24

No coated flooring surface remains on or near the outer (southern) face of Wall 03S.

#### B.5.1.2 To the east of N24

A piece of flooring surface is located to the east of N24 and Wall 07E. This surface, N25F11W (IIC.6.1.4) overlays the gravelled soil backfill throughout the area of the lane between building unit N24 and the next unit, N25. The connection between this coated surface and the remains of the footing bricks of N25's western perimeter wall (Wall 25W) is intact. The top level of this mud-coated floor ranges from 160.47m to 160.42m. One may assume that this coated surface – despite lacking a preserved connection with the eastern face of Wall 07E – once covered the area of the north–south oriented street between the two building units and abutted Wall 07E's footing courses. Further south of the lane, another piece of Floor N25F12W is also preserved<sup>140</sup> east of Wall 03E and not connected to it.

#### B.5.1.3 To the north of N24

An east–west oriented wall street runs between Enclosure Wall N4 and N24's northern perimeter wall (08N). On the northern/outer face of Wall 08N, the plaster coating extended down to 160.17m (Fig. 18), where Floor N24F12N overlaid a 17cm thick occupation deposit (N24De1a). Opposite this, on the southern face of Enclosure Wall N4, is an additional indication of the altitude of Floor N24F12N; at its

lowest point (levelled at 160.17m) the render curves outward and shows evidence of a former connection between the floor and the facing plaster. Below that point, basal courses of N4 were left uncoated.

Further down, below deposit (N24De1a), patches of a lower flooring surface were exposed (Figs. 16 and 24). This lower floor, N24F11N, is partially connected to Wall 08N against the bedding joint mortar above the eighth course from the top (160.02m–160.00m). These connected patches of mud material reveal the presence of a lower flooring surface overlying the loose pebble backfill.

#### B.5.1.4 To the west of N24

While on the internal sides, the facing plaster covers the whole surface of the brickwork until the level of the occupation floor,<sup>141</sup> the coating of the exterior face of Wall 08W extends down to *c.* 160.08m, leaving the lower three courses of mud bricks (*c.* 0.35 m high) uncoated. One could assume that Wall 08W's outer facing plaster<sup>142</sup> ended at the point of connection with the floor identified as layer E or N24F12W.<sup>143</sup> Floor N24F12W is heavily truncated and overlies a *c.* 20cm thick lower occupation deposit, (N24De1b).

The footing bricks of Wall 08W were built on a thin (5cm thick) layer of compact sand that overlies the natural gravel soil mixed with crumbled yellow sand. To the west of Wall 08W, an earlier flooring surface, N24F11Wa, connects with the foundation course of N24's western wall. This rather uneven floor consists of a patchy coated surface<sup>144</sup> overlying the natural gravelled soil. Against Wall 08W's footing bricks, the coated surface N24F11Wa is levelled at 159.80m, corresponding to roughly halfway up the threshold's footing (IIB.2.5). Against the footing course of Pilaster N24Pil4,<sup>145</sup> this lower floored surface is levelled at 159.85m, roughly halfway up the pilaster's footing.

Outside the southern end of Wall 08W, in the area between the assumed southwestern corner of

<sup>140</sup> This surface overlies a *c.* 15cm thick deposit layer densely mixed with pebbles, (N25De1a). See IIC.6.1.4.

<sup>141</sup> At that place, the floor N24F11WP is levelled at 159.95m (IIB.5.2.4).

<sup>142</sup> Wall 08W's outer facing plaster dates to a phase later than the closing of the access point through the western wall by addition of brick masonry. It may also date to a phase contemporaneous with the plastering of the medial part of Wall 08W's eastern face (IIB.5.3).

<sup>143</sup> Layer E only survived in the north and west sections of the space west of Wall 08W. The top of Layer E is either

levelled at 160.02m/160.07m (Fig. 11, north section) or 160.06m (Fig. 11, west section). As this coated surface is much truncated, its connection to the outer face of Wall 08W is lost. Nevertheless, the top level of this surface matches the inferior limit of the facing plaster that once covered the western face of 08W.

<sup>144</sup> The floor N24F11Wa corresponds to layers G–H in Fig. 11.

<sup>145</sup> The footing brick of the pilaster corresponds to the eighth course from the top. The base of N24Pil4 is levelled at 159.80m (IIB.2.5.2).

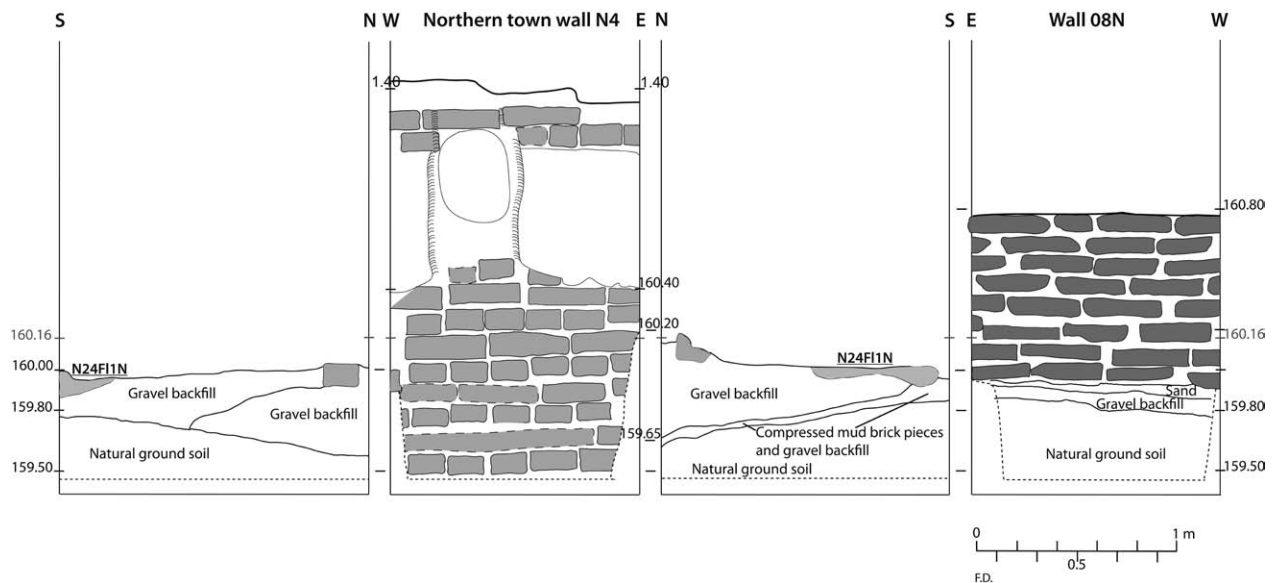


Fig. 24 Section drawing 033A & B/2012 (Square 190/2270, Sondage B north of Wall 08N)

building unit N24 and the eastern face of Wall 41E (see Fig. 3), one finds evidence of a flooring surface, N24F11Wb, whose top ranges from 159.83m to 159.91m (Fig. 22). To the east, this coated surface abuts the top of the footing course of Wall 41E,<sup>146</sup> at 159.85m. Floor N24F11Wb (5–8cm thick) overlays a lens of loose gravel backfill that runs on to the natural ground soil, consisting of pebbles mixed with crumbled yellow sand. As can clearly be seen from the section view, the footing course of Wall 41E lies upon natural ground levelled at 159.74m. To the east, on the other side of Floor N24F11Wb, the connection between the coated surface and the footing of Wall 08W is also visible. Here, this floor plaster is levelled at 159.90m and 159.87m, abutting the western face of Wall 08W's foundation course. The pile of mud bricks<sup>147</sup> standing against the outer face of N24's western perimeter wall and upon the floor N24F11Wb therefore belongs to the later phase, N24-a.

### B.5.2 Inside N24

#### B.5.2.1 The southeastern quadrant

Much of the plastered floor surface is missing in the southeastern quadrant of building unit N24. Only a

patch of mud floor plaster remains, attached to and abutting against the base of the corner joining Wall 03S and Pilaster N24Pil2.<sup>148</sup> This poorly preserved remnant of floor coating N24F11SEP overlays the compact natural ground floor, which is itself made of pebbles tightly held together with a chalky or crumbled yellow sandy matrix. In some places, small patches of mud material adhere to this gravelled surface. This exposed natural ground passes beneath the east–west Wall 03S and the north–south Wall 03E, extending beyond the interior space of N24. At the southeastern corner of N24, the foundation of these walls was built directly on the gravelled ground, whose level varies from 160.48m to 160.35m along the edges of the building unit. Nearby, the shallow scoop of Installation N24F (IIB.3.2.1) cuts into this rocky surface, while bricks delineating the storage bin sit upon a 2cm thick extruded bedding mortar joint<sup>149</sup> that overlays the natural ground soil.

Around Installation N24F, three small depressions are cut into the gravelled soil. These depressions are 30–40cm in diameter, not plastered, and contain a red burnt or ashy fill, of the same sort as the fill overlying the concave scoop of Installation N24F.<sup>150</sup> These grey/black or reddish filling deposits correspond to

<sup>146</sup> The coated surface N24F11Wb is also documented westwards, within Square 180/2290.

<sup>147</sup> The top of the pile of mud bricks is levelled at 160.23m. Though the absence of bonding does not allow for identification as a proper pilaster, the bricks are arranged in such a way that it is unlikely they result from a dump.

<sup>148</sup> The top of the 2–3cm thick patch of floor plaster N24F11SEP is levelled at 160.48m.

<sup>149</sup> The top of the bricks' bedding mortar ranges from 160.36–160.32m.

<sup>150</sup> The bottom of Depression C is levelled at 160.14m.

Building Unit N24		Length (cm)	Width (cm)	Thickness (cm)	Total l + w + t	Format
Perimeter walls	03S finger mark Type L	38	16/18	8	63cm	medium
	N24Pil2	38	17	10	65cm	large
	03E	38	16/18	8	63cm	medium
	07E finger mark Type L	39	18	8.5	65.5cm	large
	N24Pil1	40	17	9	66cm	large
	08N	35	17/18	8	60.5cm	medium
	08N finger mark Type B	36	17	10	63cm	medium
	N24Pil3	38.5	19	9/10	67cm	large
	08W	36	17	10	63cm	medium
	N24Pil4	37	17	8	62cm	medium
Internal walls	07S	35	17	8	60cm	medium
	08S	34/38	16	8	60cm	medium
	N24Div1	39	17	10	66cm	large
	N24Div2	38?	16	10	64cm	medium

Fig. 25 Walls and Pilasters of N24: brick sizes

the dark markings on the walls' inner faces or N24F's muddy lining,<sup>151</sup> attesting to fire activity.

The sequence phasing of the southeastern quadrant is as follows (in chronological order):

- The foundation of bonded Wall 03E, Wall 03S, and Pilaster N24Pil2 on the natural gravelled ground
- The shaping of storage bin N24F and three nearby shallow depressions cut into the ground
- The assembly of bricks shaping the outline of N24F
- The inner lining of N24F
- The coating of the ground soil with a muddy surface, N24FI1SEP, now almost entirely eroded and only preserved in the corner joining Wall 03S and Pilaster N24Pil2.

The northeastern part of site SAV1 North shows several indications of the naturally uneven and sloping character of the ground soil. As mentioned previously, the natural ground floor corresponds to the foundation level at the corner joining Walls 03S and 03E. There is, however, a variant type of gravelled

surface, which passes beneath other wall segments located a short distance from the corner. This pebble backfill consists of gravel stones mixed with sand and, being rather loose, contrasts with the compact natural ground soil near the corner.

Discrepancies between footing levels from one end of Wall 03S to the other demonstrate how variable the altitude of the natural gravelled soil is (*cf.* Pl. 13). From the southeastern corner of building unit N24, this ground slopes downwards to both the west and north. In the same way, a corresponding change of level occurs at the footing of Enclosure Wall N4, where the baseline drops abruptly.<sup>152</sup> Taking advantage of the ground soil's natural declivity, builders used the difference in ground level<sup>153</sup> as natural boundaries of storage bin N24B (IIB.3.1.1 and Pl. 12).

#### B.5.2.2 The southwestern quadrant

In the southwestern quadrant of building unit N24 much of the plastered floor surface is missing, except for a piece of muddy material with amalgamated pebbles that abuts the base of the outer corner

<sup>151</sup> The top of this deposit is levelled at 160.39m and its base (the bottom of N24F) at 160.24m.

<sup>152</sup> With a slope of 23.24° or 40%.

<sup>153</sup> For parallel, see the situation around Temple A of Sai: AZİM and CARLOTTI 2011–2012, 27, 34, 57, pl. IXa.

joining Walls 08W and 08S. This fragment of floor coating N24F11SWP<sup>154</sup> overlays the loose pebble fill composed of gravel mixed with sand. At its western end, no flooring surface remains alongside the base of Wall 03S's inner side.

### B.5.2.3 The northeastern quadrant

In contrast to N24's southern half, where most of the flooring is missing, the northern area of the building unit retains sizeable intact parts of coated surface. To the east, N24's northeastern quadrant also includes Installation N24A.

An indurated mud-coated surface, N24F11NEP, is located north and west of Installation N24A, up to 7cm thick. It overlays the gravelled soil and passes beneath the north and west edges of N24A (IIB.3.2.2). Due to its layered character, this floor varies in thickness, ranging from a compact and uniform surface to an irregular coating, which leaves the underlying pebbles visible. Because of the downward slope of the ground soil, Floor N24F11NEP also varies in height, ranging from 160.25m near the installation's base, to 160.12m at the most distant point *c*. 1m northwest of N24A.

Along the west side of Installation N24A, there is another small distinct patch of flooring material. This patch of floor, labelled N24F12NEP and levelled at 160.34m, lips out from the western face of N24A. This small piece of floor hides the lower layer of pottery fragments imbedded in N24A's western and northern walls (IIB.3.2.2). Finally, at the northeastern corner of building unit N24, no wall masonry is preserved, nor is any floor surface evident. At that spot, levelled at *c*. 160.00m, only the pebble fill on top of the natural ground remains.

Inside Installation N24A itself, it is worth noting that the pebble fill is also coated, a continuation of N24F12NEP. This surface culminates at 160.31m and extends up on to the base of N24A's interior western edge face. Along the three other sides, erosion has damaged this lining surface layer, which may well have once extended across most of the inner space of the installation.

The sequence phasing of the northeastern quadrant is as follows (in chronological order):

- The levelling with pebbles of the naturally sloping ground soil

- The foundation of bonded Walls 07E, 07S, and the possible Pilaster N24Pil1 upon the pebble fill
- The laying of flooring surface N24F11NEP
- The shaping of the northwestern edge of N24A, defined as a possible storage case
- The inner lining of N24A with Floor N24F12NEP, which corresponds to the upper floor coating outside the installation.

### B.5.2.4 The northwestern quadrant

The most substantially preserved span of coated floor surface runs across the northwestern quadrant of building unit N24. On both sides of N24Div1, in particular, the connection between the wall plaster and the coated Floor N24F11NWP is intact at 159.96m (Fig. 16). At that spot, the coating of the floor extends up on to the base of Wall 08N, *i.e.* against the footing course (or the eighth course from the top) of N24's northern perimeter wall.

Further east, near to N24Div2, any evidence of flooring is lost. However, the inferior limit of wall Plasters A and A'<sup>155</sup> lips outward at the top of the footing course of the wall. This feature may correspond to the formerly joined coated Floor N24F11NWP, now truncated and eroded at that place. Here, at the foot of Wall 08N, a section view discloses potsherds and half a doum palm nut within a *c*. 10cm thick loose occupation deposit (N24DeG) overlying the pebble fill. These remains support evidence of activity prior to the flooring of the pebble surface inside N24.

West of N24Div2, as detailed above (IIB.3.3.2), the area of Installation N24E yielded an informative sequence of alternating floors and deposits: the patch of coated material N24ELam overlies a 4cm thick lens of occupation deposit (N24De1d) that in turn overlies a distinct lower coated surface, N24ELam1. Levelled at 160.12m, upper Floor 2 is joined to the basal course of Pilaster 3, covers the basal course of Wall 08N,<sup>156</sup> and may correspond to the pavement N24F12N identified outside building unit N24. As mentioned above (IIB.5.1.3), this surface N24F12N was laid over the wall street, between the outer/northern face of Wall 08N and the inner/southern facing of Enclosure Wall N4 (see Fig. 18: layer Q). North of N24, the pavement N24F12N joined the top

<sup>154</sup> The top of the 2–3cm thick patch of floor plaster N24F11SWP is levelled at 159.94m.

<sup>155</sup> The inferior limit of wall plasters A and A' is levelled at 160.01m (IIB.2.4.1).

<sup>156</sup> The top of the basal course of Wall 08N's eastern section is levelled at 160.15m.

of the basal course of Wall 08N at 160.17m. Within N24E, deposit (N24De1d) separates the upper Floor N24ELam from a distinct lower surface N24ELam1, levelled at 160.08m. Because it is connected to the top of Wall 08N's footing course, N24ELam1 may also be related to two other surfaces, N24F11NWP and N24F11N, indicating a point of connection at the corresponding location. Finally, below the alternating flooring is a *c.* 7cm thick layer of loose occupation deposit (N24DeG) overlying the pebble fill, levelled at *c.* 159.97m.

To the west, on the northern part of Wall 08W, the lowest point of the plaster coincides with the flooring surface N24F11NWP, levelled at 159.96m. In the places where the coated floor, which once joined the lowest point of the plaster wash, is lost, a layer of the occupational deposit (N24DeG) is visible above a pebble backfill.

Further south on the medial part of Wall 08W, the same flooring surface N24F11NWP (levelled at 159.87m) is joined to the base of the lowest course of the wall. Below Floor N24F11NWP, both the occupation deposit (N24DeG) and its underlying lower pebble backfill are banked against the footing course of Wall 08W (IIB.5.1.4 for the sequence on the other face of Wall 08W). Here, the footing course includes the threshold, a remainder of the first building phase of Wall 08W (N24-b) when an access way was still open in the wall's masonry. The few potsherds<sup>157</sup> piled up against the medial part of Wall 08W's basal course belong to a subsequent *c.* 10cm thick occupation deposit (N24De1e), which overlies the earlier Floor N24F11NWP. At the base of the seventh course from the top, *c.* 159.96m, the facing plaster that covers the masonry blocking the earlier passage way curves slightly outwards. This lipping feature may indicate the presence of a coated surface that was, at some later stage, laid over Deposit (N24De1e). This surface might be related to surface N24ELam, located in the area of Installation N24E (IIB.3.3.2).

Another curving out and lipping feature is also visible on the southern section of Wall 08W, where the plaster wash indeed lips out from a point lev-

elled at 159.96m and may correspond to the level of the coated surface Floor N24F11NWP. Near the corner of internal perpendicular Wall 08S are some patchy remains of flooring material, levelled at 159.89m and overlaying the gravelled ground, adhere to the basal course of Wall 08W. In this area between Walls 08W and 08S, occupation deposit (N24DeG) separates the floored surface from the pebble backfill, levelled at 159.86m.

The sequence phasing of N24's internal western part is discussed as follows (in chronological order):

- The foundation of bonded Walls 08N (with its inner Pilaster N24Pil3) and 08W (with its outer Pilaster N24Pil4) upon a sandy layer overlying the natural gravelled ground. At this time, Wall 08W is not made of continuous masonry (IIB.2.5), but includes an access point, as evidenced by a mud brick threshold built directly on the sandy layer. Perimeter Wall 08N is built of two parts, as can be seen from its northern face where the brickwork of the wall features a running perpendicular joint (IIB.2.4)
- The backfilling of the area with a loose pebble fill of variable thickness<sup>158</sup>
- The foundation of internal wall 08S and dividing walls N24Div1 and N24Div2 upon the pebble fill
- The initial building phase N24-b resulting in Deposit (N24DeG) on the pebble fill<sup>159</sup>
- The plastering of the walls' inner faces:
  - Firstly, on the eastern face of Wall 08W jointly with the northern face of Wall 08S
  - Secondly,<sup>160</sup> on the southern face of Wall 08N (excluding its eastern section), as well as on the large southern face of Pilaster N24Pil3
- The coating of the area with flooring surface N24F11NWP upon the occupation deposit (N24DeG)<sup>161</sup> and the coating of the N24E area with the Floor N24ELam1 above the same deposit
- The sealing of the access point in Wall 08W with mud brick masonry
- The plastering of dividing walls N24Div1 (N24D) and N24Div2 (N24E) to the north, and

<sup>157</sup> These potsherds are levelled between 159.98m and 159.87m.

<sup>158</sup> Against the bottom of the walls, the pebble fill is as thick as a course of bricks.

<sup>159</sup> Along the basal courses of the walls, tiny floor pieces, potsherds and a fragmentary grindstone from Installation N24C belong to this deposit phase.

<sup>160</sup> The facing plaster of Wall 08N covers the inner corner joining Walls 08N and 08W, applied after the plastering of 08W's eastern face.

<sup>161</sup> The coated surface N24F11NWP covers the basal courses of Wall 08N and was laid after the plastering of the wall.



Outside, north of N24	Outside, west of N24	Outside, south-west of N24	Outside, east of N24 = west of N25	Outside, south-eastern part	Inside N24, north-eastern part	Inside N24, south-western part	N24F113 N24E	Inside N24, north-western part	Building phases of N24
N24F12N	N24F12W //Layer E		N25F12W //N12F12aNE				N24E Lam2		N24-a Second building phase
08N (east)	08W (central)				N24F12 NEP		N24E N24D		
(N24De1a)	(N24De1b)		(N25De1a)				(N24De1d)	(N24De1e)	
N24F11N	N24F11Wa //Layer G-H	N24F11Wb	N25F11W		N24F11 SEP		N24E Lam1	N24F11 NWP	N24-b First building phase
								(N24DeG)	
08N (west)	08W (north)	08W (south)	03E	03S (east)	N24F N24B		N24Div1 N24Div2		
Sandy layer	Sandy layer		07E	07S		08S N24C			
Gravel backfill		Gravel backfill							Gravel backfill
Natural ground									

Fig. 26 Floors, fills and building phases of N24

the assembly of the grinding implement (N24C) to the west

- The piercing of the coated floor surface N24F11NWP (possible postholes related to Installation N24D)
- The occupation of the area resulting in deposit (N24De1e) on Floor N24F11NWP and, in the N24E area, Deposit (N24De1d) lying on Floor N24ELam1
- The plastering of the eastern face of Wall 08W's medial section, the blocked access point
- The coating of the area of N24E with the flooring surface N24ELam.

### *B.5.3 Building phases of N24*

(Fig. 16, 23 and 26)

Because of varying altitudes in the natural gravelled soil, an extensive assessment of N24's building phases proves to be challenging. From the south-eastern corner of building unit N24, where the bricks of the wall's footing course sit directly upon the top of the natural surface, this ground slopes downwards both to the west and the north. There are thus discrepancies between the footing levels of the different walls and installations of N24 (Fig. 15), for which the builders may have occasionally added a pebble layer to counter the irregularities.

Despite these difficulties, an interpretation of the phasing was attempted. The first building phase (N24-b) began with the construction of N24's perimeter walls – leaving space for access through the western and northern sides of the building – their respective bonded pilasters, and the internal wall 07S. Also belonging to this initial phase of construction is the shaping of storage bin N24F, three nearby shallow depressions cut into the ground, probable storage pit N24B, as well as the arrangement of mortared bricks around bins N24F and N24B. During Phase N24-b, there was also a levelling with pebbles of the naturally sloping ground soil. This pebble layer, lying beneath the footing course of internal wall 08S and dividing walls N24Div1 and N24Div2, preceded the construction of these three walls and the occupational deposit (N24DeG). The plastering of the inner faces of Walls 08W, 08S and 08N<sup>162</sup> followed this early stage of occupation, after which the floor coatings labelled N24F11 or

N24ELam1 were laid upon the initial occupational deposit. Installation N24C also belongs to the first building phase, N24-b. The phase of occupation identified within N24 by deposits (N24De1e) and (N24De1d) and outside the building as (N24De1a), (N24De1b), (N24De1c), comes after the first building stage N24-b.

At the second construction phase, N24-a (Fig. 22), the access points through western Wall 08W and northern Wall 08N were blocked. The arrangement of the composite north and west sides of Installation N24A also belong to N24-a because they were built upon the earlier Floor N24F11NEP.

The plastering of dividing walls N24Div1 and N24Div2 (Plaster D) and the arrangement of the grinding implement from Installation N24C also followed the earliest flooring stage. Though there is sparse evidence of the subsequent flooring phase within N24 (Fig. 23), it can be more substantially documented outside the building (N24F12N, IIB.5.1.3.). The final plastering (Plaster C) over Pilaster N24Pil3, as well as the western face of Wall 08W, the eastern face of the medial part of Wall 08W and the northern face of Wall 08N may also date to this Floor 2 stage of the N24-a construction phase.

## **C BUILDING UNIT N25**

### **C.1 Introduction**

The perimeter mud brick walls of building unit N25 (02E, 02N and 25W) are severely degraded both in length and height (Pl. 14), but it is still possible to determine that they are half-a-brick thick and made of running stretcher brick courses. Each corner of the building unit was found in a different state of preservation. On the eastern side of N25, in the northeastern corner there is evidence for the joint of the northern perimeter wall 02N and eastern perimeter wall 02E, while the masonry of the southeastern corner is entirely lost. To the west, given the orientation of the crossing headers running eastward at the northern end of western perimeter wall 25W, one may consider that these bricks were once joined to the northern perimeter wall 02N, thus forming N25's northwestern corner. Finally, only a negative impression of a crossing brick may potentially support the former presence of the building unit's southwestern corner.

<sup>162</sup> The plasters covering the northern perimeter wall include Plasters A and A' (over the southern/inner face of Wall 08) and Plaster B (over the southern face of N24Pil3).

the assembly of the grinding implement (N24C) to the west

- The piercing of the coated floor surface N24F11NWP (possible postholes related to Installation N24D)
- The occupation of the area resulting in deposit (N24De1e) on Floor N24F11NWP and, in the N24E area, Deposit (N24De1d) lying on Floor N24ELam1
- The plastering of the eastern face of Wall 08W's medial section, the blocked access point
- The coating of the area of N24E with the flooring surface N24ELam.

### B.5.3 Building phases of N24

(Fig. 16, 23 and 26)

Because of varying altitudes in the natural gravelled soil, an extensive assessment of N24's building phases proves to be challenging. From the south-eastern corner of building unit N24, where the bricks of the wall's footing course sit directly upon the top of the natural surface, this ground slopes downwards both to the west and the north. There are thus discrepancies between the footing levels of the different walls and installations of N24 (Fig. 15), for which the builders may have occasionally added a pebble layer to counter the irregularities.

Despite these difficulties, an interpretation of the phasing was attempted. The first building phase (N24-b) began with the construction of N24's perimeter walls – leaving space for access through the western and northern sides of the building – their respective bonded pilasters, and the internal wall 07S. Also belonging to this initial phase of construction is the shaping of storage bin N24F, three nearby shallow depressions cut into the ground, probable storage pit N24B, as well as the arrangement of mortared bricks around bins N24F and N24B. During Phase N24-b, there was also a levelling with pebbles of the naturally sloping ground soil. This pebble layer, lying beneath the footing course of internal wall 08S and dividing walls N24Div1 and N24Div2, preceded the construction of these three walls and the occupational deposit (N24DeG). The plastering of the inner faces of Walls 08W, 08S and 08N<sup>162</sup> followed this early stage of occupation, after which the floor coatings labelled N24F11 or

N24ELam1 were laid upon the initial occupational deposit. Installation N24C also belongs to the first building phase, N24-b. The phase of occupation identified within N24 by deposits (N24De1e) and (N24De1d) and outside the building as (N24De1a), (N24De1b), (N24De1c), comes after the first building stage N24-b.

At the second construction phase, N24-a (Fig. 22), the access points through western Wall 08W and northern Wall 08N were blocked. The arrangement of the composite north and west sides of Installation N24A also belong to N24-a because they were built upon the earlier Floor N24F11NEP.

The plastering of dividing walls N24Div1 and N24Div2 (Plaster D) and the arrangement of the grinding implement from Installation N24C also followed the earliest flooring stage. Though there is sparse evidence of the subsequent flooring phase within N24 (Fig. 23), it can be more substantially documented outside the building (N24F12N, IIB.5.1.3.). The final plastering (Plaster C) over Pilaster N24Pil3, as well as the western face of Wall 08W, the eastern face of the medial part of Wall 08W and the northern face of Wall 08N may also date to this Floor 2 stage of the N24-a construction phase.

## C BUILDING UNIT N25

### C.1 Introduction

The perimeter mud brick walls of building unit N25 (02E, 02N and 25W) are severely degraded both in length and height (Pl. 14), but it is still possible to determine that they are half-a-brick thick and made of running stretcher brick courses. Each corner of the building unit was found in a different state of preservation. On the eastern side of N25, in the northeastern corner there is evidence for the joint of the northern perimeter wall 02N and eastern perimeter wall 02E, while the masonry of the southeastern corner is entirely lost. To the west, given the orientation of the crossing headers running eastward at the northern end of western perimeter wall 25W, one may consider that these bricks were once joined to the northern perimeter wall 02N, thus forming N25's northwestern corner. Finally, only a negative impression of a crossing brick may potentially support the former presence of the building unit's southwestern corner.

<sup>162</sup> The plasters covering the northern perimeter wall include Plasters A and A' (over the southern/inner face of Wall 08) and Plaster B (over the southern face of N24Pil3).

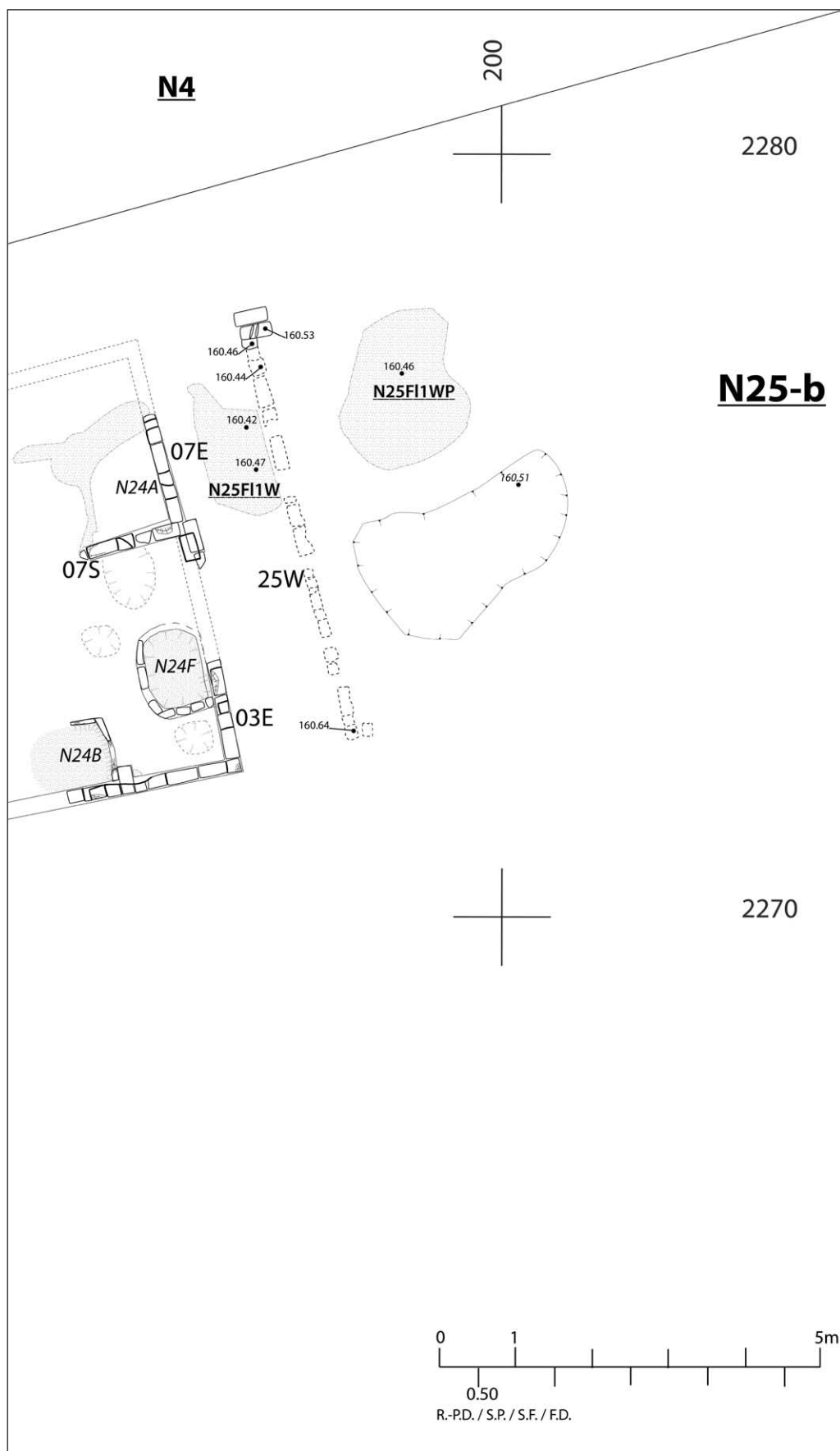


Fig. 27 Plan of Phase N25-b: levels of the perimeter walls and floors

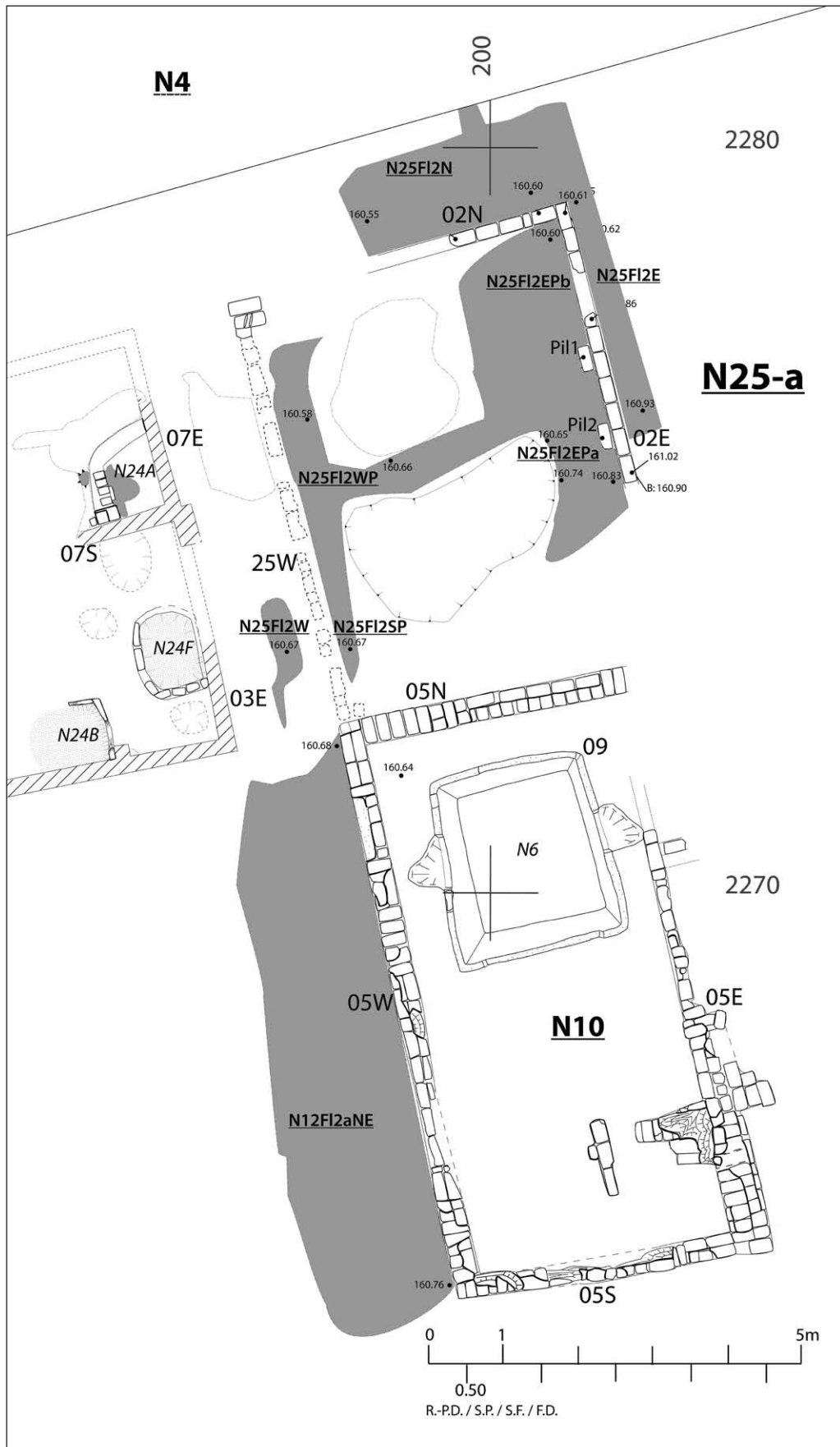


Fig. 28 Plan of Phase N25-a: levels of the perimeter walls and floors

Building unit N25 is surrounded by three streets or passageways (Fig. 28). One is the 1.60m wide wall street, which runs east–west between Wall 02N’s outer/northern face and the inner/southern face of the northern Enclosure Wall N4. Another lane, north–south oriented and *c.* 1.40m wide, separates the western side of N25 from the nearby building unit N24. Finally, to the east of N25 there is a third, narrower alleyway, also north–south oriented and 1m wide.

Due to the loss of the brickwork, the external lengths of N25’s sides can only be estimated as follows:

- The northern side is 4.55m long
- The eastern side is 5.80m long
- The southern side is 4.75m long
- The western side is 5.60m long

If only the bricks are taken into account, it would appear that N25’s perimeter walls all belong to the same period of construction. In support of this assumption, the bricks are all fairly similar in size (Fig. 29). Furthermore, some bricks from each walls’ footing course feature the same type of finger marks, two central oblique grooves.<sup>163</sup> However, when also taking associated coated floors into consideration, two successive building phases, N25-b and N25-a, seem more likely.

## C.2 Description of N25’s perimeter walls (Figs. 27 and 28)

### C.2.1 Southern perimeter wall

No bricks forming the N25’s southern perimeter wall were found.<sup>164</sup>

### C.2.2 Wall 02E

Forming the eastern side of building unit N25, Wall 02E is only preserved with a single footing course. This wall is north–south oriented and runs perpendicular to both Wall 02N and the northern Enclosure Wall N4. Wall 02E is half-a-brick thick and consists of mostly stretcher bricks lying on bed, 35 × 16 × 10.5cm in size. There is a 0.55m long gap (one and half stretcher bricks) in the masonry after the first three northern bricks, 0.75m away from the inner corner formed with Wall 02N. Six stretchers

beyond this gap, the footing course of Wall 02E is also truncated at its southern end. The total span of the gap and wall segments results in 3.75m for the present length of Wall 02E. Because bricks are lost south of this footing course, it is not possible to trace the original length of Wall 02E, but drawing on the length of the parallel Wall 25W’s bedding joint mortar (IIC.2.4.), it can be tentatively assumed that the Wall 02E was around 5.80m long.

At its preserved southernmost part, the top of Wall 02E’s footing course culminates at 161.02m and its base at 160.90m. At the northern end of Wall 02E, at the corner with the adjacent Wall 02N, the top of Wall 02E’s footing course is levelled at 160.75m, the base at 160.62m. The difference between the elevations indicates the uneven character of the ground soil that slopes gradually downward from south to north.<sup>165</sup> As can be seen from side views of Wall 02E and its truncated masonry (Pl. 15), Wall 02E was built on a 3–7cm thick deposit that in turn overlies a mud-coated surface (IIC.6.1.2).

#### C.2.2.1 Facing plasters of Wall 02E

Neither of 02E’s faces bears surface treatment.

#### C.2.2.2 Pilasters of Wall 02E: N25Pil1 and N25Pil2

Spaced 0.70m apart, two stretcher bricks lying on their broad side run along the inner/western face of Wall 02E’s southern segment. Both these bricks are situated upon a similar deposit that underlies the footing course of Wall 02E (IIC.2.2) and may thus belong to the same phase of construction as the wall. Given the location of these features, it can be suggested that they were the footing bricks of two inner pilasters buttressing N25’s eastern perimeter wall 02E, which must have been longer than its current length. Moreover, both bricks are identical in size (35 × 16 × 10.5cm) to those from the adjacent Wall 02E. At this lowest level of construction, there is no evidence of bonded masonry between Wall 02E’s footing course and the pilasters’ footing brick that runs parallel to it. With respect to this building technique, throughout the site SAV1 North there are several documented instances of pilasters associated with walls that show no specific bonding between the footing courses of a wall and its

<sup>163</sup> Finger mark Type B category = Azim Type 8 (IIA.3).

<sup>164</sup> At a right angle to Wall 25W’s (IIC.2.4) underlying mortar, there is a roughly square bedding joint mortar running east-

wards. This poorly preserved evidence might indicate the former southern perimeter, east–west oriented

<sup>165</sup> A gentle steep of 7.4 % (gradient 4.12°).

Building Unit N25		Length (cm)	Width (cm)	Thickness (cm)	Total l + w + t	Format
Perimeter walls	25W finger mark Type B	33	15/16	10	58.5cm	<i>small</i>
	02N finger mark Type B	33	15	10.5	58.5cm	<i>small</i>
	02E finger mark Type B	35	16	10.5	61.5cm	<i>medium</i>
	N25Pil1	35	16	10.5	61.5cm	<i>medium</i>
	N25Pil2	35	16	10.5	61.5cm	<i>medium</i>

Fig. 29 Walls and Pilasters of N25: brick sizes

adjacent pilaster. According to the above-suggested interpretation of the two remnant western bricks as pilasters' footing bricks, these two features have been named N25Pil1<sup>166</sup> and N25Pil2,<sup>167</sup> to the north and to the south of Wall 02E's southern segment respectively. Pilaster N25Pil1 is located 1.65m away from N25's northeastern inner corner and N25Pil2 2.70m from that same corner.

### C.2.3 Wall 02N

Like Wall 02E, only the footing course of Wall 02N, with a length of four running stretcher bricks that are  $33 \times 15 \times 10.5$ cm in size. Wall 02N is east–west oriented, half-a-brick thick, and runs perpendicular to Wall 02E and parallel to Enclosure Wall N4's southern/inner face, *c.* 1.60m away from the latter. West of the intact footing bricks of Wall 02N, there are remains of a 0.80m long mud layer, bedding for at least two missing stretchers. Moving westwards, beyond the 2.20m span of intact bricks and negative impressions, the projected length of now lost mud-bricks is 1.75m.

At the eastern end of Wall 02N, its stretcher brick abuts the brick located at the northern end of Wall 02E at a right angle. With only the footing courses remaining in the northeast corner, it is impossible to determine what bonding technique most likely existed between these contiguous walls' upper courses. The top of Wall 02N's footing course culminates at a height ranging from 160.71–160.73m.<sup>168</sup> This wall was built on a thin layer of deposit (IIC.6.1.3)

that overlies a coated floor surface N25FI2N levelled at 160.58m.

#### C.2.3.1 Facing plasters of Wall 02N

Neither face of Wall 02N bears surface treatment.

#### C.2.3.2 Pilaster of Wall 02N

There is no evidence of any pilaster associated with Wall 02N.

### C.2.4 Wall 25W

With the exception of two crossing header bricks from the footing course at the northern end of Wall 25W, all the bricks of the western perimeter wall are lost. Nevertheless, thanks to the remains of the bricks' bedding joint mortar, it is possible to determine that the brickwork that was once made of stretcher bricks. The negative impressions of the now missing footing course indicate that this wall was north–south oriented and half-a-brick thick.

The two crossing headers of Wall 25W's northern end run perpendicular to the southward stretch of the wall. The size of these mud bricks ( $33 \times 15/16 \times 10$ cm) is similar to those of Wall 02N. The orientation of these two headers may suggest that both the Walls 25W and 02N were once bonded at the northwestern corner of building unit N25. Such a juxtaposition between the two headers may also indicate that N25's northwestern corner was reinforced, formed as a corner pilaster with an interlocking brick pattern.

<sup>166</sup> The top of Pilaster N25Pil1 is levelled at 160.83m and its base at 160.75m.

<sup>167</sup> The top of Pilaster N25Pil2 is levelled at 160.92m. South of N25Pil2, the floor plaster N25FI2EPb laid on the ground is levelled at 160.83m (IIC.6.2.2).

<sup>168</sup> At its eastern end, the base of Wall 02N's footing course is levelled at 160.62m.

### C.3 Description of N25's dividing walls (Pl. 14)

Together with the perimeter walls, remains of several later wall additions were documented within N25 that belong to Post-New Kingdom periods. The best preserved of these, 04E, is a 1.20m long, northwest oriented wall, and runs perpendicular to the outer/northern face of Wall 05N, the northern perimeter wall of building unit N10. Wall 04E is preserved up to two courses of staggered stretcher bricks and culminates at 161.22m. Wall 04E's mud bricks are  $33 \times 16 \times 11$ cm in size and some of them have medium-sized pebble content. At a right angle to the northern end of Wall 04E's footing course is a contiguous footing course of bricks from the east–west Wall 04N. The footing course of Wall 04N is currently one and half stretcher bricks long, *i.e.* 0.50m. Both Walls 04E and 04N run over a deposit layer (N25DeB) (IIC.6.2.3) with a ceramic content that was assessed to belong to a recent, post-Medieval period.<sup>169</sup> Because of this late dating, Walls 04E and 04N must be considered intrusive.

Running *c.* 0.50m parallel to and west of Wall 04E is a short segment of another north–south running wall, 06E. Only two stretcher bricks ( $33 \times 15 \times 10$ cm) are left of the footing course of Wall 06E, for a length of 0.65m and culminating at 160.91m.<sup>170</sup> Wall 06E runs on top of a gravel layer covering the Floor N25F12SP, laid across the southwestern part of N25 (IIC.6.2.3) and is therefore clearly post-dating the Level 3 phase of construction of N25.

### C.4 Layout and dimensions of N25 building unit (Fig. 28)

The construction of building unit N25 began with western perimeter wall 25W, when it was probably intended as a freestanding building. With the ensuing construction of southern Structure N10, likely in the second building phase of Level 3 (N25-a), this was no longer the case. N25 is roughly rectangular; its two longer sides run north–south and are perpendicular to the two shorter sides, running east–west. The northern side of N25 runs parallel to Enclosure Wall N4, as is consistent with the pattern of SAV1's settlement grid.

The external surface area of N25 is 26.78m ( $4.75 \times 5.80 \times 4.55 \times 5.60$ m) while the internal surface area is 22.92m ( $4.30 \times 5.45 \times 4.15 \times 5.25$ m) (see Fig. 14). From the three remaining walls delineating

the building unit N25, two brick formats were identified (see Fig. 29). According to the classification described above (IIA.3), the bricks from Walls 02N ( $33 \times 15 \times 10.5$ cm) and 25W ( $33 \times 15/16 \times 10$ cm) fall into the small format category, while bricks of Wall 02E ( $35 \times 16 \times 10.5$ cm) fall into the medium format category. Some bricks of these walls bear the same type of finger marks, namely two central oblique grooves (Type B, see IIA.3).

As mentioned above, all the perimeter walls of N25 are severely damaged. Any of the spots where the brickwork or wall's mortar bed is currently missing may potentially suggest a gap creating an access point, although there is no preserved evidence of relevant features to support this. However, throughout SAV1 North the pilaster feature has been commonly noted near an access point and thus the presence of the two pilasters' footing bricks along the inner/western side of Wall 02E, N25's eastern perimeter wall (IIC.2.2.2), may tentatively suggested that this wall was opened with one or two access points. Drawing on this assumed entry for both N25 and its westward neighbouring building unit N24 (IIB.4), it can be suggested that both structures share a similar layout and may have functioned as open-air courtyards.

### C.5 Description of N25 installations

No specific installation related to the building phases of Level 3 was recorded within N25.

### C.6 Coated surfaces associated with N25 (Figs. 27 and 28)

#### C.6.1 Outside N25

##### C.6.1.1 To the south of N25

Though nothing remains of the southern perimeter wall, the preserved brick impressions of the southwestern corner indicate that it likely abutted Wall 05N of the neighbouring Structure N10. Because of this close spatial relationship, anything falling to the southern exterior of N25 is now attested within 05N itself. Thus, the lower patch of coated floor within the inner northwestern corner of building unit N10 might correspond to the flooring surfaces N25F12W (IIC.6.1.4) and N25F12SP (IIC.6.2.3), identified on either side of Wall 25W's southern end. This floor surface abuts the base of the wall at the fifth course from the top and is levelled at 160.64m.

<sup>169</sup> Lauriane Miellé, personal communication, 8 July 2009.

<sup>170</sup> The base of Wall 06E is levelled at 160.78m.



### C.6.1.2 To the east of N25

As observed below the footing course of the contiguous Wall 02N (IIC.6.1.3), the footing course of N25's eastern perimeter wall 02E was also built on a layer of compacted fine sand, designated (N25De2b).<sup>171</sup> Below the deposit (160.61m at the northeastern corner of the N25 building unit) the coated surface N25F12E is preserved only in a few scattered patches<sup>172</sup> along the lane separating Wall 02E from Wall 13W (see Fig. 3).

### C.6.1.3 To the north of N25

A large piece of mud-coating, preserved up to *c.* 4m in surface area, was laid on the wall street separating the northern Enclosure Wall N4 from N25's northern perimeter, Wall 02N. Where this surface N25F12N abuts N4's southern facing, it covers the pebble and brick backfill of the enclosure wall's foundation trench, which concealed the three lowest courses of the enclosure wall. The top of surface N25F12N varies from 160.60m to 160.55m. Despite the assumed heavy traffic patterns of a wall street, the *c.* 5cm thick mud-coating was unevenly laid and the surface of N25F12N is fairly bumpy.

Surface N25F12N lies under a *c.* 3cm thick layer of compacted fine sand (N25De2a) upon which the footing course of Wall 02N was built. Because of the truncation of the floor surface near N25's north-western corner, the content of further deposit layers underlying the surface N25F12N may be observed. Below this surface, there is a *c.* 15cm thick deposit (N25De1b) that overlays a gravel backfill. This backfill is also attested further west along the wall street, where it overlies the surface N24F12N.

### C.6.1.4 To the west of N25

For the lane separating N25 from its western neighbour N24, only two patches of mud-coated floor remain, each representing a different phase of coating the alleyway. The top of the lowest patch of Floor N25F11W is levelled from 160.47–160.42m. This floor is 3–4cm thick and covers a layer of gravel

backfill. To the east, the surface N25F11W connects to the bedding mud mortar of Wall 25W's now missing stretcher bricks, while to the west the connection of this floor to the outer/eastern face of Wall 07E is lost (IIB.5.1.2). The gravel soil underlying Floor N25F11W served as a ground foundation to Wall 25W and once concealed the footing course of the northern segment of N24's eastern perimeter wall (07E).

To the south, the upper flooring patch N25F12W runs between N25's southwestern and N24's southeastern corners. This surface is also 3–4cm thick and overlies a 15cm thick deposit layer densely mixed with pebbles, (N25De1a), that buried the footing courses of Walls 25W and 03E. The top of the floor coating N25F12W is levelled at 160.67m. Despite truncation to the south of N25F12W, this floor may nevertheless coincide with Floor N12F12aNE identified along the north–south running passageway separating N10 from N12 (IID.6.1.2).<sup>173</sup> The laying of the floor coating N25F12W may also be contemporaneous to Floor N25F12N, which was laid over the gravel material that filled the foundation trench of the northern enclosure, N4.

## C.6.2 Inside N25

### C.6.2.1 The western part

Throughout N25, the most dominate remaining features are much younger than those found in the neighbouring structures. The surface itself (Level 1), is a *c.* 15cm thick upper layer of æolian sand with ceramic sherd content.<sup>174</sup> Below this, Level 2 is a substantial stratum with a mixed content of sherds, brick waste and other refuse material, such as dumped stones or bone pieces.<sup>175</sup> It also contains a *c.* 1.10m in diameter fireplace located in the north-western quadrant of N25. A half-ring of stone fragments surrounded the western base of this fireplace, the bottom of which is levelled at 160.52m. Below the stones, there is evidence of some residual patches of mud-coated Floor N25F12WP. The top level of

<sup>171</sup> South of Wall 02E, this layer (N25De2b) is 7cm thick with its top levelled at 160.90m and its base at 160.83m. At the opposite end of Wall 02E, the layer (N25De2b) is thinner and only 2–3cm thick between 160.63m and 160.61m.

<sup>172</sup> The southern patches of Floor N25F12E are levelled at 160.93m.

<sup>173</sup> The top of Floor N12F12aNE is levelled from 160.76m (south of Wall 5W) to 160.68m (outer northern end of Wall 5W).

<sup>174</sup> Before digging, at the southeastern corner of Square 190/2270, the top of the surface level's altitude was measured at 161.46m and at 161.03m at the northeastern corner of the same square.

<sup>175</sup> The top levels of this demolition layer range from 161.35–161.21m.

this floor, cut by the fireplace from Level 2, ranges from 160.66–160.58m. Despite several large truncations, Floor N25FI2WP expands continuously across the inner room of the N25 building unit and corresponds to the Floor N25FI2EP identified in the eastern part of N25 (IIC.6.2.2). Where the hearth was located, Floor N25FI2WP overlies a 7cm thick layer of deposit, (N25De1c), composed of sand, pebbles and ceramic sherds. Underlying Deposit (N25De1c), a trampled coated surface N25FI1WP was laid over gravelled ground.

#### C.6.2.2 The eastern part

In the eastern part of N25, other distinct layers of sandy deposits belong to the demolition layer named Level 2. One meter west of the inner side of Wall 02E, a north–south section cut through the accumu-

lated strata revealed a valuable deposit sequence (Pl. 16). Below a 6–7cm thick layer of hardened sand with ash and ceramic content, there are three layers/lenses mostly composed of sandy silt mixed with sherds, thin chopped straw, ash or charcoal.<sup>176</sup>

It is clearly visible from the section that these loose sandy deposits, named (N25DeA),<sup>177</sup> overlie a different layer of compacted fine sand, (N25De2d).<sup>178</sup> This deposit in turn overlies a 3cm thick mud-coated material N25FI2EPa that was laid on a layer of gravel backfill, c. 15cm thick. Floor surface N25FI2EPa slopes gradually downwards from south to north, ranging from 160.74–160.65m. This surface is identical to the surface N25FI2EPb identified further east, along the inner side of N25's eastern perimeter wall 02E.<sup>179</sup> The floor coatings identified on the eastern part of N25 run westwards

Outside, north of N25	Outside, west of N25	Outside, east of N25	Inside N25, western part	Inside N25, eastern part	Inside N25, southern part	Building phases of N25
Surface Level 1						
Level 2						
			fireplace c. 1.10m Ø	(N25DeA)	(N25DeB)	
(N25De2a)		(N25De2b)	(N25De2c)	(N25De2d)		
<u>N25FI2N</u>  02N	<u>N25FI2W</u> // <u>N12FI2aNE</u>	<u>N25FI2E</u>	<u>N25FI2WP</u>	<u>N25FI2EPa</u>  <u>N25FI2EPb</u>  02E	<u>N25FI2SP</u>	<b>N25-a</b> <b>Second building phase</b>
(N25De1b)	(N25De1a)		(N25De1c)	(N25De1d)	(N25De1e)	
	<u>N25FI1W</u>  25W		<u>N25FI1WP</u>			<b>N25-b</b> <b>First building phase</b>
Gravel backfill						
Natural ground						

Fig. 30 Floors, fills and building phases of N25

<sup>176</sup> The upper layer of hardened sand is levelled between 160.99–160.92m. The three lower layers or lenses are c. 16cm thick.

<sup>177</sup> In the eastern section, the sandy deposits (N25DeA) are c. 22cm thick.

<sup>178</sup> The compacted fine sand deposit is c. 5–10cm thick.

<sup>179</sup> At that place, one observes a similar downward slope from south to north and the top level of N25FI2EPb ranges from 160.83–160.60m.

(N25F12WP, see IIC.6.2.1) and though the coatings were given different names due to their distinctive locations, they all belong to the same horizon.

The deposit below the Floor N25F12EPa is visible through the section. This deposit (N25De1d) mainly consists of pebbles and is *c.* 15cm thick. Under this deposit, there is another stratum of gravel, the top of which is covered by a superficial chalky crust. Such a crust below Deposit (N25De1d) may indicate the presence of the natural gravelled ground, levelled here at 160.51m.

### C.6.2.3 The southern part

As previously mentioned (IIC.3), below the footing courses of Walls 04E and 04N, there is clear evidence of a deposit layer, (N25DeB). This 22–28cm thick deposit upon which the walls were built, may correspond to Deposit (N25DeA) identified in the eastern part of building unit N25. In the south-eastern quadrant of N25, there is no evidence of a coated surface underlying Deposit (N25DeB). The floors identified in the eastern part of the building unit (IIC.6.2.2), N25F12EPa and N25F12EPb, were truncated in the area of Walls 04E and 04N, which belong to later phases.

Nevertheless, in N25's southwestern quadrant, a patch of coated floor levelled at 160.67m is visible. This small piece of coated material N25F12SP most likely corresponds to the Floor N25F12WP laid across N25's northwestern part. Now truncated, Floor N25F12SP must have at some stage been connected to both the base of Wall 06E that was built upon the deposit, as well as to the top of the footing course of Wall 25W. Similar to Floors N25F12WP, N25F12EPa and N25F12EPb, the surface N25F12SP overlies a layer of gravel backfill (N25De1e)<sup>180</sup> This deposit layer buried the inner/eastern side of Wall 25W's footing course, much like layer (N25De1a) buried the outer/western side of the same wall's footing course (IIC.6.1.4).

### C.6.3 Building phases of N25 (Figs. 27, 28 and 30)

Given that in most places one (or less) brick courses remain of building unit N25's walls,<sup>181</sup> it is only pos-

sible to provide a tentative account of their building phases. Nevertheless, despite the walls' poor preservation, several intact patches of floors may provide information about the floor layer phasing and intervening deposits sequence.

Firstly, the remnants of Floor N25F11W are clearly associated with the bedding joint mortar below the footing course of Wall 25W, attributing the western perimeter wall of N25 to the first building phase, N25-b. This early phase was contemporaneous with the foundation of the enclosure wall (Phase N3-b) and the levelling of the uneven ground surface in the surrounding area. Following this levelling stage is the construction of N25's northeastern corner walls – the associated floors designated N25F12 lie on top of the gravel fill, placing them in the second building phase of Level 3, *i.e.* N25-a.<sup>182</sup> Finally, the fireplace and its half-ring of stone pieces, as well as the short segments of Walls 04 and 06, post-date the building phases within N25 assigned to Level 3.

## D BUILDING UNIT N12

### D.1 Introduction

The outline of building unit N12 (Pl. 17) consists of four perimeter walls: 42S, 42E, 42N and 52W. In addition to these, two north–south oriented internal walls, 46W and 53E, divide the building unit into three areas. The layout of building unit N12 is thus related to the tripartite type<sup>183</sup> of Egyptian house plan with an entrance vestibule<sup>184</sup> (*i.e.* the front section N12/1 between Walls 52W and 46W, Fig. 33), a central room or court (N12/2, between Walls 46W and 53E) and a rear space (N12/3, between Walls 53E and 42E). The rear space is in turn also subdivided into a smaller space (N12A) in the southeastern corner of the structure, divided by the east–west running Wall 57. All of N12's perimeter and internal walls are half-a-brick thick and were built using layers of mud brick stretchers of a traditional running bond pattern. While both the eastern corners of building unit N12 are joined, these connections are formed by two distinct joining patterns; on the western side both corners are missing (Fig. 31). The

<sup>180</sup> In the southern part of N25, the top the *c.* 10cm thick gravel deposit layer (N25De1e) ranges from 160.77–160.64m.

<sup>181</sup> It may be suggested that the dismantling of western perimeter wall 25W down to its foundation course is to be ascribed to a later phase, after Floor N25F12W was laid, and after the time of construction of the adjacent Structure N10.

<sup>182</sup> The construction of the adjacent building enclosure N10 may also belong to this subsequent phase.

<sup>183</sup> BIETAK 1996, 24, fig. 2. For a detailed assessment of the tripartite layout, see VON PILGRIM 1996a, 190–196.

<sup>184</sup> BUDKA and DOYEN 2013, 176.

(N25F12WP, see IIC.6.2.1) and though the coatings were given different names due to their distinctive locations, they all belong to the same horizon.

The deposit below the Floor N25F12EPa is visible through the section. This deposit (N25De1d) mainly consists of pebbles and is *c.* 15cm thick. Under this deposit, there is another stratum of gravel, the top of which is covered by a superficial chalky crust. Such a crust below Deposit (N25De1d) may indicate the presence of the natural gravelled ground, levelled here at 160.51m.

### C.6.2.3 The southern part

As previously mentioned (IIC.3), below the footing courses of Walls 04E and 04N, there is clear evidence of a deposit layer, (N25DeB). This 22–28cm thick deposit upon which the walls were built, may correspond to Deposit (N25DeA) identified in the eastern part of building unit N25. In the south-eastern quadrant of N25, there is no evidence of a coated surface underlying Deposit (N25DeB). The floors identified in the eastern part of the building unit (IIC.6.2.2), N25F12EPa and N25F12EPb, were truncated in the area of Walls 04E and 04N, which belong to later phases.

Nevertheless, in N25's southwestern quadrant, a patch of coated floor levelled at 160.67m is visible. This small piece of coated material N25F12SP most likely corresponds to the Floor N25F12WP laid across N25's northwestern part. Now truncated, Floor N25F12SP must have at some stage been connected to both the base of Wall 06E that was built upon the deposit, as well as to the top of the footing course of Wall 25W. Similar to Floors N25F12WP, N25F12EPa and N25F12EPb, the surface N25F12SP overlies a layer of gravel backfill (N25De1e)<sup>180</sup> This deposit layer buried the inner/eastern side of Wall 25W's footing course, much like layer (N25De1a) buried the outer/western side of the same wall's footing course (IIC.6.1.4).

### C.6.3 Building phases of N25 (Figs. 27, 28 and 30)

Given that in most places one (or less) brick courses remain of building unit N25's walls,<sup>181</sup> it is only pos-

sible to provide a tentative account of their building phases. Nevertheless, despite the walls' poor preservation, several intact patches of floors may provide information about the floor layer phasing and intervening deposits sequence.

Firstly, the remnants of Floor N25F11W are clearly associated with the bedding joint mortar below the footing course of Wall 25W, attributing the western perimeter wall of N25 to the first building phase, N25-b. This early phase was contemporaneous with the foundation of the enclosure wall (Phase N3-b) and the levelling of the uneven ground surface in the surrounding area. Following this levelling stage is the construction of N25's northeastern corner walls – the associated floors designated N25F12 lie on top of the gravel fill, placing them in the second building phase of Level 3, *i.e.* N25-a.<sup>182</sup> Finally, the fireplace and its half-ring of stone pieces, as well as the short segments of Walls 04 and 06, post-date the building phases within N25 assigned to Level 3.

## D BUILDING UNIT N12

### D.1 Introduction

The outline of building unit N12 (Pl. 17) consists of four perimeter walls: 42S, 42E, 42N and 52W. In addition to these, two north–south oriented internal walls, 46W and 53E, divide the building unit into three areas. The layout of building unit N12 is thus related to the tripartite type<sup>183</sup> of Egyptian house plan with an entrance vestibule<sup>184</sup> (*i.e.* the front section N12/1 between Walls 52W and 46W, Fig. 33), a central room or court (N12/2, between Walls 46W and 53E) and a rear space (N12/3, between Walls 53E and 42E). The rear space is in turn also subdivided into a smaller space (N12A) in the southeastern corner of the structure, divided by the east–west running Wall 57. All of N12's perimeter and internal walls are half-a-brick thick and were built using layers of mud brick stretchers of a traditional running bond pattern. While both the eastern corners of building unit N12 are joined, these connections are formed by two distinct joining patterns; on the western side both corners are missing (Fig. 31). The

<sup>180</sup> In the southern part of N25, the top the *c.* 10cm thick gravel deposit layer (N25De1e) ranges from 160.77–160.64m.

<sup>181</sup> It may be suggested that the dismantling of western perimeter wall 25W down to its foundation course is to be ascribed to a later phase, after Floor N25F12W was laid, and after the time of construction of the adjacent Structure N10.

<sup>182</sup> The construction of the adjacent building enclosure N10 may also belong to this subsequent phase.

<sup>183</sup> BIETAK 1996, 24, fig. 2. For a detailed assessment of the tripartite layout, see VON PILGRIM 1996a, 190–196.

<sup>184</sup> BUDKA and DOYEN 2013, 176.

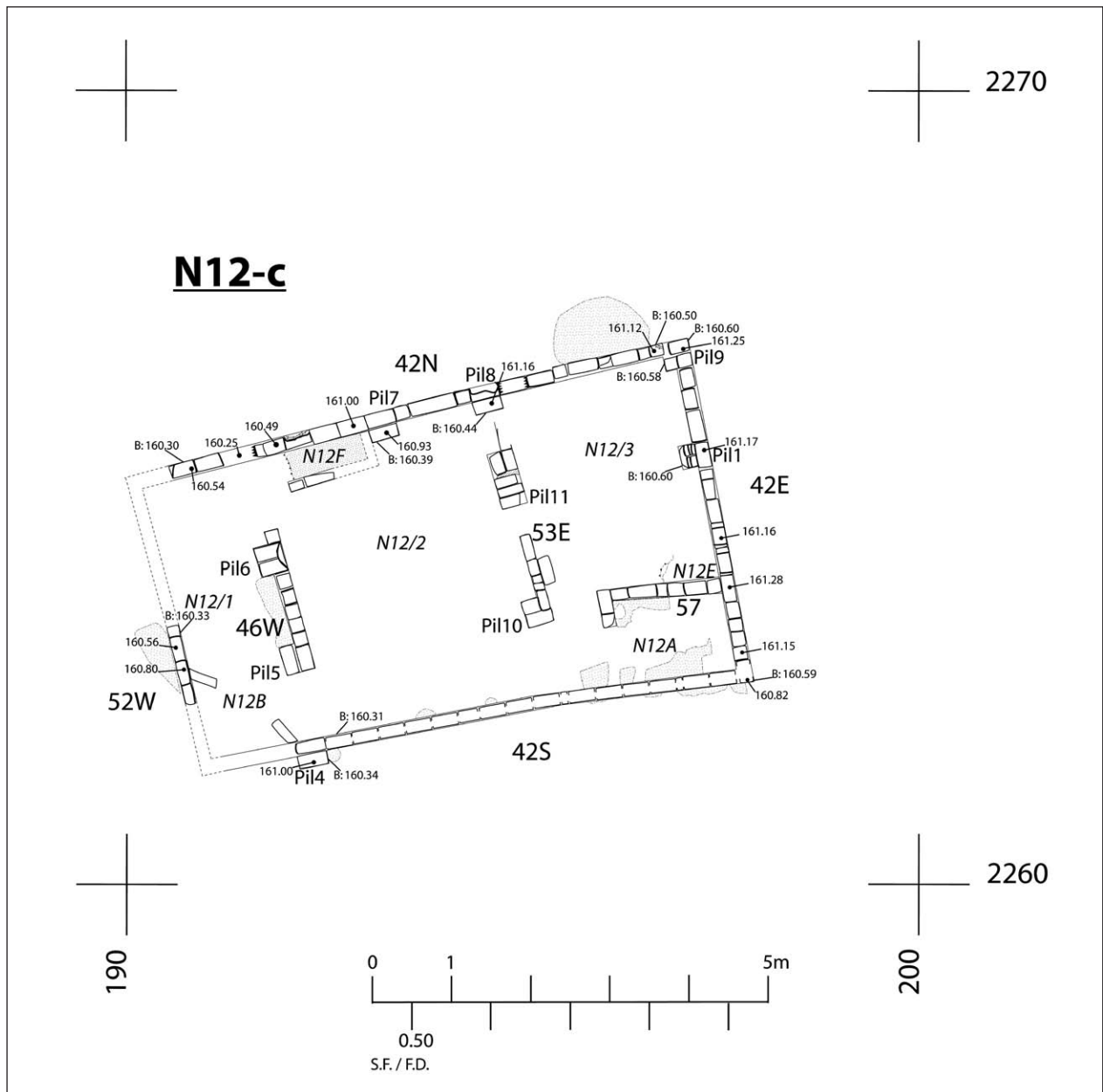


Fig. 31 Plan of Phase N12-c: levels of the perimeter walls

southern perimeter wall provides clear evidence for two distinct building phases: N12-c and N12-a.

Several pilasters have been identified with the perimeter and dividing walls of N12. Two pilasters stand along the inner face of Wall 42N: N12Pil7 and N12Pil8. Further east, N12Pil9 reinforces the northeastern corner, while N12Pil1 was erected along the inner face of the eastern Wall 42E and N12Pil2 against the northern side of the internal wall 57. Two further pilasters reinforce Wall 42S:

N12Pil3, set inside the structure, and N12Pil4, outside. Partition Wall 46W has a pilaster bonded to each end: N12Pil5 to the south and N12Pil6 to the north. The second partition wall, 53E, has two more pilasters: N12Pil10 to the south and N12Pil11 to the north.

Building unit N12 holds six installations, four of which are well preserved<sup>185</sup> and two others that are more difficult to identify. With the clear installations is N12C, a quern emplacement for a grind-

<sup>185</sup> BUDKA and DOYEN 2013, 177.

stone in rear section N12/3, abutting the southern face of 42N and the eastern edge of N12Pil8. Central section N12/2 is supplied with the mud-lined circular storage pit N12D, which was cut into the middle of the area. N12 also features two rectangular storage bins: N12E and N12F. N12E is set north of Wall 57 in rear section N12/3, and N12F lies against the northern wall of central room N12/2 and west of N12Pil7. Less clear are Installations N12B (in the entrance room) and N12A, though ashy deposits and traces of burning in the rear section's southeastern compartment suggest that Installation N12A may have served as an oven room.<sup>186</sup>

Building unit N12 covers a total area of 30.69m. As noted above, the ground plan of N12 exhibits a layout with three successive spaces: a front, central and rear space, the latter divided by an inner partition. This layout can be assigned to Type II of Manfred Bietak's Group B.<sup>187</sup> The building unit is accessed through the west side and is surrounded by 1.00m wide lanes that separate N12 from the nearby building units N27 to the west and N26 to the south (see Fig. 3). To the north, N12 is bordered by an open space, *c.* 5.00m wide, extending to the southern side of the building unit N24. Despite the gap, these two structures are roughly parallel, with the eastern perimeter wall of each in alignment.

## D.2 Description of N12's perimeter walls

(Figs. 31 and 37)

### D.2.1 Wall 42S

The intact basal layer of Wall 42S is 6.66m long and comprises approximately 17 mud brick stretchers. The masonry courses occasionally feature short bricks (18/19 × 16 × 10cm) inserted between the more commonly used stretchers and even there the brick format varies, ranging from 30/32 × 16 × 10cm to 36/37 × 17 × 10cm in size.

At the eastern end of Wall 42S, the junction with Wall 42E is quite discernible. However, due to the

absence of preserved brickwork at the opposite end of Wall 42S, it is impossible to know the nature of the potential junction between the western end of 42S<sup>188</sup> and the perimeter wall 52W. The full extension of Wall 42S's southern/outer side is estimated to be 6.98m in length.<sup>189</sup>

Made of mostly stretcher bricks laid on their broad side, Wall 42S is half-a-brick thick and is reinforced with two pilasters (IID.2.1.2 and IID.2.1.3). Its preserved height ranges from two to seven bricks, culminating at 161.23m at the wall's eastern end. The base level of Wall 42S varies from 160.59m at its east end to 160.31m at its west end, indicating the gentle slope of the ground.

Outside the building, it can be seen that the two lowest courses of the eastern segment of Wall 42S project outward (Fig. 32). Built out of alignment with the lower ones, the three upper courses create a 2–9cm recess. The fact that the masonry is not exactly vertical at this point reveals two distinct stages of construction. Moreover, a distinct layer<sup>190</sup> of deposit with a moderate proportion of charcoal flecks separates the two lower outward-projecting courses from the three upper brick layers.

To the east, the footing course of Wall 42S was built upon Deposit (N12De1a),<sup>191</sup> which covered a mud surface with red colouration (IID.6.1.1). It is worth noting that the parallel internal wall 57 (IID.3.3) also lies on the same kind of deposit over the trampled surface, which continues across the southeastern room of N12 (IID.6.2.3).

Similar evidence demonstrating a rebuilding phase of Wall 42S subsequent to its foundation is apparent westward, next to the eastern side of Pilaster N12Pil4. From both sides of the wall, one can observe an ashy deposit layer mixed with charcoal flecks between the lower<sup>192</sup> and upper<sup>193</sup> courses of the masonry. Unlike the eastern end of Wall 42S, the footing course of both the western section of the wall and buttress N12Pil4 (IID.2.1.3) were set directly upon the gravel soil.<sup>194</sup> The two lowest courses of the wall belong to the first building stage, N12-c. A subsequent collapse

<sup>186</sup> BUDKA and DOYEN 2013, 177.

<sup>187</sup> BIETAK 1996, 24, fig. 2.

<sup>188</sup> West of N12Pil4, the 0.9m long western end of Wall 42S is not bonded to the rest of the wall. This short wall segment may result from a later addition (IID.2.1.3, IID.4, IID.5.4.1 and Fig. 37).

<sup>189</sup> Estimated length of the northern/inner side of Wall 42S is 6.64m.

<sup>190</sup> This layer is 5–9cm thick, levelled between 160.91m and 160.82m.

<sup>191</sup> Below the footing course, this deposit, equivalent to the deposit named (N12De1e), is 2–4cm thick.

<sup>192</sup> The top of the lower course is levelled at 160.53m and its base at 160.31m.

<sup>193</sup> The top of the upper course is levelled at 161.06m and its base at 160.62m.

<sup>194</sup> At that point, the base of Wall 42S is levelled at 160.30m.

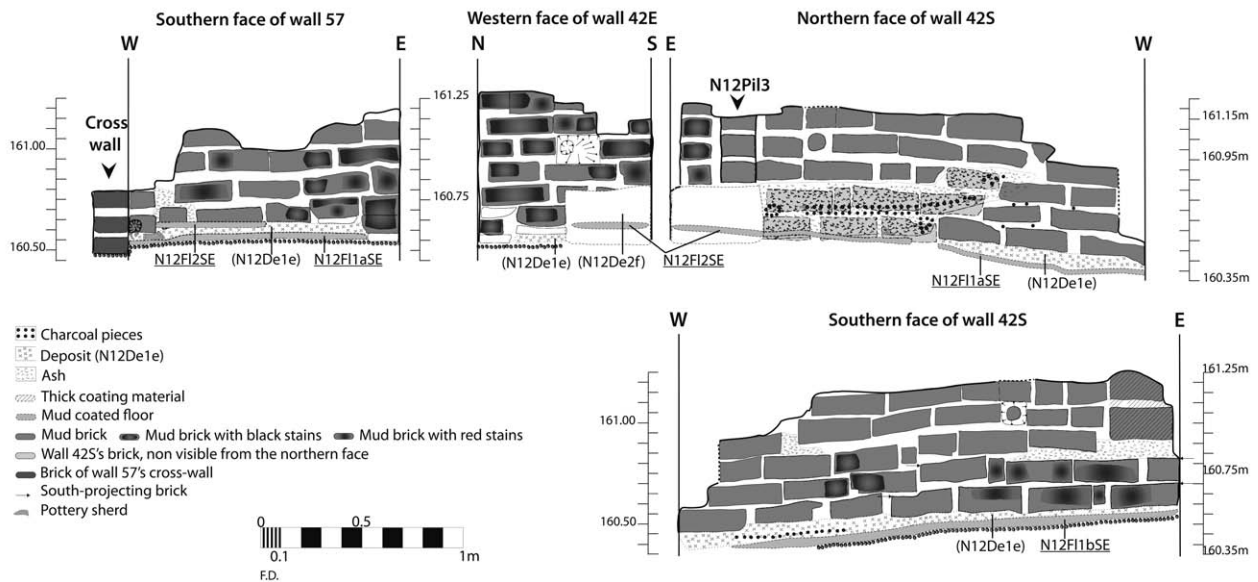


Fig. 32 Section drawing of Installation N12A

is indicated by the *c.* 1.55m long piece of wall fallen to the south and exposed in the southern lane (Pl. 18).<sup>195</sup> After some span of occupation of N12, new masonry must have been built using bricks of a slightly darker matrix, which were inserted into the wall's western section. The undamaged brickwork of this section is in turn partially bonded to the south-projecting pilaster.

#### D.2.1.1 Facing plasters of Wall 42S

Only a small part of Wall 42S's face bears a surface addition. At the southeastern corner, the three upper brick courses of Wall 42S, abutting the courses of 42E, bear two slab-like pieces of coating material on their outer face (Pl. 18), which conceal the upper masonry of the wall. Through this surface addition, the ancient builders were aiming to adjust the vertical alignment of the wall's outer facing.

Red burn marks left by fire activity in the area of N12's southeastern corner coloured the outer face of Wall 42S. Spread over a surface 1m long and 25cm high, these red marks are mainly found at the eastern end of the wall. Occasionally, similar red marks are visible on the outer face of some bricks located further west, *c.* 1.30m east of outer Pilaster N12Pil4. The northern/inner face of Wall

42S also features some dark stains in places and no other sign of surface addition.

#### D.2.1.2 Pilaster of Wall 42S: N12Pil3 (Figs. 32 and 37)

N12Pil3, 0.20m away from the inner corner of Walls 42S and 42E, is a pilaster made of layered mud brick headers, half-a-brick thick, protruding perpendicularly from the northern face of Wall 42S. With a height of 0.33m, this pilaster is partly bonded to the three upper courses of N12's southern wall. N12Pil3's footing brick runs over an ashy deposit in the rear part of Installation N12A (IID.5.1.1).<sup>196</sup> Pilaster 3 does not support the wall's two basal outward-projecting stretcher courses and is exclusively bonded to Wall 42S's upper courses.

As can be seen from the outer face of the wall, two distinct small header ends are in use in the masonry of the two last courses. Below these two small ends, the third course from the top contains a stretcher of the traditional bond pattern. From the pattern observed on the outer face of the wall, one may assume that the presently preserved top course of N12Pil3, levelled at 161.17m, had once been a brick header whose northern half is today lost. In the second course from the top,<sup>197</sup> there is a com-

<sup>195</sup> The top of the collapsed piece of wall is levelled at 160.63m and its base at 160.46m.

<sup>196</sup> The base of N12Pil3 (the top of the ashy layer) is levelled at 160.83m.

<sup>197</sup> The top of the second course is levelled between 161.07m and 161.04m.

plete header bonded to the wall, while in the third course from the top the footing brick<sup>198</sup> of Pilaster 3 is a half brick set against – not bonded to – the northern face of the wall.

#### D.2.1.3 Pilaster of Wall 42S: N12Pil4 (Fig. 31)

In alignment with dividing wall 46W, N12Pil4 stands along the outer face of Wall 42S, 1.20m from the possible southwestern corner of N12 and 5.37m away from the outer corner between Walls 42S and 42E. This pilaster is preserved up to six intact mud brick courses and measures<sup>199</sup>  $0.39 \times 0.32 \times 0.66$ m in size.

The surface of N12Pil4's top brick shows distinct remains of bedding joint mortar, indicating the bonding pattern of the lost upper bricks – the lost upper layer was made of one western header, perpendicular through Wall 42S's masonry, and one eastern half brick, set against the southern face of the stretcher from the wall, not bonded to it. This lost upper layer was thus bonded to the wall by way of one header brick.

The six courses of N12Pil4 are constructed as follows:

- The presently preserved top course is made of one stretcher set against Wall 42S.
- The second course from the top is made of one western header running across the masonry of the wall. The small opposite end of this header brick is visible from the northern side of Wall 42S. The eastern part of this course is a half brick set against the wall, not bonded to it.
- The third, fourth and fifth courses from the top each consist of a stretcher set against staggered bricks of Wall 42S.
- The basal course of N12Pil4, sixth from the top, is made of one possible<sup>200</sup> western header lying perpendicular across the wall's masonry, and one eastern half brick set against the stretcher of the wall, not bonded to it.

As can be seen from the running perpend joint west of Pilaster N12Pil4, the western segment of Wall 42S must have been added later. One can ob-

serve from the small western side of N12Pil4 that the corner between the extension of Wall 42S and the pilaster is plastered. There are remains of joint plaster still in place between every two courses. Only the three inferior courses of N12Pil4 show render covering the large, southern face of the pilaster. Between the southern face of Wall 42S and the eastern side of Pilaster 4, there is no evidence of corner plaster.

#### D.2.2 Wall 42E

At a right angle with Wall 42S, the north–south oriented Wall 42E is 4.28m long.<sup>201</sup> Half-a-brick thick, the eastern perimeter wall (Pl. 17 and Fig. 31) of N12 consists of approximately twelve running stretcher bricks whose size varies from  $36 \times 16 \times 10$ cm to  $38 \times 18 \times 10$ cm. Shorter mud bricks ( $20/25 \times 16 \times 10$ cm) were irregularly used in the masonry of the wall. In contrast to the southern corner, where the bricks do not interlock (IID.2.1), the northern end of eastern Wall 42E is unquestionably bonded to Wall 42N (IID.2.2.3).

The eastern perimeter wall of N12 lies on a gravelled soil foundation. Culminating at 161.30m, Wall 42E is preserved up to a maximum height of seven courses of staggered stretchers lying on their broad side. The footing level of this wall appears to be consistent, with an altitude of 160.59m at its southern end and 160.60m at its northern end.

##### D.2.2.1 Facing plasters of Wall 42E

Between Pilasters N12Pil1 and N12Pil9, a fairly undamaged wall coating covers the masonry of 42E on both sides of the wall's northern segment (Pl. 17). At other places on the wall there are only patchy and scanty remains of facing plaster.

In contrast to the main part of the wall, Wall 42E's shorter section (between the dividing wall 57 and the southern perimeter wall 42S) does not show the same kind of surface treatment. Instead of facing plaster, the masonry's inner face bears distinct red and black burn marks indicative of fire activity in the southeastern room of building unit N12 (IID.5.1.1). Moreover, the two uppermost brick courses show traces of white wash, which give a pale coloured effect to the wall surface.

<sup>198</sup> The top of N12Pil3's bottom course is levelled at 160.94m.

<sup>199</sup> The top of the intact courses is levelled at 161.00m and base at 160.34m (the top of the brick's bedding joint mortar is at 160.37m).

<sup>200</sup> The small northern end of this header is not visible from the opposite face of Wall 42S.

<sup>201</sup> The inner length of Wall 42E (corner to corner) is 3.86m.



#### D.2.2.2 Pilaster of Wall 42E: N12Pil1 (Fig. 31)

The badly degraded N12Pil1 stands alongside the inner face of Wall 42E, 1.14m from the northeastern inner corner, 0.90m from the northern edge of Installation N12E and 2.45m from the inner south-eastern corner of building unit N12. Pilaster 1 rises between two running perpend joints interrupting Wall 42E's brickwork, which otherwise consists of staggered stretcher bricks, half-a-brick thick. In other words, the pilaster's header bricks are not distinctly bonded to Wall 42E, since it was the pilaster's masonry itself that was inserted in one piece into the brickwork of the wall.

At its present state of preservation, N12Pil1 measures 0.53m in height<sup>202</sup> and its masonry consists of five brick courses, described as follows:

- The upper course is composed of two stretcher bricks running north–south. The eastern stretcher (32 × 17cm) is aligned with Wall 42E's masonry and is still in place, while the western brick is missing.
- As can be seen from the eastern side of the pilaster, both the second and third courses from the top are made of header bricks running perpendicular to the wall and projecting westward. These two courses secure the bonding of N12Pil1. None of these headers are preserved in full extension; headers from the second course are broken (21 × 14cm) while the headers in the western half of the third course are eroded (26 × 14cm).
- Two running stretchers compose the fourth course from the top. The brick to the west is eroded and measures 30 × 10cm. Both lie upon a bedding mortar 5cm thick.<sup>203</sup>
- It could be assumed that the footing course (fifth from the top) is also composed of two running stretchers. The eastern footing brick is hidden by the floor running over the outside lane to the east of N12 (N12F12aNE, see IID.6.1.2), while the western brick is in part eclipsed by a piece of floor joining to its southwestern corner (N12F12dR3, see IID.6.2.3).<sup>204</sup>

#### D.2.2.3 Pilaster of Wall 42E: N12Pil9 (Fig. 31)

Pilaster N12Pil9 stands at the northeastern corner of building unit N12 and thus reinforces the junction between the east and north perimeter walls, 42E and 42N. The masonry of this pilaster is not bonded to Wall 42E, but is separated by a running perpend joint, as seen from the eastern/outer face of the corner pilaster. From this perspective, it can also be observed that the small ends of N12Pil9's bricks are in two separate columns, clearly not interlocked. In contrast, from the northern side of the pilaster, the bonding to the masonry of Wall 42N is distinctly visible.

At its maximum height, the corner pilaster culminates at 161.25m, rising 0.50m above the outside floor. Its upper course is severely eroded and was probably made of two parallel stretchers running east–west, *i.e.* aligned with northern Wall 42N and at a right angle to eastern Wall 42E. Each course of Pilaster 9 is composed of two mud bricks following the east–west orientation of the northern perimeter wall. This orientation results from bonding to Wall 42N and confirms the disjunction between the masonry of N12Pil9 and Wall 42E.

N12Pil9 consists of six brick courses, five courses of which are visible above the floor of the adjacent eastern lane outside N12. From Pilaster 9's northern/outer side, it can be seen that the sixth (footing) course runs over an occupational deposit (IID.6.1.3) on which Pilaster 9 and Wall 42N were built. N12Pil9's footing course is also partly visible inside the building unit. Taking into account the footing brick dimensions, the corner pilaster thus measures 0.67m in height.<sup>205</sup> Each course is arranged as follows:

- The upper course is made of two possible stretchers running parallel east–west.
- The second course is also composed of two parallel stretchers.
- The third course from the top has a different pattern – its northernmost brick is a stretcher, while the southern half of the course consists of two half bricks running parallel to the stretcher.

<sup>202</sup> The back of the pilaster's lacking upper course, represented by the top of Wall 42E, is levelled at 161.13m. The base of N12Pil1 is levelled at 160.60m.

<sup>203</sup> The top of the bedding joint mortar is levelled at 160.64m.

<sup>204</sup> This piece of floor is levelled at 160.68m.

<sup>205</sup> The inferior limit of N12Pil9 is levelled at 160.58m.

- The fourth course from the top also presents an alternative pattern. The course's northern half is made of both a half brick and an adjoining stretcher. The southern half consists of two half bricks running parallel to the northern half.
- The fifth course from the top has the same pattern as the first and second courses, *i.e.* two parallel stretchers.
- The footing or sixth course from the top may follow a similar pattern to the fourth course's grouping. The northern half is made of a half brick and an adjoining stretcher. Hidden by the coated floor surface, it is impossible to determine the southern half's pattern.

There are no remains of facing plaster on the eastern face of N12Pil9, while on its northern face patches of coating partially cover the second and third courses from the top. From inside the north-east corner of N12, against the inner face of Wall 42N, one notes the presence of a joint plaster running down to the base of the footing course. The void between the pilaster's bricks of the fifth course was nevertheless left uncoated. Between Wall 42E's west face and the south side of N12Pil9, only a small plaster patch joins the pilaster's third course to the adjacent wall face.

### D.2.3 Wall 42N (Pl. 19)

To the north of N12, the building unit is outlined by east-west oriented Wall 42N. As was previously noted, the northern wall is joined at a right angle to the perimeter wall 42E through the corner-pilaster, N12Pil9. Wall 42N is half-a-brick thick, with most of the running stretchers bricks  $32/35 \times 17 \times 9$ cm in size and occasional smaller format bricks  $34 \times 14 \times 9$ cm also used. Today, there is a gap in the western end of 42N, due to the loss of one stretcher. Assuming that the footing course of 42N was once uninterrupted, one can measure remaining length of 6.57m, or approximately 19 stretchers. With no information concerning the possible joint between the west perimeter wall 52W and the

west end of Wall 42N, one can only estimate the latter's original length, approximating the outer face at 7.12m long.<sup>206</sup>

Wall 42N has a preserved height of three to seven brick courses, culminating at 161.24m. The base-line of its foundation course varies from 160.50m (eastern end) to 160.30m (western end). To the east, the footing course of Wall 42N runs upon an occupational deposit<sup>207</sup> that overlies a trampled surface (N12F11aN, IID.6.1.3, Pl. 19 and Fig. 34) on top of gravelled soil. At the opposite end of the wall, to the west, the foundation course has also been built over a layer of deposit, (N12De1d).<sup>208</sup>

#### D.2.3.1 Facing plasters of Wall 42N

A large piece of facing plaster – a thick greyish sandy-silt wash with occasional pebbles<sup>209</sup> – covers the outer face of Wall 42N for 1.50m, on the eastern end of the wall delineating the rear part of N12 (Pl. 19). In contrast to the presence of this consistent render on the outside of the wall, the inner side of Wall 42N's eastern section shows insubstantial evidence of facing plaster. The lower end of the outer facing plaster shows a lipping feature levelled at 160.72m. This feature may be an indication that a corresponding flooring surface was once joined to the base of the wall surface, outside N12's north perimeter wall. Further evidence of this outside coated floor surface, levelled at 160.71m, is present alongside N12's east perimeter wall (IID.6.1.2).

Further west, corresponding to N12's middle section, a smooth greyish sandy-silt wash with occasional medium-size pebbles masks the masonry's bonding pattern on both sides of Wall 42N. An additional surface treatment worth noting features red and black stains on the inner face of this part of the wall, between N12Pil7 and N12Pil8.

#### D.2.3.2 Pilaster of Wall 42N: N12Pil7 (Fig. 31)

Against the inner face of Wall 42N and just east of Installation N12F (IID.5.3.2), N12Pil7 is plastered on most of its surface to a height of up to five courses. Similar to Wall 42N itself, the pilaster

<sup>206</sup> Estimated length of the southern or inner side of Wall 42N is 6.70m.

<sup>207</sup> This deposit is 6cm thick, between 160.50m and 160.44m. The occupation deposit underneath the foundation courses at the east end of Wall 42N is also visible from its southern/inner face.

<sup>208</sup> The top of the deposit is levelled at 160.35m.

<sup>209</sup> This piece of facing plaster is made of a similar matrix to the render covering the eastern face of Wall 08W's bricked-up passageway, in building unit N24.

is founded on an occupation deposit (IID.6.2.2). Erected 3.45m west of the inner northeastern corner of the building unit, N12Pil7 is 0.54m tall<sup>210</sup> and built of mud bricks  $34 \times 16 \times 9$ cm in size. The pilaster's brickwork is bonded to Wall 42N one course below the top with two headers. The ends of these headers are visible from the north face of 42N, anomalies in the wall mostly composed of mud brick running stretchers.

The arrangement of the remaining courses of pilaster is quite simple:

- The top course – together with the third, fourth and fifth courses from the top – has one stretcher running along the corresponding staggered stretchers of the wall.
- The second course from the top consists of two headers running perpendicular to the east–west orientation of the wall. These headers project southwards into building unit N12.

As far as surface treatment is concerned, the broad southern face of N12Pil7 is fully coated with a smooth render. On the small eastern side of the pilaster, between the second and fourth courses from the top, patches of plaster cover the corner joining the pilaster and the inner face of Wall 42N. On the opposite small western side of N12Pil7, similar patches of render conceal the joint between pilaster's masonry and the northern perimeter wall.

#### D.2.3.3 Pilaster of Wall 42N: N12Pil8 (Fig. 31 and Pl. 20)

Pilaster N12Pil8 is situated 2.15m from the inner corner joining Walls 42N and 42E, and 0.96m east of N12Pil7. Just west of Installation N12C (IID.5.3.1), the western edge of the quern emplacement overlaps the eastern edge of the pilaster's lower courses. With a preserved height of 0.72m,<sup>211</sup> Pilaster 8 consists of seven intact courses of mud bricks  $34 \times 15/17 \times 9$ cm in size. The bonding of N12Pil8 to Wall 42N is demonstrated by header bricks running perpendicular to the northern perimeter wall of N12. At the second and fifth courses from the top of the pilaster, the small ends of these header bricks are to some extent visible from the northern face of the wall.

There is evidence of surface treatment on much of the pilaster's large southern face. The three visible uppermost courses of the small eastern side of N12Pil8 are also plastered. Opposite this, the western side of Pilaster 8 is similarly coated and a patch of plaster overlays the corner between the pilaster and the southern face of Wall 42N, at the level of the fifth and basal courses.<sup>212</sup>

Pilaster 8 was built according to the following pattern:

- The top most preserved course of the pilaster is a stretcher running parallel to Wall 42N. The corresponding brick course of the wall is severely damaged, thus hampering understanding of the brickwork's arrangement. Nevertheless, it is possibly made of a running stretcher.
- The second course from the top reveals the bonding of Pilaster 8 to Wall 42N, through two header bricks.
- The third, fourth, sixth and seventh courses from the top consist of stretchers running parallel to the stretcher bricks in Wall 42N.
- The fifth course from the top is composed of two header bricks running perpendicular to Wall 42N's masonry. While the short ends of the western header are visible on either side, the ends of the eastern header are concealed; the western edge of Installation N12C hides the southern face of the eastern header and its northern edge is obscured by facing plaster remnants on the exterior of Wall 42N.

On either side of Pilaster 8's two upper courses are notable gaps in the brickwork of Wall 42N (Pl. 19). At these two places, because of running perpendicular joints to both sides of the buttress, the loss of masonry might result from the absence of bonding between brick courses.

Pilaster N12Pil8 was built on a layer of deposit (N12De2e). This deposit was later coated by a flooring surface N12F12R2, levelled at 160.44m, which joined to the base of the pilaster (IID.6.2.2).

#### D.2.4 Wall 52W

As already discussed with regards to the western ends of Walls 42N and 42S, the front part of build-

<sup>210</sup> The top of N12Pil7 is levelled at 160.93m and base at 160.39m.

<sup>211</sup> The top of N12Pil8 is levelled at 161.16m and base at 160.44m.

<sup>212</sup> The sixth layer has no coating over the corner.

ing unit N12 is in very bad condition. Indeed, Wall 52W is not preserved higher than 0.47m (four mud brick courses) and no longer than 1.00m. Wall 52W is half-a-brick thick and made of north–south oriented staggered stretchers,  $32 \times 15 \times 8$ cm in size. Below Wall 52W's masonry, the mortar joint<sup>213</sup> overlies a deposit layer. This deposit (N12De1c) lies over a trampled surface<sup>214</sup> partly covering the gravelled soil (IID.6.1.4 and Fig. 34).

The lack of brickwork, resulting in gaps on both sides of Wall 52W, leaves the question of access pattern unresolved (IID.4). The remaining 1.00m segment of Wall 52W runs between two spaces that lack any masonry remains, with projected lengths to the enclosure's corners of 1.72m to the north and 0.70m to the south. It is thus possible to estimate an inner length of 3.42m for 52W, between the two putative western corners of N12.<sup>215</sup>

#### D.2.4.1 Facing plasters of Wall 52W

No surface treatment can be identified over Wall 52W's faces.

#### D.2.4.2 Pilaster of Wall 52W

There is no evidence of any pilaster associated with the remaining wall segment of 52W. A possible installation (N12B, IID.5.4.1) runs against the eastern face, inside the front section of N12 (Fig. 33).

### D.3 Description of N12's dividing walls

(Fig. 33)

#### D.3.1 Wall 46W

North–south oriented and running parallel to front Wall 52W, Wall 46W is half-a-brick thick and 1.75m long, corresponding to at least five stretcher bricks. At its maximum preserved height, culminating at 161.10m, Wall 46W consists of six courses of mud bricks preserved above the floor N12F11aR1,<sup>216</sup>  $32/35 \times 17 \times 9$ cm in size. At either end of partition Wall 46W, a pilaster made of mud brick headers is bonded to the wall's masonry.

These northern and southern pilasters, N12Pil6 and N12Pil5 respectively, are positioned 0.92m apart and project westwards, as if the two pilasters reinforced both ends of Wall 46W with L-shaped masonry. N12Pil5 forms the southern end of Wall 46W, but at the opposite end of the wall it is possible to observe a different arrangement, where the wall masonry here exceeds the span of N12Pil6 and continues northward 0.16m in length.

Wall 46W divides the spaces defined as the entrance vestibule or front section (N12/1) and the central room or court (N12/2). This dividing wall is located fairly equidistant from the northern and southern perimeter walls of the building unit,<sup>217</sup> creating a pair of passageways 0.88m and 0.82m wide respectively, which give access to the northern Installation N12F and the central space N12/2.

Wall 46W was built on a thin layer of deposit (N12De1d), about 5cm thick, which covers a trampled surface over the gravelled soil (IID.6.2.1).

#### D.3.1.1 Facing plasters of Wall 46W

With the exception of a lump of wall coating on the back of N12Pil5 (IID.3.1.2), there is no plaster addition to either the east or west faces of Wall 46W.

#### D.3.1.2 Pilaster of Wall 46W: N12Pil5 (Fig. 33)

At the southern end of Wall 46W, the 0.27m high N12Pil5 is in a poor state with only the two lower courses remaining. The upper course is made of a stretcher running parallel to the damaged stretcher of the wall. The footing brick of Pilaster 5 is also a stretcher whose large western face is concealed by plaster. N12Pil5 would have most certainly been bonded to Wall 46W's masonry through its upper courses but the evidence of this has obviously been lost.

#### D.3.1.3 Pilaster of Wall 46W: N12Pil6 (Fig. 33)

At the north end of Wall 46W, N12Pil6 has six intact courses of bricks ( $35 \times 17 \times 9$ cm in size),

<sup>213</sup> The top of the bedding joint mortar is levelled at 160.36m and its base at 160.33m.

<sup>214</sup> The trampled surface is levelled at 160.28m.

<sup>215</sup> The outer length of N12's western side is estimated to 3.78m.

<sup>216</sup> West of Wall 46W, the coated surface is levelled between 160.30m to the north and 160.33m to the south; see IID.6.2.1 and Fig. 34.

<sup>217</sup> The distance between the north end of Wall 46W and the south face of perimeter wall 42N is 0.90m. The distance between the south face of N12Pil5 (at the opposite end of Wall 46W) and the north face of perimeter wall 42S is 0.85m.

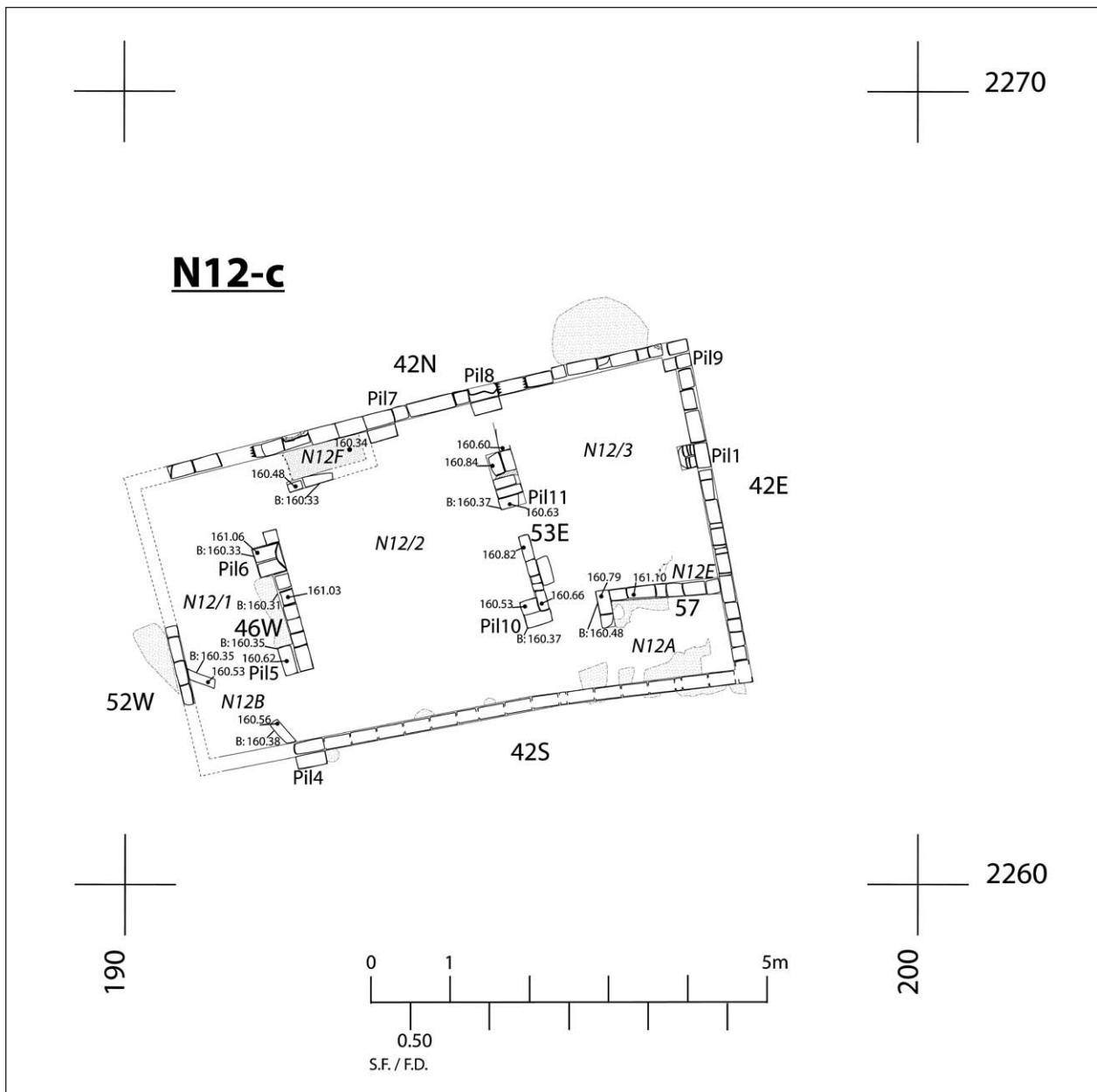


Fig. 33 Plan of Phase N12-c: levels of the internal walls

for a remaining height of 0.77m. The bonding of N12Pil6 to the north–south oriented Wall 46W is evidenced by two courses of header bricks running at the top remaining course and the fourth course below the top.

The courses of Pilaster 6 are arranged as follows:

- The upper course consists of two header bricks oriented east–west, running perpendicular to Wall 46W.
- The second, third, fifth and sixth/basal courses from the top are composed of one stretcher brick each, arranged parallel to the stretcher brickwork in the wall.

- The fourth course from the top comprises two headers, whose small ends are discernible from the northern face of the masonry. The western end of the northern header is damaged.

At the second, third, and sixth courses from the top, visible patches of joint plaster remain and cover the corner between the small north side of N12Pil6 and the west face of Wall 46W. At the opposite/southern side of the pilaster, joint plaster also hides the corner between the buttress and the wall at the second and third courses from the top. There are no plaster remains on the broad western face of N12Pil6.

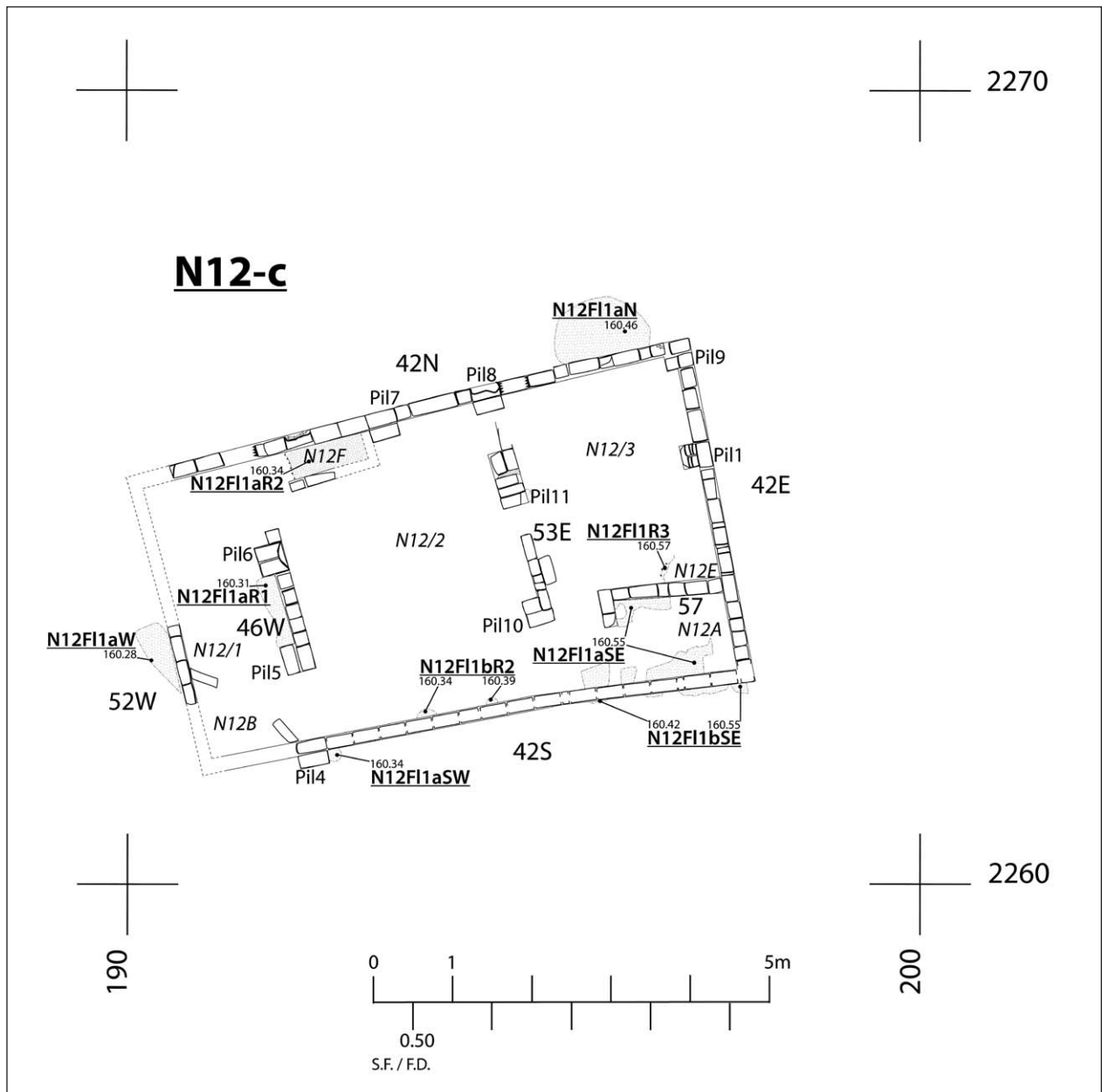


Fig. 34 Plan of Phase N12-c: levels of floors

Standing at each end of dividing wall 46W, the two buttresses N12Pil5 and N12Pil6 and the wall itself all lie upon the same deposit layer (IID.6.2.1).

#### D.3.2 Wall 53E

Wall 53E is a mud brick structure composed of two north–south wall segments that separate the central

space N12/2 from the rear section N12/3. 53E is positioned in a parallel manner roughly halfway between Wall 46W (to the west) and 42E, the eastern perimeter wall.<sup>218</sup>

Whether the *c.* 0.35m long space between the two segments of Wall 53E results from the original design is difficult to determine. The northern segment is aligned with Pilaster N12Pil8 (IID.2.3.3).

<sup>218</sup> Wall 53E is situated 2.68m away from Wall 46W and 2.15–2.18m from Wall 42E.

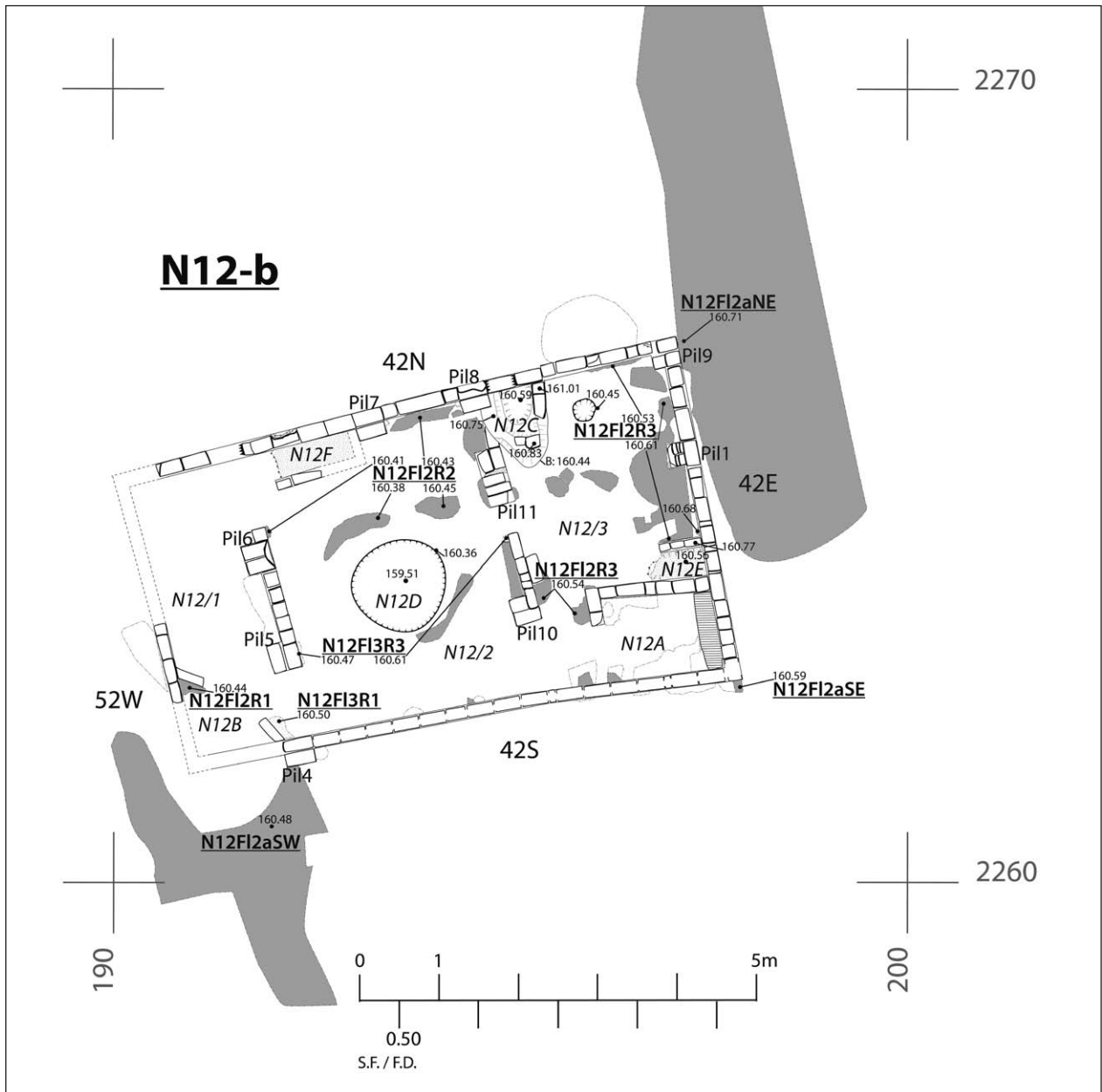


Fig. 35 Plan of Phase N12-b: levels of the installations and floors

Against the brick base of Installation N12C (IID.5.3.1), the north segment rises 0.47m above the gravelled soil. In the uppermost brick course there is evidence that a wood piece had been inserted into the masonry, rather than the brick mortar lump usually used to join the bricks. The mud bricks in the north segment's south end are arranged to shape a pilaster, N12Pil11 (IID.3.2.3), which projects eastwards towards the rear section N12/3. Both the north and south segments are half-a-brick thick and 0.70m/1.10m long respectively. At the southern tip of the south segment, 0.83m from the north face of Wall 42S, Pilaster N12Pil10 (IID.3.2.2) projects

westward in the direction of N12's central section. Severely degraded, dividing wall 53E is only preserved up to a maximum height of two to four courses. Including the gap between segments, 53E runs a total of 2.15m and was built of bricks  $33 \times 15/16 \times 8$ cm in size. Worth noting is that N12Pil5 (IID.3.1.2) and N12Pil10, the two west-projecting pilasters at the southern ends of both dividing wall 46W and 53E, run along the southern axial passage connecting the different sections of N12.

The two wall segments of 53E lie on a deposit layer which in turn overlies the gravelled soil (IID.6.2.2).

### D.3.2.1 Facing plasters of Wall 53E

In contrast to the fragmentary plaster on the western face of Wall 53E, there is evidence of a surface addition on the wall's eastern face. The eastern face of both segments of 53E feature a 2–3cm thick plaster of smooth greyish sandy-silt containing occasional medium-size pebbles.

### D.3.2.2 Pilaster of Wall 53E's southern segment: N12Pil10 (Fig. 33)

Of the three remaining courses, only the footing course of N12Pil10 is intact and consists of one header brick ( $34 \times 17 \times 9\text{cm}$ ), flanked on its southern side by two brick pieces. The L-shaped masonry of N12Pil10 runs east–west, perpendicular to Wall 53E's southern segment. The second course from the bottom has only one header; the western end of this brick is degraded while its eastern end is in much better condition, visible from the eastern face of Wall 53E. It may be concluded that the latter header bonds Pilaster 10 to the wall's masonry. The pilaster's third course from the bottom may have been made of one stretcher brick running north–south, parallel to the stretchers of the wall.

### D.3.2.3 Pilaster of Wall 53E's northern segment: N12Pil11 (Fig. 33)

The masonry of Pilaster N12Pil11 appears rather substantial in size ( $38 \times 32 \times 43\text{cm}$ ) when compared to the stretcher brickwork of Wall 53E's northern segment. The function of this thick buttress is thus quite puzzling. Constructed of three east-projecting brick courses, Pilaster 11 has a maximum height of 0.43m above the gravelled soil.

The three courses of N12Pil11 are organised as follows:

- The upper course consists of two bull headers and one header brick, running west–east. The longest bull header is  $34 \times 10\text{cm}$  in size.
- The second course from the top is made of two stretchers running parallel to each other and aligned with the north–south orientation of the wall's segment. The southern edge of the pilaster is composed of a header brick lying

perpendicular to the wall below the upper course's header brick.

- From what is visible on the pilaster's western side, it is possible to assume that the footing course consists of stretchers belonging to the wall segment masonry. On the east side of the pilaster, the following pattern of the footing course is tentatively suggested: a brick piece below the second course's header and, next to that, a stretcher brick lying parallel to the wall.

Upper headers above footing stretchers confirm the bonding of Pilaster 11 to Wall 53's northern segment. A significant feature is the wood piece ( $16 \times 8 \times 20\text{cm}$ ) separating the two upper courses of the wall segment from Pilaster 11 (see Fig. 35).

### D.3.3 Wall 57

The east–west oriented Wall 57 divides N12's rear section into two unequal areas, partitioning Installation N12A in the southeastern corner from the main rear area N12/3 (IID.5.1.1). Made of small staggered stretcher bricks  $32 \times 15 \times 10\text{cm}$  in size, Wall 57 is 1.56m long<sup>219</sup> and half-a-brick thick. Though it abuts the western face of Wall 42E, the masonry of Wall 57 shows no evidence of bonding to the eastern perimeter wall. Nor is there any bonding between the west end of Wall 57 and the cross-wall running north–south, which may have once served as a jamb of an entranceway to the oven room N12A. The potential jamb runs southward from the western end of Wall 57, is  $30 \times 18\text{cm}$  in size and rises 0.31m above the gravelled soil (Fig. 35). It has three remaining brick courses (from the bottom up): one footing stretcher, one basal stretcher and two squarish brick pieces.

Wall 57 itself is preserved up to a height of five brick courses (Fig. 32).<sup>220</sup> The base of the wall varies from 160.55m to the east and 160.48m at the western end, *i.e.* where one stretcher-long jamb runs southwards, perpendicular to Wall 57. To the east, against the inner side of perimeter wall 42E, a footing brick lies on a mortar joint running on the gravelled soil surface (IID.6.2.3);<sup>221</sup> both this footing brick<sup>222</sup> and its mortar joint slightly extend southwards over the footing brick of adjacent Wall 42E.

<sup>219</sup> Thickness of western perpendicular cross wall included.

<sup>220</sup> The top of the upper brick course, at a right angle to eastern perimeter wall 42E, levelled at 161.18m.

<sup>221</sup> The top of the 4cm thick mortar joint is levelled at 160.59m. At that point, the mortar joint overlays the gravelled soil, levelled at 160.55m (Fig. 32).

<sup>222</sup> The top of the footing brick levelled at 160.67m.



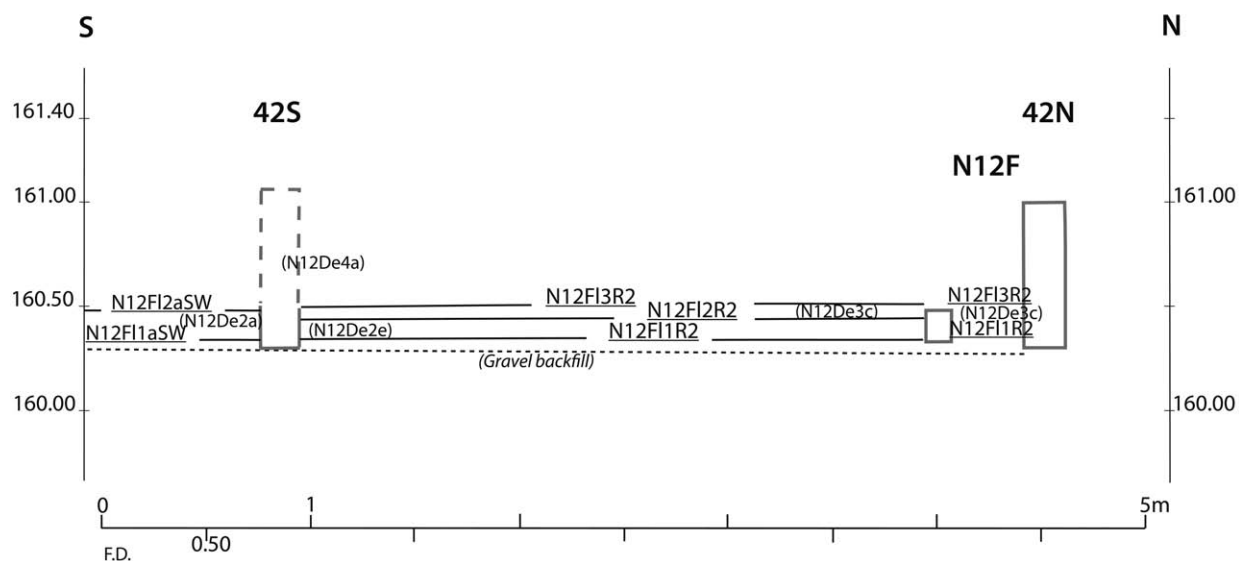


Fig. 36 Outline of the section west of N12

It should be noted that the interior wall 57 was constructed on the same kind of deposit that is found overlying the mud-plaster surface identified in the southeastern room of N12 ((N12De1e); IID.6.2.3).

#### D.3.3.1. Facing plasters of Wall 57

On the southern face of Wall 57, the surface addition is discoloured with red and black burn marks, left by fire activity within room N12A. The lower lipped end of the wall plaster (measured at 160.61m) corresponds to the level of the floor (Fig. 32).

On the opposite face of the same wall, facing plaster evenly covers the masonry across the surface east of Pilaster N12Pil2. This surface treatment consists of a smooth greyish sandy-silt wash with rare medium-size pebbles. West of Pilaster 2, the wall coating is more decayed, with only remains of its significant lipping feature at a point levelled at 160.59m, which coincides with the top of the footing course of Wall 57 and floor level N12F11R3 (IID.6.2.3).

#### D.3.3.2 Pilaster of Wall 57: N12Pil2 (Fig. 37)

N12Pil2 once stood 0.77m from the corner between the north face of dividing wall 57 and Wall 42E.<sup>223</sup> Because the two remaining brick courses lack bonding with the northern face of Wall 57,

the buttress is presently detached from the wall. It is reasonable to assume that the bonding between the pilaster and the wall would have existed in the now lost upper courses. These courses have left a “negative” on the northern face of Wall 57, free of wall coating. Consequently, the plastering of this wall face took place subsequent to the erection of N12Pil2. The pilaster itself is not covered by any surface addition.

Above the two stretcher bricks of the basal courses, remains of squarish brick pieces may have formed the third course of N12Pil2. The base of N12Pil2 overlays a deposit layer,<sup>224</sup> which filled bin N12E (IID.5.2.1).

#### D.4 Layout and dimensions of N12 building unit (Fig. 31)

Building unit N12 is a freestanding trapezoidal structure, surrounded by a wide space free of any constructions to the north and by alleyways along its other three sides. Its two longer sides run parallel to the neighbouring building units, N24 to the north and N26 to the south. Its eastern side runs parallel to the nearby building unit N10 and is slightly longer than the unit’s western side, which runs parallel to the nearby building unit N27. Like the other structures of SAV1 North discussed thus far, the layout of building unit N12 falls into the pattern of SAV1’s settlement grid. The external

<sup>223</sup> N12Pil2 is c. 30cm high.

<sup>224</sup> The top of the ashy deposit is levelled at 160.73m.

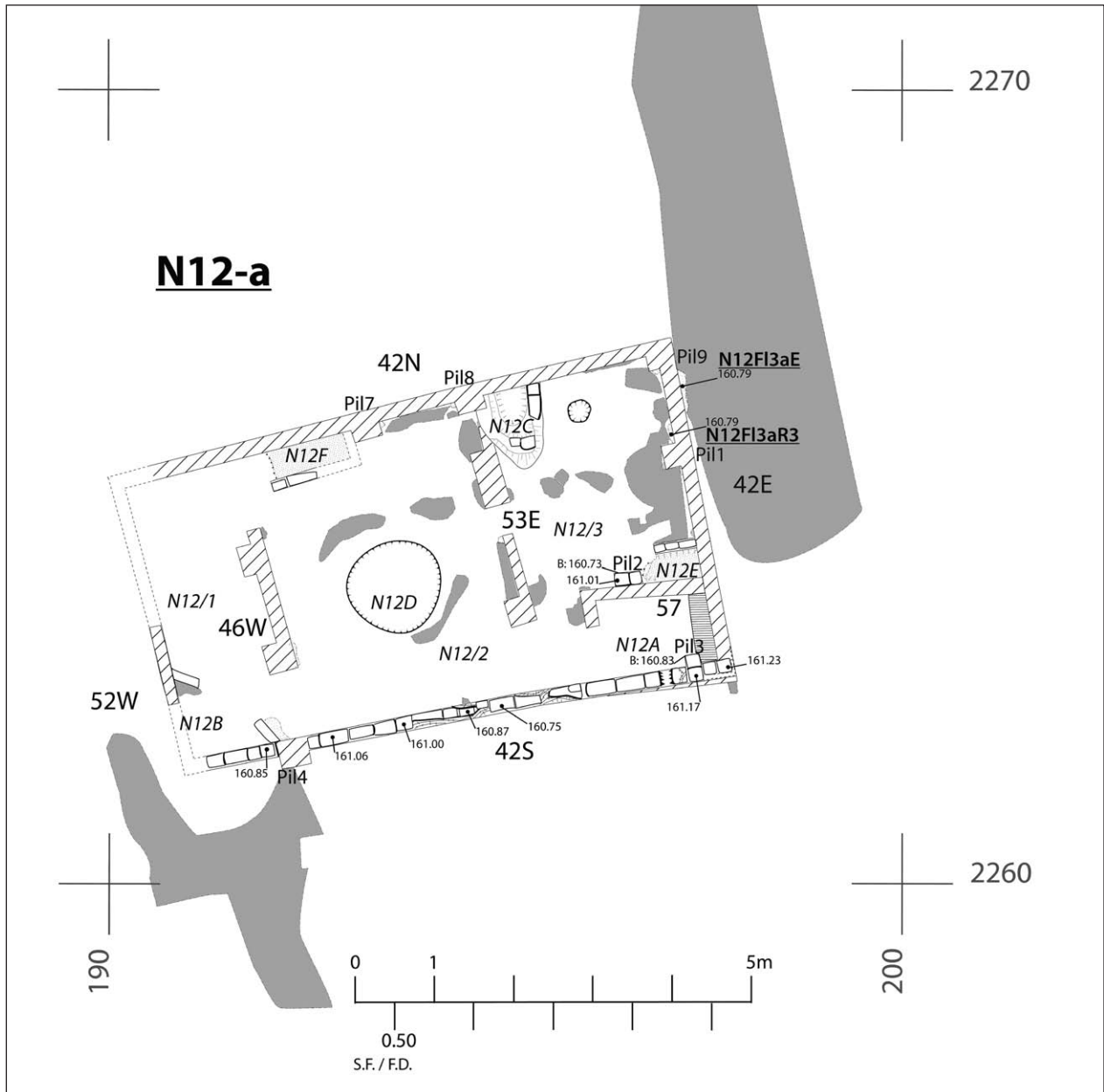


Fig. 37 Plan of Phase N12-a: levels of southern perimeter wall, additional pilasters, and floors

surface area of N12 is 30.69m ( $6.98 \times 4.28 \times 7.12 \times 3.78\text{m}$ ) while the internal surface area is 26.57m ( $6.64 \times 3.86 \times 6.70 \times 3.42\text{m}$ ) (see Fig. 14).

The layout of building unit N12 is tripartite. Accessed through the western side, this building unit is divided into three areas:

- The entrance vestibule or front room N12/1 includes Installation N12B and measures  $3.40\text{--}3.45 \times 1.30\text{m}$  (c. 4.70m) in internal surface area.
- The central room or court N12/2, with storage bin N12F and storage pit N12D, measures  $3.45\text{--}3.63 \times 2.71\text{--}2.85\text{m}$  (c. 9.80m) in internal surface area.

- The rear space N12/3 is further divided into two rooms. The larger northern room encompasses two installations – storage bin N12E and quern pedestal N12C – and measures  $2.60\text{--}2.80 \times 2.10\text{--}2.17\text{m}$  (c. 5.70m) in internal surface area. The smaller southern room N12A is an oven room and measures approximately  $1.35 \times 0.90\text{m}$  (c. 1.21m) in internal surface area.

Because the western perimeter wall is poorly preserved, the location of an entranceway can only be proposed. In the first construction phase, N12-c (Fig. 33), access to front room N12/1 may have been

through the southwestern corner of the building unit, next to the outer Pilaster 4. In this case, the bricks set at an angle against the inner sides of Walls 52W and 42S<sup>225</sup> may be assumed part of a dedicated entrance to the building unit.<sup>226</sup> While no constructional changes were conducted in phase N12-b, in the third building phase (N12-a) the construction of 0.90m in additional brickwork west of Pilaster 4 (see Fig. 37) has restricted this entranceway. Despite this partial blocking of the southwestern access, to determine keeping the entranceway to N12 at the same place or moving it to a different location on the building's west side is conjectural.

Building unit N12 is composed of seven different walls, both perimeter and internal, from which it is possible to document up to ten different brick

formats (see Fig. 38). Within a single wall, some were built with bricks of different sizes and/or of different format categories. The small brick format is predominant in building unit N12, both for the construction of perimeter walls and for internal walls.

### D.5 Description of N12 installations

(Figs. 33 and 35)

#### D.5.1 Along the southern perimeter wall (42S)

##### D.5.1.1 N12A

(Fig. 32)

At the rear of the southeastern room of N12, a deposit of ash and charcoal flecks<sup>227</sup> banked up

Building Unit N12		Length (cm)	Width (cm)	Thickness (cm)	Total l + w + t	Format
<b>Perimeter walls</b>	42S	32/33	16	10	58.5cm	<i>small</i>
	42S	36/37	17	10	63.5cm	<i>medium</i>
	N12Pil3	34	16	10	60cm	<i>medium</i>
	N12Pil4	37	15	10	62cm	<i>medium</i>
	42E	36	16	10	62cm	<i>medium</i>
	42E	38	18	10	66cm	<i>large</i>
	N12Pil1	32	17	9	58cm	<i>small</i>
	N12Pil9	34	15/17	9	59cm	<i>small</i>
	42N	34	14	9	57cm	<i>small</i>
	42N	33	17	9	59cm	<i>small</i>
	N12Pil7	34	16	9	59cm	<i>small</i>
	N12Pil8	35	17	9	61cm	<i>medium</i>
52W	32	15	8	55cm	<i>small</i>	
<b>Internal walls</b>	46W	32	17	9	58cm	<i>small</i>
	N12Pil5	34	16	9	59cm	<i>small</i>
	N12Pil6	35	17	9	61cm	<i>medium</i>
	53E	33	15/16	8	56.5cm	<i>small</i>
	N12Pil10	34	17	9	60cm	<i>medium</i>
	N12Pil11	34	15	10	59cm	<i>small</i>
	57	32	15	10	57cm	<i>small</i>
	N12Pil2	34	16	10	60cm	<i>medium</i>

Fig. 38 Walls and pilasters of N12: brick sizes

<sup>225</sup> These bricks are below described as features of Installation N12B (IID.5.4.1).

<sup>226</sup> See parallel with the oblique wall 4129 at the entrance of house E13.3-N in Amara West: SPENCER 2014b, 471 and fig. 7, pls. 10, 11.

<sup>227</sup> The top of the ashy layer levelled at 160.79m and the base at 160.58m.

<sup>228</sup> For parallels see BUDKA and DOYEN 2013, 177 with note 70.

against the wall indicate a firing process inside Installation N12A.<sup>228</sup> As detailed above, the three inner faces of Walls 57, 42E and 42S around this area bear black and red stains certainly resulting from heat and smoke. Thus, it is suggested that N12A possibly functioned as an emplacement for heating and burning.

The heap of ash with occasional sherd content has two distinct layers: the top is a powdery deposit of ash 12cm deep, while the bottom, running over a trampled surface covering the gravelled soil (IID.6.2.3), is a 9cm deep compact, light grey coloured deposit.

Walls 42E and 42S, which delineate the south-eastern Installation N12A, each feature a hole with a diameter of 7–10cm perforating the brickwork through the fourth course from the bottom. The hole through Wall 42S was subsequently closed with a removable brick plug.<sup>229</sup> Located on corresponding brick courses, these wall features may both represent air holes connected to firing activities within the room.

### D.5.2 Along the eastern perimeter wall (42E)

#### D.5.2.1 N12E (Pl. 21)

Installation N12E is located alongside the northern face of dividing wall 57, in the corner with perimeter wall 42E in the rear room N12/3. The east-west oriented sub-rectangular mud-coated bin<sup>230</sup> (inner dimensions 0.72 × 0.35m, depth 0.21m) runs parallel to Wall 57. The northern boundary of the storage bin<sup>231</sup> N12E is a low retaining wall, perpendicular to and abutting the eastern perimeter wall 42E. This retaining wall, 0.54m long and 0.16m high, consists of a single course of three bull header bricks.<sup>232</sup> Plastered on both faces, the northern brick boundary of N12E rises above mud-coated Floor N12F12aR3 (IID.6.2.3), levelled at 160.61m.<sup>233</sup> The mud plaster evenly coating the

interior of storage bin N12E is about 3cm thick; it partly covers the basal courses of Wall 42E and extends to the base of Wall 57 which is also plastered.

At the eastern side of N12E, two holes (diameter 5cm) pierce the base of Wall 42E at its seventh course from the top. Outside the storage bin, near the north side of N12E's brick boundary, another hole of the same kind perforates a brick in the fifth course from the top of Wall 42E. Whether these holes were made to accommodate some device or as channels through the brickwork is unclear. A sherd found in the northern perforation and a doum nut in the southern are perhaps the remains of the deposit that filled the bottom of the installation.

The truncation of the western entranceway to bin N12E reveals that the western retaining wall stands on a coated floor, spreading to a great extent across the rear section N12/3. Inside the installation, the inner mud plaster liner overlies the trampled surface (IID.6.2.3) over the gravelled ground.

### D.5.3 Along the northern perimeter wall (42N)

#### D.5.3.1 N12C (Pl. 21)

To the east of Pilaster N12Pil8, Installation N12C was probably used during the process of milling grain into flour.<sup>234</sup> Constructed entirely of mud bricks, N12C served as a pedestal for grinding activities using a quern stone. This type of grindstone would originally have been set into the depression of the plastered upper surface,<sup>235</sup> but none were found here *in situ*. N12C emplacement's footprint covers the ground with an irregular, trapezoid outline (outer height 1.04m, inner height 0.83m). The eastern edge culminates at 161.01m and rises 0.57m above the gravelled soil. On the opposite side, the mud plastered western rim of N12C is only 0.40m high. Both the orientation of the peak at the southern point of the installation<sup>236</sup> and the

<sup>229</sup> This hole is levelled between 160.97m and 161.16m; the hole through 42E is levelled between 160.97m and 161.03m.

<sup>230</sup> The top of the northern boundary is levelled at 160.77m, while the coated bottom of the storage bin is levelled at 160.56m.

<sup>231</sup> For parallels see BUDKA and DOYEN 2013, 177 with note 68. See also the bin-like emplacement in Room 4, House N50.42 at Amarna: KEMP and STEVENS 2010a, 341, fig. 4.11, 345.

<sup>232</sup> From east to west, the bricks of the edge are respectively 23, 17 and 14cm long; each brick is 8/9cm wide and 15/16cm high.

<sup>233</sup> Mud-coated floor N12F12aR3 overlays Deposit (N12De1f) (see Fig. 39).

<sup>234</sup> See SAMUEL 2000, 561.

<sup>235</sup> Inner dimensions of the depression are 38 × 47cm, the bottom of the concave trough is levelled at 160.59m.

<sup>236</sup> The southern tip of the triangle is levelled at 160.83m.

lack of any attached bin to collect the milled cereals makes Installation N12C quite atypical.<sup>237</sup> The place where the miller would have crouched to process grain could possibly have been the cramped corner southwest of N12C between Wall 53's north segment and N12Pil11.

Within the rear room N12/3, the raised quern emplacement<sup>238</sup> N12C abuts the southern face of Wall 42N, and more particularly the eastern ridge of Pilaster N12Pil8. From the western side of N12C, one can observe that the top, levelled between 160.75m and 160.68m, corresponds to the fifth course from the top of Pilaster N12Pil8. To the east, a patch of plaster covers the corner between the base of the Installation N12C, levelled at 160.50m, and the bedding joint mortar of Wall 42N.

#### D.5.3.2 N12F (Pls. 21 and 22)

The bin-like emplacement N12F is located west of Pilaster N12Pil7 and runs east–west, parallel to the south face of Wall 42N. On entering the central section of N12, emplacement N12F lies immediately east of the northern access point, north of Wall 46W and its buttress N12Pil6.

Only a segment of the low southern retaining wall remains in place, 0.35m from the inner side of perimeter wall 42N. This segment, 0.15m in height and 0.56m in length, has survived as two bull headers, one that is half a brick (18cm long) and the other complete (37cm long).<sup>239</sup> These two bricks form the western part of the southern edge of bin N12F, running along the access point to the west-facing bin.

Within the emplacement, a large part of the base is covered by a mud-plastered surface that overlays the gravelled soil.<sup>240</sup> The truncation of the southern end of the structure reveals the broken edge of the deposit fill in the east part of N12F, below a dumped sandstone column base (h. 0.21m, diam. 0.40m).<sup>241</sup> From this section, an interesting

sequence can be observed (IID.6.2.2), showing evidence of further flooring overlaying the base liner of bin N12F.

#### D.5.4 In the southwest corner

##### D.5.4.1 N12B (Pl. 21)

At the southwestern corner of N12, within front room N12/1, Installation N12B is delineated by two bull header bricks set on edge (each 0.38 × 0.18m). The western brick is set at an acute angle to the inner/eastern face of Wall 52W. On the opposite side, 0.85m from the western brick, the eastern brick sits at an acute angle to the inner side of Wall 42S. In each case, the baseline altitude corresponds to the footing level of the adjacent wall, while the upper edges of these bricks coincide with the top of the wall's second course from the bottom.<sup>242</sup>

At the western end of Wall 42S, the location of N12B's eastern brick may be of some importance. In fact, this brick lies precisely against the running perpend joint that causes discontinuity in the perimeter wall's bonding pattern (IID.2.1, Wall 42S's western segment). Bonded to Wall 42S, the outward-projecting Pilaster N12Pil4 possibly marked, at some stage, the western end of the perimeter wall. At Phase N12-a, the latter was extended westward with additional brickwork. As suggested above (II.D.4), this brick feature N12B might be related to the entranceway of building unit N12.

#### D.5.5 The middle of N12's central section (N12/2)

##### D.5.5.1 N12D (Pl. 23)

One of the features surviving within Room N12/2 is a mostly circular central pit with almost vertical sides. Its diameter varies from 1.15–1.25m and, due to the gentle slope of the base, its maximum depth is 0.85m.<sup>243</sup> The sides and base are lined with a thick mud plaster coating. Pit N12D cuts into the gravelled

<sup>237</sup> See SAMUEL 2009, 467 and related bibliography.

<sup>238</sup> For parallels see BUDKA and DOYEN 2013, 177 with notes 66 and 69.

<sup>239</sup> The top of the retaining wall is levelled at 160.48m and its base at 160.33m.

<sup>240</sup> The top of the surface is levelled between 160.37m against the basal courses of Wall 42N and 160.34m against the base of the southern retaining wall (Pl. 22 and Fig. 34).

<sup>241</sup> The top of the column base is levelled at 160.72m and its base at 160.51m.

<sup>242</sup> The eastern brick abuts the inner face of Wall 42S; its top is levelled at 160.56m and its base at 160.38m. The western brick abuts the inner face of 52W; its top is levelled 160.53m and its base at 160.35m.

<sup>243</sup> Top edge is levelled at 160.36m and central point of the bottom at 159.51m. The level of the depression ranges from 159.60 to 159.51m.

soil that was used to level the surface before the walls of N12 were built and the coated floor was laid. The surfaces lining pit N12D bear no discolouration resulting from fire activities, implying probable use as a storage pit. This pit was filled with a loose deposit of the distinctive brown colour typical of the Level 3 horizon, composed of silt mixed with chaff remains, small charcoal pieces and potsherds.<sup>244</sup>

The storage pit<sup>245</sup> is situated 0.75m from each of the dividing walls 46W and 53E. N12D's southern rim lies 1.00m from the southern perimeter wall, while its northern rim is 1.32m from Pilaster N12Pil7's southern face.

## D.6 Coated surfaces associated with N12

(Figs. 34, 35, 37 and 41)

### D.6.1 Outside N12

#### D.6.1.1 To the south of N12

As can be seen from outside building unit N12's southeastern corner, below the southern perimeter wall 42S is a pinkish trampled surface N12F11bSE (Fig. 32), which continues internally south of surface N12F11aSE (IID.6.2.3). The coated surface slopes downward, mirroring the gradual decline of the ground from east to west; at the external southeast corner of N12 it is levelled at 160.55m, while at nearly 2m from the east end of Wall 42S, the top of N12F11bSE is measured at 160.48m. Covering a gravelled soil beneath,<sup>246</sup> the *c.* 5cm thick N12F11bSE bears clear pink stains. This floor underlies a 4–9cm thick brown coloured matrix deposit (N12De1a), occasionally including dark grey lens of ash and charcoal.

A distinct patch of coated surface N12F12aSE abuts the base of N12's south-projecting outer footing course. The top of this 4cm thick piece of material is levelled at 160.59m. This patch may correspond to Floor N12F12aSW, near the western end of Wall 42S, which covers the lane bordering the southern perimeter wall of N12. The latter surface, N12F12aSW, is a mud-plaster floor with a *c.* 1.5–2m large surviving span<sup>247</sup> between outer Pilaster N12Pil4 and the southern building units N26 and N27. At some stage, an entire part of Wall 42S fell southwards in one piece

onto floored surface N12F12aSW (Pl. 18). Levelled at 160.48m, Floor N12F12aSW abuts the top of Pilaster 4's footing brick, so the underlying occupation deposit (N12De2a) thus conceals the foundation course of the pilaster.

Below (N12De2a), at the foot of Wall 42S and Pilaster N12Pil4, a patch of another intact mud-floor surface over the gravelled ground of the lane is designated N12F11aSW and levelled at 160.34m.

Next to the eastern side of Pilaster N12Pil4, an ashy deposit layer mixed with charcoal flecks (N12De4a) can be seen from both sides of Wall 42S, between the unaligned lower and upper courses of the masonry (IID.2.1). Against the eastern corner of N12Pil4 and from the south face of the wall, the top of this ashy layer is levelled at 160.75m and its base at 160.59m, while 1.10m away from N12Pil4 further to the east, the top of the same layer is levelled at 160.65m and its base at 160.55m.

#### D.6.1.2 To the east of N12

Subsequent to the construction of N12, a deposit (N12De2b) banked up across the bordering eastern lane, burying the footing brick course of the corner pilaster joining Walls 42E and 42N. This *c.* 20cm thick deposit layer densely mixed with pebbles was sealed beneath mud-coated Floor N12F12aNE, levelled at 160.71–160.69m. Floor N12F12aNE may correspond to Floor N25F12W, identified further north on the lane between the building units N24 and N25 (IIC.6.1.4 and Fig. 28).

Evidence for a second, upper Floor N12F13aE is found at the northern end of 42E, near Pillar 9. Here, the lower edge of the facing plaster on the eastern wall curves outward at 160.79m, corresponding to the top of the second brick from the bottom. Below N12F13aE, deposit lenses represent an upper deposit (N12De3a) between the two known floors, levelled at 160.71m.

#### D.6.1.3 To the north of N12

(Pl. 19)

North of Wall 42N, the trampled surface N12F11aN is levelled at 160.46m, over gravelled soil. Like N12F11bSE (IID.6.1.1), which it possibly shares a

<sup>244</sup> For the ceramic material from N12D, see the analysis by Julia Budka in BUDKA and DOYEN 2013, 191–196 (*s.v.* N17, the former designation of N12D, see Fig. 4) and in this volume, Chapter III.5.2.

<sup>245</sup> For parallels see BUDKA and DOYEN 2013, 177 with note 67.

<sup>246</sup> Below N12's outer southeastern corner, the gravelled soil culminates at 160.53m.

<sup>247</sup> N12F12aSW extends from the outer face of Wall 44W to the outer face of Wall 36S, see Fig. 49.

horizon with, N12F11aN underlies the occupational deposit (N12De1b)<sup>248</sup> on top of which Wall 42N was constructed.<sup>249</sup>

The outside facing plaster of 42N (IID.2.3.1 and Pl. 19) shows clear evidence of a lipping feature levelled at 160.72m, the same altitude as Floor N12F12aNE running over the eastern lane (IID.6.1.2). This lipping may indicate that this flooring surface once extended westward to join the base of the exterior surface of the north perimeter wall. The underlying deposit (N12De2c) mixed with pebbles once buried the footing brick layers of Wall 42N, ranging from one course<sup>250</sup> at the wall's east end to two or three courses further west, depending on the ground's slope. This deposit offers the same characteristics as Deposit (N12De2b) covered by Floor N12F12aNE along the eastern face of N12.

#### D.6.1.4 To the west of N12

Below and to the west of Wall 52W's masonry, a mortar joint (IID.2.4) overlies a deposit layer (N12De1c). This deposit extends over a trampled surface N12F11aW levelled at 160.28m, partly covering the gravelled soil. There is no distinct upper floor preserved in close connection with the outer face of Wall 52W.

#### D.6.1.5 Summary

To sum up the information gained from outside building unit N12, it appears that the footing courses of the perimeter walls are each built upon a thin layer of occupational deposit (see Fig. 39: (N12De1a), (N12De1b), (N12De1c)) that overlies a trampled layer surface (see Fig. 39: N12F11bSE, N12F11aN, N12F11aW), spread over the gravelled ground. A higher floor was also identified across the south and east lanes surrounding building unit N12 (see Fig. 39: N12F12aSW above (N12De2a), N12F12aNE above (N12De2b)).

### D.6.2 Inside N12

#### D.6.2.1 Front section N12/1

N12's front section, between Walls 52W and 46W, yielded some evidence of coated floor surfaces,

though heavily truncated. The lowest of these, levelled at 160.31m, is a trampled surface N12F11aR1 whose patches cover the gravelled ground, mainly on the west side of Wall 46W. Floor N12F11aR1 underlies the layer of a 3–5cm thick occupational deposit (N12De1d)<sup>251</sup> on which Walls 46W and 52W were built, drawing close comparison with external Floor N12F11aW (IID.6.1.4).

A small patch of a coated Floor N12F12R1, preserved within the acute angle formed between Wall 52W's internal south end and the southern side of Installation N12B's western brick (IID.5.4.1), is likely the only remnant of the floor that overlaid a 6cm thick occupation layer (N12De2d). Levelled at 160.44m, this patch may also be related to other flooring surfaces: N12F12aR2 (levelled at 160.41m at the north end of Wall 46W or N12F12cR2 (ranging 160.45–160.42m) across central section N12/2 (IID.6.2.2).

A portion of another coated surface N12F13R1 runs between Installation N12B's eastern brick and the west-projecting corner of Pilaster N12Pil5, at the southern end of Wall 46W. Measured at an average level of 160.50m, Floor N12F13R1 overlies a deposit (N12De3b) that conceals the footing courses of both Wall 42S to the south and Pilaster N12Pil5 to the north. Within the southern part of N12/1, N12F13R1 most likely corresponds to Floor N12F12aSW on the southern lane outside N12 (IID.6.1.1).

#### D.6.2.2 Central section N12/2

Within the central Room N12/2, two pieces of a lower coated surface have been documented: N12F11aR2 covers the bottom of storage bin N12F (IID.5.3.2) where its top level ranges from 160.37–160.34m (Pl. 22). N12F11bR2 abuts the base of the inner face of Wall 42S, where the top level of this floored surface varies from 160.39–160.34m.

Another mud-plaster floor that extends across N12's mid-room is N12F12R. This floor is partly preserved and consists of several non-adjointing patches identified as the following subunits:

- N12F12aR2 at the north end of Wall 46W, levelled at 160.41m (Pl. 23)

<sup>248</sup> Deposit (N12De1b) is 6cm thick, between 160.50m and 160.44m.

<sup>249</sup> The occupation deposit (N12De1b) underneath the foundation courses at the east end of Wall 42N is also visible from its southern/inner face.

<sup>250</sup> Between 160.72m and 160.50m.

<sup>251</sup> This is the same deposit as (N12De1c), which continues westward under the front wall 52W.

Outside, south-east of N12	Outside, south-west of N12	Outside, east of N12	Outside, north of N12	Outside, west of N12	Inside, across N12/1	Inside, across N12/2	Inside, across N12/3	Inside, across N12A	Building phases of N12
		<u>N12F13aE</u>					<u>N12F13aR3</u> <b>N12PH2</b>	<b>N12PH3</b> 42S	<b>N12-a</b> Third building phase
		(N12De3a)				(N12De4a)	(N12De3d)		
					<u>N12F13R1</u>	<u>N12F13R2</u>	<u>N12F12dR3</u>		
					(N12De3b)	(N12De3c)	(N12De2g)	(N12De2f)	
<u>N12F12aSE</u>	<u>N12F12aSW</u>	<u>N12F12aNE</u>	<u>N12F12aNE</u>		<u>N12F12R1</u>	<u>N12F12R2</u> <b>N12D</b>	<u>N12F12R3</u> <b>N12C</b> <b>N12E</b>	<u>N12F12SE</u> <b>N12A</b>	<b>N12-b</b> Second building phase
	(N12De2a)	(N12De2b)	(N12De2c)		(N12De2d)	(N12De2e)			
<b>42S (east)</b>	<u>N12F11aSW</u> <b>42S (west)</b>	<b>42E</b>	<b>42N</b>	<b>52W</b>	<b>46W</b> <b>N12B</b>	<u>N12F11R2</u> <b>53E</b> <b>N12F</b>		<b>57</b>	<b>N12-c</b> First building phase
(N12De1a)			(N12De1b)	(N12De1c)	(N12De1d)		(N12De1f)	(N12De1e)	
<u>N12F11bSE</u>			<u>N12F11aN</u>	<u>N12F11aW</u>	<u>N12F11aR1</u>		<u>N12F11R3</u>	<u>N12F11aSE</u>	
Gravel backfill									

Fig. 39 Floors, fills and building phases of N12



- N12F12bR2 between Pilasters N12Pil7 and N12Pil8 of Wall 42N, levelled at 160.43m (Pl. 20)
- N12F12cR2 around the northern and eastern rim of pit N12D (IID.5.5.1), at a level ranging from 160.45m to 160.38m (Pl. 23).

Coated surfaces N12F12aR2 and N12F12bR2 roughly coincide with the base of walls surrounding N12's central room. These surface patches, as well as N12F12cR2 around pit N12D, separate the occupational deposit (N12De2e)<sup>252</sup> from a subsequent occupational deposit (N12De3c). The latter concealed the footing courses of Walls 42S, 46W, 42N and 53E in N12/2. (N12De3c) corresponds to the fill (N12De3b), which partly remains within the front section N12/1 (IID.6.2.1).

Like N12F12R2, Floor N12F13R2 is represented by several patches of mud material, identified as the following subunits:

- N12F13aR2 between Pilasters N12Pil7 and N12Pil8 on the inner face of Wall 42N, levelled at 160.54m.
- N12F13bR2 between Pilasters N12Pil7 and N12Pil8 on the inner face of Wall 42N, levelled at 160.64m (Pl. 20).
- N12F13cR2, on the west face of Wall 53E's south segment, levelled at 160.61m (Fig. 35).
- N12F13dR2, on Wall 46W's eastern face, levelled at 160.47m (Pl. 23).

This floor might once have covered the fill across N12's central section but is now truncated throughout. N12F13R2 Subunits a, b, c and d may correspond to N12F13R1, in the front room N12/1. Additionally, west of N12Pil7, the area below a dislodged sandstone column base<sup>253</sup> shows evidence of Flooring N12F13eR2 lying on the deposit layer (N12De3c), which fills the space east of N12F.<sup>254</sup>

As seen above (IID.6.1.1), a *c.* 10–16cm thick ashy deposit layer is evidenced between the unaligned lower and upper courses of Wall 42S's ma-

sonry. This layer (N12De4a) indicates the presence of the deposit that at some stage<sup>255</sup> filled the area of building unit N12's central room, over Floor N12F13R2.

#### D.6.2.3 Rear section N12/3

The rear section of building unit N12 yields direct evidence of several floors, although none of them is entirely preserved.

The lowest, Floor N12F11aSE, is a trampled surface bearing pink stains due to heat exposure. Multiple patches of this floor span over 2m within the southeast room N12A (IID.5.1.1), visible below the east end of Wall 42S (IID.6.1.1) and dividing wall 57 (Pl. 18). Lying over the gravelled ground, N12F11aSE is about 5cm thick (Fig. 34). On the north side of Wall 57, another patch of trampled surface, N12F11R3, remains in place and actually corresponds to Floor N12F11aSE (see Fig. 34). The original trampled surface was covered by a *c.* 6cm thick occupational deposit (N12De1e), containing a mix of potsherds and a red-brown matrix with some ash, the result of heating or burning activities. The deposit (N12De1e) lying over the trampled surface N12F11aSE was already present at the time internal wall 57 and south perimeter wall 42S were built. Corresponding phasing is also observed below the footing courses of the eastern end of Wall 42N, where Deposit (N12De1b) and that underlying trampled surface N12F11aN both predate the wall.

Within installation N12A, Deposit (N12De1e) was at some stage concealed beneath another floor, N12F12SE. This partially truncated mud-plastered surface, at least 3cm thick, is now represented only by a few patches of mud material lipping out from the base of the facing plaster of Wall 57<sup>256</sup> or abutting the inner face of Wall 42S (Fig. 32).<sup>257</sup> A portion of N12F12SE occurs under (N12De2f), the 15cm deep section of the ashy deposit banked up against the southeastern corner of the room.<sup>258</sup>

Corresponding to N12F12SE, a larger proportion of Floor N12F12R3 is preserved within the

<sup>252</sup> North and west of central room N12/2, the top of remaining occupation deposit (N12De2e) is levelled at 160.30m.

<sup>253</sup> See Pl. 22. At 160.51–160.54m, the baseline of the column base corresponds to the base of the penultimate course of Pilaster N12Pil7 and, more importantly, coincides with the top of the occupational deposit (N12De3c).

<sup>254</sup> See Pl. 22 and Fig. 36. Inner coating N12F11aR2 plastering the bottom of N12F corresponds to the same phase as N12F11bR2.

<sup>255</sup> This stage predates Phase N12-a, when Wall 42S was rebuilt.

<sup>256</sup> The base of the facing plaster on Wall 57's southern face (160.64m) merges into the floor coating (top at 160.61m).

<sup>257</sup> Along the inner face of Wall 42S, the top patches of N12F12SE are levelled at 160.61m and 160.53m.

<sup>258</sup> The top of (N12De2f) is levelled at 160.79–160.81m and the base at 160.64m.

main room of N12's rear section (Fig. 35). As seen from the section west of the opening to bin N12E (IID.5.2.1), a lens of deposit (N12De1f) separates subunit N12F12aR3 from the lower trampled surface N12F11R3. Next to N12E, a small patch of the facing plaster lips out from Wall 42E's western face at 160.68m. There, the lipping plaster merges with floor subunit N12F12dR3, whose coating overlays a lens of deposit (N12De2g) that in turn conceals the footing courses of Wall 42E and Pilasters 1 and 9.

To the north, subunit N12F12bR3 is connected to the base of Wall 42E's sixth course from the top.<sup>259</sup> This portion of the floor is *c.* 4–5cm thick and probably results from several coating episodes, likely with intervening deposits. Consistent with the gradual downward slope of the ground to the west, this plastered floor is levelled at a higher point<sup>260</sup> across the eastern side of the room than the western side, where the shallow pit N12Pit1 is located.<sup>261</sup> This pit is a plaster-lined circular depression in floor N12F12bR3, *c.* 27cm in diameter and 9cm in depth, which probably served to support a round-bottomed vessel. Further west, at the foot of Wall 53E's northern segment, a patch of mud flooring material lipping at the footing course of Pilaster N12Pil11 (IID.3.2.3),<sup>262</sup> may correspond to Floor N12F12bR3.

Floor N12F12R3 is further identified in three other spots: collectively labelled as Subunit N12F12cR3, two patches are connected to the jamb/cross-wall running south of Wall 57, while the third is connected to the eastern face of Wall 53E's southern segment. The mud plaster feature that lips out from the north end of Wall 57's jamb is levelled at 160.59m. At this same altitude, the western face of the jamb shows a similar feature that here continues into a patch of flooring surface<sup>263</sup> running westward over Deposit (N12De1f) and underlying the subsequent deposit (N12De2f).<sup>264</sup>

To the north of rear section N12/3, when looking toward the inner face of Wall 42N, the aforementioned occupation deposit (N12De1b) (IID.6.1.3)

is visible underneath the foundation course of Wall 42N's eastern end. Fill (N12De1b) shares the same horizon as both (N12De1f) elsewhere in rear room N12/3 and (N12De1e) within N12's southeastern room. Like the eastern perimeter wall, Floor N12F12bR3 is also represented at the base of Wall 42N by a lip of mud-plaster, indicating the point at which the floor once abutted the northern perimeter wall.

Finally, indication of another, higher, Floor N12F13aR3 is found on the western side of eastern perimeter wall 42E. North of Pilaster N12Pil1, between the wall's fourth and fifth courses from the top, the facing plaster lips out from the inner face of the wall. Levelled at 160.79m, this lipping feature corresponds to the piece of material adhering to the corner between the short southern side of Pilaster N12Pil1 and the inner face of adjacent Wall 42E. Moreover, a lipping feature confirmed on Wall 42E's exterior face also corresponds to altitude 160.79m (IID.6.1.2, N12F13aE). Between the later surface N12F13aR3 and its predecessor N12F12dR3, further depositional layers are attested for the rear room. Firstly, (N12De3d)<sup>265</sup> an ashy deposit with small charcoal content – conceals the footing bricks of Wall 57's northern face, but is below the base of Pilaster N12Pil2. Considering this evidence for Pilaster 2's subsequent erection, it may be suggested that (N12De3d) is a remnant of the occupational deposit that covered floored surface N12F12R3 prior to both flooring the room with N12F13aR3 and constructing Pilaster 2. Secondly, within room N12A, the powdery and ashy deposit (N12De2f), banked up against the rear wall of building unit N12 and culminates at 160.79–160.82m. The construction of Pilaster N12Pil3 (IID.2.1.2 and Fig. 32) over (N12De2f), may suggest the deposit corresponds with the above-mentioned deposit, (N12De3d). Thus, by directly overlaying the depositional levels (N12De2f) and (N12De3d), it is likely that the construction of Pilasters 2 and 3 was contemporaneous with Floor N12F13aR3, *i.e.* Phase N12-a.

<sup>259</sup> Between Pilasters N12Pil9 and N12Pil1, the point of connection between floor N12F12bR3 and the basal course of the wall is levelled at 160.61m.

<sup>260</sup> Average level at 160.61m.

<sup>261</sup> The top of N12F12bR3, around the rim of N12Pit1, is levelled between 160.45m and 160.43m.

<sup>262</sup> Levelled at 160.46m.

<sup>263</sup> At the foot of the jamb for Wall 57, N12F12cR3 is levelled at 160.54m.

<sup>264</sup> At this spot against the jamb's short face, the top of (N12De2f) is levelled at 160.65m.

<sup>265</sup> The top of Deposit (N12De3d) is levelled at 160.73m and the base at 160.65m. This layer of deposit filling bin N12E is light grey coloured, with ash and small pieces of charcoal.

### D.6.3 Building phases of N12 (Fig. 39)

In the area of building unit N12, excavation was suspended at the layer of soil and pebble used to artificially level the natural surface. The natural gravel ground was thus not exposed and its altitude not measured. At various locations, the ancient backfill shows remains of a trampled and unevenly laid mud surface, designated Temporary Floor 1. Above this surface, the thin deposit layer (N12De1) may have developed in some places, before the construction of N12's perimeter and internal walls, and their corresponding bonded pilasters (with notable exception of N12Pil2 and N12Pil3). This first construction phase, N12-c (Fig. 34), also includes Installations N12B (front room, N12/1) and N12F (central room, N12/2).

Occupation of N12 began with stage N12-b (Fig. 35), as attested internally by Floors N12F12R1/R2/R3/SE abutting the footing course of the walls. Outside the structure, corresponding lipping is also seen at the footing course of the wall where remains of wall plaster are intact (*i.e.* on the outer face of the northern perimeter wall, see Pl. 19). Inside N12, the main occupation phase develops on top of Floors N12F12. This is attested in the central room by the pit N12D and at the rear of the building unit by Installations N12C and N12E, as well as the establishment of oven room N12A. Evidence of additional refreshed floored surface N12F12dR3 in rear room N12/3, against the eastern perimeter wall and Pilaster 1, may also belong to this occupational episode. Rear room N12/3 also preserves evidence for an occupation deposit succeeding this occupation sequence, (N12De3d); the remains of this deposit have developed over the earlier Floors N12F12, but pre-date the next phase of construction, N12-a.

The eastern end of southern perimeter wall 42S (IID.2.1) shows evidence for the subsequent construction phase, N12-a – perhaps after the accidental collapse of part of the wall, the upper courses of 42S were constructed in this stage. The corresponding bonded Pilaster N12Pil3 is clearly built upon the earlier occupation deposit (N12De2f) (Fig. 32), also placing it in this phase. Against the northern face of Wall 57, construction of Pilaster

2 over deposit (N12De3d) clearly places it within the later occupation layer. A corresponding later deposit, (N12De4a), was identified within the brickwork of the western part of Wall 42S, separating the lower courses from the upper courses of the masonry. The laying of the upper courses of Wall 42S thus also belongs to N12-a, the final building phase of Level 3, as does the additional segment of Wall 42S built west of N12Pil4 (Fig. 37).

## E BUILDING UNIT N26

### E.1 Introduction

Across a *c.* 1.05m wide east–west oriented lane separating the two compounds, the N26 building unit lies parallel to N12, with similar alignment on the short eastern sides (Pl. 24). Located in the southern part of SAV1 North, the outline of building unit N26 is comprised of four perimeter walls: 47S, 45E, 43N and 44W. These walls are all half-a-brick thick and were built using layers of staggered mud brick stretchers. Despite this generally used pattern, the masonry of N26's short sides is worth noting, having been enlarged in some places with additional wythes.<sup>266</sup> The western perimeter side of N26 is one brick thick, but consists of two walls built side by side: 44W on the interior and 47W on the exterior. To the east, the northern section of perimeter wall 45E is as wide as one and half bricks thick (Fig. 44). Excavation of the internal southern and eastern sides of N26 was not completed to the footing course of the walls, nor was the external face of Wall 45E.

The ground plan of N26 is a trapezoid and encloses the large space N26/1, possibly a courtyard (3.30 × 4.37m), divided by north–south oriented Wall 43E, an inner partition to the east. On the western side of N26/1, internal walls 44S, 44E and 47E delineate two side rooms identical in surface area (*i.e.* 2.2m): N26/2 to the north and N26/3 to the south.<sup>267</sup> In the southwestern corner of the building unit, N26/4 is a small room (slightly less than 1m) of the third building phase (N26-a), built over what was the southern section of the earlier room N26/3. The external surface area of N26 encompassed by the four perimeter walls covers 22.92m (see Fig. 14).

<sup>266</sup> See TASSIE and OWENS 2010, 253.

<sup>267</sup> The general groundplan with a main court and two western side rooms may, despite the different arrangement of

rooms, be compared to Type I of Bietak's Group B: BIETAK 1996, 24, fig. 2.

### D.6.3 Building phases of N12 (Fig. 39)

In the area of building unit N12, excavation was suspended at the layer of soil and pebble used to artificially level the natural surface. The natural gravel ground was thus not exposed and its altitude not measured. At various locations, the ancient backfill shows remains of a trampled and unevenly laid mud surface, designated Temporary Floor 1. Above this surface, the thin deposit layer (N12De1) may have developed in some places, before the construction of N12's perimeter and internal walls, and their corresponding bonded pilasters (with notable exception of N12Pil2 and N12Pil3). This first construction phase, N12-c (Fig. 34), also includes Installations N12B (front room, N12/1) and N12F (central room, N12/2).

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The eastern end of southern perimeter wall 42S (IID.2.1) shows evidence for the subsequent construction phase, N12-a – perhaps after the accidental collapse of part of the wall, the upper courses of 42S were constructed in this stage. The corresponding bonded Pilaster N12Pil3 is clearly built upon the earlier occupation deposit (N12De2f) (Fig. 32), also placing it in this phase. Against the northern face of Wall 57, construction of Pilaster

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The ground plan of N26 is a trapezoid and encloses the large space N26/1, possibly a courtyard (3.30 × 4.37m), divided by north–south oriented Wall 43E, an inner partition to the east. On the western side of N26/1, internal walls 44S, 44E and 47E delineate two side rooms identical in surface area (*i.e.* 2.2m): N26/2 to the north and N26/3 to the south.<sup>267</sup> In the southwestern corner of the building unit, N26/4 is a small room (slightly less than 1m) of the third building phase (N26-a), built over what was the southern section of the earlier room N26/3. The external surface area of N26 encompassed by the four perimeter walls covers 22.92m (see Fig. 14).

<sup>266</sup> See TASSIE and OWENS 2010, 253.

<sup>267</sup> The general groundplan with a main court and two western side rooms may, despite the different arrangement of

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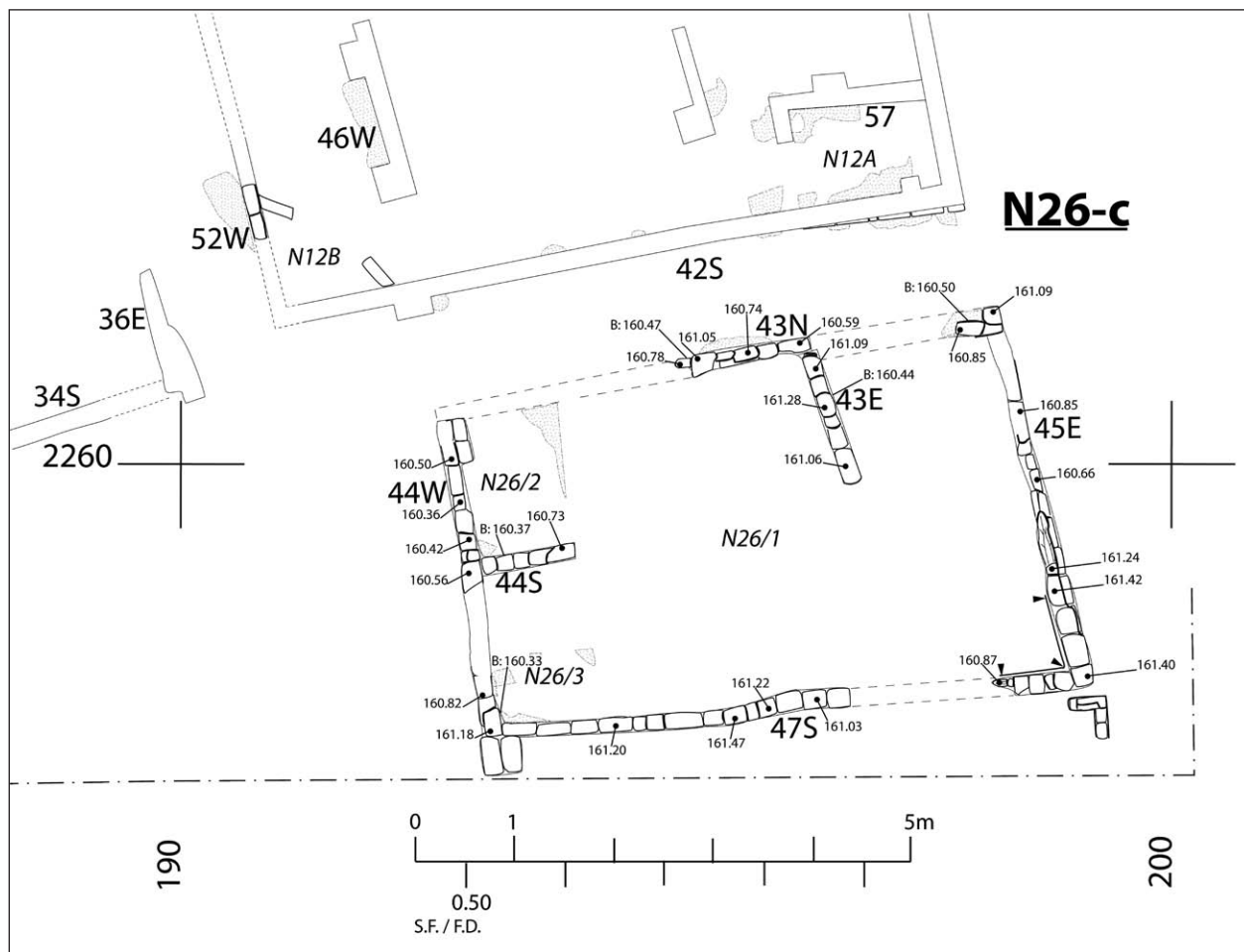


Fig. 40 Plan of Phase N26-c: levels of the perimeter and internal walls

## E.2 Description of N26's perimeter walls (Fig. 40)

### E.2.1 Wall 47S

The east–west oriented southern perimeter wall of building unit N26 is 6.15m long at the exterior and 5.70m at the interior. At its present state of preservation, Wall 47S is divided into two sections of masonry: the longer western part (3.71m long) and the shorter eastern part (1.00m long). Between these two segments is a 1.40m long gap with no visible brickwork above the ground. This truncated wall is half-a-brick thick and is made of mud bricks  $36 \times 15 \times 10$ cm in size. To the west of the internal wall 47E, perpendicular to Wall

47S, one can observe that Wall 47S slightly bends northwards.

The eastern part of Wall 47S is presently preserved up to a height ranging from two to six brick courses above an occupational deposit.<sup>268</sup> To the west, the longer part of Wall 47S has a maximum height of nine preserved brick courses and rises 1.09m above the gravelled ground. Evidence of bonding is seen at both of the original southern corners. The southwestern corner of building unit N26 features a bonded corner between Wall 47S and perpendicular Wall 44W. At the southeastern corner of N26, Walls 47S and 45E are likewise joined. The north–south internal wall 47E runs perpendicular to Wall 47S and abuts against its inner/

<sup>268</sup> The top of the eastern part of Wall 47S is levelled at 161.40m and the base of the sixth course from the top at

160.65m. An occupational deposit conceals lower courses at this part of the wall.

northern face, though there is no evidence of bond in the preserved lower courses.

#### E.2.1.1 Facing plasters of Wall 47S

Situated at the southern limit of the excavated area, the outer/southern face of Wall 47S was not cleared during the campaign and is currently not visible (Pl. 24). On the inner side of Wall 47S, a smooth greyish sandy-silt wash with rare medium-size pebbles entirely covers a 2.20m long section of the wall, running eastward from the internal cross-wall, 47E. It is worth noting that a render similar to this facing wash was also applied on the eastern face of the adjacent Wall 47E. These two walls, 47S and 47E, are not structurally bonded but their render was probably applied at the same time. At the bottom end of Wall 47S's plastered section, the render curves out from the inner wall face.<sup>269</sup> Moreover, a small schist fragment (c. 15 × 12cm) was found inserted into the facing plaster overlying the basal courses of the wall. This schist plate may indicate a stone paving technique used for the floor of N26.<sup>270</sup>

West of Wall 47E, the inner face of Wall 47S bears no trace of plaster. The internal face of the eastern segment of 47S also shows no plaster.

#### E.2.1.2 Pilaster of Wall 47S

There is no evidence of any pilaster associated with Wall 47S.

### E.2.2 Wall 45E

The perimeter wall 45E runs north–south and designates the eastern side of building unit N26. It is 3.85m long and is composed of mud bricks that differ significantly in size from one part of the wall to the other: bricks in the southern part are 35 × 15/16 × 10cm, while bricks in the northern part are larger, at 45 × 18 × 9cm in size. Additional disparity is seen with respect to the thickness of Wall 45E. Over a distance 2.10m long, the southern part of Wall 45E is half-a-brick thick and was built using courses of staggered brick stretchers in the traditional running bond pattern. In contrast, the northern part of the wall has a more substantial

width over a distance of 1.65m. This part of the wall is one and half bricks thick – over 0.50m wide – and has a schist slab inserted into the top brick course, protruding 15cm from the external face of the wall.<sup>271</sup>

Both ends of Wall 45E's outer wythe feature a bonded pattern with the adjacent east–west wall: 43N to the north and 47S to the south. Furthermore, the wider thickness at the northern part of Wall 45E results from an additional two brick wythes to the inner face of the outer wythe. At the southern end of these extra internal wythes, it is possible to observe that they are adjacent to westward-running brick courses, related to a brick structure. The construction of Wall 45E's internal wythes might be related to the building of a brick structure (IIE.3.1.2) in the space between the eastern perimeter wall and internal wall 43E, which runs south at a slight angle from the northern perimeter, Wall 43N.

The southern part of Wall 45E is preserved up to a height ranging from one to seven brick courses above an occupational deposit.<sup>272</sup> Levelled at 160.94m, the northern part of the wall is only preserved to four brick courses (0.44m) above a mud plaster surface, levelled at 160.50m. As seen from the inner face of the southern part of the wall,<sup>273</sup> the third course from the top is made of headers that run perpendicular to the stretcher bricks of the upper courses.

#### E.2.2.1 Facing plasters of Wall 45E

Only the outer face of the southern part of Wall 45E bears a facing plaster, covering the uppermost two courses. Red burn marks on the inner face of the southern part of Wall 45E may be the result of fire activity in the southeastern corner.

#### E.2.2.2 Pilaster of Wall 45E

There is no evidence of any pilaster associated with Wall 45E.

### E.2.3 Wall 43N

In the north of building unit N26, remains of Wall 43N consist of three mud brick masonry segments

<sup>269</sup> The base of the lipped-out feature is levelled at 160.54m. This feature may indicate the level where the coated floor surface N26F12R1 (IIE.6.2.1) once connected the lower part of the facing plaster.

<sup>270</sup> Cf. AZIM 1975, 113 and pl. X.

<sup>271</sup> The schist slab measures c. 45 × 20 × 3cm in size. The insertion of stone slabs within the bricklaying occasionally

occurs throughout the site (see Wall 35W, IIF.2.2). Such use is far too sporadic to infer a specific structural purpose.

<sup>272</sup> The top of Wall 45E's southern part is levelled at 161.42m and the base of the seventh course from the top at 160.60m. An occupational deposit conceals lower courses at this part of the wall.

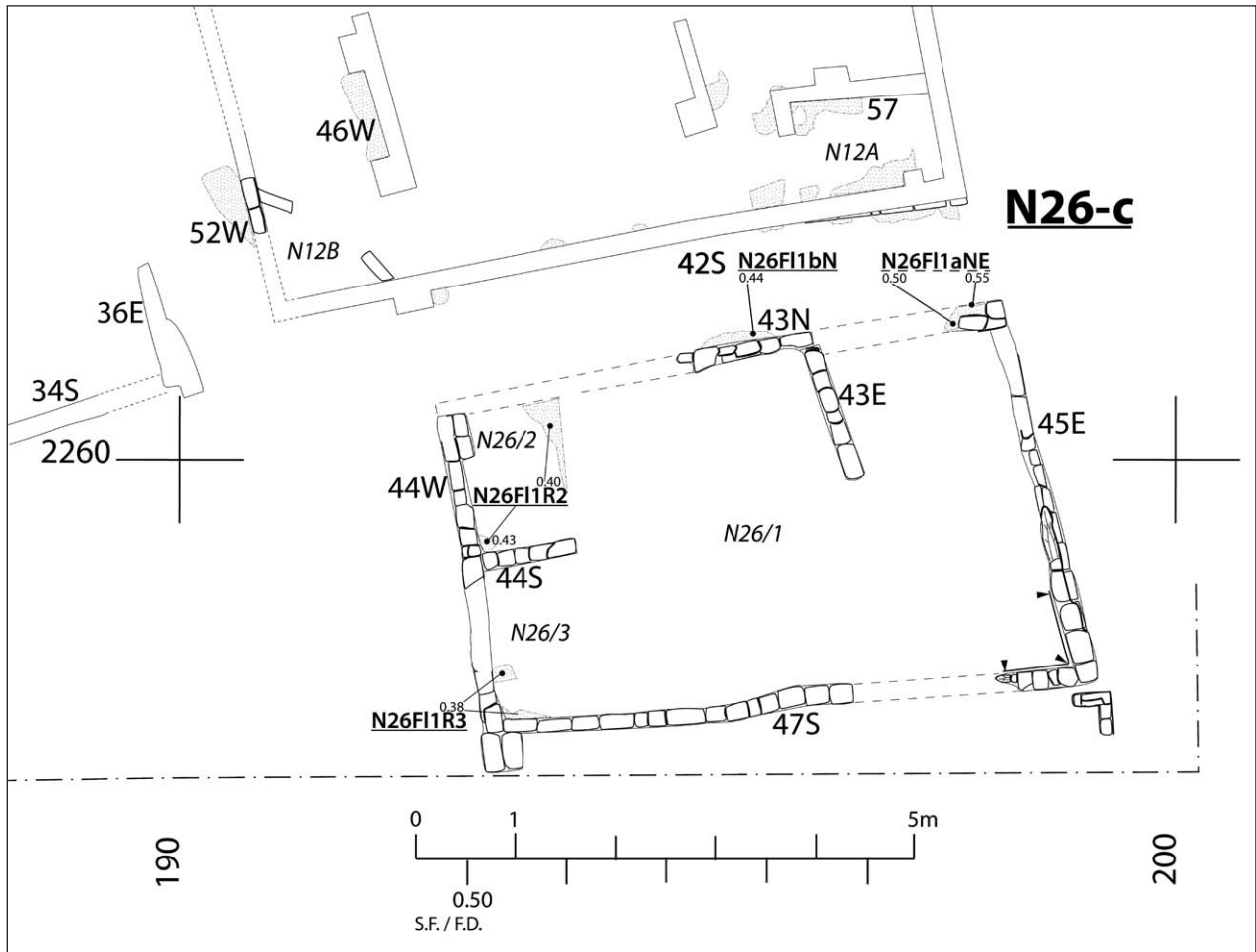


Fig. 41 Plan of Phase N26-c: levels of the floors

that are half-a-brick thick and run east–west (see Pl. 18). With a maximum height of five intact courses, the eastern segment of Wall 43N culminates at 161.09m, rising 0.59m above the mud-plaster surface N26F11aNE, levelled at 160.50m. The eastern segment of Wall 43N is less than 0.60m long, made of bricks that are 38 × 19 × 9cm in size, and was possibly bonded with Wall 45E.

The central segment of Wall 43N is separated by a 1.40m gap from the eastern segment of the wall. This central segment is 1.35m long and is also made of staggered stretcher bricks, 38 × 19 × 9cm in size. It is preserved up to a height ranging from one to five brick courses and has its high point at 161.05m.<sup>273</sup> The north–south oriented internal wall 43E runs perpendicular to Wall 43N,

near the eastern end of its central segment. An exposed section of the north end of Wall 43E indicates that this internal wall was likely not bonded to perimeter wall 43N.

The footing course of the Wall 43N's central segment overlays a 3–7cm thick layer of occupational deposit. This deposit in turn lies over a mud-plaster surface. This deposit in turn lies over a mud-plaster surface, N26F11bN, levelled at 160.44m (see Fig. 41). Despite the gap in the masonry between its eastern and central portions, one might consider that both these segments belong to the same phase of building. In support of this, both the eastern and central segments 43N are made of similarly sized stretcher bricks and both have corresponding footing levels around 160.50m; this altitude is related to the first building phase of N26, N26-c.

<sup>273</sup> The top of the third course from the top is levelled at 160.70m.

<sup>274</sup> The top of the central segment's footing course is levelled at 160.59m and its base ranges from 160.51–160.47m.

This western segment of 43N (Fig. 44) is slightly less than 0.60m long and five brick courses high (Pl. 25),<sup>275</sup> separated from the central segment by a 2m gap in the masonry. The western segment differs from the other parts of Wall 43N in that it consists of slightly smaller bricks,  $32 \times 15 \times 8$ cm in size. At the northwestern corner of N26, bricks from the second and fourth courses from the top of 34N are headers that run perpendicular to the east–west oriented stretchers of the wall segment. These header bricks also belong to the contiguous segment of Wall 47W, attesting to the interlocking character between Walls 43N and 47W. Additionally, the western segment of Wall 43N was built on a 25–30cm thick layer of occupational deposit (N26De4a), which separates the base of the wall's footing course from the surface N26F12R2 (Fig. 43 and Pl. 26). The latter sequence may indicate a construction of the western segment at a later stage (N26-a) than the central and eastern parts of Wall 43N (N26-c).

Cumulating the span of wall segments and gaps in masonry, the outer total length of the northern perimeter of building unit N26 measures 5.85m. The interior measurement, corner to corner, is 5.35m (Fig. 14).

#### E.2.3.1 Facing plasters of Wall 43N

With the exception of some patches of wall coating covering the inner face of the central segment, there is no plaster addition remaining on either face of Wall 43N.

#### E.2.3.2 Pilaster of Wall 43N

There is no evidence of any pilaster associated with the segments of Wall 43N.

#### E.2.4 Walls 44W and 47W (Figs. 40 and 44)

At the western side of building unit N26, the sequence of construction is quite complex. The earlier Phase N26-c features the half-a-brick thick Wall 44W, while the construction of Wall 47W belongs to the later Phase N26-a. Both of these walls were built of one wythe of staggered stretcher bricks and, because of the juxtaposition of the two, N26's western perimeter ends up being one

brick thick (Pl. 25). The inner and outer walls, 44W and 47W respectively, run at a north–south orientation. Despite the difference in building phases, the bricks of each wall are nearly identical:  $35 \times 16 \times 9$ cm in the earlier inner wall 44W and  $36 \times 15 \times 10$ cm in the later Wall 47W. At the southwestern corner, Wall 44W is bonded to the southern perimeter wall 47S.<sup>276</sup> At the opposite end of the western perimeter, there is evidence of bonding between the western segment of Wall 43N and the northern segment of Wall 47W (IIE.2.3). Two internal walls, 47N and 44S, run perpendicular to the western perimeter and abut against the inner face of Walls 47W and 44W respectively. The southern segment of Wall 47W is bonded to internal wall 47N, which is also assigned to the later phase of construction N26-a. Wall 44S is not bonded to Wall 44W.

The footing course of the inner wall 44W is intact over the entire length of the western perimeter of N26. This wall is 3.16m long and is preserved up to a height ranging from one to seven courses. At the southern end of Wall 44W, the top of the wall is levelled at 161.18m and its base above gravelled ground at 160.33m.

The outer wall 47W consists of two disconnected segments of brickwork. The northern segment of Wall 47W is three brick courses and 0.38m in height, while the southern segment is five courses high, or 0.65m tall. Like the northwestern corner, where Wall 47W joins 43N, the southern segment of Wall 47W was also built on a layer of occupational deposit; all belong to N26-a, the later phase of construction on the west side of N26 (IIE.6.3).

The total length of the exterior western perimeter of building unit N26 is 3.30m long. The interior distance is 3.05m (Fig. 14).

#### E.2.4.1 Facing plasters of the western perimeter walls

None of the wall faces belonging to 44W and 47W have been plastered with a surface addition.

#### E.2.4.2 Pilaster of the western perimeter walls

There is no evidence of any pilaster associated with Wall 44W or the preserved segments of Wall 47W.

<sup>275</sup> The top of the western segment is levelled at 161.38m and its base ranges from 160.79–160.75m.

<sup>276</sup> It is worth noting that both walls have bricks that bear the same finger mark, namely one central oblique groove (Type A category, IIA.3).



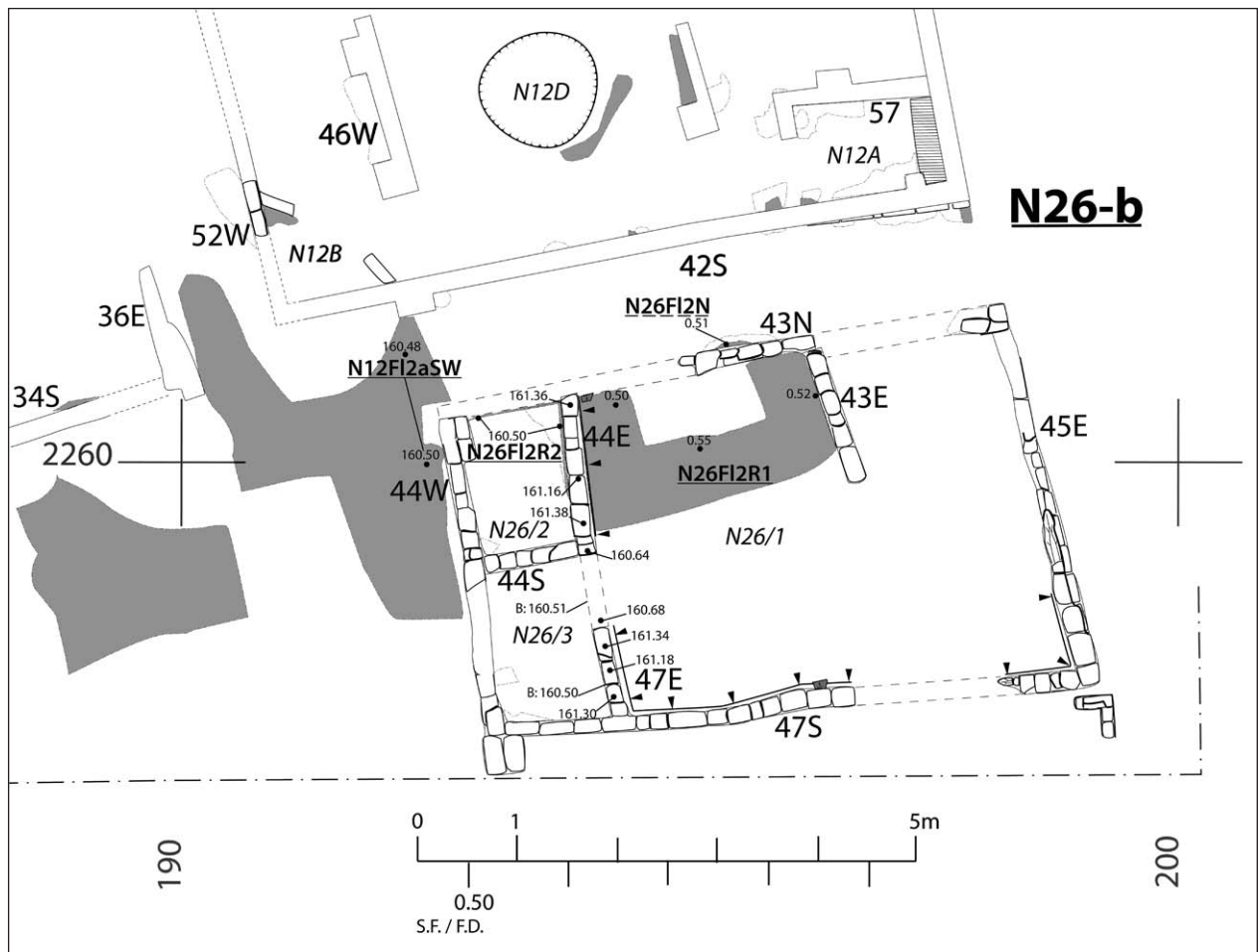


Fig. 42 Plan of Phase N26-b: levels of additional internal walls and floors

### E.3 Description of N26's internal walls

#### E.3.1 Wall 43E (Fig. 40)

Internal Wall 43E is north–south oriented and 1.35m long. It runs perpendicular to the northern perimeter of N26, 1.85m from the outer northeastern corner. Made of running stretcher bricks that are  $35 \times 15/16 \times 10$ cm in size, Wall 43E is thus half-a-brick thick. It is preserved up to a height ranging from five to seven brick courses and culminates at 161.28m.

At the northern end of Wall 43E, there is no evidence of bonding with the footing course of Wall 43N's central segment (IIE.2.3). Because the area south of Wall 43E was not exposed down to the footing courses, the relationship between the 43E's

lower brickwork and the eastward-running brick courses (IIE.3.1.2) was not determined. It was possible to document, however, that the latter course abuts against the eastern face of Wall 43E's southern end.<sup>277</sup>

#### E.3.1.1 Facing plaster of Wall 43E

On its eastern face, Wall 43E is nearly covered with a facing plaster consisting of a smooth greyish sandy-silt wash with rare small pebbles; only the northern half of the two lowest courses is denuded. The other face of this wall, the western face, is entirely plastered. At the base of the wall, there is evidence that the plastering curves westward above a coated surface N26FI2R1, levelled at 160.52m.

<sup>277</sup> The top of the contiguous eastward-running brick course is levelled at 160.54m.

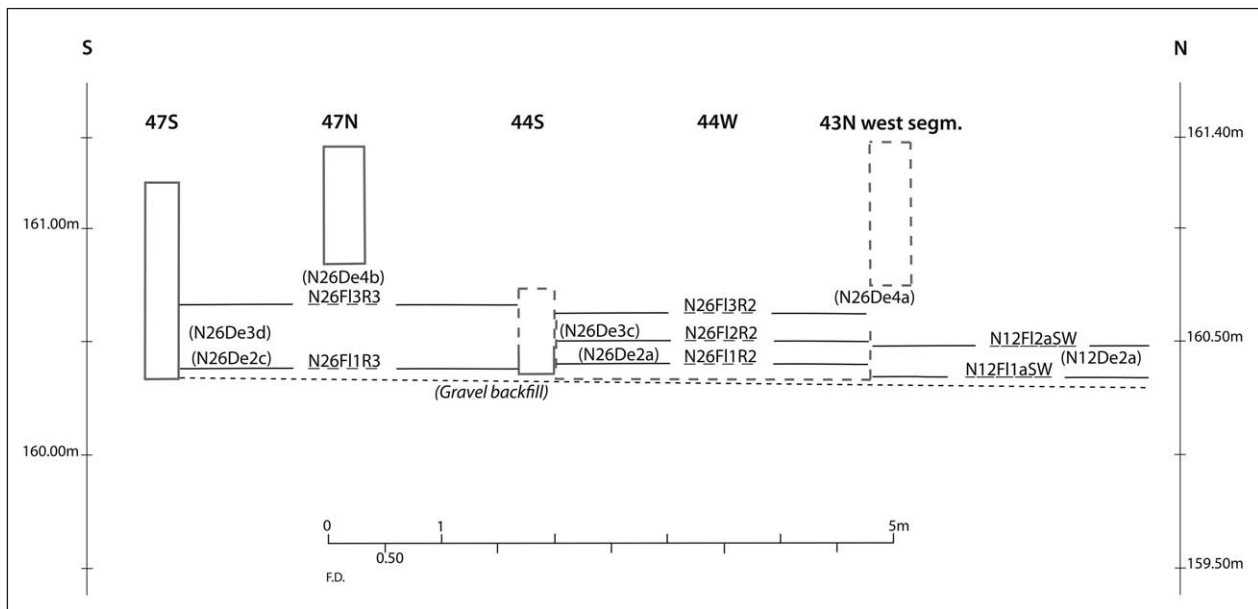


Fig. 43 Outline of the section west of N26

### E.3.1.2 Brick structure associated with Wall 43E (Fig. 44)

As mentioned above, the gap between the southern end of Wall 43E and the northern segment of Wall 45E was closed by the construction of a crooked 1.35m long brick course structure. This possible dividing wall is preserved up to a height ranging from one to four brick courses, culminating at 160.95m at its central point. Without further excavation in the eastern area of N26, the purpose and context of this mud brick assemblage are unclear.

### E.3.2 Wall 44E (Fig. 42)

Wall 44E is half-a-brick thick and north–south oriented. It runs parallel to – and 1.00m east of – western perimeter wall 44W, and is perpendicular to both Wall 44S and the exposed lane between building units N12 and N26. This internal wall outlines the eastern side of N26/2, the northwestern room of N26. Wall 44E is 2.33m long and made of running stretcher bricks,  $35/37 \times 16/17 \times 9/10$ cm in size. Beyond the cross-wall 44S, Wall 44E is only preserved up to one footing course and abuts Wall 47E, the internal wall continuing to the south.

At its highest point of preservation, Wall 44E culminates at 161.38m and is six to seven intact brick courses high. It was built on occupational deposit (N26De2a).

The brickwork of Wall 44E does not bond with either of the adjacent walls, 44S and 47E. South of the intact segment of Wall 44E, beyond the cross-wall 44S, a sheet of wall masonry made of five courses of stretchers was found fallen to the west. The weakness of the masonry in Wall 44E's southern part, is likely caused by the absence of bonding between Walls 44E and 47E. The missing part of Wall 44E further indicates that it was a later addition, blocking a former passageway between central room N26/1 and the side room N26/3 (see Fig. 42).

#### E.3.2.1 Facing plaster of Wall 44E

The inner/western face of Wall 44E bears no trace of surface treatment while, the outer face is entirely covered with a smooth greyish sandy-silt wash with occasional medium-size pebbles. At the base of the eastern face, the facing plaster lips out from the wall and merges with the floor coating levelled at 160.50–160.55m. Another small schist plate,  $c. 15 \times 20$ cm, is embedded in the plaster coating the northwestern corner of the room.<sup>278</sup> Given that the stone plate is standing perpendicular to the course

<sup>278</sup> The base of the schist plate is levelled at 160.52m, corresponding with the base of Wall 44E (IIE.3.2).

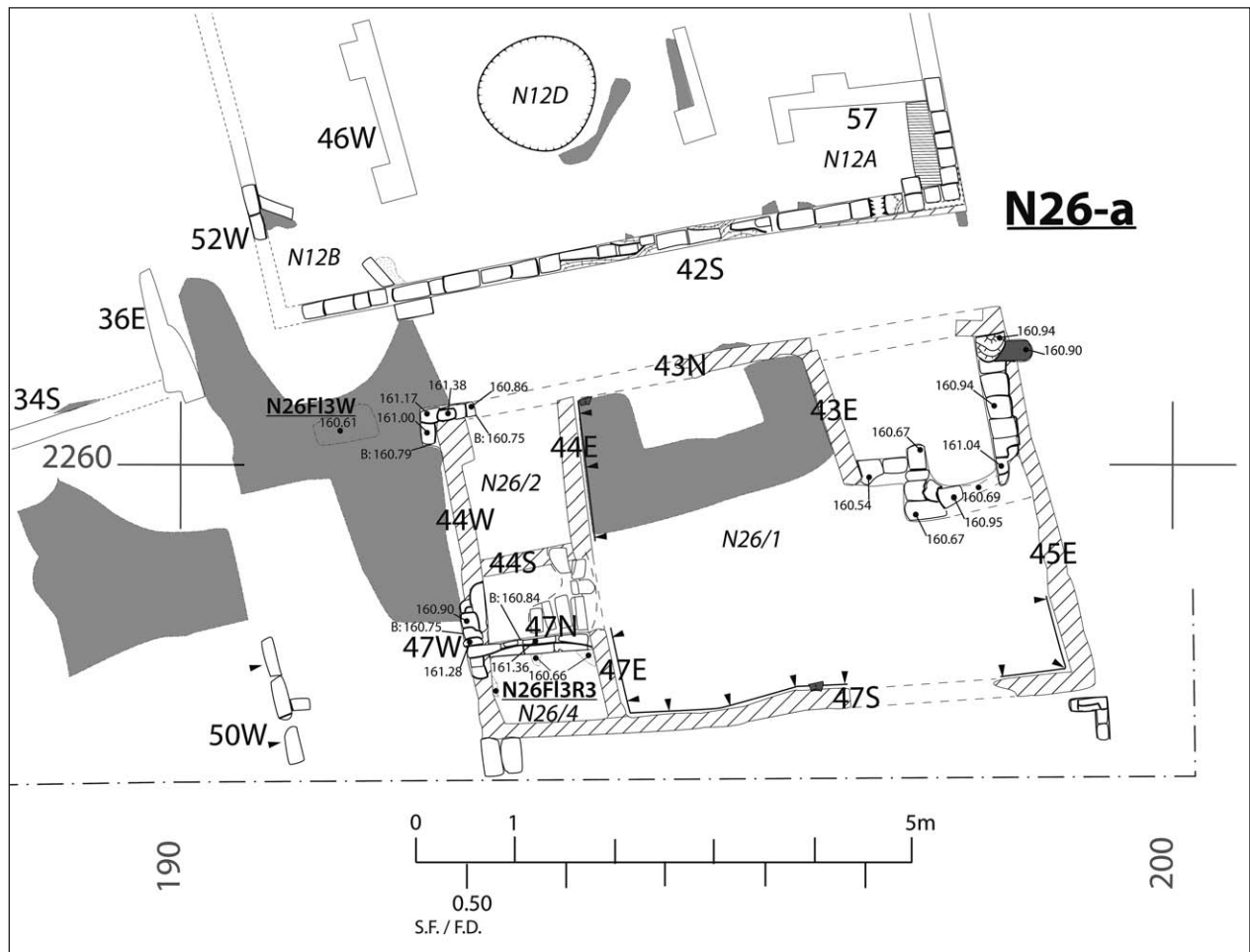


Fig. 44 Plan of Phase N26-a: levels of additional wall segments and floors

of the wall, it can be suggested that this mud and stone floor once coated the corner of the room, also abutting the bricks of N26's northern perimeter.

#### E.3.2.2 Pilaster of Wall 44E

There is no evidence of any pilaster associated with Wall 44E.

#### E.3.3 Wall 44S

(Fig. 40)

Wall 44S is a 0.95m dividing wall running perpendicular between Walls 44E and 44W. This wall is east–west oriented and delineates the southern side of the northwestern room, N26/2. Made of running stretcher bricks that are 33 × 16 × 8cm in size, Wall 44S is half-a-brick thick. It abuts the western face of Wall 44E to the east and the inner/eastern face of Wall 44W to the west, without showing any bonding pattern to the adjacent walls. This wall is preserved up to a height ranging from one to three stretcher courses and culminates at 160.73m, while its base is levelled at 160.37m.

#### E.3.3.1 Facing plaster of Wall 44S

The southern face of dividing wall 44S bears no trace of facing plaster. Its northern face is also denuded, except in the southwestern corner of the N26/2 side room. There a patch of wall coating is still intact, adhering to the inner faces of this corner between the basal courses of Walls 44S and 44W. The lower portion of the corner-plaster curves slightly toward the interior of the room (Fig. 41), levelled at 160.43m, suggesting the presence of a formerly coated floor surface, now truncated.

#### E.3.3.2 Pilaster of Wall 44S

There is no evidence of any pilaster associated with Wall 44S.

#### E.3.4 Wall 47E

(Fig. 42)

The internal wall 47E is north–south oriented, running perpendicular to the southern perimeter wall 47S against which it abuts, although unbonded.

Wall 47E is 0.90m long, made of staggered stretcher bricks that are  $33/35 \times 18 \times 10$ cm in size, and thus half-a-brick thick. It runs in the same north-south alignment as the internal wall 44E and perpendicular to internal wall 47E, but bonds with neither.

Wall 47E is preserved up to seven courses and culminates at 161.34m. It was built on occupational deposit (N26De2c), which also lies below the footing course of the contiguous, northward-running Wall 44E (IIE.3.2). Thus, it can be concluded that both, Walls 47E and 44E, belong to the same phase of construction N26-b, built before the later dividing wall 47N (Phase 26-a) (IIE.3.5 and IIE.6.3).

#### E.3.4.1 Facing plaster of Wall 47E

The western face of Wall 47E bears no surface treatment. However, the eastern face is entirely covered by a smooth greyish sandy-silt wash with rare medium-size pebbles, the same render applied to the inner face of Wall 47S against which Wall 47E abuts at the southern end.

#### E.3.4.2 Pilaster of Wall 47E

There is no evidence of any pilaster associated with Wall 47E.

#### E.3.5 Wall 47N (Fig. 44)

Dividing Wall 47N is 1.25m long and runs perpendicularly east-west between Walls 47E and 47W. This half-a-brick thick wall is preserved up to four running stretcher brick courses, with bricks  $35/37 \times 18 \times 10$ cm in size. The top of Wall 47N is levelled at 161.40m and the base of its footing brick at 160.84m.

The eastern end of Wall 47N abuts, without bonding, the western face of 47E's northern end. On the opposite end, bonding between Walls 47N and 47W has however been attested. The two walls therefore belong to a single construction phase, N26-a, postdating the building of the inner wythe of the western perimeter wall, 44W (Phase N26-c). Furthermore, Wall 47N was built over the deposit that once filled side room N26/3<sup>279</sup> and delineates the northern side of the small southwestern room N26/4, added in stage N26-a.

#### E.3.5.1 Facing plaster of Wall 47N

Neither face of Wall 47N has been plastered with a surface addition.

#### E.3.5.2 Pilaster of Wall 47N

There is no evidence of any pilaster associated with Wall 47N.

### E.4 Layout and dimensions of N26 building unit (Figs. 42 and 45)

Building unit N26 is an irregular quadrilateral structure, located across the alleyway from the southern side of building unit N12; two passageways also fringe the short eastern and western sides of N26. As far as can be observed within the limit of the excavated area, spans of other walls abutting the southern side of N26 indicate that this construction was not freestanding.

The external surface area of N26 is 22.92m ( $6.15 \times 3.85 \times 5.85 \times 3.30$ m) while the internal surface area is 19.09m ( $5.70 \times 3.38 \times 5.35 \times 3.05$ m) (see Fig. 14).

The layout of building unit N26 consists of one large courtyard and two bordering side rooms along the western perimeter. Means of access into the larger room N26/1 are not easily identifiable. The vicinity of other structures running along Wall 47S and the consequential absence of an alleyway at that same place, make an entrance to the building along the southern perimeter wall unlikely. It may be tentatively suggested that there was once some access through the northern or eastern perimeter walls of N26, although solid evidence is missing.

N26 contains two main areas: the west area was subdivided into two side rooms (N26/2 and N26/3), and the courtyard N26/1, which was in turn subdivided in the third building stage N26-a (Fig. 44). The central part of N26/1 measures  $3.12 \times 2.50$ m (*c.* 7.80m). In the northeastern corner is the Phase N26-a cell, measuring  $1.40 \times 1.15$ m (*c.* 1.60m) in internal surface area. South of this cell, at N26's southeastern corner, there is another roughly square space, 2.72m in surface area.

West of N26/1, at the northwestern corner of N26, the side room N26/2 measures  $1.39 \times 0.98$ m (*c.* 1.36m) in internal surface area. To the south of N26/2, the contiguous side room N26/3 measures  $1.54 \times 1.00$ m (*c.* 1.54m) in internal surface area.

<sup>279</sup> After clearing the interior of Room N26/3, modern red bricks have been added under Wall 47N to prevent its collapse (Pl. 25).

Building Unit N26		Length (cm)	Width (cm)	Thickness (cm)	Total l + w + t	Format
<b>Perimeter walls</b>	47S finger mark Type A	36	15	10	61cm	medium
	45E (southern segment)	35	15/16	10	60.5cm	medium
	43N (eastern and central segments)	38	19	9	66cm	large
	44W finger mark Type A	35	16	9	60cm	medium
	45E (northern segment)	45	18	9	72cm	large
	43N (western segment)	32	15	8	55cm	small
	47W	36	15	10	61cm	medium
<b>Internal walls</b>	43E	35	15/16	10	60.5cm	medium
	44E	35/37	16/17	9/10	62cm	medium
	44S	33	16	8	57cm	small
	47E	33/35	18	10	62cm	medium
	47N	35/37	18	10	64cm	medium

Fig. 45 Walls of N26: brick sizes

Within the ten walls of building unit N26, ten different brick formats were identified (see Fig. 45). Firstly, only the bricks of internal wall 44S ( $33 \times 16 \times 8$ cm) and the western segment of Wall 43N ( $32 \times 15 \times 8$ cm) fall into the small format category. By contrast, larger bricks ( $38 \times 19 \times 9$ cm) were used in the construction of 43N's central and eastern segments. This discrepancy supports the aforementioned theory (IIE.2.3) concerning the later constructional phase of the Wall 43N's western segment (Phase N26-a).

Secondly, the southern segment of 45E, Wall 44W, and Wall 47S are constructed of nearly identical bricks ( $35 \times 15/16 \times 10$ ,  $35 \times 16 \times 9$ cm or  $36 \times 15 \times 10$ cm), falling into the medium format category. These three walls show clear evidence of bonding, and thus belong to the same phase of construction, N26-c. Moreover, this is confirmed by further common feature of Walls 47S and 44W – some of their bricks bear one central oblique finger groove (IIA.3).

Lastly, in the additional wythes of the northern part of Wall 45E (IIE.2.2), the bricks fall into the large format category ( $45 \times 18 \times 9$ cm). This also demonstrates the distinctive construction phase of the brickwork enlargement of this part of Wall 45E (Phase N26-a). Finally, all other walls fall into the medium format category (see Fig. 6).

### E.5 Description of N26 installations

No specific permanent installations were found associated with building unit N26.

### E.6 Coated surfaces associated with N26

(Figs. 41, 42 and 44)

#### E.6.1 Outside N26

##### E.6.1.1 To the south of N26

The area to the south of building unit N26 has not been excavated.

##### E.6.1.2 To the east of N26

East of building unit N26, the area was not adequately exposed during the excavation campaigns and thus, the analysis of this area has not been completed.

##### E.6.1.3 To the north of N26

To the north of N26, the lane shared with N12 (ID.6.1.1) contains a number of features that contribute to the stratigraphic sequence of both building units.

Outside the northeastern corner of N26 is a pinkish trampled surface N26F11aNE, which may correspond to the surface N12F11bSE visible on the other side of the alleyway below Wall 42S (see Fig. 32). Surface N26F11aNE also bears distinct

pink stains and small patch of this surface is still visible below the eastern segment of Wall 43N, where the masonry is truncated. Levelled here at 160.50m, N26F11aNE covers the gravelled soil.<sup>280</sup> Moving along the central segment of Wall 43N, surface N26F11bN also belongs to the earlier sequence of trampled surface that overlies the gravelled soil of the lane.<sup>281</sup> N26F11bN underlies a *c.* 7cm thick deposit (N26De1a),<sup>282</sup> which in turn lies beneath the footing stretcher bricks of Wall 43N's central segment (IIE.2.3). Atop Deposit (N26De1a) and levelled at 150.51m, the remains of coated material N26F12N abut the footing course of Wall 43N's central segment. At the northwestern corner of N26, a further floor surface N12F12aSW partly covers the width of the east–west oriented lane between building units N12 and N26 (Pl. 25). The *c.* 1.5–2m span of mud-plaster Floor N12F12aSW abuts the top of Pilaster N12Pil4's footing brick and is levelled at 160.48m (IID.6.1.1.). Below this surface, the occupational deposit (N12De2a) is 14cm thick and conceals the foundation course of N12Pil4.

#### E.6.1.4 To the west of N26

West of N26, up to three coated surfaces are represented: the lower N26F11W, the intermediate N12F12aSW, and the upper N26F13W. The lowest and earliest Floor N26F11W can only be seen through a section in the ground west of the western perimeter wall 44W. Given that the surface of this floor is damaged, no point of contact with the wall's outer face is identifiable. The top of Floor N26F11W is levelled at 160.34m and overlies the gravelled soil.

Between building units N12 and N26, coated surface N12F12aSW does have preserved points of contact with the outer face of Wall 44W.<sup>283</sup> At this place, it can be seen that the underlying deposit (N12De2a) conceals the basal course of the western perimeter wall's inner wythe (IIE.2.4), as well as concealing the mud-plaster surface N26F11W. At this same place, Deposit (N26De3a) separates the top of surface N12F12aSW from the base of the western perimeter side's outer wythe and Wall 47W.<sup>284</sup> As previously mentioned (IIE.2.4), the construction of Wall 47W belongs to a later stage than Wall 44W;

Wall 47W was built over deposit (N26De3a) that overlies Floor N12F12aSW (IIE.6.3).

The final floor surface of the western area, N26F13W, is levelled at 160.61m (Pl. 25). This floor was laid over Deposit (N26De3b), which in turn covers N12F12aSW.

#### E.6.2 Inside N26

##### E.6.2.1 Courtyard/larger room N26/1

East of Wall 43E, within the bounds of the associated brick structure (IIE.3.1.2), a single flooring material has been identified. Levelled at 160.50m, Floor N26F11R1 appears to underlie the footing courses of both the eastern segment of Wall 43N and the northern segment of Wall 45E. As mentioned above (IIE.6.1.3), exterior Floor N26F11aNE appears to run beneath the Wall 43N in the northeastern corner, so it is probable that interior Floor N26F11R1 was once also a part of the same floor-coating.

In the western portion of the courtyard, bounded by Walls 44E/47E, 43N, 43E and 47S, a large portion of a mud-coated surface is preserved, despite severe truncations (Pl. 24). The top of this floor, N26F12R1, varies from 160.50m to 160.55m. To the east, N26F12R1 abuts the top of the footing course of Wall 43E, where the facing plaster that covers the western face of the wall curves outward upon the floor (IIE.3.1.1). To the west, at the level of Wall 44E's footing course, this flooring surface connects to the lower part of the render that hides the eastern face of brickwork. Floor N26F12R1 overlies occupational deposit (N26De2b), which accumulated within the bounds of the central room. Deposit (N26De2b) may correspond to Deposit (N26De2a), identified within Room N26/2 against the footing course of Wall 44E, and later covered by floor layer N26F12R2 (IIE.6.2.3).

##### E.6.2.2 Side room N26/3

At the southwestern corner of building unit N26, the side room N26/3 is enclosed by Walls 47S, 47E/44E, 44S and 44W (to the south, east, north and west respectively). Walls 47S, 44S and 44W were built directly on the gravelled ground and the baseline of their

<sup>280</sup> The 4–5cm thick surface N26F11aNE is levelled at 160.55m.

<sup>281</sup> The patch of Floor N26F11bN is 5cm thick, with its top levelled at 160.44m and its base at 160.39m.

<sup>282</sup> Deposit (N26De1a) might be similar to Deposit (N12De1a), which separates Floor N12F11bSE from Floor N12F12aSE, eastward across the lane (IID.6.1.1 and Fig. 39).

<sup>283</sup> On the western side of N26, the coated surface N12F12aSW is levelled at 160.50m (Pl. 26).

footing courses ranges from 160.32m to 160.37m. In the southwestern corner of Room N26/3, two patches of the mud-coated Floor N26F11R3 overlie the gravelled ground and abut the inner faces of adjoined Walls 47S and 44W at their footing courses, levelled at 160.38m. These patches of floored surface correspond to the flooring material N26F11R2, identified along the interior eastern and southern sides of the nearby Room N26/2 (IIE.6.2.3). Overlying the surface N26F11R3 is a *c.* 10cm thick occupational deposit (N26De2c) on which, in the eastern side of room N26/3, Walls 47E and 44E were built.<sup>285</sup>

Within side room N26/3, no floor surface has been identified that may correspond to Floors N26F12R1 (Room N26/1), N26F12R2 (Room N26/2) or N12F12aSW (outside of building unit N26). Over Deposit (N26De2c), the *c.* 13cm thick Deposit (N26De3d) accumulated, banking up against the footing and basal courses of Wall 47E. Deposit (N26De3d) underlies the surface material N26F13R3, represented by three preserved portions and levelled at 160.66m. One fragment of Floor N26F13R3 lies in the middle of Room N26/3, while the others stick to Wall 44W (base of fourth course from the top) and Wall 47E (base of fifth course from the top). Subsequently, surface N26F13R3 was covered by Deposit (N26De4b), which is the *min.* 15cm thick layer upon which Wall 47N was built (IIE.6.2.4).

### E.6.2.3 Side room N26/2 (Pl. 26 and Fig. 43)

At the northwestern corner of N26, Walls 44W and 44S belong to the first phase of construction of the building unit (N26-c) and were built directly on gravelled soil.<sup>286</sup> Coated surface N26F11R2, which once floored the ground, is extensively truncated within N26/2 and is only preserved in two spots. The first spot is the southwestern corner of the room, where a patch of remaining wall-coating material on the inner faces of the corner lips out. Opposite this, in the northeastern corner, another patch of the coated surface N26F11R2 is preserved along the northern and western sides of the room. Levelled at 160.40m,

surface layer N26F11R2 is the earliest evidence of a floor inside Room N26/2 and corresponds to the lowest floors identified outside the room: N26F11W to the west and N12F11aSW to the north.

A *c.* 10cm layer of occupational deposit (N26De2a) succeeded the earliest coated surface N26F11R2, accumulating contemporaneously to Deposit (N12De2a) outside the northwestern corner of building unit N26 (see IIE.6.1.4 and IID.6.1.1). Deposit (N26De2a) is further identified to the west of Room N26/2, banked up against Wall 44E (IIE.3.2).

As seen from the section below Wall 44E (see Pl. 26), the north and east of the room contain evidence of another floor overlying Deposit (N26De2a), Floor N26F12R2. This floor is 3–5cm thick, with the top of the mud-plaster surface levelled at 160.50m. Heavily truncated throughout the side room, Floor N26F12R2 abuts both the footing course of Wall 44E<sup>287</sup> and the top of Wall 44W's inner basal course. This floor corresponds to the exterior floor surface N12F12aSW, which also abuts the top of Wall 44W's basal course (IIE.6.1.4) and partly covers the alleyway between building units N12 and N26 (Pls. 25 and 26).

An informative sequence of alternating floors and deposits is preserved below the northwestern corner of building unit N26. As viewed from the exterior, the distinct *c.* 5–7cm thick deposit layer (N26De3c) separates the intermediate coated Floor N26F12R2 from the upper Floor N26F13R2, levelled at 160.62m. The latter, N26F13R2, likely corresponds to the small patch of flooring plaster visible west of Wall 47W, N26F13W (IIE.6.1.4). The sequence in the northern section of Room N26/2 [gravelled soil / N26F11R2 / (N26De2a) / N26F12R2 / (N26De3c) / N26F13R2] is identical to the sequence identified outside of the northwestern corner of N26 [gravelled soil / N26F11W / (N12De2a) / N12F12aSW / (N26De3b) / N26F13W].

Upper surface N26F13R2 in turn underlies (N26De4a), a *c.* 10cm thick dark brown deposit with charcoal content. Deposit (N26De4a) was banked up against basal courses of the eastern Wall 44E<sup>288</sup>

<sup>284</sup> Deposit (N26De3a) is *c.* 25cm thick between the base of Wall 47W (levelled at 160.75m) and top of Floor N12F12aSW (levelled at 160.50m).

<sup>285</sup> The base of Walls 47E and 44E's footing courses is levelled at 160.50–51m.

<sup>286</sup> The gravelled soil in the area of the northwestern corner of N26 is levelled at *c.* 160.33m.

<sup>287</sup> Floor N26F12R2 identified inside Room N26/2 may correspond to the floor N26F12R1, found in connection with the base of the facing plaster that covers the eastern face of Wall 44E (IIE.3.2.1 and IIE.6.2.1).

<sup>288</sup> Deposit (N26De4a) may belong to N26-a, the same phase as Deposit (N12De4a) (see Fig. 46) identified inside building unit N12's central room, N12/2 (see IID.6.2.2 and IID.6.3).

and lies below the footing courses of 43N's western segment and 47W's northern segment (see IIE.2.3 and IIE.2.4).<sup>289</sup> This deposit is situated within the upper part of the sequence and with the correspondence between the interior and exterior sequences, it is likely that the latter deposit is identified with the ash and charcoal deposit layer visible *c.* 1m north across the lane, between the lower and upper courses of Wall 42S's masonry ((N12De4a), IID.2.1).

#### E.6.2.4 Room N26/4 (Fig. 44)

Less than 1m in surface area, the small Room N26/4 opens to the west side of building unit N26 and results from the later addition of Wall 47N, built in Phase N26-a. At the southwestern corner of N26, this wall thus divides the space of Room N26/3, assigned to an earlier Phase N26-c. The base of Wall 47N's footing course was built upon the occupational deposit layer (N26De4b), already identified within N26/3 (IIE.6.2.2). Because the western end of Wall 47N bonds to the outer western perimeter wythe of Wall 47W (IIE.3.5), it can be concluded that the walls at both the northern and western sides of N26/4 belong to the same phase of construction (N26-a), a later stage than the eastern and southern Walls 47E (N26-b) and 47S (N26-c).

The preserved walls of N26/4 were found below surface Level 1, a heterogeneous surface layer of æolian sand mixed with a number of sherds that entirely covers the structures of SAV1 North and fills the upper part of them.<sup>290</sup> Below this surface stratum, Level 2 was also identified within the upper part of Room N26/4, consisting of a sandy content mixed with particles of decayed mud bricks, brick piece rubble, and sherds.<sup>291</sup> The earlier deposit underlying Level 2 is (N26De4b),<sup>292</sup> *i.e.* the occupational deposit over which the Wall 47N was built (IIE.6.2.2) during the latest building phase of Level 3, N26-a.

#### E.6.3 Building phases of N26 (Figs. 43 and 46)

Despite the unfinished state of excavating N26 (IIE.1), it was possible to define distinct occupation and building phases of the unit, in particular thanks to the comparative analysis with the neighbouring building unit N12 (IID.6.3).<sup>293</sup>

In the northeastern corner of N26, Floor N26F11aNE corresponds to the muddy trampled surface overlying the pebble fill also identified across the street, below the footing course of the eastern end of Wall 42S. Subsequently, a thin deposit layer, (N12De1a), developed here on top of this unevenly laid surface (see IID.6.1.1. and Fig. 39). Within N26, evidence of a corresponding deposit layer (N26De1a)<sup>294</sup> on top of Floor N26F11aNE is also preserved.

The construction of the perimeter walls of N26 marked the first building phase, N26-c. To the west, Walls 44W and 47S were built directly on the gravel soil, rather than the trampled surface and its (possible) subsequent deposit to the east. Internal Wall 43E also belongs to the first building phase. Additionally, various pieces of Floor N26F11 identified outside and inside N26 demonstrate the start of occupation related to the first building phase, N26-c.

Evidence of N26's progressive occupation is represented by subsequent Floors N26F12 laid on Deposit 2, which accumulated against the footing course of the walls. The lipping features that appear at the bottom of the facing plaster of Walls 44E and 43E clearly attest to flooring the area at this stage. This flooring phase is related to the second building phase (N26-b), when the internal walls 47E and 44E were built to demarcate the western side rooms N26/3 and N26/2. The sequence observed in the northwestern corner of N26 attests to a subsequent stage of deposit, (N26De3c) (Fig. 43 and Pl. 26).

Clearly built on top of Deposit (N26De4a), the bonded western and northern segments of Walls 43N and 47W belong to a third building phase of

<sup>289</sup> The base of the western segment of Wall 43N is levelled at 160.75m and the base of the northern segment of 47W is levelled at 160.79m.

<sup>290</sup> In the area of N26/4, at the northwestern corner of Square 190/2250, the surface layer called Level 1 is 44cm thick between 161.53m and 161.09m.

<sup>291</sup> Within the upper part of Room N26/4, Level 2 is 26cm thick and levelled between 161.10m and 160.84m.

<sup>292</sup> Below the footing course of Wall 47N, the top of Deposit (N26De4b) is levelled at 160.84m and its base, over Floor N26F13R3, at 160.66m.

<sup>293</sup> To present some of the similarities between N26 and N12, columns displaying the sequence of floors and fills across N12's central room and to the southwest of N12 are introduced in Fig. 46.

<sup>294</sup> There is evidence of Deposit (N26De1a) underlying the footing course of Walls 43N's central part and 43E.



Outside, north of N26	Outside, south-west of N12	Outside, west of N26	Across N12/2	Inside, across N26/R1	Inside, across N26/R2	Inside, across N26/R3	Inside, across N26/R4	Building phases of N26
							Level 1	
							Level 2	
		<u>N26F13W</u> <b>47W</b>	(N12De4a) <u>N12F13R2</u>	<b>45E</b> 's northern internal wythes and brick structure	<b>43N (west)</b> (N26De4a) <u>N26F13R2</u>	(N26De4b) <u>N26F13R3</u>	<b>47N</b> (N26De4b)	<b>N26-a</b> <b>Third building phase</b>
		(N26De3a) (N26De3b)	(N12De3c)		(N26De3c)	(N26De3d)		
<u>N26F12N</u> <u>N12F12aSW</u>	<u>N12F12aSW</u>	<u>N12F12aSW</u>	<u>N12F12R2</u> N12D	<u>N26F12R1</u>	<u>N26F12R2</u> <b>44E</b>	<b>47E</b>		<b>N26-b</b> <b>Second building phase</b>
	(N12De2a)	(N12De2a)	(N12De2e)	(N26De2b)	(N26De2a)	(N26De2c)		
<b>43N (east)</b> <u>N26F11aNE</u>	<u>N12F11aSW</u> <b>42S (west)</b>	<u>N26F11W</u> <b>44W</b>	<u>N12F11R2</u> <b>53E</b> N12F	<b>45E</b> <u>N26F11a</u> <u>NE/N26F11R1</u>	<u>N26F11R2</u> <b>44S</b>	<u>N26F11R3</u> <b>47S</b>		<b>N26-c</b> <b>First building phase</b>
Gravel backfill								

Fig. 46 Floors, fills and building phases of N26

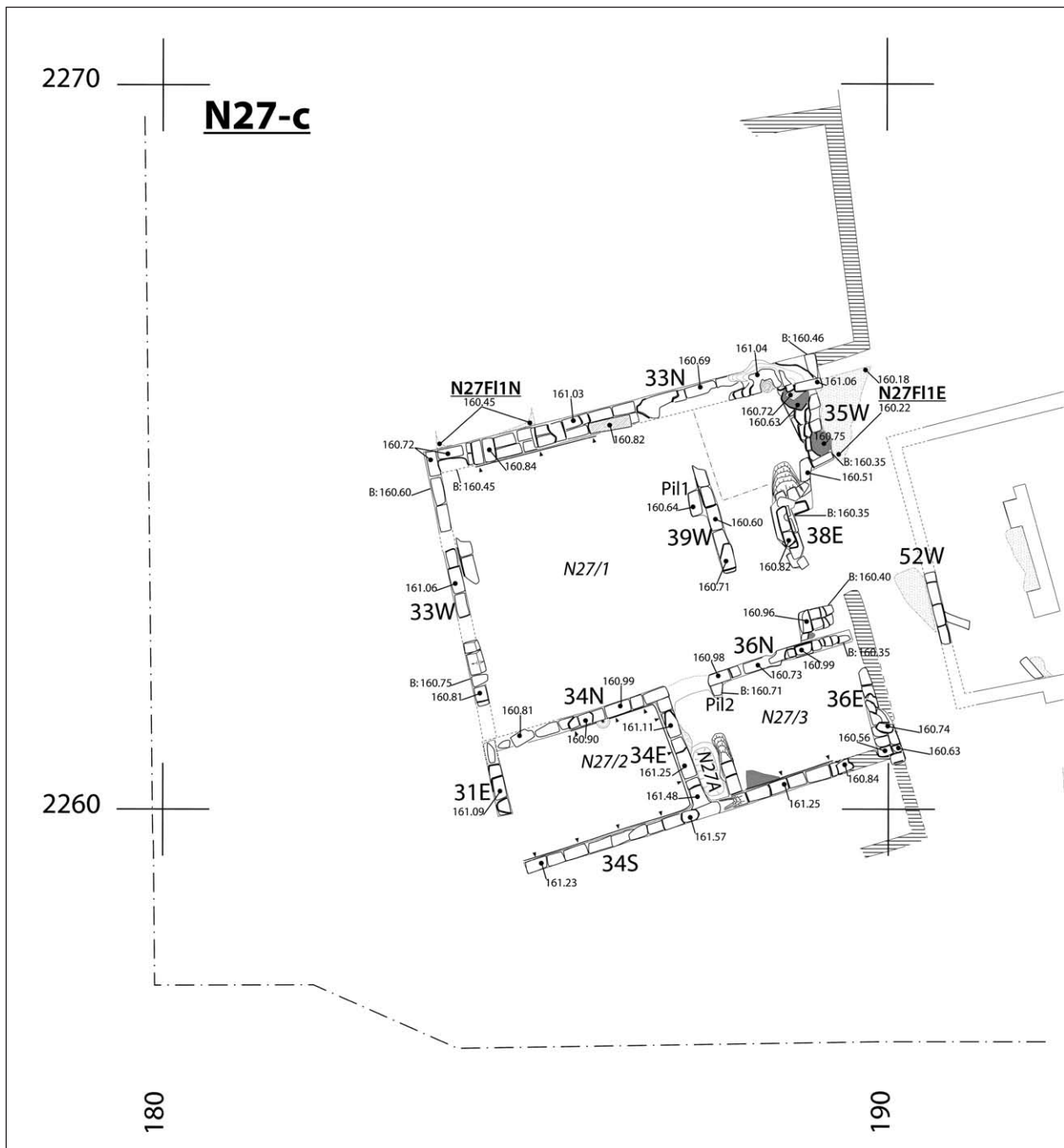


Fig. 47 Plan of Phase N27-c: levels of the perimeter/internal walls and floors 1

Level 3, N26-a. At the southwestern corner of N26, the construction of Walls 47W and 47N to enclose room N26/4 also pertain to Phase N26-a (Fig. 43).

## F BUILDING UNIT N27

### F.1 Introduction

To the west of building unit N12, walls of different thicknesses delineate building unit N27 (Fig. 47).

On the western and southern sides of N27, Walls 33W, 31E and 34S were built according to the standard running bond pattern with layers of staggered stretcher bricks and are only half-a-brick thick. The walls of the north and the east (33N, 35W and 36E) were built using layers of mud brick stretchers and headers and are thus one brick thick. Despite these differences, all the perimeter walls appear to belong to the same phase of construction.

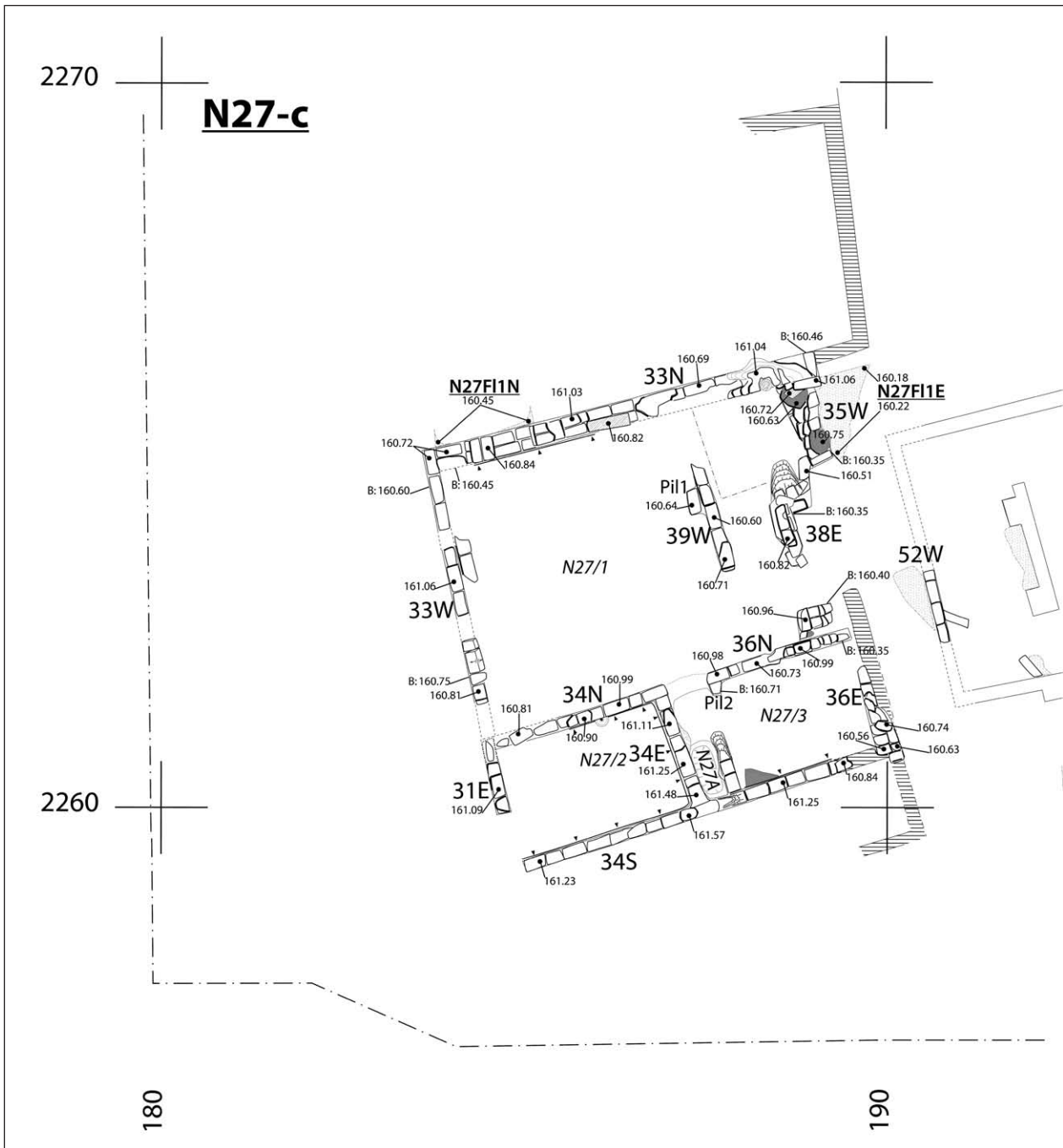


Fig. 47 Plan of Phase N27-c: levels of the perimeter/internal walls and floors 1

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Building unit N27 (Pl. 27) is composed of two parts and three spaces. The main part and larger rectangular space N27/1 (*c.* 3.45 × 4.70m) is a courtyard. The second part is composed of two small rooms, N27/2 and N27/3, which run the full length of the southern edge of the courtyard. Divided by Wall 34E, the two side rooms are of comparable size (*c.* 1.40 × 2.30m), and represent the southwestern and southeastern corners of the building unit. Three boundary walls encompass the southern side rooms: 31E to the west, 34S to the south and 36E to the east. Wall 34N is the northern boundary of room N27/2, while the northern face of room N27/3 is formed by Wall 36N.

The ground plan of building unit N27 corresponds to Type I of Bietak's Group B.<sup>295</sup> Covering a total area of 30.22m, the western side of N27 stretches to 5.70m, both its northern and southern sides are around 5.40m long, and its eastern side is 5.50m. Like the neighbouring building units, N27 is also oriented towards the northern Enclosure Wall N4.

## F.2 Description of N27's perimeter walls (Fig. 47)

### F.2.1 Wall 34S

East–west oriented, the intact basal course of the southern perimeter wall 34S is 4.53m long and outlines the rear wall of both Rooms N27/2 and N27/3. This wall is half-a-brick thick and is made of running staggered stretchers of various dimensions; the largest bricks featured in the masonry courses are 38 × 16 × 7/8cm in size. Wall 34S is preserved up to a height ranging from three to seven brick courses, with a maximum preserved height of 1.02m above the gravelled soil surface within the side rooms.<sup>296</sup> A peculiar feature of Wall 34S is a large stone piece<sup>297</sup> set against the basal course. In Room N27/3, to the east of Installation N27A, this stone protrudes 0.30m outward into the space, and may have once accommodated a quern implement.

At its west end, Wall 34S terminates without bonding to the adjacent L-shaped Wall 48W.<sup>298</sup>

The latter wall outlines the west side of Room N13 (see Fig. 3), which abuts the outer/southern face of Wall 34S. With no evidence of a brick connection between the western end of Wall 34S and the perpendicular Wall 31E, it is possible that there was an entranceway to Room N27/2 at the southwestern corner of building unit N27.

The north–south oriented Wall 34E runs 2.65m perpendicularly from Wall 34S's western end and divides Rooms N27/2 and N27/3 into two distinct spaces. Because a facing plaster conceals the faces of Walls 34S and 34E, potential bonding between these two walls is not visible internally. However, from the denuded outer face of Wall 34S it is possible to observe a coursing pattern featuring the short ends of header bricks, which may represent the bonded masonry from 34E.

On the eastern end of Wall 34S the brickwork is truncated over a distance of 0.35m, the length of one stretcher brick (Pl. 28), eliminating evidence of potential bonding with perpendicular Wall 36E. Because of the truncation in the brickwork, an underlying brick course is visible and though it may appear to be the footing course of Wall 34S, such is actually not the case. This course belongs to an anterior building phase that comprises Wall 54N bonded to Wall 54E, running east–west and north–south respectively. Built on the top of levelled Wall 54N,<sup>299</sup> Wall 34S runs east–west according to the alignment of the earlier brickwork.

The total length of the southern perimeter side of building unit N27 measures 5.37m on the outside and 4.88m from the inside, from the western end of Wall 34S to the southeastern corner of Room N27/3.

#### F.2.1.1 Facing plasters of Wall 34S

There is no surface addition on the outer/southern face of Wall 34S. However, within room N27/2, the inner/northern face of the wall is fully covered with a smooth greyish sandy-silt wash with rare medium-size pebbles. To the east, the segment of Wall 34S bordering Room N27/3 shows two layers of render (see Pls. 29 and 30). The first con-

<sup>295</sup> BIETAK 1996, 24, fig. 2.

<sup>296</sup> Wall 34S culminates at 161.53m (*i.e.* top of incomplete brick capping the seventh course). The top of the seventh course from the bottom is levelled at 160.48m.

<sup>297</sup> The top of the sandstone quern element is levelled at 160.71m. The stone is 0.25m in height and the triangular portion projecting out of Wall 34S is 0.45 × 0.30 × 0.50m in dimension.

<sup>298</sup> Wall 48W outlines the west side of Room N13. Though it abuts the outer/southern face of Wall 34S, N13 is not part of building unit N27.

<sup>299</sup> The top of Wall 54N is levelled at 160.46m. Walls 54N, 54E and 54S belong to the Level 4 phase (Fig. 48). Features of this phase were not completely exposed in this quadrant of Square 180/2260.

ceals only the corner area of the wall face and is similar to the facing plaster covering the western section of the wall. An additional render made of a thicker greyish sandy-silt plaster lies partly atop the first render, veiling the four upper courses of Wall 34S.<sup>300</sup>

#### F.2.1.2 Pilaster of Wall 34S

There is no evidence of any pilaster associated with Wall 34S.

#### F.2.2 Walls 35W and 36E

The eastern side of building unit N27 is composed of two north–south oriented wall segments that are one brick thick: 35W and 36E. To the north, wall segment 35W runs perpendicular to northern perimeter wall 33N, to which it bonds. This wall segment is 1.15m long and made of bricks  $35 \times 17 \times 8$ cm in size. From the three intact brick courses, it is possible to observe a construction bond pattern which uses layers of mud brick stretchers, header bricks and occasional bull headers.<sup>301</sup> At intervals, flat sandstone elements (with an average diameter of 0.30m) are part of the layers of mud bricks. The footing course of Wall 35W overlays a 13cm thick layer of deposit that separates the footing bricks from a mud-plaster surface, N27F11E,<sup>302</sup> identified along the outer side of the northeastern perimeter wall.

Similarly aligned with Wall 35W, Wall 36E runs along the eastern edge of Room N27/3 and is preserved up 1.30m in length. Both ends of Wall 36E are missing, making it impossible to substantiate any observations about the bonding pattern between this eastern Wall 36E and its two related adjacent walls, 34S and 36N. Wall 36E is composed mostly of stretcher bricks  $37 \times 18 \times 10$ cm in size and its brickwork features two adjoining sections of different thicknesses. The northern section is 0.80m long and half-a-brick thick, while the southern section of the wall is 0.50m long and double skinned, *i.e.* one brick thick.<sup>303</sup> With a maximum height of three courses, 36E has a high point of 160.74m. Though the alignment shifts slightly to the west, 36E follows a similar

orientation to an underlying earlier wall, 54E. The level of Wall 36E's basal bricks thus coincides with the top of Wall 54E, ranging from 160.46m to 160.35m.

Between the two segments, no brickwork joins the southern end of Wall 35W to the northern end of Wall 36E, with a gap of 2.75m. Lying to the east of N27, this large opening might have been designed as an entranceway to the building unit's courtyard. As this opening would have been quite large, it is possible that the later addition of Wall 38E may have been constructed to reduce the size of the passage to 0.54m wide (IIF.4).

Combining wall segments 33N and 35W with the gap, the total outer length of N27's eastern side measures 5.50m. From the interior corner of Walls 33N and 35W to the east side room N27/3's south-eastern corner, the distance is 4.96m long.

#### F.2.2.1 Facing plasters of the eastern perimeter walls

The eastern faces of Walls 35W and 36E bear no surface addition. In contrast to their denuded outer faces, the inner/western faces of the walls show some remaining patches of facing plaster, with evidence of a render on the inside of Wall 35W's lower area and Wall 36E's upper area. The latter also features some traces of whitewash, which makes the wall surface appear pale in colour. Furthermore, black burn marks on this same wall are evidence of possible fire activities within the southeastern side room, N27/3.

#### F.2.2.2 Pilaster of the eastern perimeter walls

There is no evidence of any pilaster associated with the faces of Walls 35W and 36E.

#### F.2.3 Wall 33N

At the north of building unit N27, Wall 33N runs east–west. This wall is preserved to its full extent, 5.42m long (14 stretchers of  $33 \times 16 \times 8$ cm) and one brick thick. The thickness of this wall is the result of a building technique using a double skin wall consisting mostly of layers of stretcher bricks

<sup>300</sup> This additional plaster extends down Wall 34S from 161.24m to 160.85m.

<sup>301</sup> The top of Wall 35W's third course from the bottom is levelled at 160.65m and base of the wall at 160.35m. When the wall was first exposed in 2010, the fourth course was partially preserved, culminating at 160.75m.

<sup>302</sup> The top level of this surface ranges from 160.22–160.18m (IIF.6.1.2).

<sup>303</sup> The header brick of the top course lies perpendicular to the stretcher bricks underneath.

occasionally bonded to a course of header bricks. At some places in the basal course, brick headers are laid diagonally on edge. The three basal courses of 33N are fairly intact all along the wall,<sup>304</sup> and two parts of Wall 33N are preserved up to a height of six courses – there, 33N culminates at 161.22m and rises 0.67m above the coated floor of the courtyard.<sup>305</sup>

Despite the poor condition of the brickwork at the northwestern corner of building unit N27, it is still possible to conclude that the western end of Wall 33N was bonded to the western perimeter wall 33W, which runs perpendicular to it. In addition to evidence of bonding between 33N and 35W, excavation of the northeastern corner area of building unit N27 yielded additional information about the foundation of Wall 33N. From the outer/northern face of Wall 33N's eastern end, it is possible to observe that the one brick thick footing course runs atop half-a-brick thick Wall 51S.<sup>306</sup> This underlying wall belongs to an earlier phase of building, identified as Level 4 (Fig. 48).<sup>307</sup> The eastern end of Wall 51S is bonded to north–south oriented Wall 51E, which also bonds with Wall 51N at its northern end. Together, these three walls belonging to Level 4 encompass storage Installation N23. It is worth noting that during the Level 3 building phase, the construction of the northern perimeter wall of building unit N27 was aligned with the east–west oriented wall running underneath.

The masonry of Wall 33N features the use of two unusual building techniques. The first is the inclusion of a 0.60m long palm tree log, which was inserted longitudinally between the third and fourth course above Floor N27F12N along the inner/southern face of the wall,<sup>308</sup> probably to prevent the wall from cracking.<sup>309</sup> Near the northeastern corner of N27 another type of wooden structural device was identified. Here, bricks are arranged to

shape a kind of support case,<sup>310</sup> enclosing a vertical palm tree log of which only the bark remains. This vertical timber was probably used to strengthen the corner area<sup>311</sup> between the mud brick Walls 33N and 35W.

#### F.2.3.1 Facing plasters of Wall 33N

Very small patches of wall coating have survived on each face of Wall 33N.

#### F.2.3.2 Pilaster of Wall 33N

There is no evidence of any pilaster associated with Wall 33N. Due to the thickness of the double skin wall, a strengthening feature of this nature may have been considered unnecessary.

#### F.2.4 Walls 33W and 31E

The western perimeter of N27 is made of two distinct walls that both run north–south, but are not structurally bonded. Both Wall 33W to the north and 31E to the south are half-a-brick thick and made of running staggered stretcher bricks. Their bricks are of the medium format, with slight variation: Wall 33W is made of bricks 35 × 17 × 10cm in size and Wall 31E is made of bricks 36 × 18 × 9cm in size. The northern end of Wall 33W is bonded to the northern perimeter wall, 33N (IIF.2.3). At 3.53m long, Wall 33W is the longer of the two western segments and has a basal course of *c.* nine stretchers, but is not preserved more than a maximum of three courses in height.

To the south, beyond a short truncation in the masonry of Wall 33W,<sup>312</sup> Wall 31E is five brick courses high and no more than three stretchers long (1.05m). Because of the truncation, there is no visible trace of bonding between Walls 31E and 33W. There was probably no access point to Room N27/2 from the courtyard N27/1 because Wall 34N abuts against Wall 31E. However, between the southern

<sup>304</sup> The top of the third course from the bottom is levelled at 160.84m.

<sup>305</sup> Patches of the coated floor N27F12bR1 are levelled at 160.55m (IIF.6.2.1). From the truncation through the western end of Wall 33N, the baseline of its footing course is levelled at 160.40m.

<sup>306</sup> The base of Wall 33N (the top of Wall 51S) is levelled at 160.46m.

<sup>307</sup> BUDKA and DOYEN 2013, 172–174, fig. 3.

<sup>308</sup> The top of the timber log is levelled at 160.82m. For the use of wood in brickwork, see KEMP 2000, 88–90, fig. 3.4c; SPENCER 1979, 131–132.

<sup>309</sup> A wooden log employed as tie beam, stringer beam or bonding timber would have been “used in the same manner as layers of reed-matting” SPENCER 1979, 132.

<sup>310</sup> The “casing” culminates at 161.04m and encloses a vertical log *c.* 0.60m high. At the foot of the vertical log, the gravelled soil is levelled at 160.26m.

<sup>311</sup> KEMP 2000, 91.

<sup>312</sup> The gap is 0.45m long, the length of one missing footing brick.

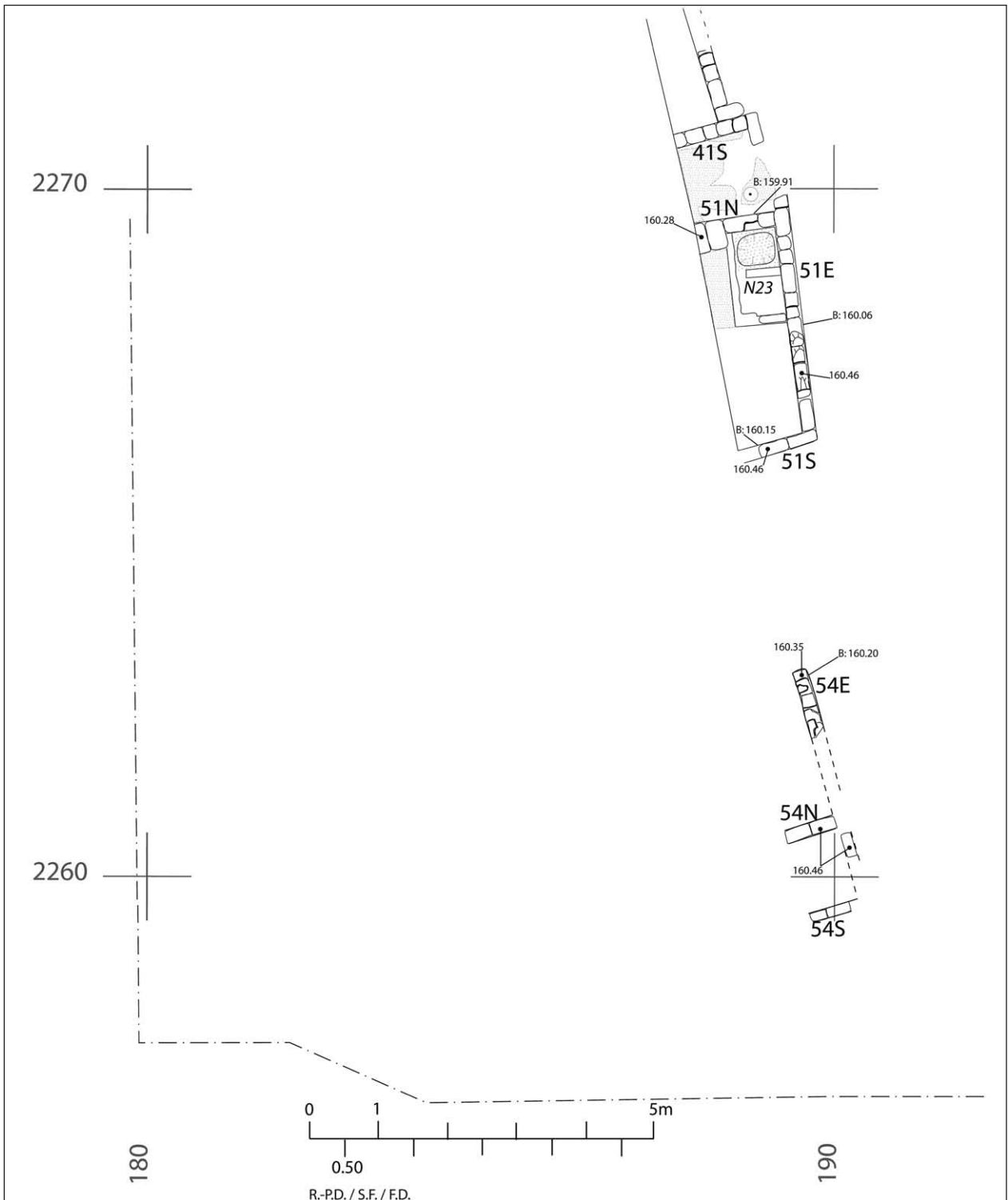


Fig. 48 Square 180/2260, plan of structures assigned to Level 4, including wall levels

end of Wall 31E and perimeter wall 34S is a space 0.65m long and the lack of brickwork between the two perpendicular walls might have corresponded to the entranceway to side room N27/2.

The total outer length of the western perimeter side of building unit N27, composed of both Walls 33W and 31E, measures 5.70m long. The total inner length, from the northwestern inner corner of

the main court N27/1 to the southwestern corner of Room N27/2, is 5.35m long.

#### F.2.4.1 Facing plasters of the western perimeter walls

A few patches of wall coating remain on the western/outer face of Wall 33W. However, there is no plaster addition on either face of Wall 31E.

#### F.2.4.2 Pilaster of the western perimeter walls

There is no evidence of any pilaster projecting from the faces of Walls 33W and 31E.

### F.3 Description of N27's internal walls

(Fig. 47)

#### F.3.1 Wall 38E

The north–south oriented Wall 38E is located immediately west of the eastern boundary of building unit N27. The substantially broad wall features four wythes and is 0.60m thick. Divided by a gap 0.50m long, the wall is therefore composed of northern and southern segments of brickwork, respectively 1.35m and 0.40m long. The northern wall segment of 38E is preserved up to a height of five courses and culminates at 160.82m, while its base is levelled at 160.33m. In comparison, the southern segment is slightly taller, with six intact courses whose top is levelled at 160.96m and base at 160.40m. Bricks of Wall 38E are  $36 \times 18 \times 9$ cm in size and the coursing pattern with header bricks crossing stretcher wythes is clearly evident (Pl. 29).

Both portions of Wall 38E lie above a layer of gravelled soil.<sup>313</sup> At either end of the wall, the brickwork abuts the adjacent walls: the southern segment abuts the north face of Wall 36N, while the outer lower courses of the north wall portion abuts the southern end of eastern boundary Wall 35W.

##### F.3.1.1 Facing plaster of Wall 38E

As far as one can examine the outer/eastern face of Wall 38E in its poor condition, there is no evidence of any surface addition. On the other hand, both western/inner faces of the wall segments bear a

facing plaster. The 2–3cm thick plaster of the southern wall segment also covers the area of the corner joining this wall to adjacent Wall 36N. On northern portion of 38E, the bonding material separating the second and third courses from the top is pointed and extruded.<sup>314</sup>

##### F.3.1.2 Pilaster of Wall 38E

As in the case of Wall 33N, there is no evidence of any pilaster associated with Wall 38E.

#### F.3.2 Wall 39W

Wall 39W runs north–south, parallel to and 0.60m west of eastern Wall 38E. This wall is 1.50m long, half-a-brick thick, and made of stretcher bricks that are  $36 \times 18 \times 9$ cm. Built in the eastern half of the courtyard, 39W lies 0.80m south of perimeter wall 33N, c. 3.40m from the inner face of perimeter wall 33W and 1.20m north of the outer face of internal/dividing wall 36N.

Wall 39E is preserved to a height ranging from two to three brick courses.<sup>315</sup> An occupational deposit, (N27De2d), hides the footing course of Wall 39W, which itself overlies the gravelled soil. This deposit layer is in turn concealed below a mud-coated surface.<sup>316</sup>

##### F.3.2.1 Facing plaster of Wall 39W

While there is no evidence of any surface addition on the western face of Wall 39W, there is occasional extruded bonding material between the brick joints. On the eastern side of this wall, however, a 2–3cm thick facing plaster covers almost the entire wall face. This plaster consists of a smooth greyish sandy-silt wash with rare medium-size pebbles and runs down to the floor's coated surface, with which it merges.<sup>317</sup>

##### F.3.2.2 Pilaster of Wall 39W: N27Pil1

A stretcher brick ( $36 \times 18 \times 9$ cm) runs along and abuts the western side of 39W's basal course, the top of which is levelled at 160.64m. Situated 0.30m and 0.80m from the northern and southern ends respectively, this brick may be identified as the re-

<sup>313</sup> The top of the gravelled soil layer underlying Wall 38E varies from 160.40m (below the southern wall segment of 38E) to 160.30m (below the northern wall segment of 38E).

<sup>314</sup> The top level of the extruded bonding material varies from 160.70–160.67m.

<sup>315</sup> The top of Wall 39W is levelled at 160.71m and the baseline of the second course from the top at 160.48m.

<sup>316</sup> Between Walls 39W and 38E, the top of the mud-coated surface [N27F12cR1](#) is levelled at 160.44m (IIF.6.2.1).

<sup>317</sup> The point of connection between the coated floor and the plastered basal course of Wall 39W is levelled at 160.49m.



maining basal stretcher of Pilaster N27Pil1. At the basal level of this buttressing feature, the stretchers from both Wall 39W and N27Pil1 run parallel north–south and are not structurally bonded. A lump of facing plaster still adheres to the corner between the short northern face of N27Pil1 and the western face of Wall 39W, attesting to a connection between the wall and its pilaster.

### F.3.3 Wall 34N

Outlining the northern side of Room N27/2, Wall 34N is half-a-brick thick (0.18m) and 2.40m in length. This wall follows an east–west orientation, running parallel to the southern perimeter wall 34S. In the construction of Wall 34N, layers of mud brick stretchers  $38 \times 16 \times 7\text{--}8\text{cm}$  in size were used in the traditional running bond pattern. The preserved height of Wall 34N ranges from one to four brick courses, with the maximum elevation levelled at 160.99m, *c.* 0.32m above a coated surface overlaying an occupational deposit.<sup>318</sup>

The eastern end of Wall 34N is clearly bonded to the northern end of the adjacent perpendicular wall, 34E. At the opposite end of the wall, only the footing course of the western end remains intact. At this point, the half-stretcher brick that forms the end of Wall 34N abuts the eastern face of adjacent perpendicular Wall 31E, confirming that Walls 34N and 31E are not bonded.

#### F.3.3.1 Facing plaster of Wall 34N

The outer/northern face of Wall 34N has no coating. In contrast, 34N's inner/southern face is covered in a smooth greyish sandy-silt wash with rare medium-size pebbles. This wall coating covers the entire face of the wall, connecting the base of the wall to the floor surface in the side room, N27/2 (IIF.6.2.2). In the northeastern corner of N27/2, however, this facing plaster does not merge with the surface addition of the adjacent perpendicular Wall 34E. These two walls are thus structurally bonded (IIF.3.3), but their respective plasters were not applied at the same stage.

#### F.3.3.2 Pilaster of Wall 34N

There is no evidence of any pilaster associated with Wall 34N.

### F.3.4 Wall 34E

North–south oriented Wall 34E divides the southern part of building unit N27 into two side rooms, delineating the eastern side of Room N27/2 and the western side of Room N27/3. Like 34S and 34N, the walls to which it is bonded, 34E is also half-a-brick thick. Wall 34E is preserved to a height ranging from four to seven brick courses and culminates at 161.48m.<sup>319</sup> Made of *c.* five running stretcher bricks that are  $38 \times 16 \times 7\text{--}8\text{cm}$ , Wall 34E is 1.81m in length.

Though Wall 34E is centred to Wall 34S, located 2.30m from either end, it is not perpendicular to the southern perimeter wall. Rather, Wall 34E veers slightly to the west, with the northern end of the wall culminating 2.50m from Wall 36E and 2.22m from Wall 31E. Within the southwestern inner corner of Room N27/3, storage bin N27A was constructed parallel to the eastern face of dividing wall 34E (IIF.5.3).

#### F.3.4.1 Facing plaster of Wall 34E

Both the eastern and western faces of Wall 34E have surface treatment composed of a smooth greyish sandy-silt wash with rare medium-size pebbles. At the southeastern corner of Room N27/2, the facing plaster continuously covers both faces of Walls 34E and 34S. Similarly, in the southwestern corner of Room N27/3, the surface addition on the opposing face of Wall 34S completely covers both corner walls.

#### F.3.4.2 Pilaster of Wall 34E

There is no evidence of any pilaster associated with Wall 34E.

### F.3.5 Wall 36N

(Pl. 29)

East–west oriented Wall 36N forms the northern side of Room N27/3 and is half-a-brick thick, made of bricks  $38 \times 16 \times 7/8\text{cm}$  in size. Wall 36N is 1.97m long, about five running mud brick stretchers. The preserved height of this wall ranges from three to six brick courses above the pebble fill.<sup>320</sup> A lower brick course is only visible through the eastern truncation of Wall 36N and might be the footing course.<sup>321</sup>

<sup>318</sup> The top of this surface coating patch is levelled between 160.70–160.66m along the north face's basal courses and at 160.68m along the south face of Wall 34N.

<sup>319</sup> The base of Wall 34E is levelled at 160.58m.

<sup>320</sup> The top of Wall 36N culminates at 160.99m. The baseline of its lowest course varies from 160.62m (west end of the wall) to 160.47m (east end of the wall).

<sup>321</sup> At this point, the baseline of the footing course is levelled at 160.35m.

Due to its poor state of preservation, the east end of Wall 36N unfortunately provides no evidence of bonding to the adjacent perpendicular wall, 36E. Also at the east end of Wall 36N, the connection between the southern wall segment of Wall 38E and the northern face of this wall is preserved. Though these walls abut there is no structural tie between them, but only a plaster joint between the west face of 38E and the north face of 36N. To the west, the wall is in a better state, probably thanks to the reinforcing Pilaster N27Pil2.

#### F.3.5.1 Facing plaster of Wall 36N

The facing plaster is only partially intact on either side of Wall 36N. At the corner joining 36N's eastern end with the abutting southern wall segment 38E, the thick plaster is similar to that identified also on the western face of adjacent Wall 38E. On the northern face of 36N, this plaster extends from the second course to the fifth course from the top, *i.e.* up to 0.40m in height.

To the west of the corner with 38E, the northern face of Wall 36N has no surface addition over the brick courses. On the opposite face, surface addition is confined to the area of the basal courses of both Wall 36N and Pilaster N27Pil2 (see IIF.3.5.2 and IIF.6.2.3).

#### F.3.5.2 Pilaster of Wall 36N: N27Pil2 (Pl. 29)

The western end of Wall 36N is reinforced on the southern side with a pilaster, N27Pil2. This pilaster stands to the east side of the entranceway to Room N27/3, 0.55m west of the northwestern corner of neighbouring Room N27/2.

Perpendicular to Wall 36N, narrow Pilaster 2 is half-a-brick thick (16 × 35cm) and has a preserved height of three courses of bricks (27cm). The top course of N27Pil2 is levelled at 160.98m and consists of a squarish brick piece. The pilaster's second course from the top is bonded to Wall 36N, as can clearly be seen from the western side of the feature where the brick protrudes perpendicularly from the southern face of the wall. The final course is also a brick piece, running against the stretcher brick of the wall's corresponding course. Unusually, this lowest brick overlies the occupational deposit of Room N27/3, (N27De2f). Therefore, N27Pil2 did not ex-

tend down to the footing of Wall 36N itself, with the two lowest courses concealed by the deposit and currently hidden by a thick, lipped out plaster feature.<sup>322</sup>

#### F.4 Layout and dimensions of N27 building unit (Figs. 47 and 50)

The freestanding building unit N27 is a quadrilateral roughly square – with a slightly longer western side and three other nearly equal sides. The northern wall of N27 runs parallel to and 10.50m away from the northern Enclosure Wall N4. Its eastern side runs parallel to the nearby N12 building unit, across a lane 0.90m wide. Like its neighbours, the location of N27 indicates that its layout falls into the pattern of SAV1's settlement grid.

The external surface area<sup>323</sup> of N27 is 30.22m (5.37 × 5.50 × 5.42 × 5.70m) while the internal surface area is 24.55m (4.88 × 4.96 × 4.63 × 5.35m) (see Fig. 14).

Possibly accessed through its eastern side (IIF.2.2), the layout of building unit N27 consists of one large courtyard (N27/1) with two adjacent small side rooms located at the rear. The division of the building is as follows:

- The larger northern section N27/1 is an irregular quadrilateral that measures 4.15 × 3.33 × 4.63 × 3.60m, *c.* 15.42m in internal surface area. In the eastern part of this court, the internal wall 39W possibly subdivided this open air area.
- N27/2, the southwestern side room, measures 2.25 × 1.44m or 3.24m and is equipped with sandstone grinding device.
- N27/3, the southeastern side room, measures 2.40 × 1.40m or 3.36m and includes the storage bin Installation N27A and a possible sandstone quern implement.

Within the construction of the eleven walls of building unit N27, six different brick formats have been identified. At the eastern perimeter wall, the bricks of Wall 36E (37 × 18 × 10cm) fall into the large format category while the bricks of Wall 35W are 35 × 17 × 8cm in size, and thus belong to the medium format category. Only bricks from the northern perimeter wall 33N (33 × 16 × 8cm) are ascribed to the small format category, while the bricks of both western perimeter wall segments – 33W (35 × 17 × 10cm) and 31E (36 × 18 × 9cm)

<sup>322</sup> The top of the lipping out plaster feature is levelled at 160.67m and its base at 160.55m.

<sup>323</sup> The external surface area encompasses the thickness of the perimeter walls.

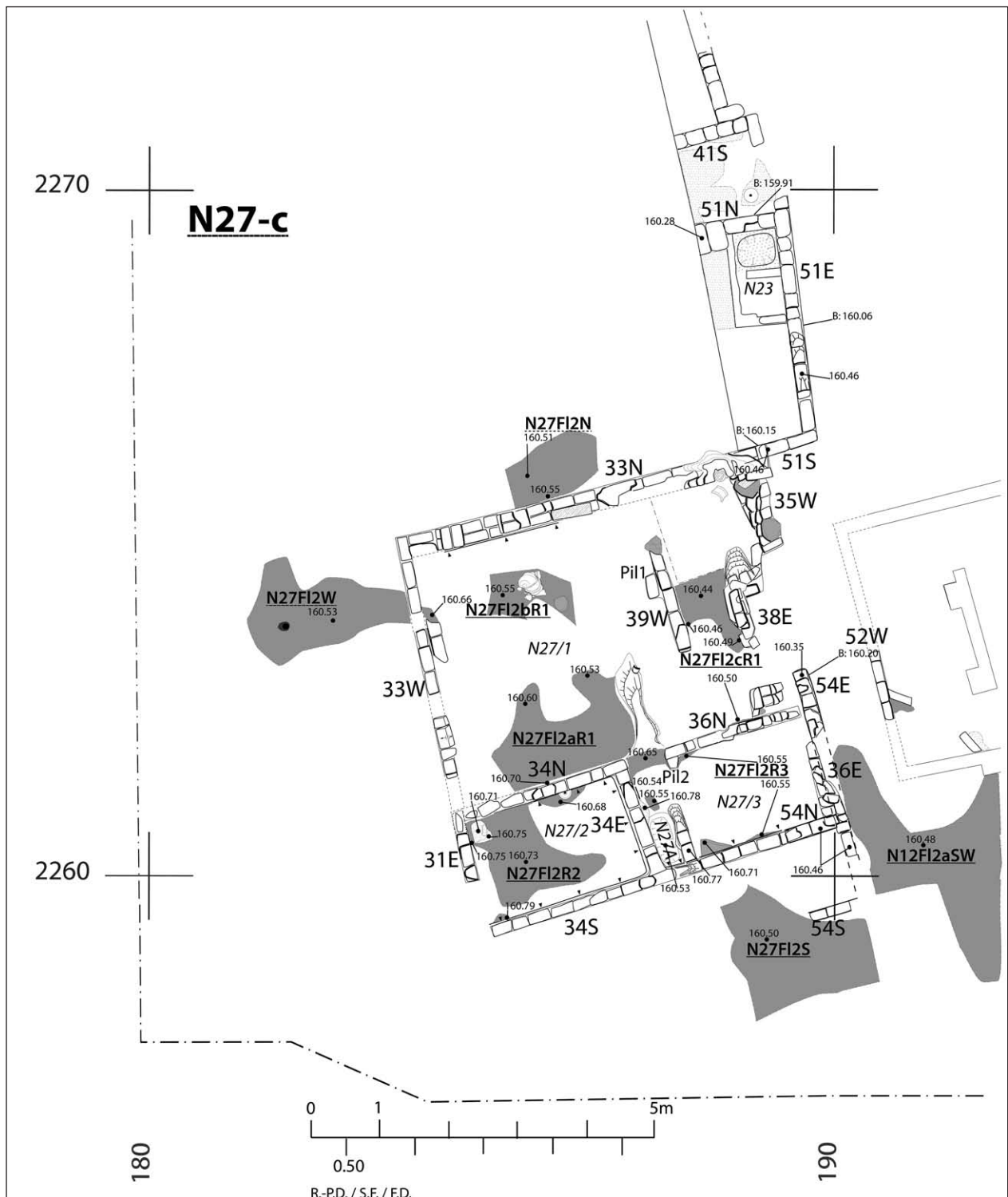


Fig. 49 Plan of Phase N27-c: levels of installations and floors 2

– also fall into the medium format category. Bricks of the same size ( $36 \times 18 \times 9\text{cm}$ ) were used for internal walls 38E and 39W, also in the medium format category. Finally, the southern perimeter wall (34S) and the three internal walls delineat-

ing the side rooms (34N, 34E and 36N) were built with bricks of a similar size in the medium format category, *i.e.*  $38 \times 16 \times 7/8\text{cm}$ . The latter case demonstrates that the same type of bricks were used indifferently, without particular consideration for

the type of wall, either perimeter or internal. It is worth noting that some bricks from Wall 36N display longitudinal digit prints, the only representation in N27 of finger marks printed in the brick or grooved in the horizontal bedding mortar.<sup>324</sup>

## F.5 Description of N27 installations

(Fig. 49)

### F.5.1 Courtyard N27/1

No specific installation was documented within the courtyard N27/1. However, it should be mentioned that, subsequent to the five campaigns 2008–2012, some east–west oriented mud brick footing courses have been revealed in the middle of the courtyard as the result of wind erosion.

### F.5.2 Side room N27/2

Strictly speaking, there is no properly built installation within the southwestern side room of building unit N27. Nevertheless, the presence of a stone associated with a small flat pestle in the northwestern corner of N27/2 attests to milling activities. The flat stationary half broken saddle stone is ovoid-shaped, 30cm in diameter and *c.* 5cm thick. This sandstone grinding device features a red ochre top surface. The schist pounder found on the top measures 17 × 6 × 3cm.

The bottom of the grindstone is levelled at 160.71m and the surrounding edges at 160.75m. This milling device was found stuck in an intact patch of mud-coated floor surface N27FI2R2, also levelled at 160.75m. The rounded northern edge lies near the western end of Wall 34N, while the straight western edge runs 5–9cm from the foot of Wall 31E.

### F.5.3 Side room N27/3: N27A

(Pl. 30)

The north-facing Installation N27A is located in the southwestern corner of Room N27/3. Built against the eastern face of dividing wall 34E, this installation is a sub-rectangular mud-coated bin, with inner dimensions of 0.68 × 0.25m and a depth of 0.24m.<sup>325</sup> The north–south oriented eastern boundary of storage bin N27A runs parallel to and 0.30m from Wall 34E. The length of this low retaining wall is two to

three stretcher bricks (0.85m), with only two brick courses (0.24m) intact, at its southern end. At the northern end, only a bedding joint mortar attests to the former presence of the lower brick course.

The eastern brick boundary of N27A is plastered on both faces. Where it abuts the inner face of building unit N27's southern perimeter wall (34S), an upper render lips out from the wall (IIF.2.1.1). The construction of the boundary wall thus belongs to a stage that predates the addition of the facing plaster partly covering the four upper courses of Wall 34S.

The floor of Installation N27A is covered with a mud plaster surface, levelled at 160.53m. This floor plaster coating was the first layer to be spread within the feature, with both the facing plaster of the boundary wall's inner/western side and the coating<sup>326</sup> at the northern edge applied at a later stage. In the corner joining Walls 34S and 34E, the basal courses bear an unusual type of render made of a coarse, friable and orange sandy-silt material.<sup>327</sup> This coating rims the south and west sides of the bin and lips out from the walls over N27A's plastered floor. Compared to the other facing plasters coating the walls of SAV1 North, the plastering material of N27A's sides is quite remarkable. This rough reddish material also shows the presence of charcoal and chalky particles, which may be related to either the type of storage within N27A or to heating activity inside the bin.

East of Installation N27, another feature, a possible quern implement, might be related to the activity inside N27/3. A triangular portion of a sandstone quern inserted in the brickwork of wall 34S projects out of the wall (II.F.2.1); it might have been used for the preparation of products before their conditioning within the nearby bin.

## F.6 Coated surfaces associated with N27

(Figs. 47, 49 and 51)

### F.6.1 Outside N27

#### F.6.1.1 To the south of N27

The partial excavation to the southwest of N27 did not expose 3.70m of the base of 34S, making discussion of potential flooring impossible. Where the

<sup>324</sup> This finger mark falls into the Type L category (IIA.3).

<sup>325</sup> See similar installations within building unit N12 (IID.5.2.1 and IID.5.3.2).

<sup>326</sup> The top of this coating at the northern entrance of N27A is levelled at 160.58m.

<sup>327</sup> The top of the orange rim coating is levelled at 160.78m and the base at 160.54m.

Building Unit N27		Length (cm)	Width (cm)	Thickness (cm)	Total l + w + t	Format
<b>Perimeter walls</b>	34S	38	16	7/8	61.5cm	medium
	35W	35	17	8	60cm	medium
	36E	37	18	10	65cm	large
	33N	33	16	8	57cm	small
	33W	35	17	10	62cm	medium
	31E	36	18	9	63cm	medium
<b>Internal walls</b>	38E	36	18	9	63cm	medium
	39W	36	18	9	63cm	medium
	<b>N27Pil1</b>	36	18	9	63cm	medium
	34N	38	16	7/8	61.5cm	medium
	34E	38	16	7/8	61.5cm	medium
	36N finger mark Type L	38	16	7/8	61.5cm	medium
	<b>N27Pil2</b>	35	16	7/8	58.5cm	small

Fig. 50 Walls and pilasters of N27: brick sizes

base of the eastern end was exposed, it appears that 34S was probably built on a brick course identified as Wall 54N and belonging to a former construction (IIF.2.1). South of the eastern end of Wall 34S, small patches of mud floor coating material adhere to the gravelled surface over the 1m area bounded by walls from an earlier phase: 54N, 54E, and 54S (Pl. 29). Below these floor patches, the gravelled surface is levelled at 160.46m. In contrast to the heavily truncated floor surface in this area, a fairly intact plaster Floor N27F12S lies further south of Wall 54S, levelled at *c.* 160.50m; this floor may have once formed a continuous surface covering the entire outer area.

#### F.6.1.2 To the east of N27

To the southeast, near the southern end of Wall 36E, is a *c.* 1.5–2m span of the mud-plaster Floor N12F12aSW. This floor, levelled at 160.48m, partly covers the lanes both south and west of building unit N12<sup>328</sup> and abuts the top of Pilaster N12Pil4's footing brick. Because of truncation, there is no evidence of a connection between this mud-plaster floor and the outer/eastern side of Wall 36E. How-

ever, within the broken areas it is possible to identify a *c.* 12cm thick gravel deposit, (N27De2a). This gravel layer may correspond to Deposit (N12De2a) underlying the coated surface N12F12aSW, found at the southwestern corner of building unit N12 (IID.6.1.1 and Fig. 39).

To the northeast, along the eastern face of Wall 35W is lower coated floor surface, whose top level ranges from 160.22m to 160.18m. This 2–3cm thick surface N27F11E covers a gravelled soil and underlies the layer of occupational deposit (N27De1a) on which perimeter wall 35W was later built.<sup>329</sup> This same occupational deposit was also identified below both segments of Wall 38E.<sup>330</sup> Moreover, Floor N27F11E and its overlying Deposit (N27De1a) could have the same phasing pattern as Floor N12F11aW identified eastward outside N12, and Deposit (N12De1c), below front Wall 52W (see Fig. 51).

#### F.6.1.3 To the north of N27

To the east of the later Wall 37, a segment of coated surface N27F12N runs north of the outer/northern face of Wall 33N. This floor is measured at an aver-

<sup>328</sup> A north–south oriented lane separates the eastern side of N27 from the western side of N12.

<sup>329</sup> The top of Deposit (N27De1a) is levelled at 160.35m below Wall 35W.

<sup>330</sup> The top of Deposit (N27De1a) is levelled at 160.33m below the north segment of Wall 38E and at 160.40m below its south segment (Pl. 29).

Outside, south of N27	Outside, east of N27 (south)	Outside, east of N27 (north)	Outside, west of N12	Outside, north of N27	Outside, west of N27	Inside, across N27/1	Inside, across N27/2	Inside, across N27/3	Building phases of N27
								Surface Level 1 Brick rubble	
								Level 2 Sandy deposit	
								<u>N27F13R3</u>	
								(N27De3a)	
<u>N27F12S</u>	<u>N12 F12aSW</u> (N27De2a)		<u>N27F12N</u>	<u>N27F12R1</u>	<u>N27F12W</u>	<u>N27F12R2</u>	<u>N27F12R3</u>		
(N27De2a)			(N27De2b)	(N27De2d)	(N27De2c)	(N27De2e)	(N27De2f)		
<b>34S (west)</b>	<b>36E</b>	<b>35W</b> (N27 De1a)  <u>N27 F11E</u>	<b>52W</b> (N12 De1c)  <u>N12 F11aW</u>	<u>N27 F11N</u>  <b>33N (west)</b>	<b>33W</b> <b>31E</b>	<b>34N</b> <b>34E</b>	<b>36N</b>		<b>N27-c</b> <b>Building phase</b>
<b>34S (east)</b>									
<b>51N (Level 4)</b>	<b>54E (Level 4)</b>			<b>51S (Level 4)</b>					<b>Level 4</b>
Gravel backfill									

Fig. 51 Floors, fills and building phases of N27

age level of 160.51m and abuts the basal course of N27's northern perimeter wall. Although N27F12N is partly truncated – less than 1m remains – an intact portion of this surface does lip out and connect to the wall's northern face at 160.55m. This surface covers the occupational deposit (N27De2b) that hides the footing course of Wall 33N.

To the west of Wall 37, there is also evidence of a few lipping mud features curving out from northern face of Wall 33N, the top levelled at 160.45m. These probably indicate the former presence of mud-coated surface N27F11N overlying the gravelled soil.

Where the footing course has been exposed at the eastern end of Wall 33N, there is clear evidence of the earlier underlying Wall 51S (IIF.2.3). At the western end of Wall 33N, the footing course runs upon gravel, levelled at *c.* 160.40m.

#### F.6.1.4 To the west of N27

A distinct patch of coated surface N27F12W, *c.* 2m in surface area, lies outside the western side of building unit N27. This surface is truncated along Wall 33W, but a mud feature lipping out from the base of the outer face of the wall probably corresponds to the floor. Against the basal stretcher of Wall 33W, the upper part of the mud feature is levelled at 160.67m and its base at 160.60m while the top of Floor N27F12W ranges from 160.53m to 160.49m. The floored surface N27F12W overlies the occupational deposit (N27De2c) that conceals the footing bricks of Wall 33W.

### F.6.2 Inside N27

#### F.6.2.1 Courtyard N27/1 (Pl. 28)

A mud-plaster floor extending across the full width of courtyard N27/1 is preserved in patches that each range from 1–3m in surface area. Of these subunits, the three most extensive were identified as follows:

- N27F12aR1 lies in the southwestern quadrant of N27/1, in front of dividing wall 34N. Its top level varies from 160.53m in the centre of the court to 160.70m at the juncture point with the base of Wall 34N's outer/northern face.

- In the northwestern quadrant of the court N27/1, the top of the floored surface N27F12bR1 is levelled at 160.55m. To the west of this surface, truncation precludes identification of any connection between the floor and the base of Wall 33W's inner face. Nevertheless, a small piece of flooring material adheres to this wall's inner face at 160.66m and may be a remaining piece of Floor N27F12bR1.
- In the east of N27/1 is mud-coated floor surface N27F12cR1, lying between Walls 38E and 39W. The top of this floor is levelled at 160.44m, while its points of juncture with the facing plaster of either wall varies from 160.49m to 160.46m. On the northern face of Wall 36N, 1.20m south of Wall 39W, the facing plaster extends to the base of the fifth brick course from the top of this wall,<sup>331</sup> where it curves out at its lowest point. This feature, levelled at 160.50m, may correspond to the juncture between the facing plaster on the wall and the coated floor surface N27F12cR1, now lost alongside Wall 36N.

In the places where Floor N27F12R1 is truncated, it is possible to identify (N27De2d), which conceals the footing course of the walls encompassing the court.

#### F.6.2.2 Side room N27/2

In the southwestern corner of building unit N27, a large piece of mud-coated surface was found intact on the gravelled ground, extending across side room N27/2. This surface N27F12R2 covers an area of over 1m, *i.e.* roughly half the ground area within Room N27/2. Unlike the other floor material inside and outside of different building units of SAV1 North, surface N27F12R2 is not truncated along the wall faces. One can thus see clear evidence of this coated floor in close connection to the facing plaster running down the walls, which is especially visible in the southwestern and northwestern corners of N27/2<sup>332</sup> and along the inner face of the internal wall 34N (IIF.3.3.1).<sup>333</sup>

The phases of flooring for Room N27/2 are most likely the same as the courtyard N27/1.<sup>334</sup> Floor N27F12R2 overlies gravelled deposit accumulated within the boundary of N27/2. On the northern face,

<sup>331</sup> This point, at the base of the fifth course from the top, is levelled at 160.50m.

<sup>332</sup> At the interior southwestern corner of N27/2, surface N27F12R2 is levelled at 160.79m. At the interior northwestern corner of N27/2, this surface is levelled at 160.75m.

<sup>333</sup> Along the southern face of Wall 34N, surface N27F12R2 is levelled at 160.68m. This floored surface stretches below a tall footed offering dish (N/C 605, III.5.4).

<sup>334</sup> Cf. coated surface N27F12aR1 (IIF.6.2.1).

the footing course of Wall 34N is visible where the courtyard's coated Floor N27F12aR1 is truncated, at the northeastern outer corner of the room. When applying this evidence to the interior of N27/2, it may be determined that the gravelled deposit (N27De2e), found below Floor N27F12R2, is *c.* 10cm thick and masks the footing course of the walls.

As with courtyard N27/1, Room N27/2 was not excavated beyond the gravelled level of (N27De2e), so the character of the deposits underlying the footing courses of the walls is unknown.

### F.6.2.3 Side room N27/3

In Room N27/3, the uppermost fill consisted of layers of brick rubble (*i.e.* "Level 1")<sup>335</sup> and sandy deposit (*i.e.* "Level 2")<sup>336</sup>. Within this sandy deposit, the decorated squat jar N/C 494<sup>337</sup> was discovered intact, except for a half-broken rim (Fig. 81). The base of the jar was found on a thin mud surface levelled at 160.81m. Surface N27F13R3 is poorly preserved in the area of the inner southwestern corner of N27/3 and otherwise lost in the rest of the room. Considering Floor N27F13R3 with an altitude that slightly corresponds to the altitude of the second render over the adjacent wall 34S's lower end (IIF.2.1.1),<sup>338</sup> a possible phasing relation might be suggested; when the second render was applied over the southern face of Wall 34S, this render extended down to the level of Floor N27F13R3. The latter also separates the sandy deposit from an earlier accumulated layer of debris with stone pieces, (N27De3a).

Deposit (N27De3a) is *c.* 25cm thick. It overlies an additional mud-coated floor surface N27F12R3, which in turn overlies a gravelled deposit. The lower Floor N27F12R3 is heavily truncated all across Room N27/3, with only a few patches visible north of storage bin N27A, in the area of the entranceway to N27/3 (Pl. 30).<sup>339</sup>

In addition, within side room N27/3 the northern/inner face of Wall 34S shows the typical plastering method, with the lower part of the facing plaster lipping out from the wall. Levelled at 160.55m, this curved-out feature may indicate the former presence

of Floor N27F12R3, which was connected to the base of Wall 34S. A similar feature concealing the basal courses of Wall 36N on its southern face (IIF.3.5.2) is also levelled at 160.55m.<sup>340</sup> Furthermore, the courtyard's Floor N27F12cR1 also once joined the northern base of Wall 36N at 160.50m (IIF.6.2.1). Given the analogous levels of the curved-out wall plasters, it can be supposed that Floors N27F12R3 (inside N27/3) and N27F12cR1 (outside N27/3 and within the courtyard N27/1) may have been completed at the same time. Coated Floor N27F12R3 was laid upon Deposit (N27De2f), which hides the footing course of walls bounding Room N27/3. Inside N27/3, the sequence of Floor N27F12R3 on the top of Deposit (N27De2f) may also correspond to the sequence identified outside the southeastern corner of the building, *i.e.* N12F12aSW over (N12De2a).

### F.6.3 Building phases of N27 (Fig. 51)

The walls of building unit N27 were only exposed to the footing courses on the eastern side of the building, thereby providing direct evidence of the material underlying the eastern end of Wall 34S, as well as Walls 36E, 38E, 35W and the eastern end of Wall 33N. From this it is seen that the perimeter walls 34S, 36E and 33N were clearly built on the top of existing brickwork (*i.e.* Walls 54N, 54E and 51S respectively), which belong to the earlier Level 4 building/occupation phase.<sup>341</sup> On the other hand, both Walls 35W and 38E were constructed on Deposit (N27De1a), which overlies the muddy trampled surface N27F11E. It should be noted that such an arrangement is also seen east of N27, below the footing course of N12's perimeter wall, 52W.

By extrapolation, it may be thus tentatively concluded that all the perimeter and internal walls of N27 date to Phase N27-c. Subsequently, the development of occupation layers (N27De2a-f) concealed the footing courses of Walls 34S, 36E, 33N, 33W/31E, 39, 34N, 34E and 36N, as seen in many places both outside and inside N27. There are also several remnants of flooring material N27F12, which

<sup>335</sup> This pile of brick rubble is over 0.50m thick, from *c.* 161.50m to 160.98m.

<sup>336</sup> The top of the sandy deposit is levelled at 160.98m.

<sup>337</sup> The top of N/C 494 is levelled at 160.98m and base at 160.81m. For this jar see MIELLÉ 2011–2012, fig. 5.2 and in the present volume, III.5.4.

<sup>338</sup> This additional/second plaster extends down to Wall 34S, from 161.24–160.85m.

<sup>339</sup> Here, the top of the mud-coated surface N27F12R3 varies from 160.65m (entranceway) to 160.55m (north of N27A's northern rim).

<sup>340</sup> The curved-out feature on Wall 34S (inside N27/3) is levelled at 160.55m and a similar feature on Wall 36N (outside N27/3) is levelled at 160.50m.

<sup>341</sup> BUDKA and DOYEN 2013, 174, fig. 3.



were laid over the earlier occupation deposit (Fig. 49). This flooring phase may also coincide with the wall-plastering phase, as indicated by intact points of connection between floor and facing plaster at the top of the footing bricks of the walls.

Within Room N27/3 it is possible to identify an additional layer of Deposit 3. This layer, a demolition stage that developed over Floor N27F12R3 (at present truncated) was later concealed by Floor N27F13R3. There is no clear evidence of relation between this upper floor and a second building phase of N27, but this sequence of flooring may be concomitant with the refreshment of the facing plaster on the room's interior southwestern corner.

### G CONCLUDING REMARKS ON THE ARCHITECTURE AT SAV1 NORTH

On the basis of the architectural analysis of the five building units assigned to Level 3 at SAV1 North, it can be stated that N24, N25, N12, N26 and N27 pertain to a rectilinear type of architecture with a planned housing system. Even though none of the exposed building units is of the same size or plan, all are arranged according to a loose and detached pattern of spatial distribution. This pattern reveals a clear alignment oriented along the town's northern enclosure wall (N4) and thus in compliance with the general pattern of the settlement grid in SAV1, corresponding with the southern sector of the Pharaonic town.

The building units of SAV1 North from Level 3 have been assessed here with regards to the different aspects of building techniques. Firstly, conclusions are drawn with respect to the size and disposition of the bricks. The building units were constructed with mostly narrow, half-a-brick thick walls. However, the size of the bricks themselves seems not been related to a particular purpose, wall, pilaster or installation. In other words, the distribution in SAV1 North does not imply that a particular size of brick – small, medium or large – was necessary to build a particular type of wall, be it perimeter or internal.

Secondly, from the study of the relationships of the walls and pilasters, both in the bonding and in successive wall plastering and floor coating, information can be gleaned as to the different phases of building and occupation. The gravel backfill substratum is evidence of human activity prior to

the construction phases N24-b, N25-b, N12-c and N26-c, while N27-c partly sits on walls belonging to an earlier building phase, Level 4.<sup>342</sup> The earliest construction stage for the Level 3 units could start with the perimeter and internal walls (N24-b, N12-c, N27-c), with one of the perimeter walls (N25-b) or with perimeter walls and two of the inner walls (N26-c). It is also possible to ascribe the construction of Enclosure Wall N4 and its external interlocked small Brick Tower N3 to the earliest building phase of Level 3. The floors designated as "1" for each unit belong to this first building phase. The second building phase attests to various changes and additional installations. Within N24, phase N24-a shows the construction of two extra segments of walls: one extends the span of the northern perimeter wall and the other links the two parts of the western perimeter masonry. Modification of the access pattern may potentially result from these brickwork additions. For building unit N25, phase N25-a features the construction of the northern and eastern perimeter walls. Within N12, three installations – a storage bin, a storage pit, and a quern emplacement – belong to the second building phase N12-b, while in N26 the second stage of construction (N26-b) is represented by the building of additional internal walls to delineate the western side rooms. The secondary building phases N24-a, N25-a, N12-b, and N26-b are all connected by a new sequence of flooring, designated in each unit as Floor 2. By contrast, from the case study of N27, it seems that this Floor 2 may rather correspond to a refreshment of the floor, without evidence of a new building stage. A distinct *third* building phase is identified in only two of the five building units, where there is also evidence of a Floor 3, and has been designated there as N12-a and N26-a. Building phase N12-a shows both the restoration and extension of the southern perimeter wall, as well as the erection of two additional pilasters. In building unit N26, the short western and eastern perimeter walls were reinforced by the adjunction of extra wythes. In N27, the possible remains of a Floor 3 identified in Room N27/3 are not related to a distinct building phase, but rather to the refreshment of the facing plaster in the room's interior southwestern corner.

Finally, the identifiable access points into each building unit indicate that no constant orientation

<sup>342</sup> BUDKA and DOYEN 2013, 175. For the short sections of walls attributed to Level 4, see BUDKA and DOYEN 2013, 172. Budka further specifies the date of these earliest archi-

tectural remains "to the time span of Ahmose Nebpehtyra up to Thutmose I", see BUDKA 2014, 62, note 72.

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### G CONCLUDING REMARKS ON THE ARCHITECTURE AT SAV1 NORTH

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The building units of SAV1 North from Level 3 have been assessed here with regards to the different aspects of building techniques. Firstly, conclusions are drawn with respect to the size and disposition of the bricks. The building units were constructed with mostly narrow, half-a-brick thick walls. However, the size of the bricks themselves seems not been related to a particular purpose, wall, pilaster or installation. In other words, the distribution in SAV1 North does not imply that a particular size of brick – small, medium or large – was necessary to build a particular type of wall, be it perimeter or internal.

Secondly, from the study of the relationships of the walls and pilasters, both in the bonding and in successive wall plastering and floor coating, information can be gleaned as to the different phases of building and occupation. The gravel backfill substratum is evidence of human activity prior to

the construction phases N24-b, N25-b, N12-c and N26-c, while N27-c partly sits on walls belonging to an earlier building phase, Level 4.<sup>342</sup> The earliest construction stage for the Level 3 units could start with the perimeter and internal walls (N24-b, N12-c, N27-c), with one of the perimeter walls (N25-b) or with perimeter walls and two of the inner walls (N26-c). It is also possible to ascribe the construction of Enclosure Wall N4 and its external interlocked small Brick Tower N3 to the earliest building phase of Level 3. The floors designated as "1" for each unit belong to this first building phase. The second building phase attests to various changes and additional installations. Within N24, phase N24-a shows the construction of two extra segments of walls: one extends the span of the northern perimeter wall and the other links the two parts of the western perimeter masonry. Modification of the access pattern may potentially result from these brickwork additions. For building unit N25, phase N25-a features the construction of the northern and eastern perimeter walls. Within N12, three installations – a storage bin, a storage pit, and a quern emplacement – belong to the second building phase N12-b, while in N26 the second stage of construction (N26-b) is represented by the building of additional internal walls to delineate the western side rooms. The secondary building phases N24-a, N25-a, N12-b, and N26-b are all connected by a new sequence of flooring, designated in each unit as Floor 2. By contrast, from the case study of N27, it seems that this Floor 2 may rather correspond to a refreshment of the floor, without evidence of a new building stage. A distinct *third* building phase is identified in only two of the five building units, where there is also evidence of a Floor 3, and has been designated there as N12-a and N26-a. Building phase N12-a shows both the restoration and extension of the southern perimeter wall, as well as the erection of two additional pilasters. In building unit N26, the short western and eastern perimeter walls were reinforced by the adjunction of extra wythes. In N27, the possible remains of a Floor 3 identified in Room N27/3 are not related to a distinct building phase, but rather to the refreshment of the facing plaster in the room's interior southwestern corner.

Finally, the identifiable access points into each building unit indicate that no constant orientation

<sup>342</sup> BUDKA and DOYEN 2013, 175. For the short sections of walls attributed to Level 4, see BUDKA and DOYEN 2013, 172. Budka further specifies the date of these earliest archi-

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of the entranceways was favoured. The individualised placement of access points is consistent with the fact that none of the five building units were built to a standardised type of plan. From the case study of N27, it is clear that this building unit was constructed over the earlier Level 4 walls. However, architectural remains of Level 4 are much too sparse to prove that the Level 3 phase of construction was consistently based on the existing pattern. It is only possible to note the conspicuous compliance of the five building units with the northern enclosure wall, supporting the assertion that all the construction assigned to Level 3 – the time of foundation of the walled settlement, the enclosure wall and the building units of SAV1 North – were organised according to a pre-planned arrangement.

Through the study of the Level 3 building units at SAV1 North, it is possible to capture a significant view of the Pharaonic town's northern area. In this undeniably urban context, the five building units appear to be dedicated as simple domestic compounds, properly equipped with installations related to production and food-processing tasks: storage bins, storage pits and grinding tools. However, the absence of other "typical domestic emplacements such as mastabas"<sup>343</sup> challenges the status of the SAV1 North area as a permanent residential housing quarter and further indication must be sought through the material remains (see Chapters III and IV).

#### **H ANNEX: DATES AND TEAM MEMBERS OF SIAM MISSIONS AT SAV1 NORTH**

*SAV1 North SIAM season 12 January to 14 February 2008*<sup>344</sup>

Project director: Didier Devauchelle

Team members affiliated to the Charles-de-Gaulle – Lille 3 University, UMR 8164 HALMA-IPEL: Florence Doyen, René-Pierre Dissaux, Coralie Gradel, Magali Pagnoux, H el ene Delattre, Lauriane Miell e and Sandra Porez

Team members affiliated to the Section fran aise de la direction des antiquit es du Soudan: Agn es Paris and Awadallah Ali el Bacha

Team member affiliated to the National Corporation for Antiquities and Museums: Yassin Mohammed Saeed

NCAM representative: Sami Mohammed el Amin  
Workmen's supervisor: Imad Shorbagy Mohamed Farah

Funding granted by the French Ministry of Foreign Affairs.

*SAV1 North SIAM season 17 January to 19 February 2009*<sup>345</sup>

Project director: Didier Devauchelle

Team members affiliated to the Charles-de-Gaulle – Lille 3 University, UMR 8164 HALMA-IPEL: Florence Doyen, Elise Devival, H el ene Delattre, Lauriane Miell e, Sandra Porez and Simone Petacchi

Team members affiliated to the Section fran aise de la direction des antiquit es du Soudan: Fran ois Lenoir and Awadallah Ali el Bacha

NCAM representative: Sami Mohammed el Amin  
Workmen's supervisor: Imad Shorbagy Mohamed Farah

Funding granted by the French Ministry of Foreign Affairs and UMR 8164 HALMA-IPEL.

*SAV1 North SIAM season 16 January to 18 February 2010*<sup>346</sup>

Project director: Didier Devauchelle

Team members affiliated to the Charles-de-Gaulle – Lille 3 University, UMR 8164 HALMA-IPEL: Florence Doyen, Jean-Fran ois Carlotti, Ren e-Pierre Dissaux, Luc Gabolde, Lauriane Miell e and Sandra Porez

NCAM representative: Sami Mohammed el Amin  
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Funding granted by the French Ministry of Foreign Affairs and UMR 8164 HALMA-IPEL.

*SAV1 North SIAM season 8 January to 10 February 2011*<sup>347</sup>

Project director: Didier Devauchelle

Team members affiliated to the Charles-de-Gaulle – Lille 3 University, UMR 8164 HALMA-IPEL: Florence Doyen, Nathalie Bozet, Julia Budka, St ephanie Facon

<sup>343</sup> KEMP and STEVENS 2010a, 492.

<sup>344</sup> DOYEN 2008, 257–258; DEVAUCHELLE and DOYEN 2009, 31.

<sup>345</sup> DOYEN 2009b, 197–198.

<sup>346</sup> DOYEN 2011, 203–204.

<sup>347</sup> DOYEN 2013, 138–141.

Team members affiliated to the Archaeological Prospection Service of Southampton (APSS), University of Southampton, and to the British School of Rome: Sophie Hay and Nicholas Crabb

NCAM representative: Amel Nasir Awad

Workmen's supervisor: Imad Shorbagy Mohamed Farah

Funding granted by the French Ministry of Foreign Affairs and UMR 8164 HALMA-IPEL.

*SAVI North SIAM season 14 January to 16 February 2012*<sup>348</sup>

Project director: Didier Devauchelle

Team members affiliated to the Charles-de-Gaulle – Lille 3 University, UMR 8164 HALMA-IPEL: Florence Doyen, Nathalie Bozet

Team members affiliated to the University of Vienna (and sponsored by the Austrian Academy of Sciences): Julia Budka, Veronika Hinterhuber

NCAM representative: Huda Magzoub

Funding granted by the French Ministry of Foreign Affairs and UMR 8164 HALMA-IPEL.

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<sup>348</sup> BUDKA and DOYEN 2013; DOYEN forthcoming.

### III. POTTERY FROM SAV1 NORTH

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by Julia Budka

#### 1 GENERAL REMARKS

Considerable amounts of ceramic material were unearthed during excavations in SAV1 North. This rich ceramic material finds ready parallels not only in other Egyptian foundations of Lower and Upper Nubia,<sup>349</sup> but also at various New Kingdom sites in Egypt,<sup>350</sup> especially Elephantine,<sup>351</sup> Abydos<sup>352</sup> and Deir el-Ballas.<sup>353</sup> However, a local component of site-specific features is present on Sai.<sup>354</sup> These site-specific features are best illustrated by a diachronic overview and development of the pottery corpus. Despite the focus of the present publication on Level 3 (see Chapter II), a short presentation of the New Kingdom pottery from all levels is necessary (see I.3).

The ceramic analysis of the material excavated during the SIAM missions at SAV1 North presents several difficulties. First of all, few undisturbed deposits were documented, with the majority represented by mixed material ranging in date from the early to late New Kingdom, including Post-Pharaonic material (I.3.1). This holds especially true for Levels 1 and 2, being the uppermost and most disturbed layers. Within Levels 3 and 4, Post-New Kingdom material was found more randomly, but was present in almost all contexts. Some examples of Post-New Kingdom material appeared even in the few assemblages assigned to Level 5.

Furthermore, the author was only in charge of the material during the final excavation seasons (2011 and 2012); between 2008 and 2010, Lauriane Miellé was responsible for the ceramic analysis.<sup>355</sup> Thus, despite generous access to some of her data after processing, no statistical observations are possible for ceramics unearthed prior to 2011 and no complete sets of material were available for a detailed study, except from building unit N12. Limited information can therefore be presented for

the building units discussed in Chapter II. During excavation, levels without specific stratigraphic information were assigned to ceramics, e.g. labels like “from interior of N12, Level 3” or “south of Wall 47S, Level 2” were used. There was no assignment to individual phases or layers because these were reconstructed in the post-excavation analysis only; due to the restricted information regarding the find position, a re-assignment was not possible.

Despite these deficiencies, the pottery corpus from SAV1 North represents important material covering the complete span of the 18<sup>th</sup> Dynasty. In all levels at SAV1 North, material from the 18<sup>th</sup> Dynasty predominates, even in the uppermost layer. This situation clearly reflects the peak of activity at the site, but renders finer dating more difficult – it is much more complex to connect the ceramic material with specific structures and to give an absolute date to the various phases and levels. Fortunately, in 2011 a deposit of almost complete vessels was uncovered in Square 180/2270 that can be clearly attributed to Level 4 and proved to be very significant for the early history of the site.<sup>356</sup> Furthermore, during the final cleaning in 2014, some few additional sherds were uncovered in building units N12 and N24 (see III.5.1). All in all, the present state of processing the ceramics suggests that the “Levels” attributed to phases throughout SAV1 North may differ slightly depending on context/location/building units and cannot be treated as uniform stratigraphic sequences. Consequently, the phasing of ceramics from SAV1 North must remain tentative in some respects.

#### 1.1 Recording and numbering system

Excavation yielded substantial amounts of pottery on a daily basis, attesting not only to the use

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<sup>349</sup> Cf. HOLTHOER 1977, *passim*. See also MIELLÉ 2011–2012, 173–187.

<sup>350</sup> Cf. BUDKA 2011a, 23–33; BUDKA 2011b, 29–39.

<sup>351</sup> SEILER 1999, 204–224; BUDKA 2005, 90–116; BUDKA 2010a, 350–352.

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<sup>352</sup> Cf. BUDKA 2006, 83–120.

<sup>353</sup> BOURRIAU 1990, 15–22 and 54–65 [Figs.].

<sup>354</sup> Cf. BUDKA 2011a, 23–33.

<sup>355</sup> See MIELLÉ 2011–2012; MIELLÉ 2014.

<sup>356</sup> BUDKA 2011a, 25–29. See also BUDKA 2016b.

of the structures in SAV1 North during the New Kingdom, but also to the abandonment phase and the later history of the site, especially in Meroitic, Post-Meroitic and Christian times. The sherds arrive from the field at the dig house in large baskets, arranged according to their archaeological context (square, level and location).<sup>357</sup> The contents of each basket were then separated into the categories of diagnostic and undiagnostic sherds; rim and base sherds, handles and decorated/painted sherds are regarded as diagnostics. The first step was to separate the Pharaonic and Post-Pharaonic material.<sup>358</sup>

The New Kingdom material was subsequently documented according to wares and vessel type. The typology established for the SAV1 North ceramic material (Fig. 52) is organised along the lines of the pottery corpus from Amarna as published by Pamela Rose:<sup>359</sup> broad shape groups like dishes, necked jars and pot stands constitute the main categories of vessels, designated by two letters, e.g. DP for dishes/plates. Within these shape groups, form classes are labelled by a numeral, e.g. DP 1 for a simple dish. The individual types are designated with a further number separated from the form class by a point, e.g. DP 1.1. If possible, the diagnostics of each basket are recorded according to their form class or at least within their shape groups. In contrast, all body sherds are counted according to their ware and broad shape group only.

Coming from 256 different find spots, a total of 164,922 sherds were looked at, sorted and recorded between 2011 and 2012. Amongst these sherds, 23,493 were diagnostics from the New Kingdom and 98,568 non-diagnostics from the same period (74%). The remaining 42,861 sherds (26%) are comprised of Post-Pharaonic material, with Christian sherds in the clear majority, followed by X-Group/Post-Meroitic material and a few Meroitic and Napatan pieces.

Selected sherds of the New Kingdom were sorted out for drawing, to enlarge the site-specific corpus. Pottery sherds and vessels that are selected

for this detailed analysis are labelled as “N/C” = “Number/Ceramic” and numbered continuously (starting from N/C 605).<sup>360</sup> Complete profiles, complete vessels, decorated or otherwise important pieces were recorded with an individual N/C-number (e.g. the bodysherd of a *zir* with a hieratic docket as N/C 740, or a complete beaker as N/C 661). In the case of fragments and less important pieces, they were labelled as find assemblages (e.g. N/C 663.01-17 coming from Level 1 in Square 190/2260, from the mud brick debris A).

## 2 THE CORPUS OF FABRICS

A site-specific fabric corpus was established, which closely resembles the Egyptian material from the New Kingdom town of Elephantine,<sup>361</sup> but also includes local fabrics for Egyptian vessels as well as for Nubian wares.<sup>362</sup>

This site-specific fabric corpus of SAV1 North contains six large groups of fabrics:

- 1) Imported Nile clays from Egypt
- 2) Locally produced Nile clays from Sai/Upper Nubia
- 3) Nubian clays from Upper Nubia
- 4) Imported Marl clays from Egypt
- 5) Other imported wares (Oases, Levante, Cyprus)
- 6) Imported Mixed clays from Egypt

The establishment of a site-specific classification of fabrics was essential for the analysis of the ceramics from SAV1 North because it is well known that development in the composition and nature of fabrics and wares is traceable within the pottery from New Kingdom Egypt, potentially providing dating criteria and more.<sup>363</sup> The main fabric groups, with the exception of the Nubian wares (III.2.3), were identified from fresh breaks with the aid of a 1 × 10-magnification hand-lens. The designations employed for the groupings – especially for groups 1, 2 and 4 – are those used within the “Vienna System”,<sup>364</sup> with some minor alterations and additions.<sup>365</sup> In the following, only

<sup>357</sup> See above: directions were noted according to walls, no locus system was used and no find numbers were given by the excavators in the field.

<sup>358</sup> Cf. BUDKA 2011a, 24.

<sup>359</sup> ROSE 2007.

<sup>360</sup> The numbers N/C 001–604 were used by L. Miellé. See MIELLÉ 2011–2012.

<sup>361</sup> BUDKA 2005, 91–95.

<sup>362</sup> Cf. BUDKA forthcoming (including petrographic comments by G. D’Ercole).

<sup>363</sup> For example, the sandy variant of Nile B2 (typical for the Ramesside period), the use of Mixed clays and the distribution of Marl clays, cf. ASTON 1992, 73.

<sup>364</sup> NORDSTRÖM and BOURRIAU 1993, 168–186.

<sup>365</sup> Following a system established by the author for the New Kingdom pottery at Elephantine; see BUDKA 2005, 91–95.

<b>OPEN FORMS</b>	<i>Funnel-necked jars = FU</i>
<i>Dishes/Plates = DP</i>	FU 1: Biconical vessels, short-medium neck, direct rim FU 2: Complex contour, tall neck, modelled rim
DP 1: Simple, direct rim DP 2: Simple, modelled rim DP 3: Simple, upturned rim (direct) DP 4: Simple, direct rim internally thickened DP 5: Simple, modelled rim with flange (ledge) DP 6: Simple, everted rim (direct) DP 7: Complex, direct rim DP 8: Complex, modelled rim DP 9: Complex, outer lip DP 10: Complex, inwardly-sloped upper wall DP 11: Modelled contour (wavy rims)	<i>Zir = ZI</i>
<i>Bowls = BO</i>	ZI 1: Composite, long wide neck, modelled rim
BO 1: Simple, direct rim BO 2: Simple, modelled rim BO 3: Simple, outer lip/everted rim BO 4: Complex, direct rim BO 5: Complex, modelled rim BO 6: Complex, outer lip BO 7: Complex, inwardly-sloped upper wall	<i>Storage jar = ST</i>
<i>Flowerpot = FP</i>	<i>Tall jars = TJ</i>
FP 0: Modelled rim FP 1: Modelled rim, hole in base FP 2: Modelled rim, without hole FP 3: Direct rim, hole in base FP 4: Direct rim, without hole	TJ 1: Tall jars, hole-mouth TJ 2: Tall jar, simple, modelled rim TJ 3: Tall jar, simple, everted rim TJ 4: Tall necked jar, inflected contour, externally thickened rim TJ 5: Tall short-necked jar, bag-shaped, modelled rim
<i>Beakers (deep open forms) = BK</i>	<i>Globular jar = GJ</i>
BK 1: Tall beaker with direct rim BK 1.1: rounded base BK 1.2: cut/trimmed base BK 1.3: flat base BK 2: Beaker with inflected contour, direct/everted rim	GJ 1: Globular jar, short flaring neck with direct rim GJ 2: Globular jar, short flaring neck with modelled rim GJ 3: Globular jar, vertical neck with modelled rim GJ4: Globular jar, vertical neck, direct rim
<b>CLOSED FORMS</b>	<i>Ovoid meat jars = MJ</i>
<i>Carinated vessel = CV (squat)</i>	<i>Handeled vessels/amphorae = AO</i>
CV 1: Vessel with carination, modelled rim CV1.1: shortnecked CV1.2: broadnecked CV 1.3: narrownecked CV 2: Vessel with carination, outer lip CV 3: Vessel with carination, outer lip and handles	<i>Pilgrim flask = PF</i>
<i>Slender jars = Jar ordinary = JO</i>	<i>Miniature vessels = MV</i>
JO 1: Slender jars, simple contour, externally thickened rim JO 1.1 Ovoid jar with rounded base JO 1.2 Drop-shaped jar with rounded base JO 2: Slender jars, everted rim JO 3: Slender jar with internally rolled rims (crucibles) JO 4: Slender jar with externally rolled rims (crucibles) JO 5: Slender jar, composite contour, direct rim	<b>OTHERS/FUNCTIONAL</b>
<i>Necked jars = NJ</i>	<i>Pot-stands = S stands</i>
NJ 1: Necked jars, externally thickened rim NJ 2: Necked slender jar, composite contour, modelled rim NJ 3: Necked slender jar, composite contour, direct rim NJ 4: Slender jar, out-flared neck, direct rim NJ 5: Ovoid necked-jar, rounded base	<i>SB = Biconical</i>
<i>Beer jar = BJ</i>	SB 1: Low ring stands of biconical form SB 2: Medium ring stands of biconical form SB 3: Tall ring stands of biconical form
BJ 0: base with hole BJ 00: base without hole BJ 1: Hole-mouthed BJ 2: Short-necked slender jar, composite contour, direct rim	<i>ST = Transitional</i>
	ST 1: Low ring stands ST 2: Medium ring stands ST 3: Tall stand
	<i>SU = Tubular</i>
	SU 1: Low ring stands SU 2: Medium ring stands SU 3: Tall stand of tubular form
	<i>SO = Tall stand with bowl/offering bowl</i>
	<i>Lids = LL</i>
	<i>Stoppers = LS</i>
	<i>Fire dogs = FD</i>
	<i>Funnels = FN</i>
	<i>Spinning bowls = SB</i>
	<i>Fish bowls = FB</i>
	<b>HANDMADE</b>
	<i>Bread tray = BT</i>
	<i>Bread mould = BM</i>
	<i>Various</i>

Fig. 52 Main categories of vessels from SAV1 North

descriptions based on the macroscopic analysis of the fabrics will be presented. Petrographic details based on optical microscopy and chemical analyses will be published elsewhere.<sup>366</sup> In particular, planned provenance studies by Instrumental Neutron Activation Analysis (INAA) will add important information on the exact nature of Nile clay wares. As already illustrated by Askut as a case study for Nubia, chemical characterisation methods may elucidate regional pottery production.<sup>367</sup> Preliminary results by INAA, conducted by Johannes Sterba and Giulia d'Ercole as part of the AcrossBorders project, revealed for SAV1 North sub-groups for the Nile clay fabrics which correspond to (a) locally made Nubian style vessels, (b) locally made Egyptian style vessels and (c) imported Egyptian style vessels.<sup>368</sup>

In accordance with the “Egyptological” understanding of “pottery fabric”, as defined in the classification of the Vienna System<sup>369</sup> (“a group designation for all significant physical and chemical properties of the clay and the non-plastic inclusions in a fired ceramic material, as well as all relevant technological features of the finished product”<sup>370</sup>), the production technique is included in our assessment.<sup>371</sup> The locally produced Egyptian-style Nile clays are almost always wheel-thrown, whereas the indigenous Nubian tradition is hand-made.

## 2.1 Nile clays from Egypt

As with the case in early New Kingdom levels at Elephantine, Nile silt fabrics form by far the most common group of fabrics.<sup>372</sup> From a macroscopic point of view, it is not always possible to distinguish Nile clays imported from Egypt and locally produced Nile variants. The groups described here in accordance with the “Vienna System” are all attested on Sai, but the attribution of an individual vessel as either imported or locally produced Nile

clay must somehow remain tentative, although INAA provides tools to illustrate the provenience.

### *Nile B group*

The majority of the pottery belongs to a medium, straw-tempered fabric equivalent to Nile B2.<sup>373</sup> Several variants are well attested at SAV1 North – sometimes hard to differentiate from Nile C, the dominant inclusion is usually sand and not straw.<sup>374</sup> Black-rim ware and red burnished dishes attest to a rather fine Nile B2 and are possibly imported; the same holds true for some other dishes and plates. Bichrome decorated Nile clay jars, deriving from contexts datable between the early reign of Thutmose III and Thutmose IV,<sup>375</sup> are made in a very chaffy variant of Nile B2 (or Nile C2). Parallels from Elephantine indicate that this variant was imported from Egypt,<sup>376</sup> but Bichrome vessels from Dukki Gel might also suggest an Upper Nubian production.<sup>377</sup> Other variants with decoration in red and black clearly illustrate that Marl clay and imported vessels were imitated in Nile clay variants of jugs and jars. The latter are made of regular Nile B2 with some straw and show a white wash as well, as red and black painted decoration (Pl. 34).

### *Nile C group*

The sandy and straw-tempered Nile C was used for trays and bread plates, as well as large bowls and small votive vessels.<sup>378</sup> It is very common at SAV1 North, but outnumbered by Nile B2. A chaffy and coarse Nile C2 variant with abundant straw inclusions was used for *zir* vessels (Fig. 76). All in all, the Nile C2 group is very difficult to distinguish from the local Nile C variant.

### *Nile D group*

Nile D, variant 2, was identified at SAV1 North.<sup>379</sup> With fine to medium sand inclusions and limestone

<sup>366</sup> See D'ERCOLE forthcoming and AcrossBorders Volume II (in preparation).

<sup>367</sup> CARRANO et al. 2009. Cf. also MILLET and SPATARO 2012; SPATARO et al. 2014.

<sup>368</sup> Cf. BUDKA 2015a, 69; BUDKA 2015b, 50.

<sup>369</sup> See NORDSTRÖM and BOURRIAU 1993, 168–186.

<sup>370</sup> NORDSTRÖM and BOURRIAU 1993, 162.

<sup>371</sup> The same approach is followed for the study of material from Amara West, cf. MILLET and SPATARO 2012. For the general importance of the production techniques for ceramic analysis see MILLER 1985, 34–50.

<sup>372</sup> Nile silt fabrics generally dominate pottery corpora from settlements, cf. e.g. for Amarna ROSE 2007, 12–13.

<sup>373</sup> Cf. NORDSTRÖM and BOURRIAU 1993, 171–173.

<sup>374</sup> See NORDSTRÖM and BOURRIAU 1993, 172.

<sup>375</sup> BUDKA 2010a, 351 and personal observation.

<sup>376</sup> Possibly from Elephantine, see BUDKA 2015c.

<sup>377</sup> RUFFIEUX 2009, 127–128.

<sup>378</sup> Two variants of Nile C – a fine tempered and a coarse type – are to be distinguished; cf. BIETAK 1991, 325–326. For general properties of Nile C see NORDSTRÖM and BOURRIAU 1993, 173–174.

<sup>379</sup> For this variant, not listed in the Vienna System, see BUDKA 2005, 92. For Nile D according to the Vienna System see NORDSTRÖM and BOURRIAU 1993, 174–175.



particles, this fabric was mostly used for beer jars and flowerpots as well as some small dishes. The latter are likely to be original Egyptian products, whereas others are more difficult to separate from the local wheel-made production. Bread moulds, only rarely attested at SAV1 North and belonging to Helen Jacquet's Type D of the New Kingdom,<sup>380</sup> were made of a typical mixture of sandy mud, clay and organic temper, classified as "bread mould clay" or Nile D4.<sup>381</sup> As this fabric is normally a local phenomenon at Egyptian sites, the same assumption might apply for Sai.

### *Nile E group*

The authentic Egyptian cooking pots from Sai Island are manufactured either in a sandy version of Nile clay B2 or in a fabric characterised by abundant inclusions of rounded sand grains in varying amounts and sizes. This fabric can be classified as the Upper Egyptian equivalent of Nile E as described within the Vienna System,<sup>382</sup> originating from the Nile Delta.<sup>383</sup> At present, Sai is the only 18<sup>th</sup> Dynasty site in Nubia where Nile E is attested for cooking pots.

### **2.2 Locally produced Nile clays (wheel-made)**

A considerable number of Nile clay pottery vessels from SAV1 North have been modelled on Egyptian types but were locally produced, especially in Level 3. As mentioned above, the difference between locally and imported Nile clay is often not visible macroscopically, giving much importance to current chemical and petrographic analyses. However, the production technology is often relevant as well. Locally made dishes, carinated bowls, beer jars and beakers are sometimes less well thrown on the wheel than genuine Egyptian imports. In the case of dishes, these sometimes have a thicker wall diameter and show a peculiar surface treatment which is not typically Egyptian.<sup>384</sup> For example, N/C 926.5 from N27 (Fig. 82) shows a "low quality" of wheel production with irregular surface and rim – together

with its chaffy Nile clay variant, it is safe to assume a local origin for this bowl.<sup>385</sup>

Consistent with the distribution of Egyptian Nile clays, the local Nile variants comprise primarily Nile B and Nile C variations. These are less well sorted than the real Egyptian variants and seem to have a higher proportion of organic inclusions. A local Nile D variant shows some small white particles, which are probably micritic calcite aggregates, well attested in the clays and soils of the island (see Nubian fabrics) and therefore natural inclusions rather than intentional temper.

### **2.3 Nubian clays from Upper Nubia (hand-made)**

Nubian clays are present in all levels, comprising between 2% and max. 5% of the material, depending on the context. In 2013, a macroscopic analysis of the Nubian ceramic assemblages from SAV1 North was undertaken by Giulia D'Ercole in order to elaborate a preliminary classification of the fabrics and organise the sampling strategy for the future laboratory analyses (OM, XRPD, XRF, INAA).<sup>386</sup> The observation of the wares was conducted using a lens with 20x magnification (TM 20 Eschenbach) and four different fabrics were recognised, based on the content and the typology of the main non-plastic inclusions present in the paste. Distinction between these fabrics is not sharp, with subtle boundaries between one group and another.<sup>387</sup>

#### *Nubian Fabric 1 – Fine wares, dung tempered*

Fine wares of this fabric are characterised by a rather dense and homogeneous sandy-silt matrix, containing numerous micaceous inclusions, a variable amount of very small (< 0.5 mm) angular mineral grains and some small white particles (micritic calcite aggregates; likely to be natural inclusions of unsorted or poorly sorted clay).<sup>388</sup> Ceramics of this group are tempered with a limited proportion of fine tubular organic inclusions (possibly herbivore dung or finely crumbled straw remains). Nubian Fabric 1 is attested for very fine, small open

<sup>380</sup> JACQUET 1981, fig. 5.

<sup>381</sup> Cf. BUDKA 2005, 92, note 305 (Elephantine); BUDKA 2006 (Abydos).

<sup>382</sup> See NORDSTRÖM and BOURRIAU 1993, 175.

<sup>383</sup> Cf. BUDKA 2006, 84 (for a local variation at Abydos).

<sup>384</sup> Cf. BUDKA 2017.

<sup>385</sup> There is still little known about the identity of potters at Egyptian sites in Nubia (cf. most recently RESHETNIKOVA and WILLIAMS 2016); evidence like that from SAV1 North

would suggest that local potters were trained in Egyptian wheel-thrown technology; the presence of Egyptian potters is in general very likely.

<sup>386</sup> The latter will be published in *AcrossBorders* Vol. II.

<sup>387</sup> See D'ERCOLE 2013.

<sup>388</sup> Compares to: Fabric SH4 (ROSE 2012, 14, fig. C, F); Types CII, 2, CIII, 1–2, CIV, 1 (GRATIEN 1986, 430–433, figs. 320–322); uncertain parallel: Fabric II (FORSTNER-MÜLLER 2012, 63, fig. 5).

shapes of black-topped vessels (cf. Fig. 73): Kerma beakers and small bowls with well-polished and shiny-micaceous surfaces, sometimes showing the typical Kerma Classic silvery-white band or just a dark grey painted (?) band below the rim.

*Nubian Fabric 2 – Medium wares, straw-dung tempered*

Medium-fine to medium wares of this fabric are characterised by a sandy-silt matrix, containing frequent very small (< 0.5 mm) angular to sub-rounded minerals, grains, mica and a variable amount of white particles (micritic calcite aggregates).<sup>389</sup> Organic tempers are common and include both fine tubular inclusions (dung and/or chopped straw remains) and some larger flat fibers (straw and chaff remains). The consistency of the paste can range from relatively compact and homogeneous to quite porous and friable. Based on the frequency and the size of the non-plastic inclusions, possible sub-groups can be recognised. Nubian Fabric 2 was mainly used for open shapes with medium-fine to medium textures: black-topped and black-topped red slipped vessels, as well as bowls with burnished or wet-smoothed surfaces, showing incised or impressed decorations (Fig. 73).<sup>390</sup>

*Nubian Fabric 3 – Coarse wares, chaff tempered*

Medium-coarse to coarse wares of this fabric are characterised by a sandy-silt matrix, containing frequent very small (< 0.5 mm) angular plus rare medium (1 ≤ 2 mm) rounded mineral grains, mica and a variable amount of white particles (micritic calcite aggregates).<sup>391</sup> Ceramics belonging to this fabric are tempered with abundant proportions of organic inclusions (mainly flat straw and chaff remains), easily recognisable to the naked eye. The consistency of the paste looks porous and friable. Both open and restricted shapes with medium-coarse to coarse textures and wet-smoothed or scraped surfaces are

known in Nubian Fabric 3: bowls and globular vessels, as well as cooking pots, often showing basketry or matting impressions (Fig. 67).

*Nubian Fabric 4 – Very coarse wares, heavily chaff tempered*

This fabric is a coarse version of Fabric 3.<sup>392</sup> Ceramics included in this group are tempered with high proportions of large to very large flat organic inclusions, mica plus a variable amount of small to medium angular/sub-rounded mineral grains and white calcareous particles up to 2 mm in size (micritic calcite aggregates?). Nubian Fabric 4 was used for large storage vessels with very thick walls and uncoated or poorly smoothed surfaces, often decorated with comb-impressions on the rim (e.g. N/C 651, Fig. 57).

## 2.4 Marl clays from Egypt

Marl clays are less common than Nile clays. The following have been identified in the material deriving from SAV1 North:<sup>393</sup> Marl A2, A4 (variant 1 and 2) and A3, Marl B, Marl C (variant 1 and 2), Marl D (variant 1 and 2) and Marl E. Within the material of the early 18<sup>th</sup> Dynasty, Marl A2, A4 and Marl B were used most often (Levels 4 and 3). During the late 18<sup>th</sup> Dynasty and the 19<sup>th</sup> Dynasty (Levels 3 and 2), Marl D appears in considerable quantities. Marl C and Marl E are both rare at SAV1 North and restricted to vessels dating to the early 18<sup>th</sup> Dynasty. Marl C was mainly used for large *zir* vessels, attested only by broken sherds.<sup>394</sup> Nevertheless, the presence of Marl C at SAV1 North supports the results from recent excavations indicating that the use of this particular fabric did not cease completely at the end of the Second Intermediate Period,<sup>395</sup> but rather continued into the early New Kingdom.<sup>396</sup>

The first occurrence and origins of Marl D are still a matter for future research.<sup>397</sup> The fabric is

<sup>389</sup> Compares to: Fabric SH2 (ROSE 2012, 14, figs. A–B).

<sup>390</sup> Incised wet-smoothed wares are quite common in late Second Intermediate Period and 18<sup>th</sup> Dynasty Nubian assemblages (cf. AYERS and MOELLER 2012, 113, fig. 8). They show both reflections of Kerma Moyen style and similarities with Pan Grave assemblages from Lower Nubian contexts (cf. GIULIANI 2006; GATTO, GALLORINI and ROMA 2012).

<sup>391</sup> Comparison: Fabric SH1 (ROSE 2012, 14–18); questionable parallel: Fabric III (FORSTNER-MÜLLER 2012, 63, fig. 6).

<sup>392</sup> Comparisons: Type CIX, 1 (GRATIEN 1985, pl. 5c; GRATIEN 1986, 434–435, fig. 324c); AYERS and MOELLER 2012, 113, fig. 8: ED 2547. N.3.

<sup>393</sup> Cf. BUDKA 2011a; BUDKA 2016b. For general descriptions of Marl clays of the Vienna System see NORDSTRÖM and BOURRIAU 1993, 175–182.

<sup>394</sup> Also well attested from the Kerma cemetery on Sai Island, see GRATIEN 1986, *passim*.

<sup>395</sup> Cf. NORDSTRÖM and BOURRIAU 1993, 180.

<sup>396</sup> Marl C vessels were discovered in early New Kingdom levels at Tell el-Daba and Kom Rabia; for a detailed study on Marl C see BADER 2001.

<sup>397</sup> Cf. ASTON 2008, 36–37.

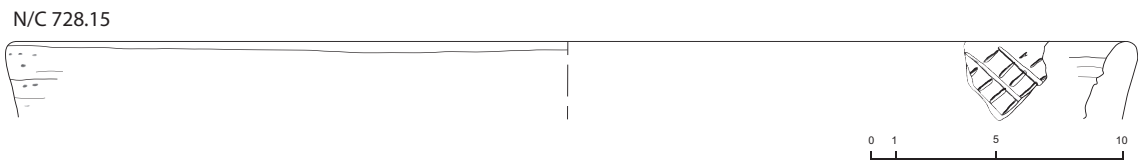


Fig. 53 Marl E *Schaelbecken* N/C 728.15, Level 4

known as early as the mid-18<sup>th</sup> Dynasty (as yet, the earliest evidence in Egypt dates to the reign of Thutmose III)<sup>398</sup> but is already common and “*fashionable*” by the late 18<sup>th</sup> Dynasty.<sup>399</sup> An intriguing sherd in Marl D was unearthed at Dukki Gel from a context probably datable to Hatshepsut.<sup>400</sup> Unfortunately, the contexts in SAVI North from which Marl D sherds were recovered are partly disturbed, composed of mixed material dating from the early 18<sup>th</sup> Dynasty up to Ramesside times. Amphorae, jugs and also pilgrim flasks are attested (Pl. 31). Despite this lack of stratified contexts, most sherds made of Marl D currently derive from Level 3 and thus parallel the widely known development of the fabric.

Marl E is very rare at Sai and was used mainly for large thick-walled bread trays (so-called *Schaelbecken*, Fig. 53), which are attested from Level 4 onwards.<sup>401</sup> Parallels for these vessels are known from Koptos, Deir el-Ballas<sup>402</sup> and Abydos,<sup>403</sup> as well as from early 18<sup>th</sup> Dynasty contexts at Memphis.<sup>404</sup> Such trays are hand-made and therefore an exception within the otherwise wheel-thrown Marl clay corpus.

## 2.5 Other imported wares

Some imported pottery (Canaanite, Levantine and Cypriote), as well as few sherds in Oases ware, is also attested at SAVI North. Most common are

Non-Egyptian amphorae from Syria/Canaan (c. 5% of the diagnostics). The most frequent fabric, especially in the 18<sup>th</sup> Dynasty levels, is a variant which is similar to Marl D with a dark grey or brownish matrix and abundant particles of limestone.<sup>405</sup> Another amphora fabric is homogenous with reddish-yellow colour, numerous mineral inclusions and abundant limestone particles; this corresponds to P11 at Saqqara and Memphis.<sup>406</sup>

Three classes of Oases wares are attested from SAVI North:<sup>407</sup> 1) Oasis grey ware, often with a white wash (preliminary label: OA 1)<sup>408</sup>, 2) Oasis pink ware (preliminary label: OA 2a)<sup>409</sup> and 3) Oasis orange ware (preliminary label: OA 2b).<sup>410</sup> All of these variants, possibly coming from both Bahariya and Dakhlah oases, are attested also in the Nile valley, e.g. at Amarna.<sup>411</sup> Most of the nine samples identified from SAVI North as Oases ware fall into group 2, the Oasis pink ware, OA 2a.

Oases wares appear in all five levels at SAVI North.<sup>412</sup> That Oasis ware already appears in the earliest levels of SAVI North, Levels 5 and 4, datable to the early 18<sup>th</sup> Dynasty (Ahmose II–Amenhotep I/Thutmose I), is remarkable from a historical perspective.<sup>413</sup> Sherds in Oasis grey ware from these levels find close parallels at Elephantine from “Bauschicht 10” (early to mid-18<sup>th</sup> Dynasty).<sup>414</sup>

It is well known that Cypriote and Aegean fine wares are common in contexts of the 18<sup>th</sup> Dynasty.

<sup>398</sup> HOPE 1989, 14 (Amenhotep II/Thutmose IV); for amphorae in Marl D from TT 99 with stamps of Thutmose III see ROSE 2003, 204.

<sup>399</sup> ASTON 2002, 173.

<sup>400</sup> RUFFIEUX 2016, 516, fig. 11.5. For other Marl D shapes in Nubia cf. MIELLÉ 2016, 430.

<sup>401</sup> This type of vessel is frequently found in settlements of the 13<sup>th</sup> Dynasty; see BADER 2001, 81–83; on the possible function of these peculiar objects see SEILER 2005, 120–121.

<sup>402</sup> BOURRIAU 1990, 21–22.

<sup>403</sup> BUDKA 2006, 85.

<sup>404</sup> NORDSTRÖM and BOURRIAU 1993, 182, fig. 26.

<sup>405</sup> Well attested at Elephantine in 18<sup>th</sup> Dynasty contexts; personal observation.

<sup>406</sup> NORDSTRÖM and BOURRIAU 1993, 185; ASTON 2008, 40; BOURRIAU 2010, 31.

<sup>407</sup> See BUDKA in press.

<sup>408</sup> Cf. Amarna fabric V.10, ROSE 2007, 15.

<sup>409</sup> Cf. Amarna fabric IV.2, ROSE 2007, 15. See also Oasis clay 2 at Elephantine according to ASTON 1999, 7.

<sup>410</sup> Cf. Amarna fabric IV.3, ROSE 2007, 15.

<sup>411</sup> ROSE 2007, 15.

<sup>412</sup> See BUDKA in press.

<sup>413</sup> Cf. the early occurrence in Memphis/Kom el-Rabia, BOURRIAU 2010, 29.

<sup>414</sup> Unpublished material under the responsibility of the author, to be published elsewhere.

This also holds true for Sai, although there are only rare examples from SAV1 North. The best preserved Cypriote import is the small black burnished jug N/C 763 (Fig. 77) of Black Lustrous Wheel-made Ware from N12D (see III.5.2).<sup>415</sup> This Cypriote Ware seems to be most common during the reign of Thutmose III.<sup>416</sup>

Imported fine ware is also represented by the fragment of a Mycenaean stirrup jar N/C 616 (Pl. 32). Its fabric is very typical, characterised by its hardness, fine texture, dense porosity and fine red-brown particles as inclusions.<sup>417</sup> Unfortunately, N/C 616 is derived from a non-stratified context; it comes from Level 1 in Square 190/2260, north of debris C, east of Wall 43E, thus above the eastern part of building unit N26.

Egyptian Mixed clays are also attested at SAV1 North. From 18<sup>th</sup> Dynasty contexts (Levels 4 and 3) this is Mixed Fabric A (III-a), well known from early 18<sup>th</sup> Dynasty and Thutmoside contexts at Elephantine and used almost exclusively for *zir* jars (cf. N/C 1169.3 from N12, see Fig. 71 bottom). This fabric seems to be an innovation of the New Kingdom,<sup>418</sup> as it has not yet been found in Second Intermediate Period contexts.<sup>419</sup> For Ramesside amphorae, the Mixed Fabric B (III-b) was sometimes used.<sup>420</sup> Due to the limited quantity of Ramesside material from SAV1 North, this fabric is rarely attested.

### 3 PRODUCTION TECHNIQUES

The general co-existence of Egyptian (wheel-made) and Nubian (hand-made) pottery traditions on Sai Island is also well-known from other Nubian New Kingdom sites.<sup>421</sup> At Sai, a Nubian component is traceable at all sectors recently excavated in the New Kingdom town, including SAV1 North.<sup>422</sup> Hand-made cooking pots and storage vessels, as well as some fine wares (black-topped cups and beakers) are attested in considerable numbers, es-

pecially in the early levels (Levels 5 to 3 at SAV1 North).<sup>423</sup> The Nubian assemblage at Sai is comparable to findings at other Upper Nubian sites established in the early 18<sup>th</sup> Dynasty, like Sesebi.<sup>424</sup> The Nubian pottery from SAV1 North shows relations to the local Kerma corpus,<sup>425</sup> is hand-made as a rule and very often decorated with impressed and/or incised patterns. Nubian storage vessels at SAV1 North generally have a larger capacity than Egyptian vessels and often show traces of repair.<sup>426</sup>

The majority of the material from SAV1 North is wheel-made pottery in Egyptian style, produced in Egyptian Nile clays and imported to Upper Nubia<sup>427</sup> or locally produced with Nile clay variants. Most of the vessels were either wholly or partially made on a simple wheel. Small open forms were usually thrown on the wheel in one piece, whereas large storage vessels frequently show traces of joints where they were produced in more than one piece.<sup>428</sup> *Zir* vessels were usually made in sections with the coiling technique, while the rim finished on the wheel. Egyptian hand-made pottery is rare and the examples are restricted to bread moulds, bread plates and so-called *Schaelbecken* or bread trays (Figs. 53 and 61–62).

Sometimes locally produced Nile clay pottery vessels have been modelled on Egyptian types, but with a ‘Nubian’ influence in regards to the surface treatment, production technique or decoration. The appearance of such hybrid types is very significant, but not straightforward to explain. Such pots – attested also at other Egyptian sites in Nubia, like Amara West – might be products of a temporary or local fashion, but could also refer to the cultural identity of their users or be the result of more complicated processes. All in all, they seem to attest to a complex mixture of lifestyles in New Kingdom Nubia.<sup>429</sup>

During the New Kingdom, there is generally less clear evidence for kilns<sup>430</sup> and potter’s workshops

<sup>415</sup> See HOERBURGER 2006; HOERBURGER 2007, 107–113.

<sup>416</sup> See HEIN 2007, 79–106.

<sup>417</sup> NORDSTRÖM and BOURRIAU 1993, 184.

<sup>418</sup> SEILER 1999, 217; see also BUDKA 2005, 94 with note 321.

<sup>419</sup> See BUDKA 2006, 85.

<sup>420</sup> For two variants of Mixed clays see ASTON 1999, 6.

<sup>421</sup> Cf. SMITH 2002; SMITH 2003, 43–53; SPENCER 2014, 55.

<sup>422</sup> See BUDKA 2017.

<sup>423</sup> BUDKA 2011a, 26, 28; BUDKA and DOYEN 2013, 188; MIELLÉ 2014, 389–390.

<sup>424</sup> ROSE 2012.

<sup>425</sup> See GRATIEN 1986, *passim*.

<sup>426</sup> Cf. the almost complete vessel N/C 650 with four repair holes (Fig. 57), BUDKA 2011a, 27 (citing parallels from the

local Kerma tombs, cf. GRATIEN 1986). In general, through various periods and diverse Nubian cultures, the repair of pots is very common, see e.g. WILLIAMS 1993, fig. 4 and *passim*.

<sup>427</sup> For the import of Nile silt vessels cf. ARNOLD 1993, 78, figs. 90B–C and SMITH 2003, 117.

<sup>428</sup> For a concise summary of shaping techniques see HOLTHOER 1977, 42–43.

<sup>429</sup> See BUDKA 2017; cf. also GARNETT 2014, 62; RUFFIEUX 2016, 518–519, fig. 13.

<sup>430</sup> For the recent discovery of a pottery kiln at Amara West: GARNETT 2014, 62; SPENCER, STEVENS and BINDER 2014, 19–20, 26.

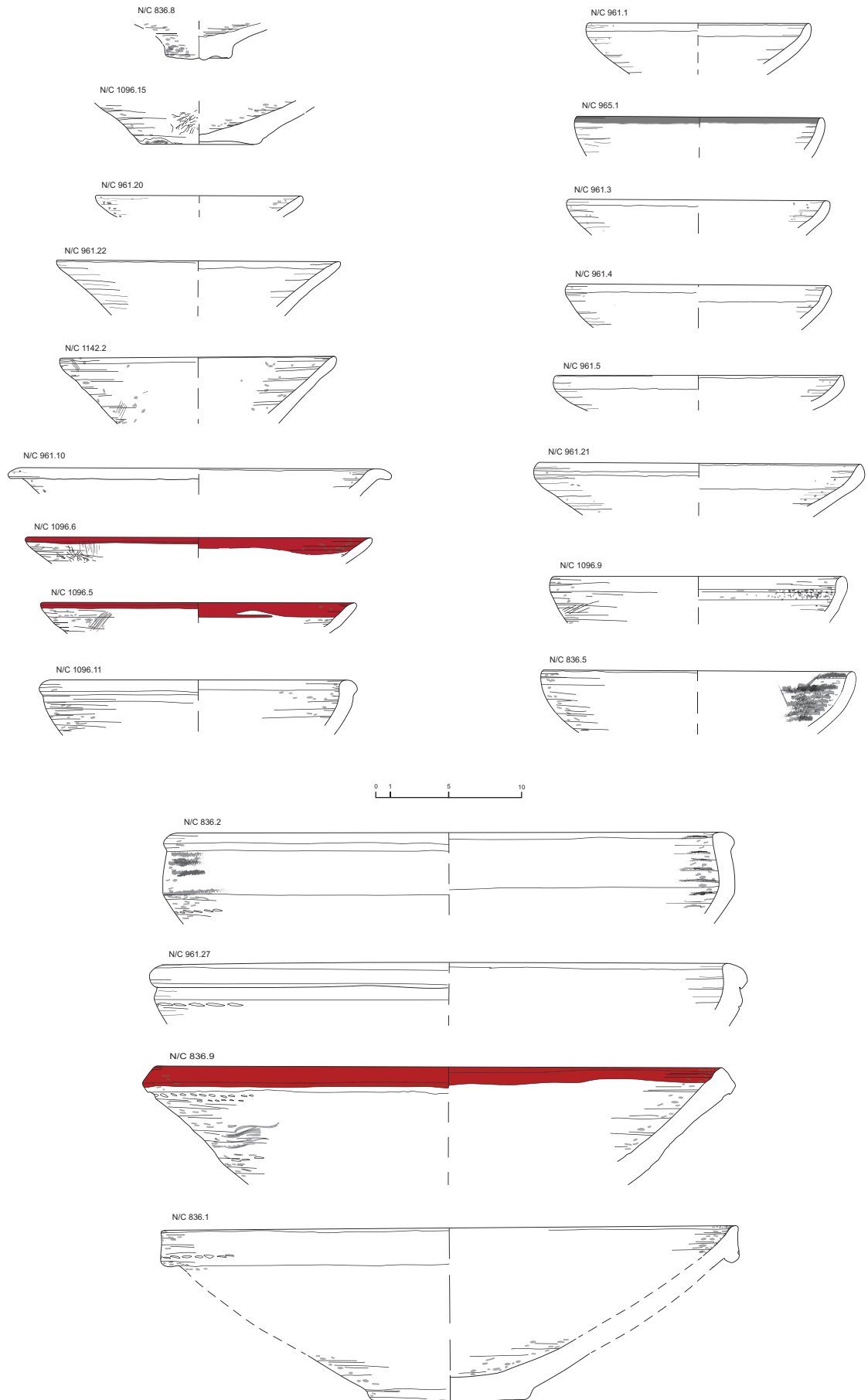


Fig. 54 Open forms from Level 5

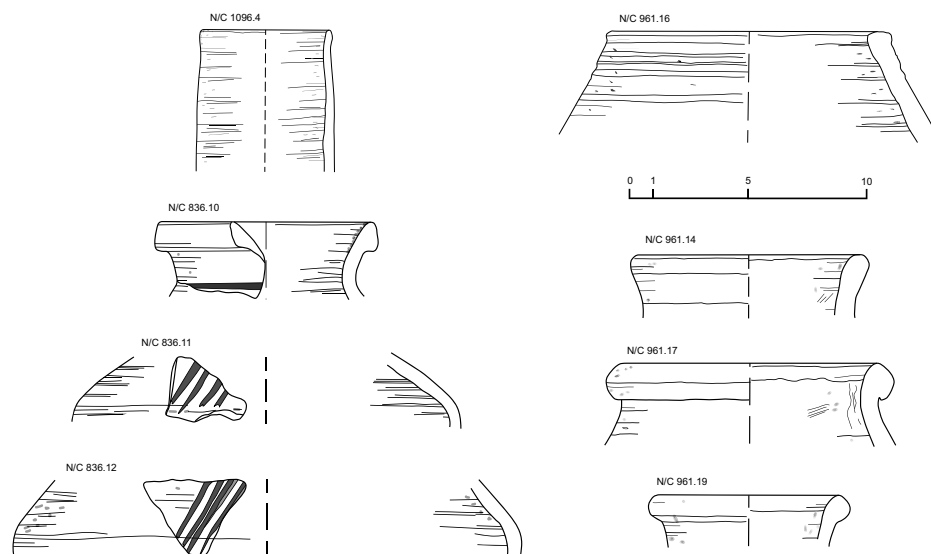


Fig. 55 Closed forms from Level 5

than in Middle Kingdom Nubia. Important evidence for local pottery production comes from wasters and unfired sherds at various sites.<sup>431</sup> Though the latter were also found in small numbers at SAV1 North, no kilns or potter's workshop of the New Kingdom have been identified with certainty on Sai.<sup>432</sup>

#### 4 CORPUS OF TYPES AND SHAPES

A final presentation of ceramics from SAV1 North (fabrics, wares, corpus) will be published elsewhere. Therefore, the following presents an overview of the most important types, with a focus on early and mid-18<sup>th</sup> Dynasty contexts (Levels 5, 4 and 3). In general, small and medium-sized dishes, various plates, pot stands, storage vessels, cooking pots, beer jars, beakers and bread plates dominate the corpus of ceramic types from SAV1 North. Bread moulds, bread trays and spinning bowls, as well as carinated Marl clay vessels, amphorae and decorated jars are also present.

##### 4.1 Pottery types from Level 5

The first evidence of activity in the area of SAV1 North, Level 5, can firmly be associated with the 18<sup>th</sup> Dynasty (see I.3.2). The ceramics still partly show

features of the Second Intermediate Period tradition and are sometimes even reminiscent of the Middle Kingdom.<sup>433</sup> Such an overlap in styles is typical for the early phase of the 18<sup>th</sup> Dynasty, particularly for Ahmose II and Amenhotep I.<sup>434</sup> Furthermore, a considerable presence of Nubian cooking pots can be observed. Most common are basketry impressions on a coarse, chaff tempered ware (Nubian Fabric 3), but incised decoration on medium fine, straw-dung tempered fabrics are also present (Nubian Fabric 2). Interestingly, these hand-made cooking pots are associated with Egyptian cooking pots of a type well attested at Elephantine (see III.4.5.1).<sup>435</sup>

The open forms (Fig. 54) comprise various dishes, including black rim ware and red rim ware. Dishes with inverted rim are frequently red slipped and burnished. This also holds true for carinated bowls, although larger examples appear uncoated in coarse Nile C2 variants. Characteristic "markers" of the early 18<sup>th</sup> Dynasty are plates with ledged rims and rope impressions. They have flat bases, cut from the slow wheel, but not reshaped or smoothed as is attested in the later course of the 18<sup>th</sup> Dynasty.

The closed forms from Level 5 (Fig. 55) include especially beakers, beer jars and some deco-

<sup>431</sup> WILLIAMS 1992, 24 (Serra); SMITH 2003, 117 (Askut); EDWARDS 2012, 78, fig. 3.33 (Tombos).

<sup>432</sup> See, however, HESSE 1981; cf. BUDKA and DOYEN 2013, 170 with discussion.

<sup>433</sup> Cf. "Bauschicht 11" on Elephantine; see SEILER 1999, 205–223.

<sup>434</sup> BUDKA 2006, 83–120.

<sup>435</sup> See BUDKA 2016c.

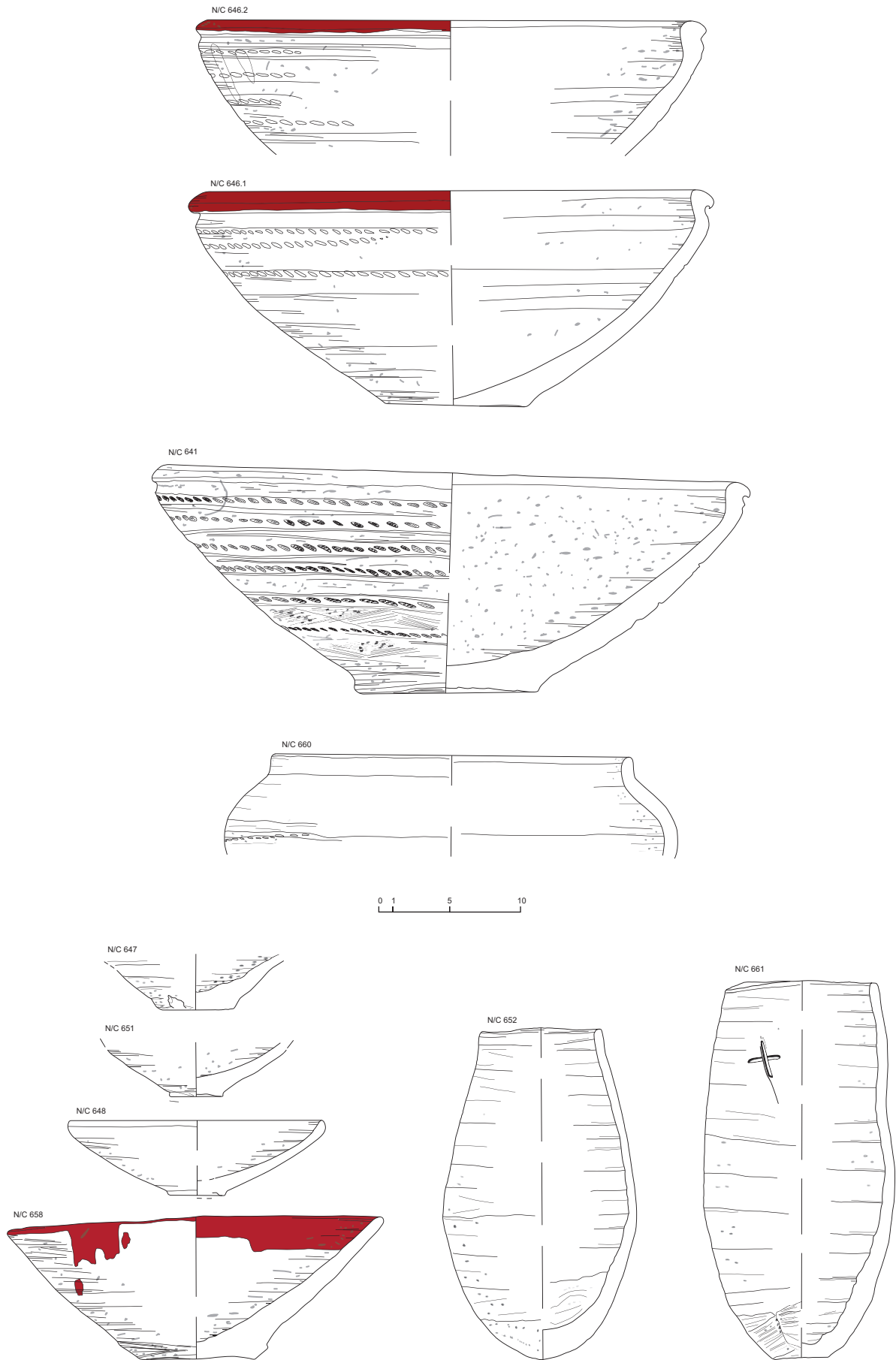


Fig. 56 Open shapes, beakers and cooking pot from cluster in Square 180/2270, Level 4

rated squat jars, as well as jars with modelled rims. The small quantity of Marl A2 and Marl A4 squat jars, both decorated and undecorated, is significant for dating. They find parallels in Thebes<sup>436</sup> and are characteristic of the early 18<sup>th</sup> Dynasty.

At present, the isolated remains labelled as Level 5 in SAV1 North cannot be distinguished from Level 4 as far as the ceramic is concerned. Based on the rare occurrence of black rim ware and Marl clay decorated squat jars, Level 5 seems to date in some areas of SAV1 North already to the time of Thutmose I. All in all, the ceramics suggest that Level 5 is not a distinct unit of stratigraphic layers, separated from what was called Level 4, but rather a very small area of unsystematically exposed early remains on the site that possibly belong to the sequence of Level 4 (see I.3.1).

#### 4.2 Pottery types from Level 4

For establishing an absolute dating of the ceramics from Level 4, a set of vessels discovered in Square 180/2270 is important (Figs. 56–57, Pl. 32). Combining the data from this ceramic deposit with the square's Level 4 material as a whole, nearly 700 vessels can be regarded as dating evidence.<sup>437</sup> The general character of the wares, similar to Level 5, shows a close affinity to Second Intermediate Period traditions (e.g. predominance of coarse Nile C variants and of Marl B). Significant wares like black rim ware and red splash ware are here absent, and the scarcity of Marl A decorated wares points towards a Pre-Hatshepsut/Thutmose III date.<sup>438</sup> In addition, common types like carinated and simple dishes with ring bases frequently occur in a design that identifies them as early variants: the bottom of the ring base is left uncoated outside in most cases, which is still a Second Intermediate Period style of applying a wash to vessels.<sup>439</sup>

The vessels found in the ceramic cluster provide further interesting clues. Two Egyptian-style vessels (N/C 647 and N/C 652) are most likely of 17<sup>th</sup> Dynasty date considering the shape, manufacture and ware. The lower part of a simple dish with a string-cut base with asymmetrical marks, N/C 647 (Fig.

56), was produced on a slow wheel. This method of manufacture corresponds to the Second Intermediate Period style, and does not yet reflect the technological innovations of the New Kingdom. Three examples of the so-called drop pots or beaker jars have been found, two of which (N/C 645 and N/C 661, Fig. 56) have trimmed flat bases and show traces of a red wash. They have the typical slender shape for which many parallels can be named, for example vessels from the early 18<sup>th</sup> Dynasty found at South Abydos<sup>440</sup> and Umm el-Qaab.<sup>441</sup> However, drop pot N/C 652 was left uncoated and has a rounded base (Fig. 56). N/C 652 is of special interest, since according to its peculiar shape it seems to pre-date the 18<sup>th</sup> Dynasty – it has a somewhat angular outline and is rather broad, with a high balance point. Unfortunately, its base was heavily eroded, so the finishing technique that might provide a hint for dating the vessel remains a bit unclear. Especially with respect to its broad shape, it fits best within a morphological line *before* the slender, round bottomed drop pots of the early 18<sup>th</sup> Dynasty.<sup>442</sup> N/C 652 also shows some affinity to similar vessels from Thebes, which are datable to the 17<sup>th</sup> Dynasty.<sup>443</sup>

Another vessel of pre-18<sup>th</sup> Dynasty character is a large Nubian storage jar (N/C 650, Fig. 57) of Classical Kerma tradition and falls into Brigitte Gratien's Type C IX.<sup>444</sup> Four post-fired repairing holes are preserved on the upper part of N/C 650, indicating a long use-life for the large sized vessel before it was deposited together with the 18<sup>th</sup> Dynasty types.

The other vessels (see Fig. 56) find close parallels at sites of the early 18<sup>th</sup> Dynasty, in particular with material from the early phase of "Bauschicht 10" in the New Kingdom town of Elephantine (dated as Pre-Hatshepsut) and from the Ahmose II complex at South-Abydos (dated as Ahmose II–Amenhotep I).<sup>445</sup> Deep carinated bowls with red rims and coarse flat bases (N/C 646.1–2, Fig. 56) are typical for the early 18<sup>th</sup> Dynasty, finding parallels both in Egypt (e.g. Elephantine) and Upper Nubia (Dukki Gel).<sup>446</sup> A variant of this type are the uncoated deep carinated bowls with several rope impressions and again a very coarse flat base (N/C 641, Fig. 56). Simple

<sup>436</sup> Dated to the early 18<sup>th</sup> Dynasty, see SEILER 2003, figs. 11.5–6.

<sup>437</sup> See BUDKA 2011a, 29, Table 2.

<sup>438</sup> Cf. BUDKA 2005, 97.

<sup>439</sup> SEILER 2010, 49. See also BUDKA 2011a, 28.

<sup>440</sup> BUDKA 2006, figs. 19.9 and 20.1.

<sup>441</sup> PUMPENMEIER 1998, fig. 23.

<sup>442</sup> Cf. SEILER 2005, folded pls. 6.6–12.

<sup>443</sup> Cf. SEILER 2005, folded pl. 6.4; SEILER 2010, fig. 9.2.

<sup>444</sup> GRATIEN 1985, pl. 5c; GRATIEN 1986, 434–435, fig. 324c. Cf. BUDKA 2011a, 27.

<sup>445</sup> Cf. also Deir el-Ballas, estimated in date as 17<sup>th</sup>/18<sup>th</sup> Dynasties; BOURRIAU 1990, 15–22.

<sup>446</sup> RUFFIEUX 2009; RUFFIEUX 2011; RUFFIEUX 2014.



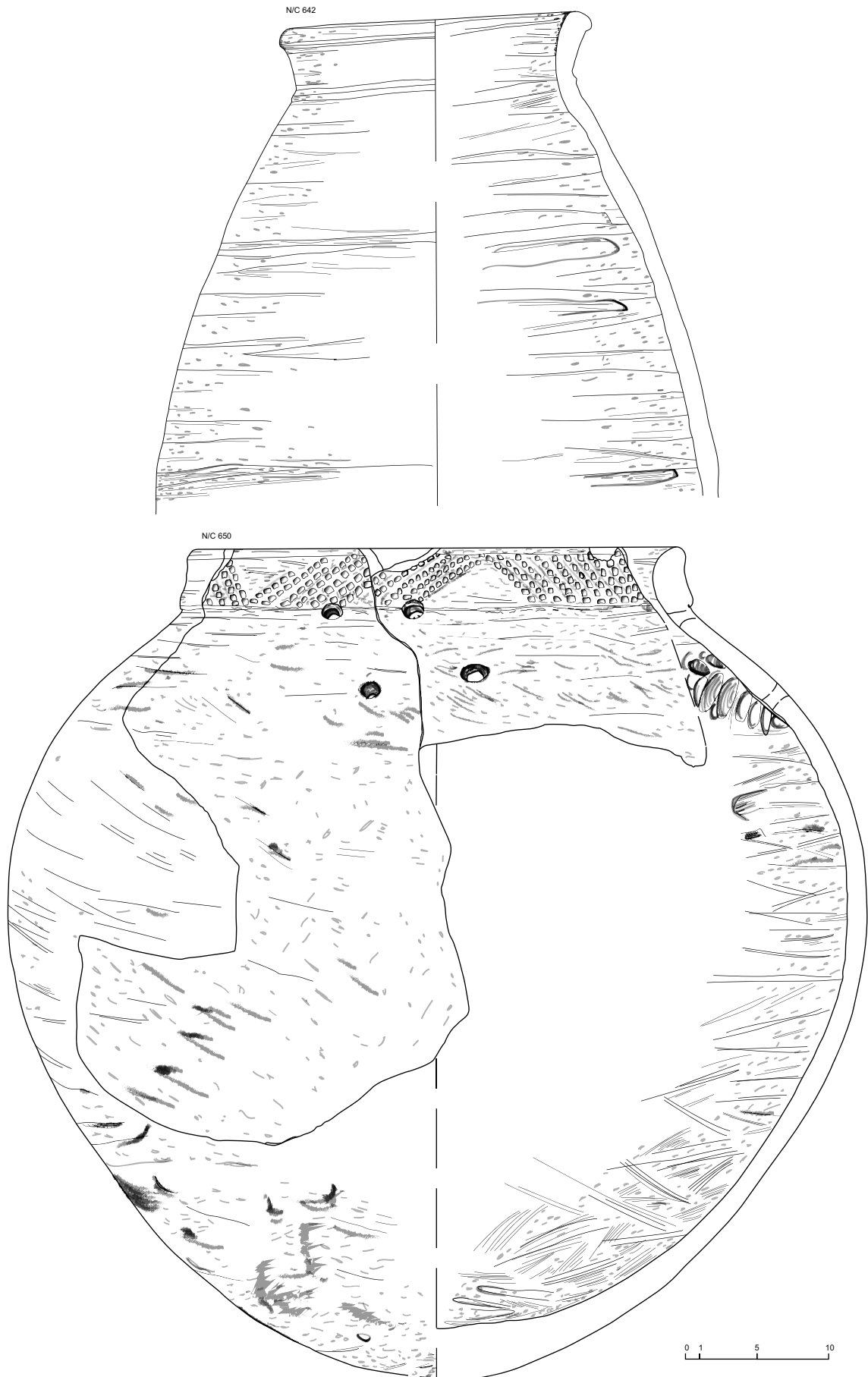


Fig. 57 Egyptian *zir* and Nubian storage vessel from cluster in Square 180/2270, Level 4

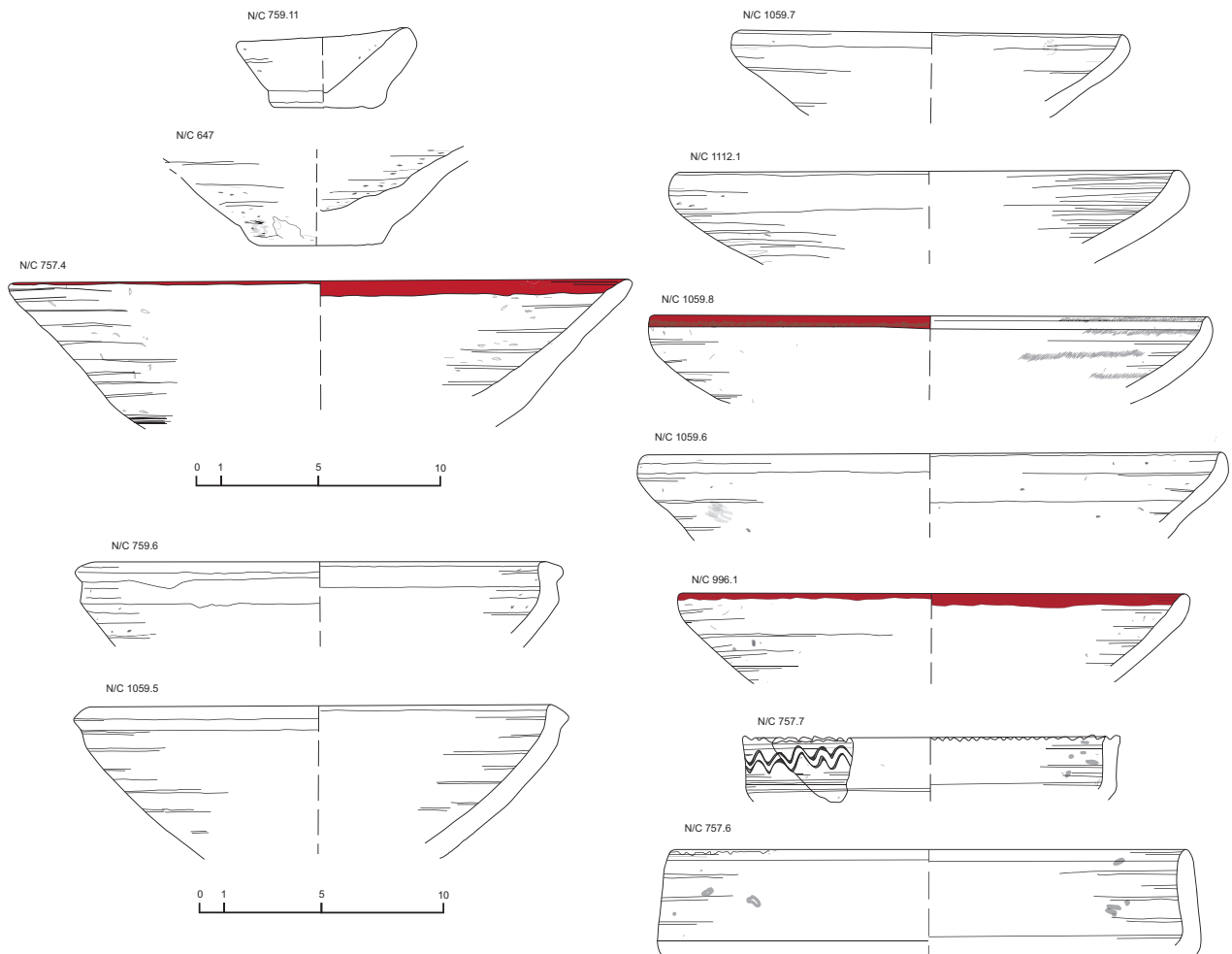


Fig. 58 Open forms

dishes with a flat base and irregular red rim (N/C 658, Fig. 56) are common types as well, with good comparisons from other contemporaneous sites. N/C 660 is the rim sherd of a typical Egyptian cooking pot (Fig. 56, see III.4.5.1). This type of cooking pot becomes common throughout Egypt during the 18<sup>th</sup> Dynasty, but is first attested at the very beginning of the New Kingdom at Elephantine.<sup>447</sup> Interestingly, the fabric of N/C 660 corresponds exactly to the sandy Elephantine cooking pot ware, labelled as Nile E2 (III.2.1).

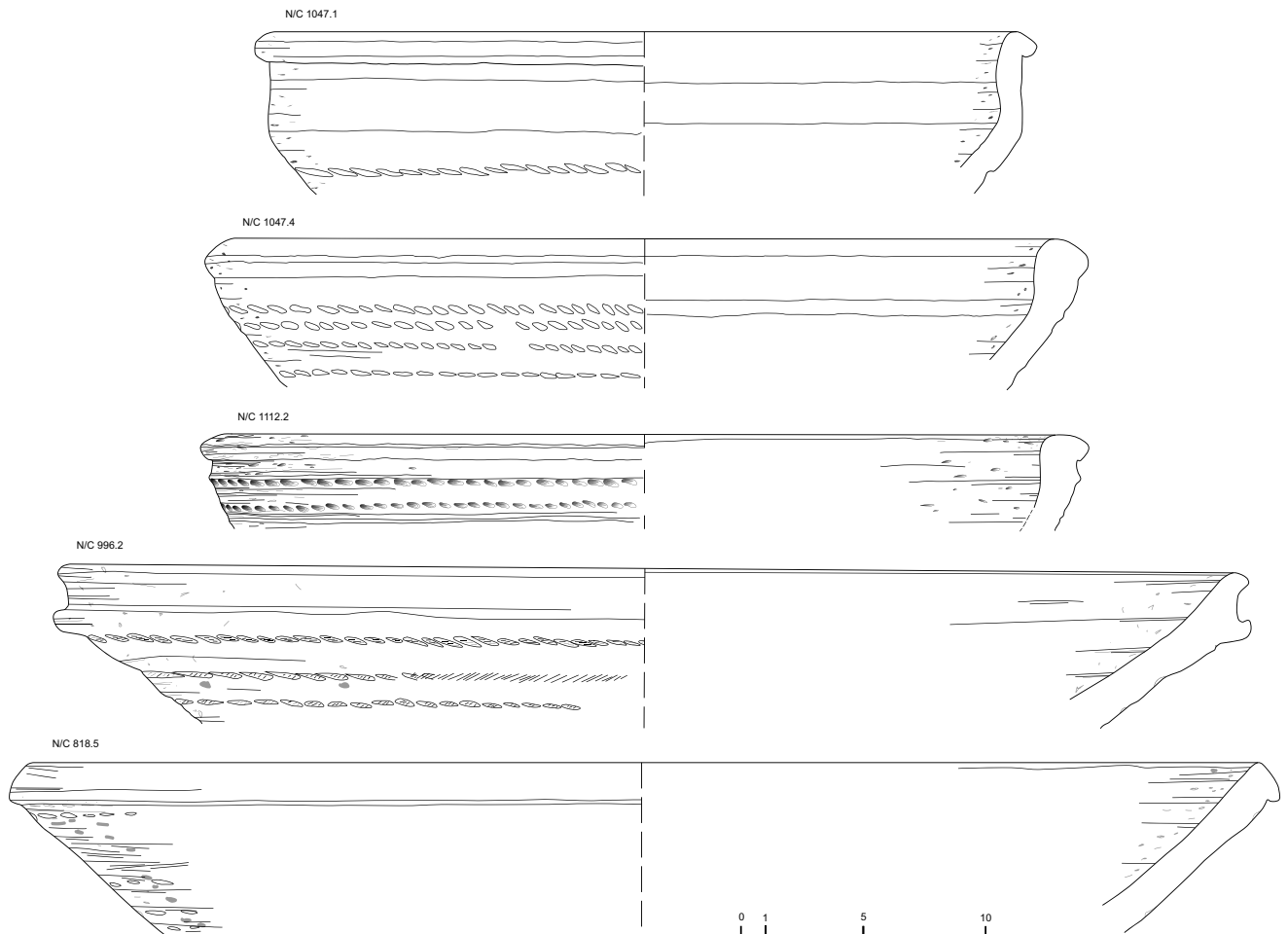
A total of four white-washed Nile clay storage vessels or *zirs* were found in fragmentary condition in the ceramic cluster of Square 180/2270, the largest of which is a part labelled N/C 642 (Fig. 57). This type of *zir* is short-necked, with a ledge at the

junction of the neck and the shoulder. It can be interpreted as an imitation of Marl clay vessels, produced in a coarse Nile clay variant with abundant chaff and a white washed surface. It is quite a common vessel type in the New Kingdom town of Sai and a vessel sequence based on its morphological development (especially the height of the neck, but also the globular or more slender overall shape) shows that little change occurs from the early to mid-18<sup>th</sup> Dynasty (Levels 4 and 3). N/C 642 finds parallels at SAV1 North in the subsequent Level 3 (cf. Fig. 76), at Sesebi and also in “Bauschicht 10” at Elephantine. Similar *zir* vessels in another fabric, a dense Nile clay with limestone, are known from contexts of the late 17<sup>th</sup> Dynasty and early 18<sup>th</sup> Dynasty at Elephantine<sup>448</sup> and Thebes.<sup>449</sup> Somewhat distant

<sup>447</sup> SEILER 1999, 221, fig. 53.

<sup>448</sup> SEILER 1999, fig. 51.2, level 11.

<sup>449</sup> SEILER 2003, fig. 11.7.



from Level 4

variants of the shape of N/C 642, with no clear identification of the ware, were found at Fadrus.<sup>450</sup> In general, the *zir* N/C 642 illustrates that certain vessel types may show little formal modifications over a considerable time span, while others display a more rapid morphological development<sup>451</sup> – for example, beakers change in their outline, general shape *and* rim specifics (see above and Fig. 56).

Other material from various contexts of Level 4 in SAV1 North confirms the close parallels with “Bauschicht 10” at Elephantine. Numerous dishes (simple or with inverted rim, outer lip or carinated) as well as carinated bowls and large plates

(Fig. 58) also correspond to findings in Dukki Gel at Kerma.<sup>452</sup> A common and very specific type of carinated dish shows incised wavy lines and a finger pinched or cut rim (N/C 757.7, Fig. 58),<sup>453</sup> and appears within both Levels 4 and 3 at SAV1 North.<sup>454</sup> These dishes (DP 8.1) are regularly red washed, sometimes with additional white paint, and they often show vertical applications on the upper part of the vessel. This type, also known on Sai Island from SAV2,<sup>455</sup> is commonly associated with the Second Intermediate Period pottery tradition in Egypt. Numerous examples of these dishes are attested for this period in Lower Egypt<sup>456</sup> and Upper Egypt<sup>457</sup> as

<sup>450</sup> HOLTHOER 1977, pl. 16, ST 1, 185/227:2.

<sup>451</sup> Cf. SEILER 1999, 205.

<sup>452</sup> RUFFIEUX 2016, 511, fig. 4.

<sup>453</sup> Smith labelled this kind of rim as “pinched ‘piecrust’ rims” (SMITH 2012, 397).

<sup>454</sup> BUDKA 2011a, 29–30.

<sup>455</sup> HESSE 1981, 29, class 93, fig. 18.

<sup>456</sup> See BOURRIAU 2010, fig. 9; BUDKA 2011a, 30 with other references.

<sup>457</sup> E.g. SEILER 2010, figs. 8.2–3; BOURRIAU 1990, fig. 4.3 [20].

well as in Lower Nubia.<sup>458</sup> Early variants are already known as of the late Middle Kingdom in Egypt.<sup>459</sup> Finds from Elephantine<sup>460</sup> and Sedment<sup>461</sup> illustrate that this vessel type occurs in 18<sup>th</sup> Dynasty contexts as well, until the reign of Thutmose III. This corresponds to the distribution of Type DP 8.1 at Sai Island, where such dishes frequently appear together with material dating to Thutmose III/Amenhotep II (see III.4.3). In particular, the close parallels from Elephantine indicate that although the dishes from SAV1 North within Levels 4 and 3 evoke the style of the Second Intermediate Period, they are not residual pieces. This specific type may be used to illustrate how pottery of the Second Intermediate Period and the early New Kingdom followed regionally divergent developments within the areas of both Egypt and Nubia.<sup>462</sup>

Since the possibilities for more refined dating of ceramics from the early 18<sup>th</sup> Dynasty are in general still limited, assumptions derived from the context of Level 4 at SAV1 North have to be treated with caution.<sup>463</sup> However, a date range beginning with the reign of Ahmose II (or Amenhotep I) and ending with Thutmose I may be safely assumed, since no material datable to the period of Hatshepsut/Thutmose III has been recorded. There is certainly an overlap with the material identified as Level 5 (see III.4.1). That some findings from contexts within Level 4 of SAV1 North seem to be already “Thutmoside” corresponds to the recent assessment of David Aston that there was a change in pottery production after the reign of Amenhotep I.<sup>464</sup> Further material from a substantial stratigraphic sequence would be necessary for a more precise dating, but for now, Levels 5 and 4 at SAV1 North are considered to span the period from Ahmose II to Thutmose I.

### 4.3 Pottery types from Level 3

SAV1 North clearly experienced its heyday during the 18<sup>th</sup> Dynasty in the time of Level 3. The ceramic material is numerous, but derives mostly from fills rather than closed contexts. Thus, a large quantity

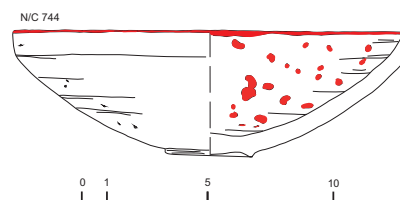


Fig. 59 Complete dish with red splash decoration N/C 744

of material originally belonging to Level 3 was also found in fills from Level 2 and even in Level 1 contexts, providing difficulties in establishing a precise dating (see I.3.1).

Other important aspects of the ceramics from Level 3 at SAV1 North are the first appearance of Marl D amphorae and an increase in decorated wares.<sup>465</sup> Though it first appears in Level 3, Thutmoside red splash decoration on dishes<sup>466</sup> is now frequently found (Fig. 59). A large group of Bichrome decorated necked jars with linear, floral, or figurative designs is of special interest.<sup>467</sup> The best parallels were recently unearthed in Kerma/Dukki Gel, where they have been dated to the reign of Hatshepsut and possibly Thutmose III.<sup>468</sup> The first appearance of the pieces at SAV1 North within Level 3 (e.g. N/C 723.01 with the joining pieces N/C 265, 305, 311) suggests a similar date. A substantial quantity of sherds with the same type of chaffy Nile clay and Bichrome decoration were excavated in recent years on Elephantine Island, from contexts datable between Thutmose III and Thutmose IV.<sup>469</sup> Amongst others, these jars also find parallels in Nubia at Askut<sup>470</sup> and Sesebi.<sup>471</sup>

Specific wares and vessel types from Level 3 – blue painted pottery, monochrome painted storage vessels, meat jars and various plates – find ready parallels at Malqata, Amarna and Elephantine, associated with the second half of the 18<sup>th</sup> Dynasty. This material postdates the Thutmoside era and it is possible to assume that Level 3 at SAV1 North lasted at least until the reign of Amenhotep III, if

<sup>458</sup> From Askut, dated as 13<sup>th</sup> Dyn. (SMITH 1995, fig. 3.8; SMITH 2002, fig. 3.3), but probably later, see KNOBLAUCH 2007.

<sup>459</sup> SEILER 2012, 288–291, Type I.F.18.

<sup>460</sup> Personal observation; material courtesy of author.

<sup>461</sup> PETRIE and BRUNTON 1924, pl. 64.

<sup>462</sup> Cf. KNOBLAUCH 2007 and more recently SEILER 2010; BOURRIAU 2010.

<sup>463</sup> Cf. BUDKA 2016b with references.

<sup>464</sup> ASTON 2013.

<sup>465</sup> BUDKA 2011a, 29–30.

<sup>466</sup> Cf. ASTON 2005, 65–73.

<sup>467</sup> BUDKA 2015c.

<sup>468</sup> RUFFIEUX 2009, 124–126, figs. 3–5.

<sup>469</sup> BUDKA 2010a, 351 and personal observation.

<sup>470</sup> SMITH 1995, 145, fig. 6.5.

<sup>471</sup> Pamela Rose, personal communication, 20 Jan 2012. For the generally close comparisons of the material from Sesebi to Sai cf. SPENCE and ROSE et al. 2011, 37.

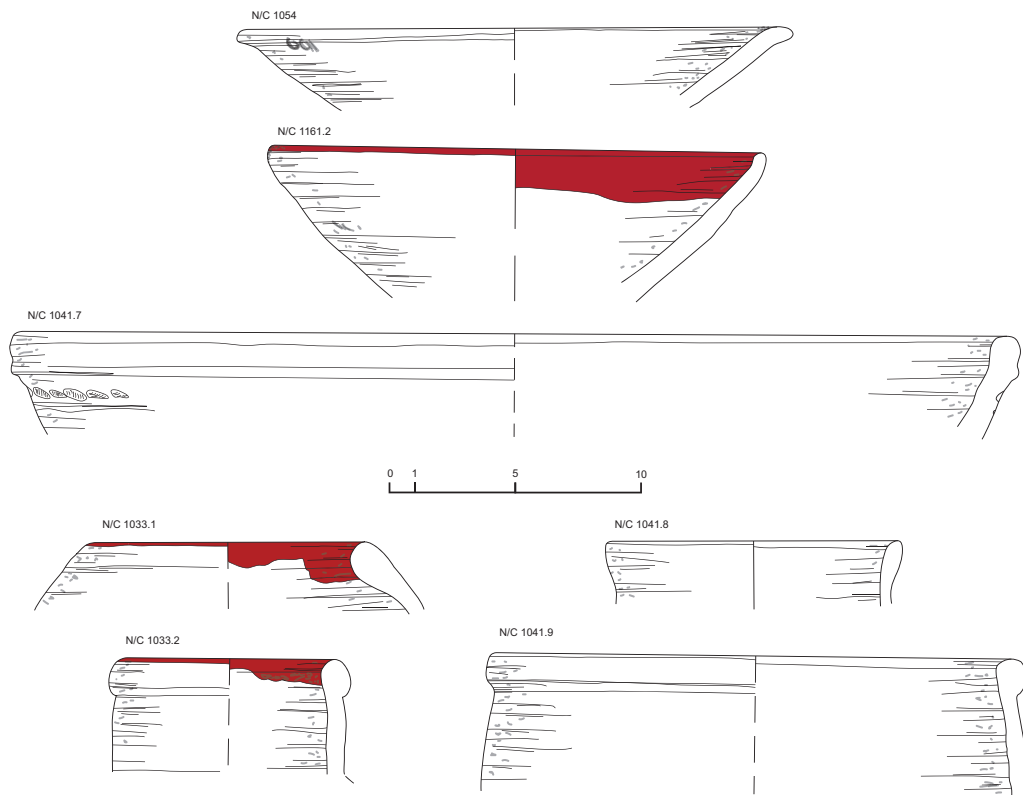


Fig. 60 Ramesside pottery from Level 2

not further towards the end of the 18<sup>th</sup> Dynasty (cf. III.5.4).<sup>472</sup>

Open forms of Level 3 are best illustrated from N12D (III.5.2). Simple dishes with flat bases or ring bases are in general very common, often with a red rim. Carinated dishes still frequently show wavy incised or painted decoration, already known from Level 4.<sup>473</sup> Black rim ware and the Thutmoside red splash decoration<sup>474</sup> is now regularly found on dishes, contrasting slightly with the material from Level 4. Chronological markers for the 18<sup>th</sup> Dynasty are the so-called flower pots, conical deep bowls with perforated bases (N/C 1185.1, Fig.75), finding numerous parallels both in Egypt and Nubia.<sup>475</sup>

The most characteristic types amongst the closed Nile clay forms of the 18<sup>th</sup> Dynasty are round-based beakers, two types of beer jars, large *zirs* and ovoid jars as well as squat jars and pitchers.<sup>476</sup> The latter are often decorated<sup>477</sup> and imitate Marl clay ves-

sels (see also Pl. 34, N/C 606). Large *zir* vessels of a chaffy Nile C variant (N/C 642, N/C 962, cf. Fig. 57) are characteristic of the early to mid-18<sup>th</sup> Dynasty and find close parallels at Elephantine.<sup>478</sup> Thus, though Level 4 and 3 are quite similar as far as the corpus is concerned, slight changes can be observed in terms of wares and surface treatment, as well as technological features like the finishing of ring and flat bases.

#### 4.4 Pottery types from Level 2

The material from Level 2 is highly mixed, making precise dating of these remains difficult. A large number of early to mid-18<sup>th</sup> Dynasty vessels appear side by side with some Ramesside, few Napatan and a considerable amount of Post-Meroitic and Christian sherds.

Fig. 60 illustrates Ramesside pottery vessels from Level 2. The most common open type is a

<sup>472</sup> Cf. BUDKA 2011a, 29, Table 3.

<sup>473</sup> See parallels from Sesebi: SPENCE and ROSE et al. 2011, 37, fig. 5.

<sup>474</sup> Cf. ASTON 2006, 65–73.

<sup>475</sup> HOLTHOER 1977, pl. 18; MINAULT-GOUT and THILL 2012, pl. 132.

<sup>476</sup> See also WILLIAMS 1992, 80, fig. 2.

<sup>477</sup> See material from SAC5: MINAULT-GOUT and THILL 2012, pl. 141; cf. also HOLTHOER 1977, pls. 20–21; KNOBLAUCH and LACOVARA 2012, 207.

<sup>478</sup> BUDKA 2011a, 26 with references.

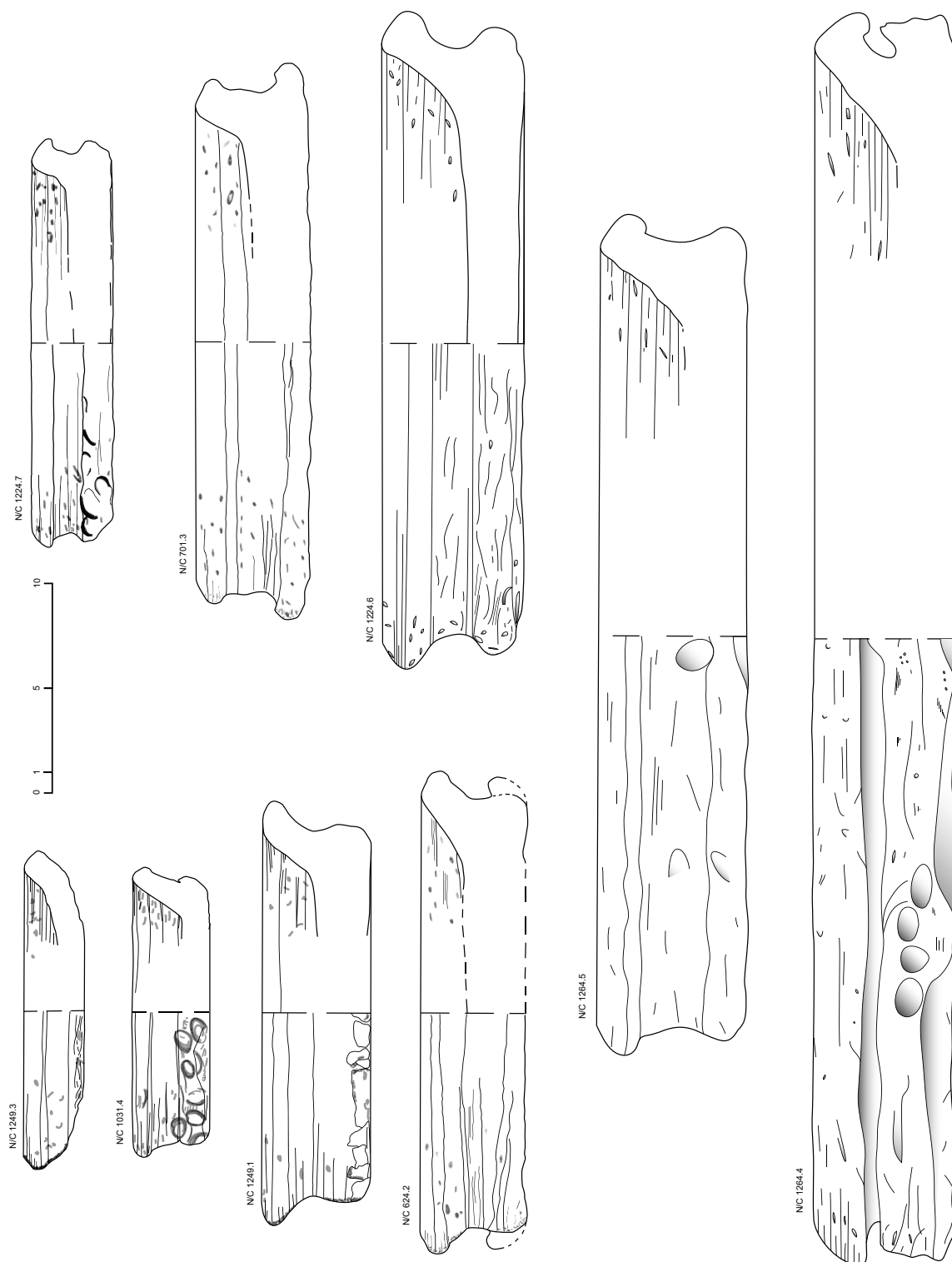


Fig. 61 Bread plates from SAV1 North

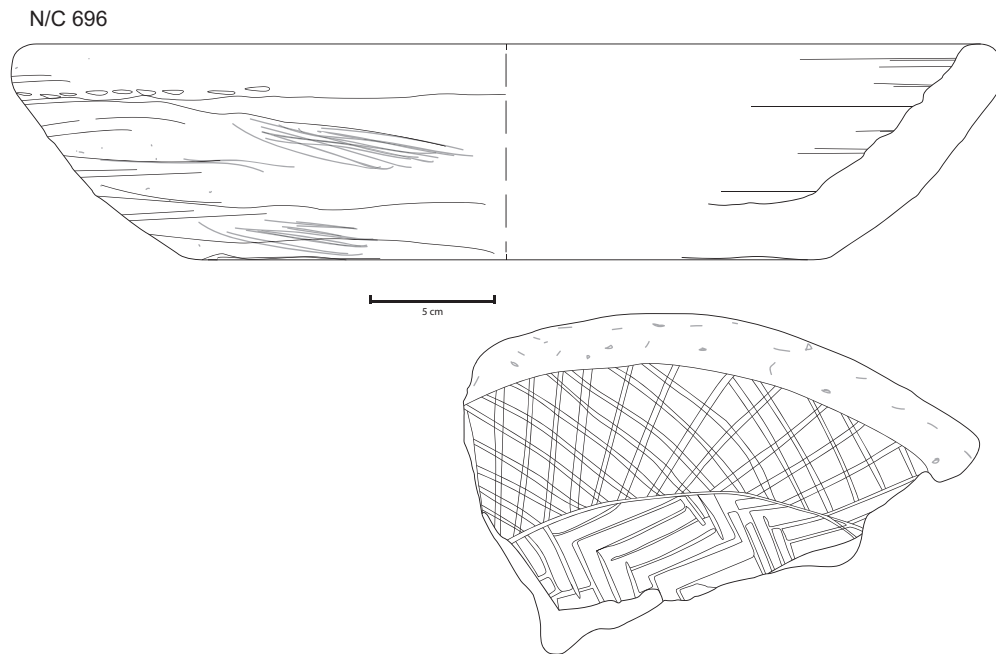


Fig. 62 *Schaelbecken* N/C 696

convex dish with a red rim (N/C 1161.2, Fig. 60). Closed forms are more common and comprise Nile, Marl and Mixed clay wares. Nile clay jars may also have a red painted rim (N/C 1033.1-2, Fig. 60).<sup>479</sup> Characteristic Ramesside types are amphorae in Mixed clay B (N/C 1041.9, Fig. 60) and Marl D. All in all, the significance of the material from Level 2 is restricted primarily to the attestation of Ramesside material at SAV1 North – further conclusions are unfortunately not possible at present.

#### 4.5 Functional vessels from SAV1 North

The most common functional vessel types from SAV1 North are pot stands, cooking pots and bread plates (Fig. 61). Bread plates of different sizes are frequent and usually made in Nile C. Conical bread moulds, belonging to Jacquet's Type D<sup>480</sup>, appear only in very small numbers (cf. Fig. 66, N12).<sup>481</sup> Pot stands are typically numerous in settlement contexts (e.g. Buhen) and vary in general from low, transi-

tional to tall, made primarily in Nile clays (Nile B2 and Nile C), but also attested in Marl clay (especially Marl B and Marl E).<sup>482</sup> Marl E was also used for the so-called *Schaelbecken* (Fig. 53). These large thick-walled trays are ovoid in shape and incised geometric pattern on the interior occur both in Marl and local Nile clay variants – the shapes and decoration patterns are the same in both cases.<sup>483</sup> N/C 696 is a Nile clay example and illustrates the typical shape and decoration (Fig. 62). Other Egyptian functional types like spinning bowls (dishes with two handles attached to the interior of the base)<sup>484</sup> were primarily produced onsite in local fabrics, finding parallels in Sesebi and Buhen.<sup>485</sup> Pottery manufacture to meet the local demand is therefore likely, similar to the workmen's village at Amarna.<sup>486</sup>

##### 4.5.1 Egyptian cooking pots

Amongst functional vessels, cooking pots are of much importance in settlement areas. At SAV1 North,

<sup>479</sup> Cf. Amara West: BINDER, SPENCER and MILLET 2010, 38–41.

<sup>480</sup> JACQUET-GORDON 1981, 18, fig. 5. See also ROSE 2007, HC 2, 288.

<sup>481</sup> Cf. BUDKA 2014; BUDKA 2015b.

<sup>482</sup> For Buhen see EMERY, SMITH and MILLARD 1979, pls. 70–71. For the small amount of stands from funerary contexts

see WILLIAMS 1992, 88, figs. 10m–p; cf. also STEINDORFF 1937, pl. 68 (Cemetery S, Aniba).

<sup>483</sup> See BUDKA and DOYEN 2013, 191.

<sup>484</sup> See ROSE 2007, 60–61, SD 6, 202–203.

<sup>485</sup> Sesebi: Pamela Rose, personal communication, 20 Jan 2012; Buhen: EMERY, SMITH and MILLARD 1979, pl. 68, nos. 143–144 and 148.

<sup>486</sup> Cf. ROSE 2007, 60.

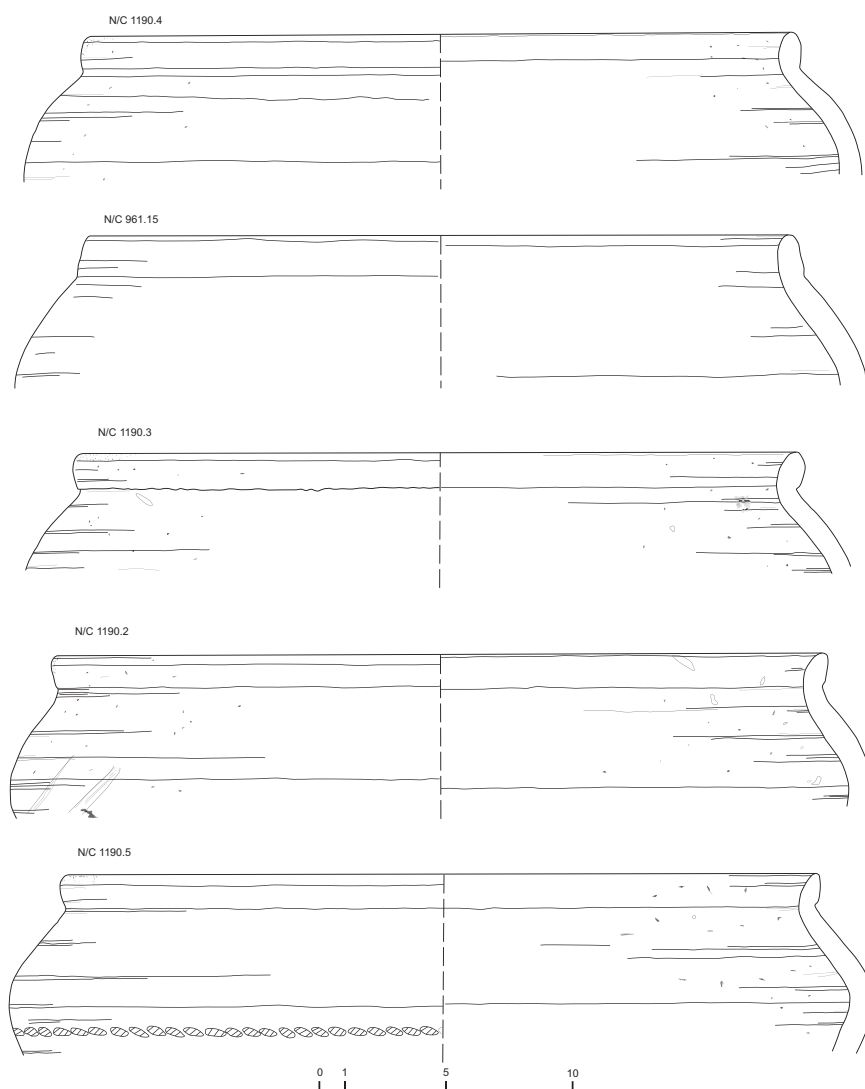


Fig. 63 Egyptian cooking pots from SAV1 North

imported, authentic Egyptian wheel-made cooking pots<sup>487</sup> are attested contemporaneous with Nubian-style cooking pots (hand-made with basketry impression or incised decoration).<sup>488</sup> In the earliest levels at SAV1 North (Levels 5 and 4), the Egyptian type of cooking pot seems to be the most common, gradually declining in frequency through later phases. Within the form class of Egyptian cooking pots attested from Sai Island, four individual types can be differentiated according to details of shape (Fig. 63),<sup>489</sup> all of which find close parallels at Elephantine.<sup>490</sup> Further vari-

ants regarding the size, carination and details of the rim shape are attested throughout the class; the rim gradually becomes more pronounced and the folded rim or lip is a late morphological feature within this series of cooking pots.

#### 4.5.2 *Fire dogs* (Fig. 64)

Specific Egyptian ceramic devices thought to be connected with the preparation of food are the so-called fire dogs.<sup>491</sup> The functional use of these

<sup>487</sup> BUDKA 2011a, 26; BUDKA 2012, 60; BUDKA and DOYEN 2013, 196, fig. 26.

<sup>488</sup> BUDKA and DOYEN 2013, 197, fig. 27.

<sup>489</sup> BUDKA 2016c.

<sup>490</sup> See SEILER 1999, 223, fig. 53.

<sup>491</sup> BUDKA 2012, 60–61, figs. 9–10.



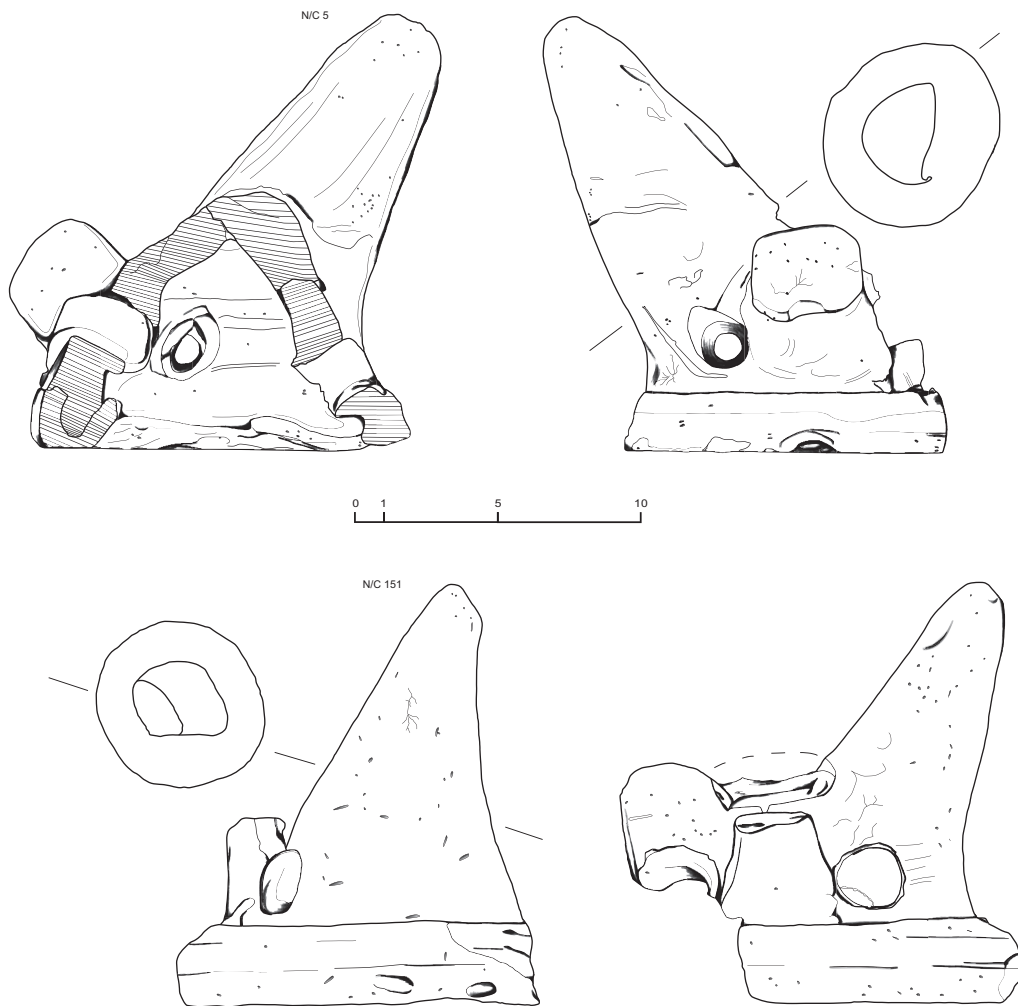


Fig. 64 Fire dogs from Level 1

vessels is not precisely understood, but traces of burning link them to processes involving fire, most likely placing cooking pots above flames.<sup>492</sup> The fire dogs from SAV1 North might therefore indicate that some inhabitants at Sai used a typical Egyptian tradition of food preparation: a set of fire dogs with an Egyptian cooking pot.<sup>493</sup> Until now, Sai is the only site in Upper Nubia where early 18<sup>th</sup> Dynasty cooking pots imported from Egypt were found; equally unique is the large quantity of Egyptian fire dogs from SAV1 North (more than 100 pieces). However, this large number – contrasting considerably with findings in settlements in Egypt – and the lack of hearths from 18<sup>th</sup> Dynas-

ty levels raises doubts about an Egyptian “cooking kit”, suggesting a more complex situation and possible multifunctional use of these fire dogs.<sup>494</sup> Comparably large quantities of these objects found at Buhen were tentatively associated with copper production processes.<sup>495</sup>

As Fig. 64 illustrates, two main types of fire dogs can be distinguished from SAV1 North: N/C 5 illustrates the common version with “snout” and “ears” and two holes as “eyes”, while N/C 151 attests a variant with a handle instead of a “snout”.<sup>496</sup> Although both of these pieces come from non-stratified contexts of Level 1, they may likely be attributed to the 18<sup>th</sup> Dynasty.

<sup>492</sup> See ASTON 1989; GIDDY 1999, 250–253.

<sup>493</sup> BUDKA 2012.

<sup>494</sup> Cf. BUDKA 2017.

<sup>495</sup> MILLARD 1979, 123–126, pls. 43, 103.

<sup>496</sup> Cf. MOSINIAK 2013.

### 5 SELECTED POTTERY FROM BUILDING UNITS OF LEVEL 3

Within the building units presented in this volume by Florence Doyen (Chapter II), the storage pits and silos yielded especially large amounts of ceramic material, which will be presented in the following. In 2014, while cleaning in N24 and N12, some few sherds were collected from contexts relevant for the building phases. Although the total number of sherds is insignificant (198 sherds with only 48 diagnostics and ten Christian sherds), these finds do contribute to the dating of Level 3. No material was available for a ceramic study from building unit N25, while the finds from all buildings except for N12 are scarce, as described below.

#### 5.1 Pottery from building unit N24

The ceramics unearthed during the excavation of N24 were studied by Miellé. Here, only some remarks about material from the final cleaning of the structure are possible (Fig. 65). According to

the pottery, deposit (N24De1d) predates Thutmose III; the same holds true for the backfill under N24F11SWP and the deposit lying between floors N24F11NEP and N24F12NEP. Thus, even this limited evidence suggests that the earliest building phase of N24 seems to date to an era prior to Thutmose III (cf. Chapter V).

#### 5.2 Pottery from building unit N12

During excavation, clear distinctions were not always made regarding the specific find positions of pottery within building unit N12 and some of the material was labelled only as “from the interior of N12”. Thus, no remarks are possible regarding the distribution of these sherds.

Fig. 66 shows some functional vessels from N12: two rim fragments of bread moulds and two fragments of tall pot stands, one of which is painted with linear design in black. Cooking pots are illustrated on Fig. 67. One Egyptian style cooking pot (N/C 1169.19) is an import from Egypt. The Nubian cooking pots find parallels at Sai and neighbouring

Pottery SAV1 North 2014 (from cleanings in N12 and N24)				
Square	Location	Levelments	Comments	Dating
190/2260	N12, pit 1, E of N16	160.42m 160.36m	corresponds to deposit (N12De2g) overlying Floor <u>N12F12R3</u>	early–mid 18 <sup>th</sup> Dynasty
190/2260	N12, ashy layer between Walls 42Sa, 42E und 42S	160.78m 160.56m	corresponds to deposit (N12De2f)	Thutmose III
190/2270	N24, deposit in installation south of N24Pil3; S of Wall 8N	160.08m	corresponds to (N24De1d) overlying Floor <u>N24ELam1</u>	early–mid 18 <sup>th</sup> Dynasty (pre-Thutmose III)
190/2270	N24, deposit in foundation trench?; S of Wall 8S	159.92m 159.86m	corresponds to the gravel backfill underlying Floor <u>N24F11SWP</u>	early 18 <sup>th</sup> Dynasty
190/2270	N24, fallen on floor from layer of sherds; northern edge of N24A	160.33m 160.28m	corresponds to the deposit overlying Floor <u>N24F11NEP</u> and underlying Floor <u>N24F12NEP</u>	early 18 <sup>th</sup> Dynasty
190/2270	N24, layer of backfilling with sand and pebbles	160.01m 159.92m	<i>disturbed area resulting from previous clearings (e.g. Sondage A 2012). Context overlying Floor <u>N24F11Wb</u></i>	Mixed with Christian material
190/2270	N24, layer of backfilling; above the missing SW corner of N24	160.01m 159.91m	<i>disturbed area resulting from previous clearings (e.g. Sondage A 2012). Context overlying Floor <u>N24F11Wb</u></i>	Mixed with Christian material
190/2270	N24, upon layer of pebbles and yellow sand	–	corresponds to gravel backfill underlying Floor <u>N24F11Wb</u>	early–mid 18 <sup>th</sup> Dynasty
190/2270	N24, south of N24Pil.3; occupational deposit below grindstone	160.00m 159.97m	corresponds to Deposit (N24DeG) underlying Floor <u>N24F11NWP</u>	early–mid 18 <sup>th</sup> Dynasty
190/2270	N24, s of Wall 8W; w of Wall 3S; eastern limit of Sondage A; brick pieces and residual layer	160.01m 159.88m	<i>disturbed area resulting from previous clearings (e.g. Sondage A 2012). Context overlying Floor <u>N24F11Wb</u></i>	Mixed with Christian material

Fig. 65 Dating of ceramics from cleaning in N12 and N24

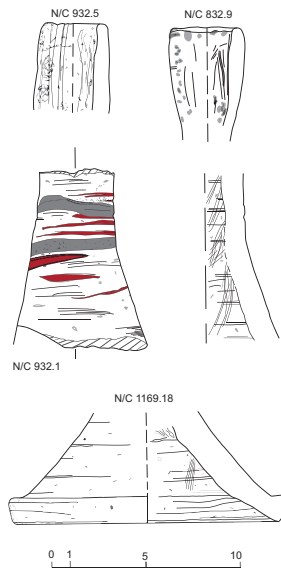


Fig. 66 Functional vessels from N12  
(bread moulds and pot stands)

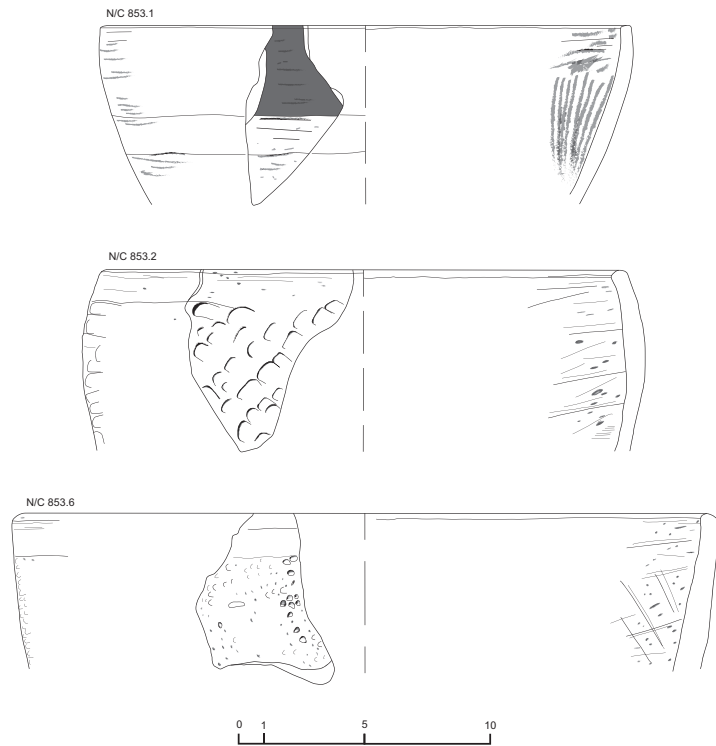


Fig. 67 Nubian vessels and Egyptian  
cooking pot from N12



sites like Sesebi. Black-topped deep bowls of Kerma Classique ware like N/C 853.1 are very common in Kerma contexts, but were also popular within the Kerma fine wares found in the town.<sup>497</sup>

Fig. 68 presents a representative collection of Level 3 open forms. Especially common are dishes with red rims and carinated dishes with wavy incised decoration, as well as various large plates and bowls. Beer jars with inverted rims and slender beakers (Fig. 69) correspond to other finds from Level 3 at SAV1 North and also to types from Abydos.<sup>498</sup> The types shown on Fig. 70 seem to be of an early 18<sup>th</sup> Dynasty date: a so-called crucible (JO 3/4, Fig. 52),<sup>499</sup> red burnished bottles and rims of jars. They all resemble material from the early “Bauschicht 10” at Elephantine. The same holds true for the Marl clay

vessels (Fig. 71); clearly of Upper Egyptian production, a tall necked Marl B bottle and a Mixed clay (III-a) *zir* are noteworthy.<sup>500</sup> The base and rim of a Canaanite amphora also find parallels in the material from Elephantine (Fig. 71).

#### N12D

One of the rare cases from SAV1 North of an almost intact and closed context is the circular storage pit, N12D.<sup>501</sup> This material is therefore of great significance and can be used for some remarks concerning the dating.<sup>502</sup> The silo N12D, excavated in 2011 within room N12/2, belongs to the building phase N12-b (see IID.6.3), with subsequent use in N12-a. Its ceramic material spans the time from the late Second Intermediate Period/early 18<sup>th</sup> Dynasty<sup>503</sup>

<sup>497</sup> Cf. BUDKA and DOYEN 2013, 193.

<sup>498</sup> BUDKA 2016b, figs. 6–7.

<sup>499</sup> See BUDKA forthcoming.

<sup>500</sup> See BUDKA 2005, 95–96, fig. 29.

<sup>501</sup> Former nomenclature: N17, see Fig. 4, Chapter II.

<sup>502</sup> See BUDKA and DOYEN 2013, 193–196; BUDKA 2016b.

<sup>503</sup> Cf. the similar material from Kom Rabia/Memphis, BOURRIAU 2010, 5 and passim.

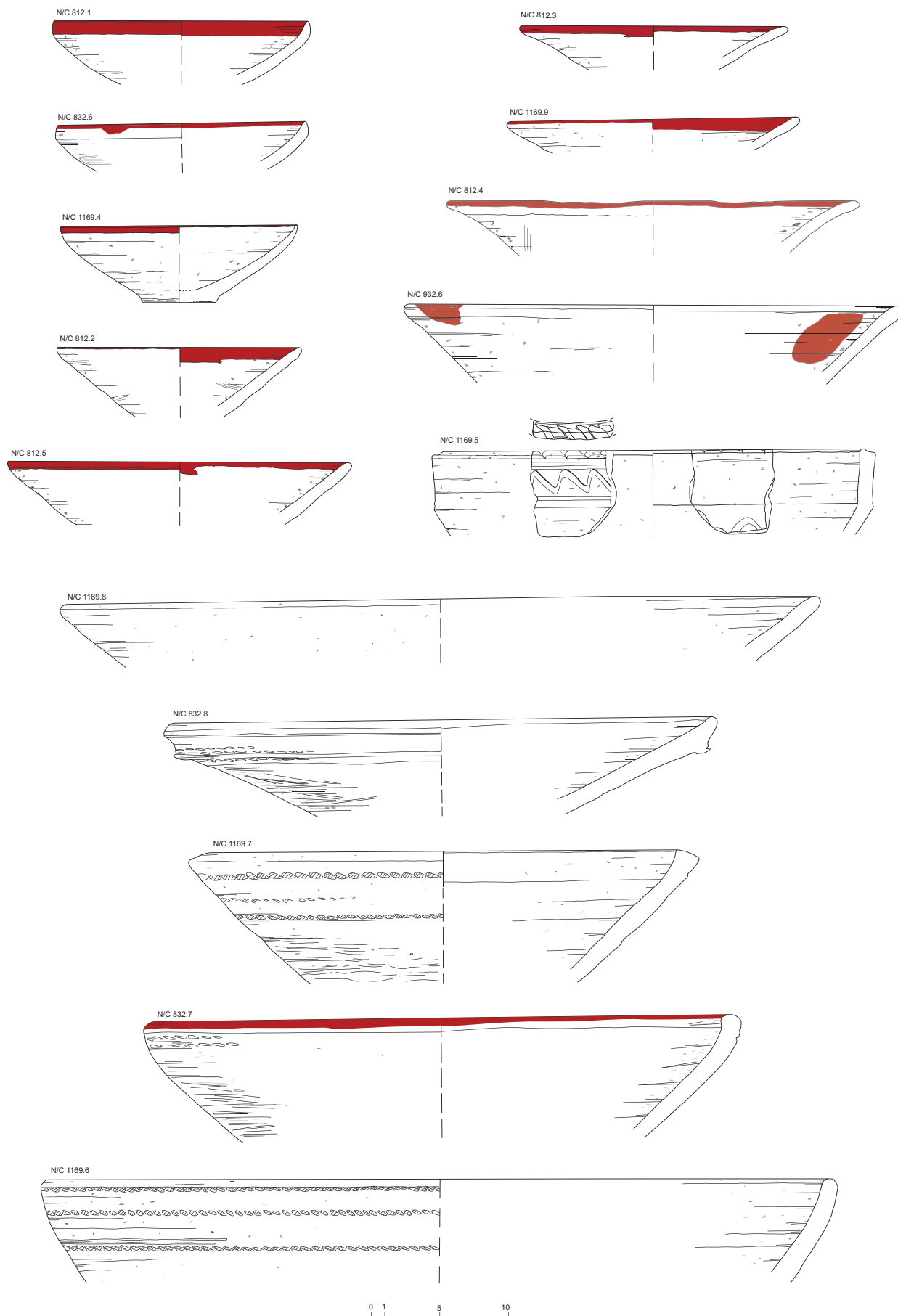


Fig. 68 Open forms from N12 (dishes and plates)

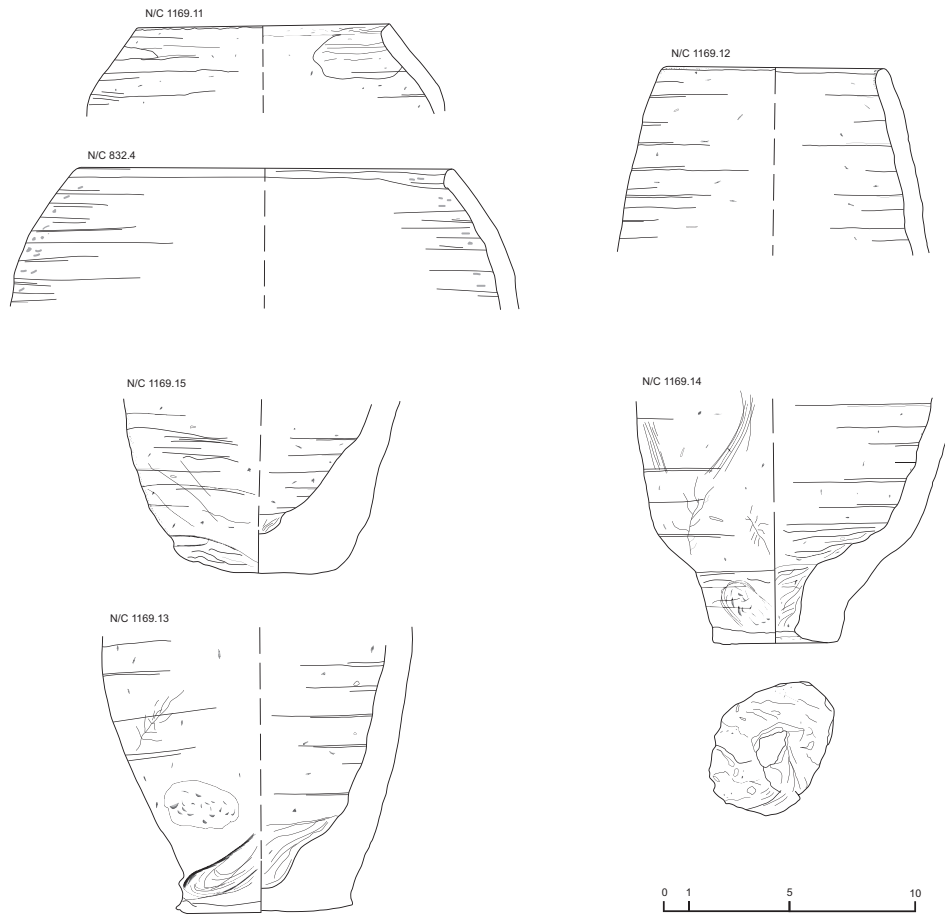


Fig. 69 Beerjars from N12

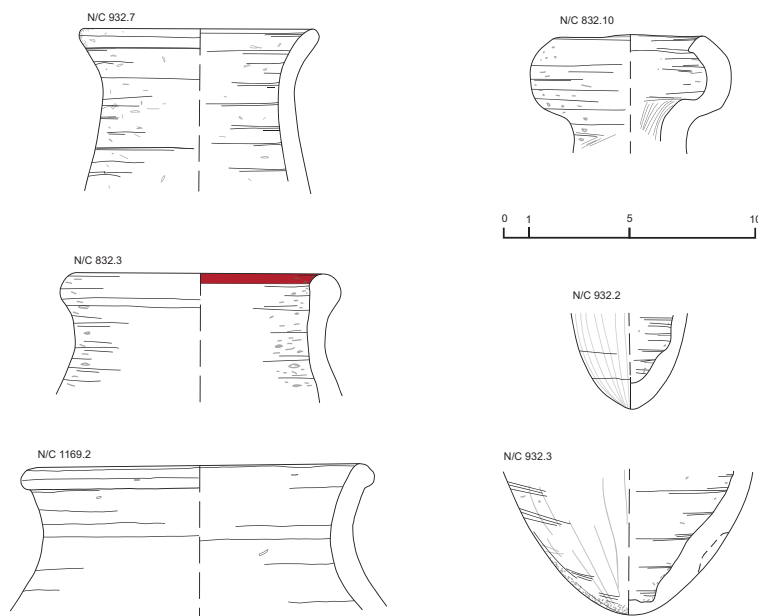


Fig. 70 Closed forms from an early phase of Level 3, N12

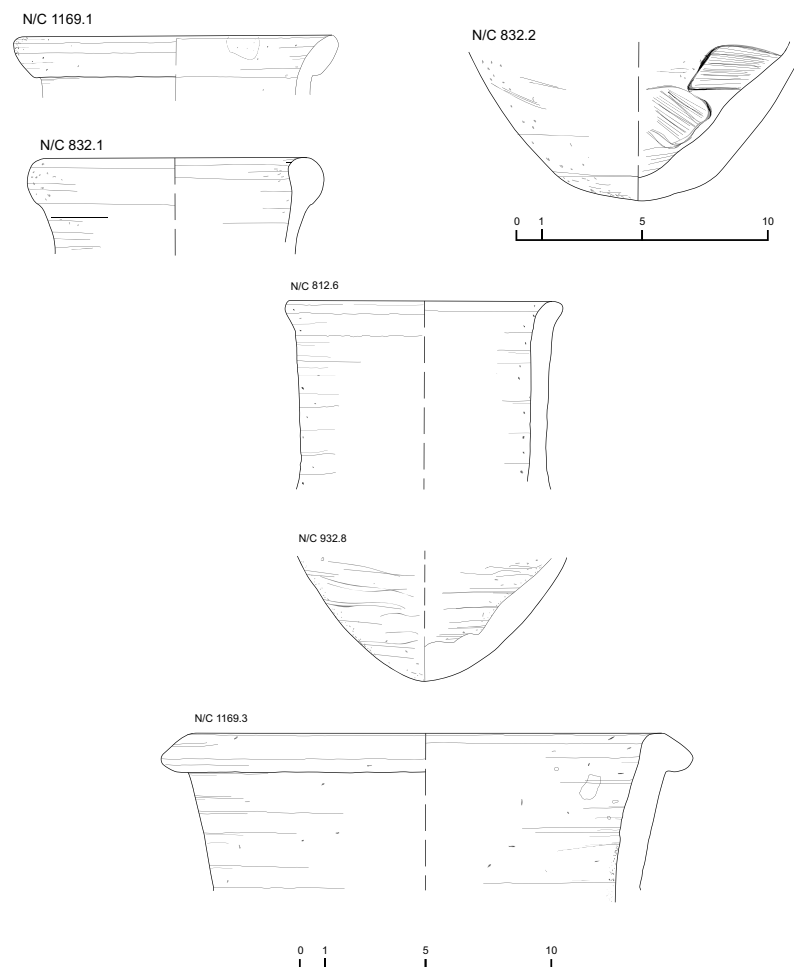


Fig. 71 Marl clay vessels and Canaanite amphorae from N12

until the reign of Thutmose III.<sup>504</sup> In total, 1,049 sherds were studied from N12D: 222 diagnostic pieces from the New Kingdom, 740 undiagnostic pieces from the New Kingdom and 87 fragments of Post-New Kingdom date. Despite the small amount (8%) of Post-New Kingdom material present, the silo seems to be a closed context from Level 3 since no New Kingdom sherds of periods later than the mid-18<sup>th</sup> Dynasty were found. Whether the Post-New Kingdom material came into N12D through disturbances cutting in from above or by mixing layers within N12 remains unclear and was not documented during excavation.

The pottery from N12D is a typical household assemblage, but with a large repertoire of forms.

It illustrates the most common types and wares of Level 3 in SAV1 North (Figs. 72–77),<sup>505</sup> supporting the assessment that Level 3 can be predominately associated with the later reign of Thutmose III.<sup>506</sup> All in all, it is very likely that the silo was filled in (or after) the last phase of Level 3 use of N12 – the abandonment phase following Phase N12-a – still consisting of Level 3 material.

Two almost complete tall biconical stands have survived, as well as two additional fragments of the same (Fig. 72).<sup>507</sup> They have a modelled rim at the base and the top. As attested in sites in Egypt (e.g. Amarna and Elephantine), stands like this are attested at SAV1 North with different surface treatments: uncoated, white washed and red burnished.<sup>508</sup>

<sup>504</sup> See BUDKA 2016b.

<sup>505</sup> The material finds, amongst others, close parallels at Askut, see SMITH 1995, figs. 6.4–6.5.

<sup>506</sup> BUDKA 2012, 60, fig. 7.

<sup>507</sup> Cf. HOLTHER 1977, class TB 3 tall, pl. 15.

<sup>508</sup> For white washed stands and their cultic connotation see HULIN 1984.

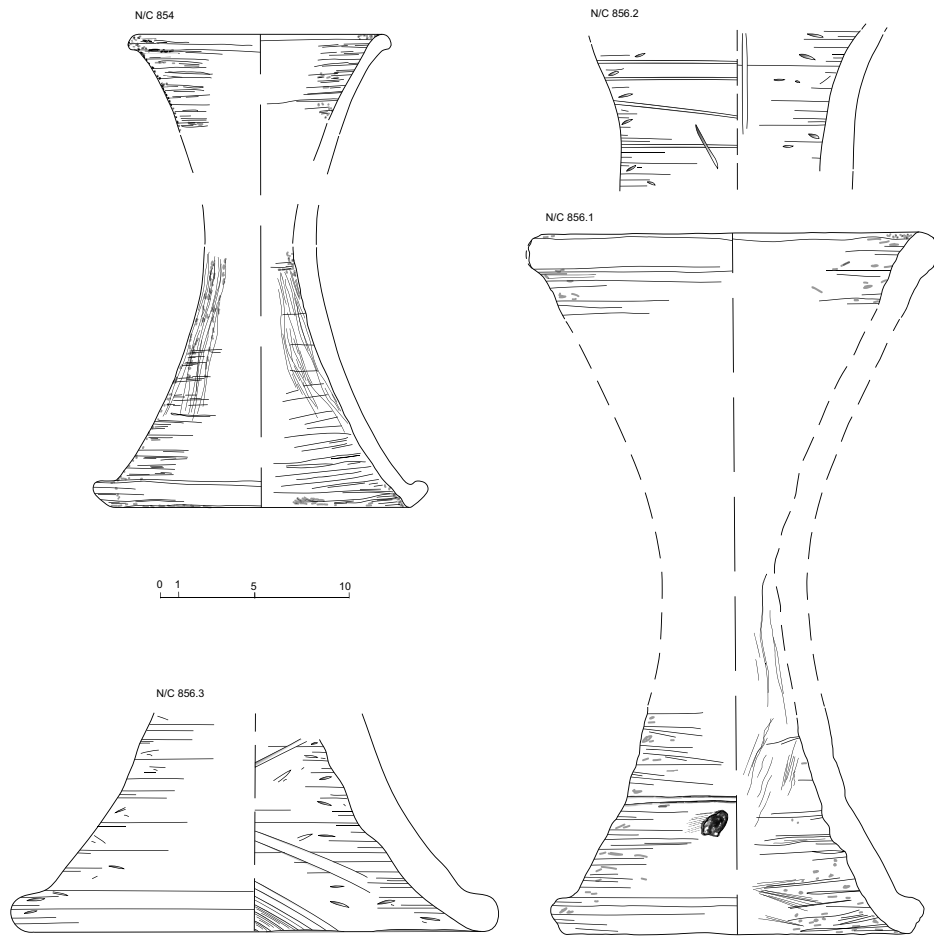


Fig. 72 Tall pot stands from N12D

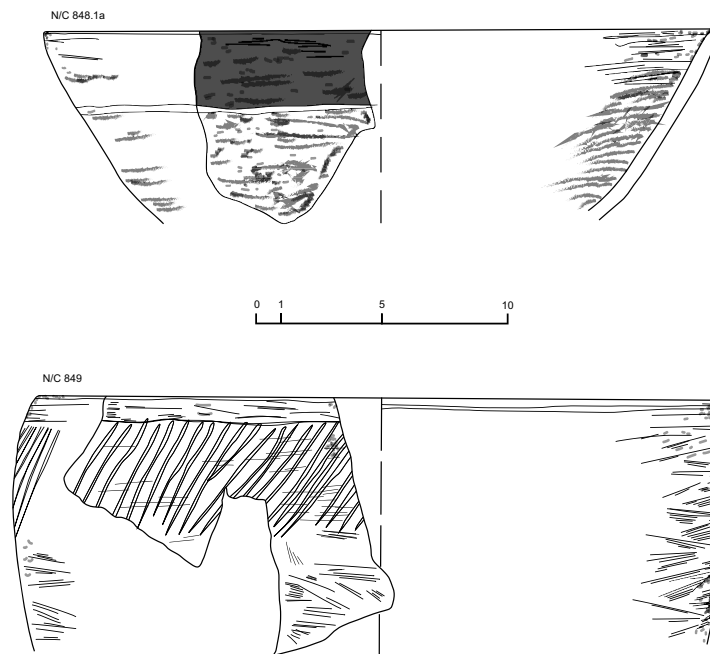


Fig. 73 Nubian vessels from N12D

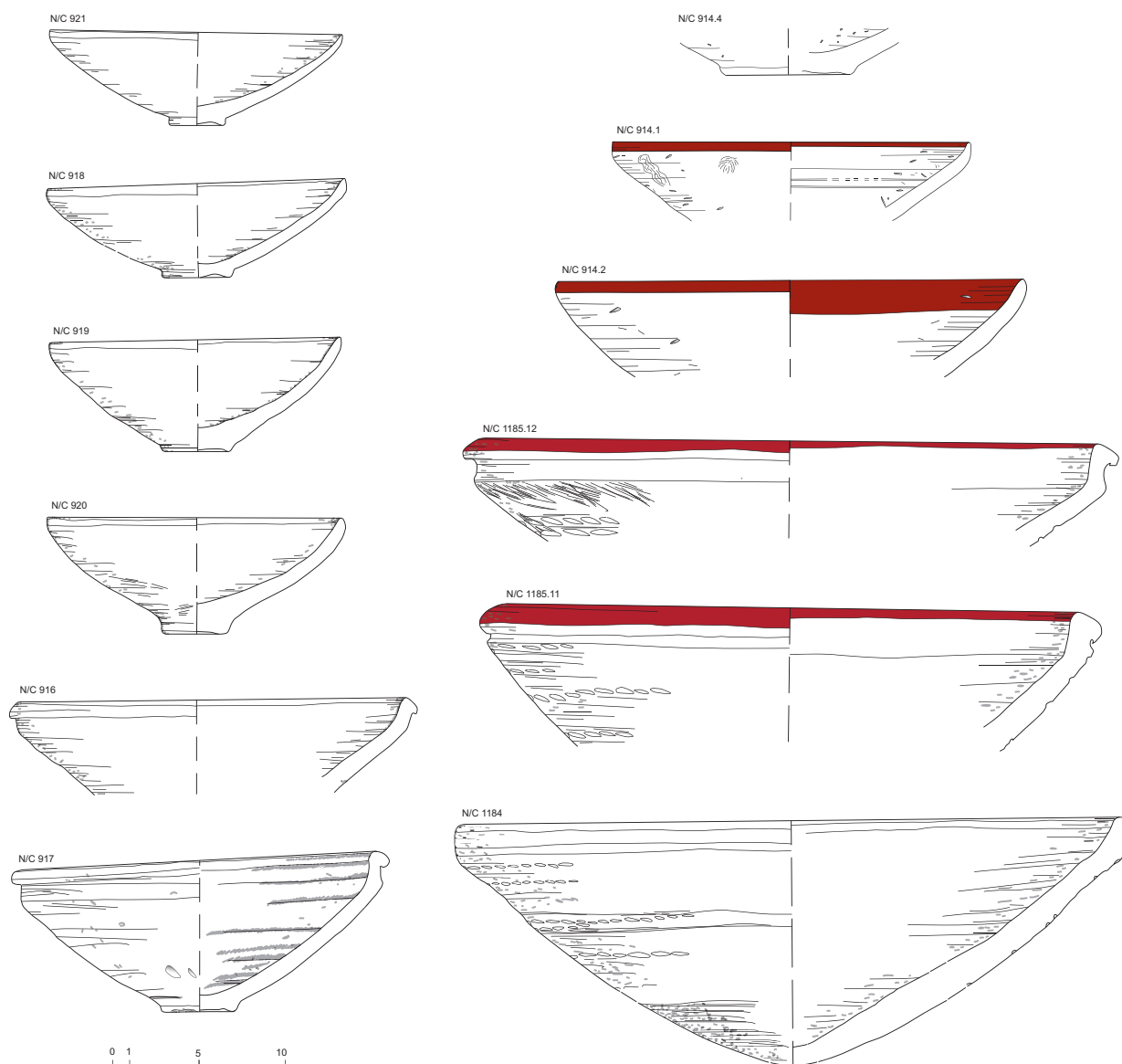


Fig. 74 Open forms from N12D

A small quantity of Nubian cooking pots and some Kerma black-topped cups (6.6% of the diagnostics; cf. Fig. 73)<sup>509</sup> complement the otherwise typical Egyptian corpus of small and medium-sized dishes which usually have ring bases, various plates (usually with flat bases), storage vessels, cooking pots, beer jars, beakers and bread plates. Fig. 74 illustrates the most common open forms – simple and

carinated dishes, as well as carinated bowls with red rims and rope impressions. One complete profile of a beer jar could be reconstructed (N/C 993, Fig. 75).<sup>510</sup> Some beakers of Level 4/3 types are also attested, as well as the base of a large flower pot (N/C 1185.1, Fig. 75).

The type of *zir* already discussed for Level 4 is well represented by rim fragments in N12D (Fig. 76).

<sup>509</sup> Besides almost hemispherical cups of Kerma black-topped ware, the classical black-topped tulip beakers are also present in SAV1 North (see also SAC4, GRATIEN 1985, pl. V and SACKHO-AUTISSIER 2011–2012, 201–212); these types are well known from other Egyptian sites, cf. e.g. the Nu-

bian types at Buhen, EMERY, SMITH and MILLARD 1979, pl. 78 or at Sesebi (SPENCE and ROSE et al. 2011, 37; ROSE 2012, fig. 3).

<sup>510</sup> Cf. HOLTHER 1977, type BB4, pl. 18.



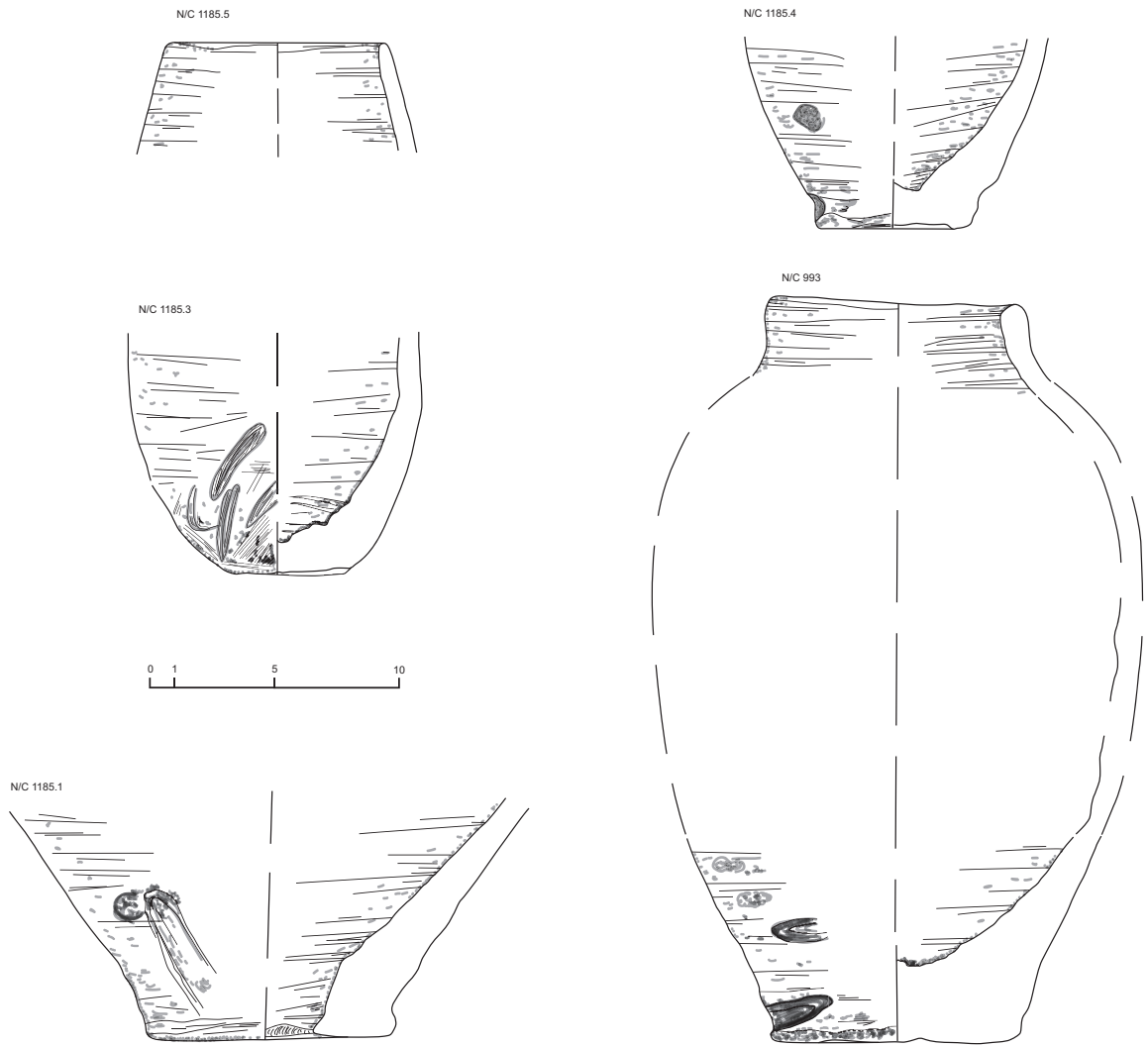


Fig. 75 Beer jars, beakers and flower pot from N12D

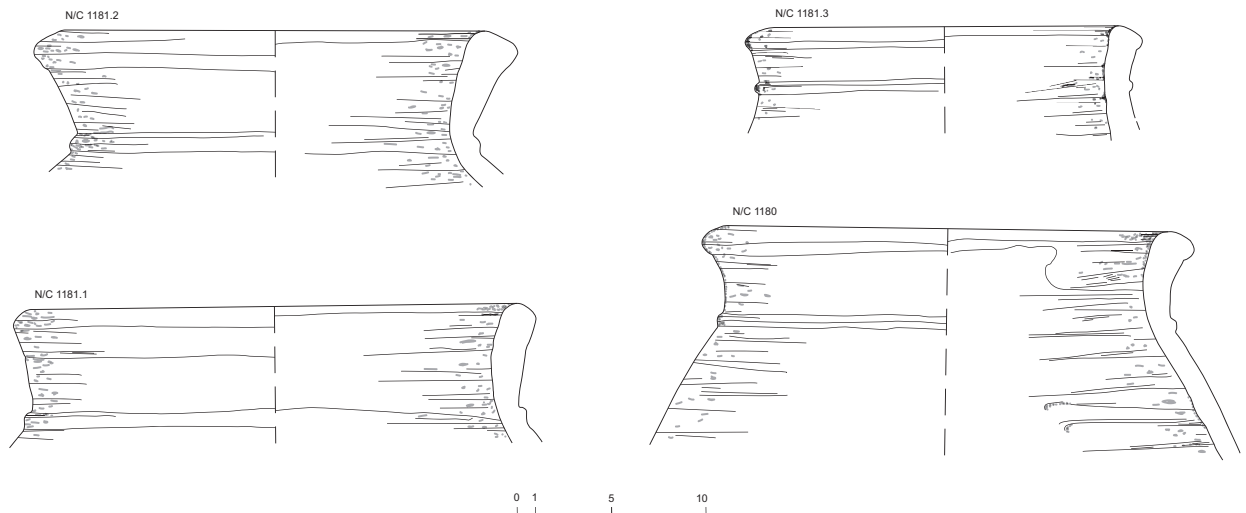


Fig. 76 Nile clay *zir* vessels from N12D

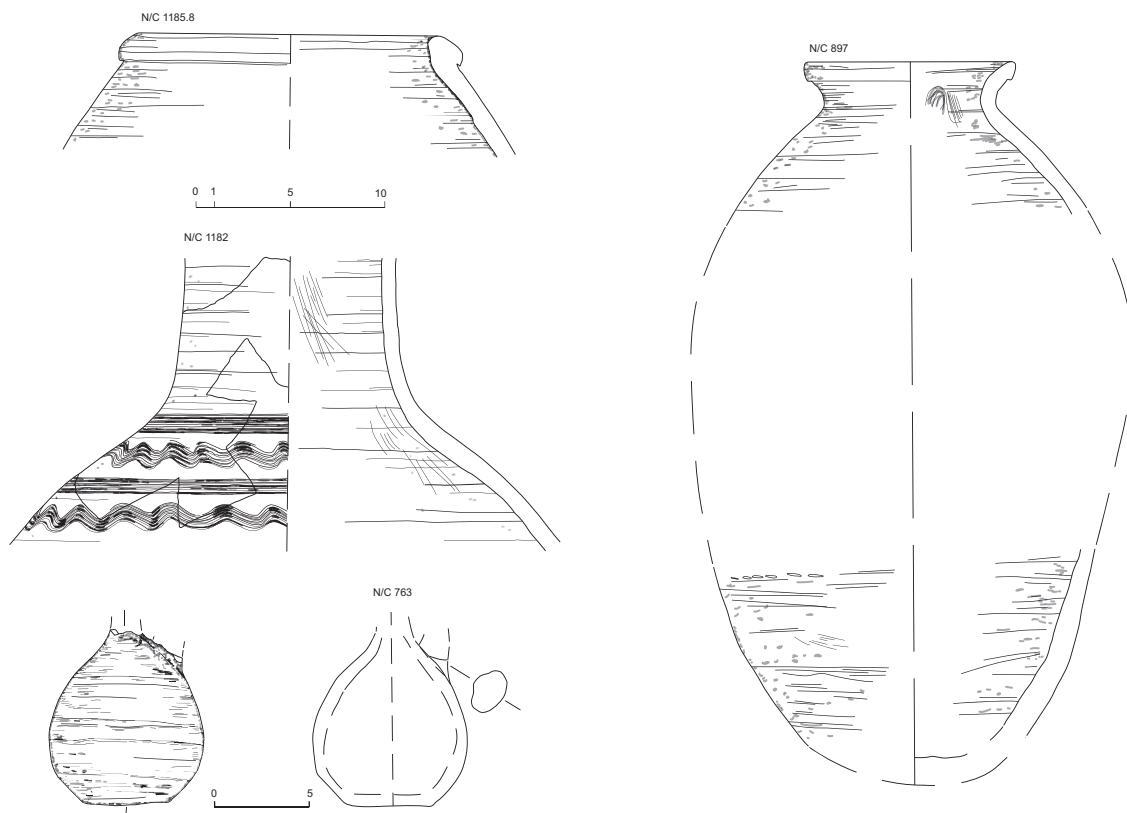


Fig. 77 Closed forms from N12D, including the Black Lustrous Wheelmade Ware jug

The shape of the rim and the height of the neck may differ, but the ware is always a chaffy Nile clay variant and they are in most cases white washed.

Especially remarkable amongst the ceramics from N12D are the fragments from three Canaanite amphorae, one amphora fragment in Oasis ware (N/C 855.7), a small black burnished jug of Black Lustrous Wheel-made Ware (N/C 763, Fig. 77) and the shoulder and neck of a Marl B vessel with incised decoration comprising horizontal and wavy lines (N/C 1182, Fig. 77);<sup>511</sup> the missing rim of this vessel was of the type represented by N/C 812.6 (Fig. 71). N/C 855.7 is a fragment from the lower part of a very thick-walled pink Oasis amphora of fabric OA 2a (III.2.5). The manufacture of this amphora is very typical, displaying deep vertical finger marks on the interior and thus attesting the attachment of the now lost base. The exterior surface dis-

plays some scraping marks. This type of amphora, which once had vertically-placed handles, is well attested in the Nile valley, e.g. at Amarna.<sup>512</sup>

N/C 987 is a large, ovoid jar with a rounded base, short neck, and angular outer lip (Fig. 77). It could be reconstructed from a fragment of the upper part and the base. Another closed shape typical for the early-mid 18<sup>th</sup> Dynasty is represented by N/C 1185.8 (Fig. 77). Large neckless storage vessels like this piece are already known from Level 4, find parallels at Elephantine and resemble the chaffy *zir* ware in terms of material. Overall, the complete assemblage from silo N12D finds close parallels at Elephantine, in material associated with “Bauschicht 10”.<sup>513</sup>

#### N12E

Only two diagnostic sherds were recovered from installation N12E (Fig. 78): the rim sherd of a Nu-

<sup>511</sup> Cf. close parallels from the Ahmose II complex at South Abydos, BUDKA 2006, 94–95, fig. 6.2. Very common already from the Middle Kingdom onwards, possibly with a Nubian influence, see RZEUSKA 2010, 397–420.

<sup>512</sup> Cf. no. 681 at Amarna, ROSE 2007, 146, 290. See also no. 2202 from Qantir, ASTON 1998, 537.

<sup>513</sup> Cf. BUDKA 2005, 90–116.

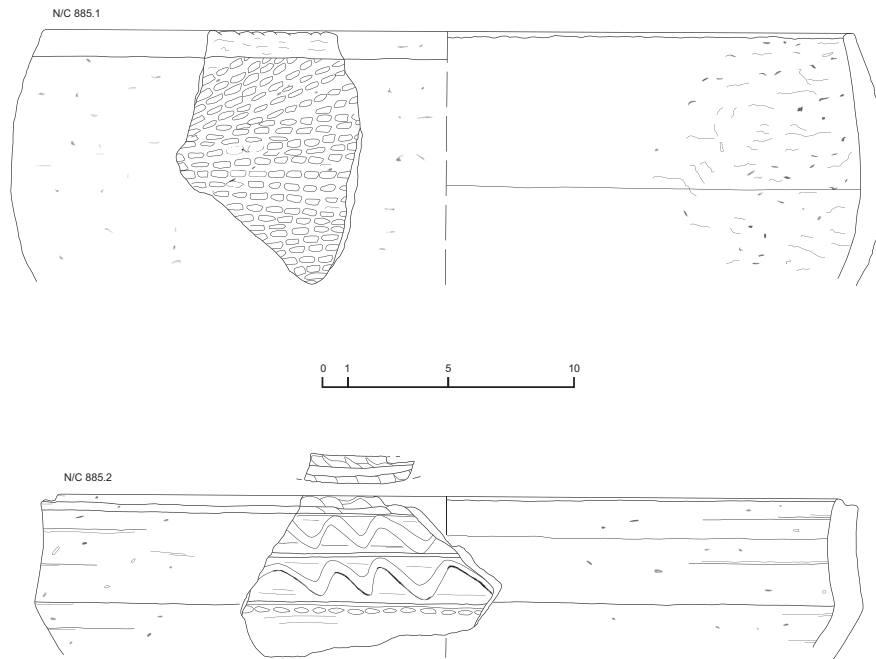


Fig. 78 Vessels from N12E

bian cooking pot with basketry impression and a carinated dish with wavy line decoration and a pinched rim, both common types from Level 3.

### 5.3 Pottery from building unit N26

Excavation of N26 was not finished and the available ceramics are limited material from the latest building phase. More sherds come from the area of N26, but from only the upper levels, Level 2 and 1 (see N/C 616, III.2.5). Only five pieces from Level 3 were documented in detail (Fig. 79), including a small beaker in Nile clay and an imported amphora rim, as well as the base of another non-Egyptian transport vessel. The small rim fragment of a cooking pot was imported from Egypt, made in Nile E. An open form is represented by a carinated bowl with a black band decoration on red slip. Together, the scarce remains from N26 support the attribution of the building to Level 3. Fine dating beyond Thutmoside is not possible.

### 5.4 Pottery from building unit N27

Within Room N27/2 (IIF.1), the upper part of a tall, biconical pot stand with modelled rim (N/C 605, Fig. 80) was found south of Wall 34N. The Nile clay vessel is red slipped and burnished. This pot stand finds many parallels within Level 3 of SAV1 North, including from silo N12D of building unit N12 (see N/C 854, Fig. 72).

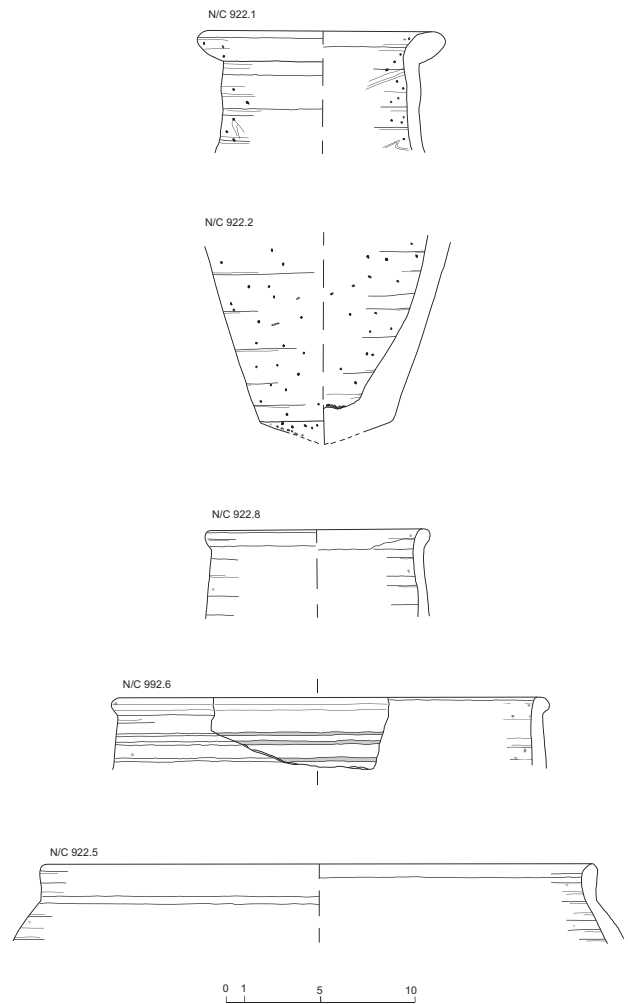


Fig. 79 Vessels from N26

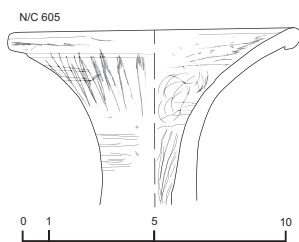


Fig. 80 Pot stand N/C 605 from N27

Room N27/3 yielded an almost complete squat jar (N/C 494, Fig. 81) made of Marl A2, polished and monochrome painted.<sup>514</sup> During excavation, its find position was measured with the top at 160.98m and the base at 160.81m, documented as belonging to Level 2. Since N/C 494 is clearly Thutmose in date, this illustrates several problems of dating Level 2 (see I.3.2). Much of the material found in SAV1 North within the backfilling of Level 3 structures is Thutmose and presumably belongs to the original phase of use of the buildings. Thus, N/C 494 was probably also originally inventory of building unit N27.

A further assemblage of sherds was found just outside N27, south of Room N27/3 and east of N13. Assemblage N/C 926 comprises six pieces (Fig. 82): the complete profile of a Nile B2 pot stand (N/C 926.1), the base of a Canaanite amphora (N/C 926.6) and three simple dishes with red rims (DP 3, N/C 926.2-4). The last piece, N/C 926.5, illustrates the low quality in wheel-thrown pottery that occurs in small numbers throughout SAV1 North (see III.3). This dish, type DP 2 with a modelled rim, has a very irregular mouth, shows uneven rope impressions and was made in a local variant of Nile clay B2 and left uncoated (Fig. 82).

### 5.5 Dating of pottery from Level 3 building units at SAV1 North

As mentioned, the material from SAV1 North is significant for the study of settlement material from the New Kingdom, but faces several problems in dating. As of yet, no complete ceramic sequence

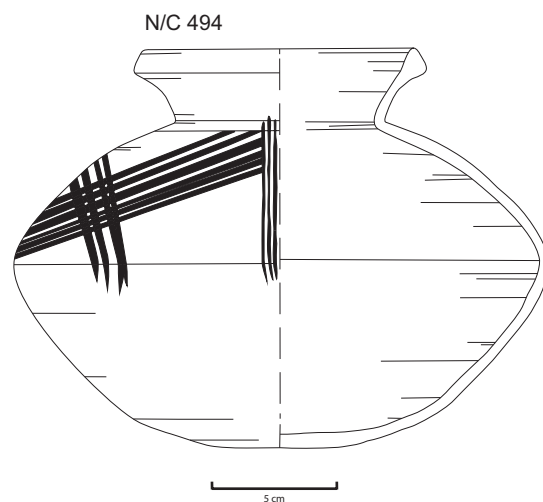


Fig. 81 Squat jar N/C 494 from N27

covering the entire span of the New Kingdom was presented from settlement sites. Consequently, vessels from well-dated New Kingdom tombs contexts have been used as “chronological markers”<sup>515</sup>, but with clear shortcomings.<sup>516</sup> Much potential lies in the material from the continuously settled town of Elephantine – deriving from stratified contexts, a sequence covering the late Second Intermediate Period until the late New Kingdom will be presented in the near future. For SAV1 North, the close parallels to both published and unpublished material from Elephantine is of great importance, also in regards to questions of dating. As will be illustrated in the following, Level 3 corresponds to the chronological Phases 2 (mid-18<sup>th</sup> Dynasty; A Hatshepsut/Thutmose III, B Amenhotep II–Thutmose IV) and 3 (A Amenhotep III–Horemheb) by Aston.<sup>517</sup>

Of relevance for dating the material from Sai is its correspondence with stratified material from Elephantine. Level 3 at SAV1 North, which is of main interest here, matches certain phases of “Bauschichten 10 and 9” from Elephantine.<sup>518</sup> Important aspects of the ceramics with chronological significance are the first appearance of Marl D amphorae and an increase in decorated wares in Level 3.<sup>519</sup> Thutmose red splash decoration on dishes (Fig. 59) and the large group of Bichrome

<sup>514</sup> MIELLÉ 2011–2012, fig. 5.2.

<sup>515</sup> ASTON 2003, 135–162; cf. also ASTON 2009, 207–248.

<sup>516</sup> BOURRIAU 2010, 2.

<sup>517</sup> ASTON 2003, 140.

<sup>518</sup> Cf. BUDKA 2005.

<sup>519</sup> BUDKA 2011a, 29–30.

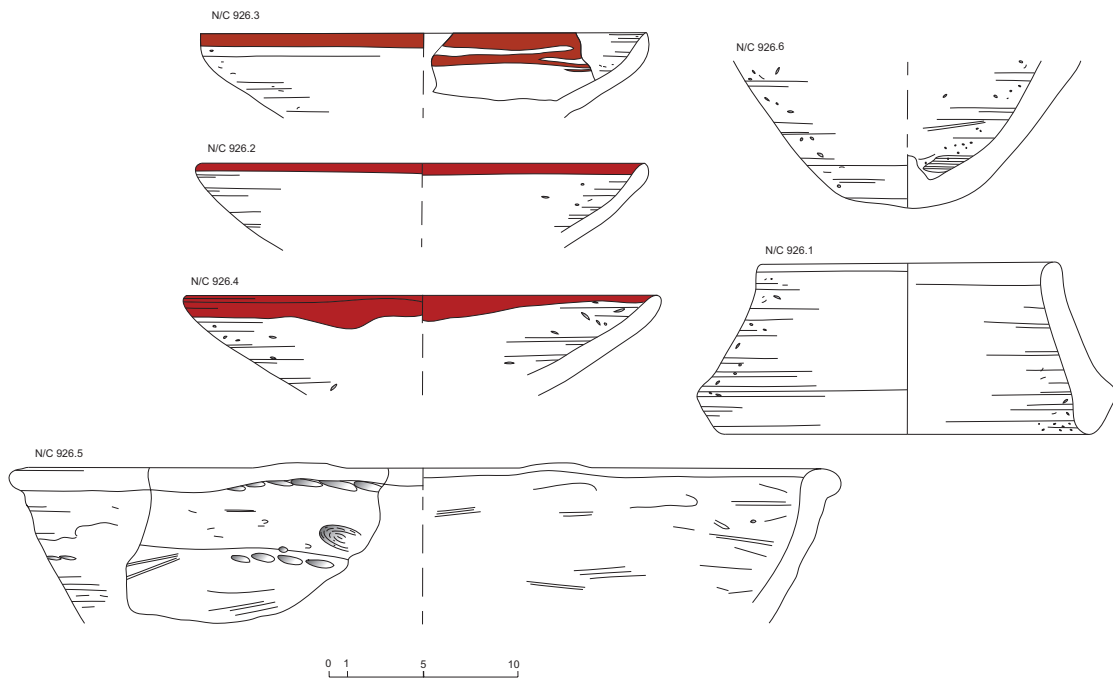


Fig. 82 Sherds from outside N27

decorated necked jars also point towards the time of Hatshepsut/Thutmose III. For now, the evidence from N12 (the best preserved ceramic context in SAV1 North) suggests that the earliest phase of Level 3 seems to relate to the early/mid reign of Thutmose III.<sup>520</sup> Best traceable are the subsequent deposits and later phases of Level 3, probably corresponding to the second half/late reign of Thutmose III. However, the blue painted pottery, monochrome painted storage vessels, meat jars and various plates from Level 3 are associated with the second half of the 18<sup>th</sup> Dynasty. This material clearly postdates the Thutmoside era and it is likely to assume that at SAV1 North, Level 3 lasted at least until the reign of Amenhotep III, if not further towards the end of the 18<sup>th</sup> Dynasty.<sup>521</sup> Here, formation processes play a vital role and must be considered. Buildings set up during the reign of Thutmose III were certainly used for one or two generations, pushing the time line of use towards the reigns of Amenhotep II and Thutmose IV. Material from the late 18<sup>th</sup> Dynasty,

thus four to five generations after the start of Level 3, would make most sense as deriving from an abandonment phase filling the building units of Level 3. For reasons explained above (I.3.1), this assumption cannot be verified for SAV1 North. However, the comparison with Elephantine, where two “Bauschichten” correspond to one “Level” at SAV1 North, supports the interpretation that the pottery from Level 3 comprises different phases of use, including the abandonment and re-filling phase of the building units described in Chapter II.

To sum up, the ceramics allow reconstructing a major remodelling of the site during the reign of Thutmose III, covering part of Level 3.<sup>522</sup> Compared to ceramics from earlier levels of common household character, the high variability of the ceramic material and the large quantities of decorated wares are striking. This might be interpreted as reflecting an increasing occupation of the site, in conjunction with the construction of the enclosure wall, a new temple and adjoining structures.<sup>523</sup>

<sup>520</sup> However, as mentioned above and cf. Figs. 70 and 74, ceramics associated with the very earliest phases of Level 3 buildings correspond to Level 4 material and is pre-Thutmose III in date. Because of the small number of sherds, this must remain tentative. Altogether, the most likely explanation is that material from the previous building phase

(Level 4) was incorporated for setting foundations and first floors of the next phase (Level 3).

<sup>521</sup> Cf. BUDKA 2011a, 29, Table 3.

<sup>522</sup> See BUDKA 2013, 86; BUDKA 2015b; BUDKA 2017.

<sup>523</sup> Cf. BUDKA 2016b, 61–62.

## 6 SUMMARY

The most common types within the ceramic corpus from SAV1 North are pot stands and dishes, as well as bread plates, *zirs*, beakers and beer jars. The considerable amount of decorated jars and bowls is noteworthy. In general, the assemblage is well comparable to house inventories from Elephantine – thus, the pottery does suggest a domestic character for the building units in SAV1 North.

Amongst the site specific features,<sup>524</sup> the large number of fire dogs is especially relevant. Compared to Elephantine, the quantity is much higher and raises the question whether the fire dogs are connected with some specific function or possible production process. This could suggest some kind of workshop character for parts of SAV1 North. The high concentration of fire dogs is similar to the very large numbers of stone tools found in the sector (see IV.3). While both object types attest to former activity, the mixed character of the material and unsystematic excavation prohibit a concise reconstruction of these actions in specific part of the site.

The crucial ceramics questions from SAV1 North are: who produced these vessels and who were the users? As mentioned above, no clear traces of kilns were found, but part of the material was definitely a local production in Egyptian style. Here, it is interesting to mention the situation of pottery production at the Middle Kingdom Nubian forts. Nadejda Reshetnikova and Bruce Williams have convincingly argued that episodic work of potters as itinerant craftsmen travelling from site to site played an important role.<sup>525</sup> New evidence from Askut complements this picture: based on the existence of a ceramic potter's wheel head, Stuart Tyson Smith demonstrated that the production and distribution of pottery during the Middle Kingdom in Nubia was probably quite complex, including industrial workshops at major sites like Askut, as well as local production for demands on a much smaller scale at other sites.<sup>526</sup>

For New Kingdom Sai, it would be reasonable to assume an industrial workshop during the heyday of the site. However, since we still know little about the internal structure of the town, it is possible to consider small scale production as well – perhaps even to specifically cover the demands of sector SAV1 North. Hybrid versions of New Kingdom and Nubian style vessels illustrate the close interconnections between Egyptians and Nubians. One has to assume that Nubian potters were being trained in wheel-made production by Egyptians, at least in the first generation. For this training, but also possibly to explain higher quality products in local fabrics, the presence of Egyptian potters at the site is very likely.<sup>527</sup> Hybrid versions could therefore be products of local potters introduced to a new technological skill, but they could also be the outcome of a Nubian influence on trained Egyptians spending time on the island. At present, a number of questions about the individuals producing the pottery from SAV1 North remain open.

The individuals using the pottery from sector SAV1 North are also difficult to grasp. Of course they were the occupants of New Kingdom Sai – but here, much is still debatable. At present, the most likely scenario would be that both Egyptians and Nubians settled at the site, with the Egyptians being both the majority and the “upper” social class. As highlighted elsewhere, there is a clear development with changing stratification from the earliest levels to Level 3.<sup>528</sup>

To conclude, although it was not possible to suggest specific room function on the basis of the ceramics from SAV1 North, the ability to draw comparison with domestic sites like the town of Elephantine and the Amarna workmen's village is a significant result. Food serving, food consumption, cooking, baking and storage are the main activities attested by the pottery of SAV1 North, complemented by less frequently attested actions like spinning or ritual activities.

<sup>524</sup> Cf. also RUFFIEUX 2016 for the local style at Dukki Gel.

<sup>525</sup> RESHETNIKOVA and WILLIAMS 2016, 500–501.

<sup>526</sup> SMITH 2014.

<sup>527</sup> For this complex question cf. RESHETNIKOVA and WILLIAMS 2016.

<sup>528</sup> Cf. BUDKA 2015a.

N/C	Vessel type	Ware*	Find spot	Dating	Fig.	
728.15	<i>Schaelbecken</i>	Marl E UC	Square 180/2270, sandy layer within Level 4, south of Wall 18N, west of Wall 18W	early-mid 18 <sup>th</sup> Dyn.	Fig. 53	
836.9	DP 2 plate	C2 red rim	Square 180/2270, west of Wall 26W, Level 5	early 18 <sup>th</sup> Dyn.	Fig. 54	
836.5	DP 3 dish	B2RWall RPin		early 18 <sup>th</sup> Dyn.	Fig. 54	
836.2	BO 6 carinated bowl	B2chaffy RPal		early 18 <sup>th</sup> Dyn.	Fig. 54	
836.8	Base of plate	C2UC		early 18 <sup>th</sup> Dyn.	Fig. 54	
836.1	DP 5 plate	C2UC		early 18 <sup>th</sup> Dyn.	Fig. 54	
965.1	DP 3 dish	B2RWall black rim	Square 180/2270, north of EW section, west of Wall 18W, south of Wall 18N, Level 5	early 18 <sup>th</sup> Dyn.	Fig. 54	
1096.11	DP 2 dish	C2RWall RPin	Square 180/2270, west of Wall 18W, south of Wall 18N, Level 5	early 18 <sup>th</sup> Dyn.	Fig. 54	
1096.15	DP 3 dish	C2UC		early 18 <sup>th</sup> Dyn.	Fig. 54	
1096.5	DP 1 dish	B2 red rim		early 18 <sup>th</sup> Dyn.	Fig. 54	
1096.6	DP 1 dish	B2 red rim		early 18 <sup>th</sup> Dyn.	Fig. 54	
1096.9	DP 3 dish	B2RWall RPin		early 18 <sup>th</sup> Dyn.	Fig. 54	
1142.2	DP 1 dish	B2RWall RPin	Square 180/2270, north of EW section, west of Wall 18W, south of Wall 18N, Level 5	early 18 <sup>th</sup> Dyn.	Fig. 54	
961.1	DP 3 dish	B2RWall RPin	Square 180/2270, north of EW section, west of Wall 18W, south of Wall 18N, Level 5	early 18 <sup>th</sup> Dyn.	Fig. 54	
961.10	DP 2 var. dish	B2 UC		early 18 <sup>th</sup> Dyn.	Fig. 54	
961.20	DP 1 dish	B2UCRW		early 18 <sup>th</sup> Dyn.	Fig. 54	
961.21	DP 3 dish	B2 red rim		early 18 <sup>th</sup> Dyn.	Fig. 54	
961.22	DP 6 dish	B2 red rim		early 18 <sup>th</sup> Dyn.	Fig. 54	
961.27	Carinated plate	B2UCRW		early 18 <sup>th</sup> Dyn.	Fig. 54	
961.3	DP 3 dish	B2RWall RPin		early 18 <sup>th</sup> Dyn.	Fig. 54	
961.4	DP 3 dish	B2RWall RPin		early 18 <sup>th</sup> Dyn.	Fig. 54	
961.5	DP 3 dish	B2RWall RPin		early 18 <sup>th</sup> Dyn.	Fig. 54	
1096.4	Drop pot/beaker	B2RW		Square 180/2270, south of Wall 18N, west of Wall 18W, Level 4	early 18 <sup>th</sup> Dyn.	Fig. 55
961.16	Jar	B2RW	Square 180/2270, south of Wall 18N, West of wall 18W, north of E-W section. Level 4	early 18 <sup>th</sup> Dyn.	Fig. 55	
836.10	Squat jar	A2UCMO	Square 180/2270, west of Wall 26W, Level 4	Thutm.	Fig. 55	
836.11	Squat jar	A2UCMO		Thutm.	Fig. 55	
836.12	Squat jar	A4UCMO		Thutm.	Fig. 55	
961.19	Jar	B2UC	Square 180/2270, south of Wall 18N, West of wall 18W, north of E-W section, Level 4	early 18 <sup>th</sup> Dyn.	Fig. 55	
961.14	Jar	B2RW		early 18 <sup>th</sup> Dyn.	Fig. 55	
961.17	Jar	B2RW		early 18 <sup>th</sup> Dyn.	Fig. 55	
647	Dish	C2 local UC	Ceramic cluster in Square 180/2270, south of Wall 18N, Level 4	17 <sup>th</sup> -early 18 <sup>th</sup> Dyn.	Fig. 56	
651	Dish	C1RWall, RP in		early 18 <sup>th</sup> Dyn.	Fig. 56	
648	DP 3 dish	B2RWall RPin		early 18 <sup>th</sup> Dyn.	Fig. 56	
658	DP 1 dish	B2 red rim		early 18 <sup>th</sup> Dyn.	Fig. 56	
646.2	Carinated plate	B2UCRW		early 18 <sup>th</sup> Dyn.	Fig. 56	
646.1	Carinated plate	B2UCRW		early 18 <sup>th</sup> Dyn.	Fig. 56	
641	Carinated plate	C2UCRW		early 18 <sup>th</sup> Dyn.	Fig. 56	
660	CP 2, Cooking pot	B2sandyUC		early 18 <sup>th</sup> Dyn.	Fig. 56	
661	Drop pot/beaker	B2UC		early 18 <sup>th</sup> Dyn.	Fig. 56	
652	Drop pot/beaker	C1-2UC		17 <sup>th</sup> -early 18 <sup>th</sup> Dyn..	Fig. 56	
642	Egyptian <i>zir</i>	C2chaffWW		early 18 <sup>th</sup> Dyn.	Fig. 57	
650	Kerma storage vessel	Nubian3P		17 <sup>th</sup> - early 18 <sup>th</sup> Dyn.	Fig. 57	
1059.8	Dish	B2 red rim		Square 170/2270, south of N4, west of Wall 22, Level 4	early 18 <sup>th</sup> Dyn.	Fig. 58
1059.6	Dish	B2 red rim			early 18 <sup>th</sup> Dyn.	Fig. 58
1059.5	DP 9 dish	B2RWall RPin			early 18 <sup>th</sup> Dyn.	Fig. 58
1059.7	Small dish	B2 RP in	early 18 <sup>th</sup> Dyn.	Fig. 58		
1047.4	DP 2 Dish	C2UCRP	Square 180/2270, Sondage A east of Wall 41E, south of Wall 8W, Level 4	early 18 <sup>th</sup> Dyn.	Fig. 58	
1047.1	Bowl	C2 RP		early 18 <sup>th</sup> Dyn.	Fig. 58	

\* The abbreviations of the ware include the label of the site specific fabric (in analogy to the Vienna System, but with local variations, see III.2) as well as the surface treatment (UC = uncoated; UCMO = monochrome painted on uncoated; UCRW = uncoated out, red washed in; RW = red washed; RW all RPin = red washed in and out, burnished/polished inside; RP = red polished; WW = white wash).

Fig. 83 Details of illustrated vessels from SAV1 North according to their appearance in the figures

N/C	Vessel type	Ware*	Find spot	Dating	Fig.
1112.1	Bowl	B2RWall RPin	Square 180/2270, north of 26S, east and west of Wall 26W, Level 4	early 18 <sup>th</sup> Dyn.	Fig. 58
1112.2	Large bowl with rope im-pressions	C2UCRW		early 18 <sup>th</sup> Dyn.	Fig. 58
757.4	Dish	C2 red rim	Square 180/2270, sandy layer of Level 4, west of Wall 5W, south of Wall 18N, north of Wall 26S	early 18 <sup>th</sup> Dyn.	Fig. 58
757.7	Small bowl	B2 Mo		early 18 <sup>th</sup> Dyn.	Fig. 58
757.6	Carinated bowl	B2 RP		early 18 <sup>th</sup> Dyn.	Fig. 58
759.11	Miniature dish	B2localRPin	Square 180/2270, south of Wall 18N	early 18 <sup>th</sup> Dyn.	Fig. 58
647	Dish	C2 local UC	Square 180/2270, south of Wall 18N, Level 4	early 18 <sup>th</sup> Dyn.	Fig. 58
759.6	Bowl	B2 RWallRPin	Square 180/2270, south of Wall 18N	early 18 <sup>th</sup> Dyn.	Fig. 58
996.1	Dish	B2 RF Rand	Square 180/2270, south of Wall 23, west of Wall 8W	early 18 <sup>th</sup> Dyn.	Fig. 58
996.2	DP 5 large plate	C2UC		early 18 <sup>th</sup> Dyn.	Fig. 58
818.5	DP 2 large plate	C2RP all	Square 180/2270, west of Wall 26W	early 18 <sup>th</sup> Dyn.	Fig. 58
744	DP 3 dish	B2 red rim + splash	Square 190/2260, west of Wall 46, Level 2	Thut. III	Fig. 59
1041.7	Bowl/plate	B2chaffyUC	Square 190/2260, west of Wall 51, east of Wall 42E, Level 2	Ram.	Fig. 60
1041.9	Necked storage vessel	B2WW		Ram.	Fig. 60
1041.8	Beer jar	B2UC		Ram.	Fig. 60
1161.2	Dish/plate	B2red rim	Square 190/2260, north of Wall 42N, west of Wall 5W, Level 2	Ram.	Fig. 60
1054	DP 6 dish	B2UCRW	Square 190/2260, south of Wall 42N, west of Wall 42E, Level 2	Ram.	Fig. 60
1033.1	Hole mouth jar	B2localRW	Square 200/2260, south of Wall 5S, Level 2	Ram.	Fig. 60
1033.2	Bottle	B2RW		Ram.	Fig. 60
1031.4	Bread plate	C2UC	Square 200/2260, Level 1	18 <sup>th</sup> Dyn.	Fig. 61
1249.3	Bread plate	C2ocalUC	Square 190/2250, south of 43 + 45, Level 1	18 <sup>th</sup> Dyn.	Fig. 61
1249.1	Bread plate	C2ocalUC		18 <sup>th</sup> Dyn.	Fig. 61
701.3	Bread plate	C2UC	Square 200/2260, Level 1	18 <sup>th</sup> Dyn.	Fig. 61
624.2	Bread plate	C2localUC	Square 190/2260, north of Wall 42, Level 1	18 <sup>th</sup> Dyn.	Fig. 61
1224.7	Bread plate	C2localUC	Square 190/2260, from the interior of Walls 42N, 42E and 42S, Level 2	18 <sup>th</sup> Dyn.	Fig. 61
1224.6	Bread plate	C2localUC		18 <sup>th</sup> Dyn.	Fig. 61
1264.4	Bread plate	C2localUC	Square 190/2250, south of Wall 43 + 44, Level 2	18 <sup>th</sup> Dyn.	Fig. 61
1264.5	Bread plate	C2localUC		18 <sup>th</sup> Dyn.	Fig. 61
696	<i>Schaelbecken</i>	C2localUC	Square 190/2250, south of 43 and 45, Level 2	18 <sup>th</sup> Dyn.	Fig. 62
961.15	Cooking pot	E2UC	Square 180/2270, south of 18W, west of 18W, north of E-W section, Level 5	early 18 <sup>th</sup> Dyn.	Fig. 63
1190.4	Cooking pot	E2UC		Square 190/2270, Walls 5W/5N, Level 3	early-mid 18 <sup>th</sup> Dyn.
1190.2	Cooking pot	E2UC	early-mid 18 <sup>th</sup> Dyn.		Fig. 63
1190.3	Cooking pot	E2UC	early-mid 18 <sup>th</sup> Dyn.		Fig. 63
1190.5	Cooking pot	B2sandyUC	early-mid 18 <sup>th</sup> Dyn.		Fig. 63
005	Fire dog	B2localUC	Square 190/2270, Level 1	18 <sup>th</sup> Dyn.	Fig. 64
151	Fire dog	B2localUC	Square 200/2260, Level 1	18 <sup>th</sup> Dyn.	Fig. 64
832.9	Bread mould	D4UC	Square 190/2260, from the interior of N12, Level 3	early-mid 18 <sup>th</sup> Dyn.	Fig. 66
932.5	Bread mould	D4UC		early-mid 18 <sup>th</sup> Dyn.	Fig. 66
932.1	Burner, tall foot	B2GPMO		early-mid 18 <sup>th</sup> Dyn.	Fig. 66
1169.18	Pot stand	C2RP		early-mid 18 <sup>th</sup> Dyn.	Fig. 66
853.1	Black topped Kerma bowl	Nubian 1		early 18 <sup>th</sup> Dyn.	Fig. 67
853.2	Nubian cooking pot	Nubian 2		early 18 <sup>th</sup> Dyn.	Fig. 67
853.6	Nubian cooking pot	Nubian 2		early-mid 18 <sup>th</sup> Dyn.	Fig. 67
1169.19	Cooking pot			early-mid 18 <sup>th</sup> Dyn.	Fig. 67
812.1	DP3 dish	D2 red rim		early-mid 18 <sup>th</sup> Dyn.	Fig. 68
812.2	DP1 dish	B2 red rim		early-mid 18 <sup>th</sup> Dyn.	Fig. 68
812.3	DP 6 dish	B2 red rim		early-mid 18 <sup>th</sup> Dyn.	Fig. 68
812.4	DP 6 dish	B2 red rim		early-mid 18 <sup>th</sup> Dyn.	Fig. 68
812.5	DP 1 dish	B2local red rim		early-mid 18 <sup>th</sup> Dyn.	Fig. 68
832.8	DP5 plate	C2UC		early-mid 18 <sup>th</sup> Dyn.	Fig. 68
832.6	DP 3 dish	B2 red rim		early-mid 18 <sup>th</sup> Dyn.	Fig. 68
832.7	Large plate	C2 red rim		early-mid 18 <sup>th</sup> Dyn.	Fig. 68
932.6	DP 6 plate	B2UCRW	early-mid 18 <sup>th</sup> Dyn.	Fig. 68	

Fig. 83 continued Details of illustrated vessels from SAV1 North according to their appearance in the figures



N/C	Vessel type	Ware*	Find spot	Dating	Fig.
1169.4	DP 3 dish	B2UCRW	Square 190/2260, from the interior of N12, Level 3	early-mid 18 <sup>th</sup> Dyn	Fig. 68
1169.5	DP11 carinated dish, wavy lines	B2RWall		early-mid 18 <sup>th</sup> Dyn	Fig. 68
1169.6	Large plate	C2UC		early-mid 18 <sup>th</sup> Dyn	Fig. 68
1169.7	Plate	C2UC		early-mid 18 <sup>th</sup> Dyn	Fig. 68
1169.8	Plate	C2RPall		early-mid 18 <sup>th</sup> Dyn	Fig. 68
1169.9	DP 6 plate	C2red rim		early-mid 18 <sup>th</sup> Dyn	Fig. 68
1169.11	Beerjar	B2localUC		early-mid 18 <sup>th</sup> Dyn.	Fig. 69
1169.12	Beerjar	B2localUC		early-mid 18 <sup>th</sup> Dyn.	Fig. 69
1169.13	Beerjar	B2localUC		early-mid 18 <sup>th</sup> Dyn.	Fig. 69
1169.14	Beerjar	B2localUC		early-mid 18 <sup>th</sup> Dyn.	Fig. 69
1169.15	Beerjar	C2localUC		early-mid 18 <sup>th</sup> Dyn.	Fig. 69
832.4	Beerjar	B2UC		early-mid 18 <sup>th</sup> Dyn.	Fig. 69
932.7	Jar	B2localUC		early 18 <sup>th</sup> Dyn.	Fig. 70
832.3	Jar	C2localRW		early 18 <sup>th</sup> Dyn.	Fig. 70
832.10	JO 3 crucible	D2UC		early 18 <sup>th</sup> Dyn.	Fig. 70
1169.2	Storage vessel	B2localWW		early 18 <sup>th</sup> Dyn.	Fig. 70
932.2	Ovoid jar	B2RP		early 18 <sup>th</sup> Dyn.	Fig. 70
932.3	Ovoid jar	B2RP		early 18 <sup>th</sup> Dyn.	Fig. 70
1169.1	Amphora	MarlA4 P		mid 18 <sup>th</sup> Dyn.	Fig. 71
832.1	Canaanite amphora	IV		early-mid 18 <sup>th</sup> Dyn.	Fig. 71
832.2	Canaanite amphora	IV		early-mid 18 <sup>th</sup> Dyn.	Fig. 71
812.6	Necked jar	MarlB UC		early-mid 18 <sup>th</sup> Dyn.	Fig. 71
932.8	Jar	MarlB UC		early-mid 18 <sup>th</sup> Dyn.	Fig. 71
1169.3	Zir	III-a UC/WW		early-mid 18 <sup>th</sup> Dyn.	Fig. 71
854	Tall pot stand	D2RP		Thutm.	Fig. 72
856.1	Tall pot stand	C2UC		early-mid 18 <sup>th</sup> Dyn.	Fig. 72
856.2	Tall pot stand	C2RW		early-mid 18 <sup>th</sup> Dyn.	Fig. 72
856.3	Tall pot stand	C2localUC		early-mid 18 <sup>th</sup> Dyn.	Fig. 72
848.1a	Kerma cup, Black topped	Nubian 1		early 18 <sup>th</sup> Dyn.	Fig. 73
849	Nubian cooking pot	Nubian 2		early 18 <sup>th</sup> Dyn.	Fig. 73
1185.12	Carinated plate/bowl	B2UCRW		early-mid 18 <sup>th</sup> Dyn.	Fig. 74
1185.11	Carinated plate/bowl	UCRW		early-mid 18 <sup>th</sup> Dyn.	Fig. 74
921	DP 3dish	B2RPall	early-mid 18 <sup>th</sup> Dyn.	Fig. 74	
918	DP3 dish	B2RWall RPin	mid 18 <sup>th</sup> Dyn.	Fig. 74	
916	DP 9 dish	B2RWall RPin	early-mid 18 <sup>th</sup> Dyn.	Fig. 74	
920	DP 3 dish	B2RWall RPin	mid 18 <sup>th</sup> Dyn.	Fig. 74	
919	DP 3 dish	B2RWall RPin	Thutm.	Fig. 74	
917	DP 9 dish	C2Rwall RPin	early-mid 18 <sup>th</sup> Dyn.	Fig. 74	
914.1	DP 3 dish	B2 red rim	early-mid 18 <sup>th</sup> Dyn.	Fig. 74	
914.2	DP 3 dish	C2 red rim	early-mid 18 <sup>th</sup> Dyn.	Fig. 74	
914.4	Dish/plate	C2local RWall-RPin	early-mid 18 <sup>th</sup> Dyn.	Fig. 74	
1184	Plate/bowl with string impressions	B2UC	Thutm.	Fig. 74	
1185.4	Beer jar	C2UC	early-mid 18 <sup>th</sup> Dyn.	Fig. 75	
1185.3	Drop pot/beaker	B2UC	early-mid 18 <sup>th</sup> Dyn.	Fig. 75	
1185.1	Flower pot	B2UC	Thutm.	Fig. 75	
1185.5	Drop pot/beaker	B2UC	early-mid 18 <sup>th</sup> Dyn.	Fig. 75	
993	Beer jar	D2UC	Thutm.	Fig. 75	
1181.3	Zir	B2localUC	early-mid 18 <sup>th</sup> Dyn.	Fig. 76	
1181.1	Zir	B2localWW	early-mid 18 <sup>th</sup> Dyn.	Fig. 76	
1181.2	Zir	B2localUC	early-mid 18 <sup>th</sup> Dyn.	Fig. 76	
1180	Zir	C2localWW	early-mid 18 <sup>th</sup> Dyn.	Fig. 76	
1185.8	Neckless storage jar	C2chaffy WW	early-mid 18 <sup>th</sup> Dyn.	Fig. 77	
763	Black Lustrous WM jug	Cypriote Import	Thut. III	Fig. 77	
897	Jar	B2RW	early-mid 18 <sup>th</sup> Dyn.	Fig. 77	
1182	Necked storage vessel, incised decoration	Marl B UC	early-mid 18 <sup>th</sup> Dyn.	Fig. 77	

Fig. 83 continued Details of illustrated vessels from SAV1 North according to their appearance in the figures

N/C	Vessel type	Ware*	Find spot	Dating	Fig.
885.1	Nubian cooking pot	Nubian 2	Square 190/2260, from N12E, Level 3	early–mid 18 <sup>th</sup> Dyn.	Fig. 78
885.2	DP 11 carinated dish	C2RWall		early–mid 18 <sup>th</sup> Dyn.	Fig. 78
922.1	Import amphora	?	Square 190/2250, west of Wall 44, north of N26/4, Level 3	early–mid 18 <sup>th</sup> Dyn.	Fig. 79
922.2	Oasis amphora	OA 2		mid 18 <sup>th</sup> Dyn.	Fig. 79
922.5	Cooking pot	E2UC		mid 18 <sup>th</sup> Dyn.	Fig. 79
922.6	Carinated bowl	B2RWall RPinMO		Mid 18 <sup>th</sup> Dyn.	Fig. 79
922.8	Beaker	B2RW		early–mid 18 <sup>th</sup> Dyn.	Fig. 79
605	Pot stand	B2RP		Square 180/2260, south of Wall 34N, Level 3	early–mid 18 <sup>th</sup> Dyn.
494	Squat jar	A2UCMO	From N27, Level 3	Thutm.	Fig. 81
926.1	Pot stand	B2UC	From outside N27, Level 3	early–mid 18 <sup>th</sup> Dyn.	Fig. 82
926.2	DP 1 dish	B2 red rim		early–mid 18 <sup>th</sup> Dyn.	Fig. 82
926.3	DP 3 dish	B2 red rim		Thutm.	Fig. 82
926.4	DP 1 dish	C2 red rim		early–mid 18 <sup>th</sup> Dyn.	Fig. 82
926.5	DP 2 var. plate	B2localUC		early–mid 18 <sup>th</sup> Dyn.	Fig. 82
926.6	Imported amphora	IV		early–mid 18 <sup>th</sup> Dyn.	Fig. 82

Fig. 83 continued Details of illustrated vessels from SAV1 North according to their appearance in the figures

## IV. SELECTED FINDS FROM SAV1 NORTH

by Julia Budka

### 1 GENERAL REMARKS

As observed at other Egyptian Nubian towns, e.g. Buhen<sup>529</sup> or Askut,<sup>530</sup> objects of Egyptian type dominate the material assemblage at Sai. However, some aspects of the material remains from the town attest to the complex nature of archaeological cultures on Sai during the New Kingdom, illustrating the dynamic settings, shifting identities and permeable borderlines between Egyptian and Nubian lifestyle on the island.<sup>531</sup> The rich material from SAV1 North may serve as a representative case study for Sai, although it faces several challenges.

Like the ceramics, the finds from SAV1 North cover a time period from the 18<sup>th</sup> Dynasty to Meroitic, Post-Meroitic and Christian periods, all the way to Ottoman and sub-recent times. It is not the purpose of this publication to present all of the recorded finds from SAV1 North. The focus of this chapter, like the last, is instead laid on objects deriving from the discussed building units of Level 3. A general introduction highlights the potential of a concise analysis of the material remains. It must be stressed, however, that the same problems mentioned for the pottery (shortcomings in documentation, the lack of stratified deposits, mixed material, see III.1) also apply to the assessment of objects and small finds from SAV1 North. Thus, the originally envisaged detailed contextual analysis, presenting associations and specific percentages of object

types from both a synchronic and diachronic point of view was unfortunately not feasible.<sup>532</sup>

### 2 CATEGORIES OF FINDS

A total of 2,405 objects have been recorded in the database for SAV1 North until 2016 (Fig. 84). In registration, the finds are labelled “SAVIN” and assigned a continuous number (starting from SAVIN 001). This sequence is dependent on the chronology of excavation and does not distinguish between Pharaonic and Post-Pharaonic finds by number.

The variability of finds derived from SAV1 North will be illustrated in the following. Of particular interest is the reconstruction of the circumstances placing the objects into the archaeological record – whether they attest a primary function as *in situ*-deposits, as primary refuse of activities or as evidence for other discard criteria.<sup>533</sup> Deliberate refuse of objects is often the case, occurring in several variants.<sup>534</sup> Similar to the ceramics, most of the objects from SAV1 North were recovered from Level 2, from disturbed contexts or fills<sup>535</sup> and therefore include Post-Pharaonic material as well. Despite the problems of dating these finds, thoughts about their significance in establishing the function of structures and activities at the site will be presented, with possible considerations about its occupants.

All in all, the material from SAV1 North that can be safely dated to the New Kingdom<sup>536</sup> represents a

Level	1	2	3	4	5	Total
Number of objects	685	1,309	320	76	15	2,405
Percentage	28.5	54.4	13.3	3.2	0.6	100

Fig. 84 The distribution of objects from SAV1 North according to levels

<sup>529</sup> MILLARD 1979.

<sup>530</sup> SMITH 2003, 101.

<sup>531</sup> See SMITH 2003, 97 for Askut. Cf. BUDKA 2017.

<sup>532</sup> For general aspects of the analysis of artefact distributions and assemblages in Egyptian houses, see most recently SPENCE 2014, 89–93 with further references.

<sup>533</sup> Cf. ROSEN 1989, 564.

<sup>534</sup> Cf. KEMP and STEVENS 2010b, 4–5.

<sup>535</sup> For the most common circumstances under which objects entered the archaeological record in settlements cf. KEMP and STEVENS 2010b, 4–5.

<sup>536</sup> Cf. EMERY, SMITH and MILLARD 1979, 94: “While some object-types can be dated from other sites with relative security, others cannot; and the pottery record is not very helpful.”

typical assemblage as attested from other Egyptian settlements, both in Egypt (e.g. Elephantine, Memphis, Amarna) and in Nubia (e.g. Askut, Buhen, Quban). For some aspects, parallels to sites in Nubia are closer than to the Egyptian ones and will be specifically highlighted in the following.

## 2.1 Main categories of finds

The six main categories established for finds from SAV1 North follow a modified system as developed by Lisa Giddy for Memphis.<sup>537</sup>

### A) *Figurines and statuettes*

Manufactured in clay and mud, figurines in both human and animal shapes are attested. Especially noteworthy is a group of a dozen female figurines in low-fired clay or mud, finding close parallels in both Egypt and Nubia.<sup>538</sup> Rudimentary figures in the shape of simple sticks with an incised or dotted area representing the pubic region, sometimes with dotted circles resembling breasts (e.g. SAVIN 589),<sup>539</sup> are of a common Egyptian style as are the bed figurines (SAVIN 613).<sup>540</sup> The simple hand-modelled clay sticks with indications of the female genitalia (Fig. 85) are already attested from the earliest level of SAV1 North, Level 5 (SAVIN 2306, Fig. 85 top). Well preserved examples like SAVIN 2189 (Fig. 85 middle) and SAVIN 1217 derive from Level 2. One example, SAVIN 664 (Fig. 85 bottom), was found in the wall street of SAV1 North, between Enclosure Wall N4 and Wall 18N, from a deposit of Level 3.

All together, these figurines can clearly be dated to the early to mid-18<sup>th</sup> Dynasty, both by the archaeological context from SAV1 North and through numerous parallels.<sup>541</sup> The majority at SAV1 North represent classical Egyptian types. Interestingly, some of

the figurines (e.g. SAVIN 2186) combine a typical Nubian pattern of wavy incised lines<sup>542</sup> with Egyptian stylistic features (see below, Fig. 94).<sup>543</sup> A group of female figurines in distinctive “Nubian style”, identified at Askut,<sup>544</sup> is currently missing at SAV1 North. However, another group – the so-called pottery fertility figurines, well-attested in Egypt and Nubia – was found at SAV1 North. SAVIN 071 and SAVIN 457 (Pls. 35–36) are two fragments preserving the upper part/head of such clay figurines, Type 3 after Geraldine Pinch.<sup>545</sup> Though fragmentary, the head is itself a characteristic feature of these figures,<sup>546</sup> marking them as a type common during the 17<sup>th</sup> Dynasty. The heads of these figurines are always flattened, with rudimentary facial features: a beak-like nose and slits for the eyes and eyebrows. The disc surmounting the face is always pierced with a series of holes, through which better preserved examples indicate that artificial hair was threaded.<sup>547</sup> According to Pinch this hairstyle might suggest a Nubian origin of these figurines.<sup>548</sup> Although more common from tomb contexts, parallels for the domestic context of SAV1 North are also found at Abydos, Deir el-Medina, Karnak and Memphis.<sup>549</sup> SAVIN 071 has three well preserved holes for strands of hair and was found in silo N7 from Level 2. SAVIN 457 was also found in Level 2, from the area of building unit N24. The figurine again exhibits perforations for adjoining the hair, with an intact neck and the typical facial features.

The fragmentary bed figurine (SAVIN 613)<sup>550</sup> represents a nude woman with her left hand crossed over the chest in typical Egyptian style<sup>551</sup> and is so far unique in the corpus of finds from the town of Sai. This mould-made pottery figurine seems to be a bit later in date than the rudimentary examples, probably belonging to the late 18<sup>th</sup> Dynasty or Ramesside era.<sup>552</sup>

<sup>537</sup> GIDDY 1999. See already BUDKA and DOYEN 2013, 183–188.

<sup>538</sup> DOYEN 2016, 133–157.

<sup>539</sup> Cf. DOYEN 2016, pl. 7 (SAVIN 589).

<sup>540</sup> Cf. Elephantine (KOPP 2005a, 88–90); Amarna (STEVENS 2006, 85–91, figs. II.3.7, II.3.10–11); Memphis (GIDDY 1999, 28–31, pls. 8–12); Askut (SMITH 2003, 131–133). For more parallels and a typology of the figurines from SAV1 North see DOYEN 2016, 133–157.

<sup>541</sup> See KOPP 2005a, 89, note 291 with further parallels from domestic contexts. The examples from Amarna (STEVENS 2006, 89–91, figs. II.3.10, II.3.11) date to the late 18<sup>th</sup> Dynasty. For a summary of the figurines from SAV1 North see also DOYEN 2016.

<sup>542</sup> See, e.g., a net-weight found at Elephantine in Nubian fabric and with un-Egyptian incised decoration; see VON PILGRIM 1996a, 276, fig. 120b.

<sup>543</sup> BUDKA and DOYEN 2012, 183.

<sup>544</sup> SMITH 2003, 131–134, fig. 5.31.

<sup>545</sup> PINCH 1993, 201–203.

<sup>546</sup> PINCH 1993, 201–202.

<sup>547</sup> PINCH 1993, 202.

<sup>548</sup> PINCH 1993, 202.

<sup>549</sup> PINCH 1993, 229, List 3.

<sup>550</sup> DOYEN 2016, pl. 6.

<sup>551</sup> Cf. STEVENS 2006, 85–88, fig. II.3.7; WARAKSA 2009, 25–26, Type 2; TEETER 2010, 41–48, Type C, pls. 10–11. Such figurines have been found at Quban, see EMERY and KIRWAN 1935, fig. 32.

<sup>552</sup> Cf. KOPP 2005a, 89 for stratified examples from Elephantine (oldest examples from the late 18<sup>th</sup>–19<sup>th</sup> Dynasty; but more common in the 20<sup>th</sup>–21<sup>st</sup> Dynasties); for Memphis see GIDDY 1999, 31 (mid-18<sup>th</sup>–20<sup>th</sup> Dynasties); for Medinet Habu see TEETER 2010, 41–48 (all from the Third Intermediate Period).

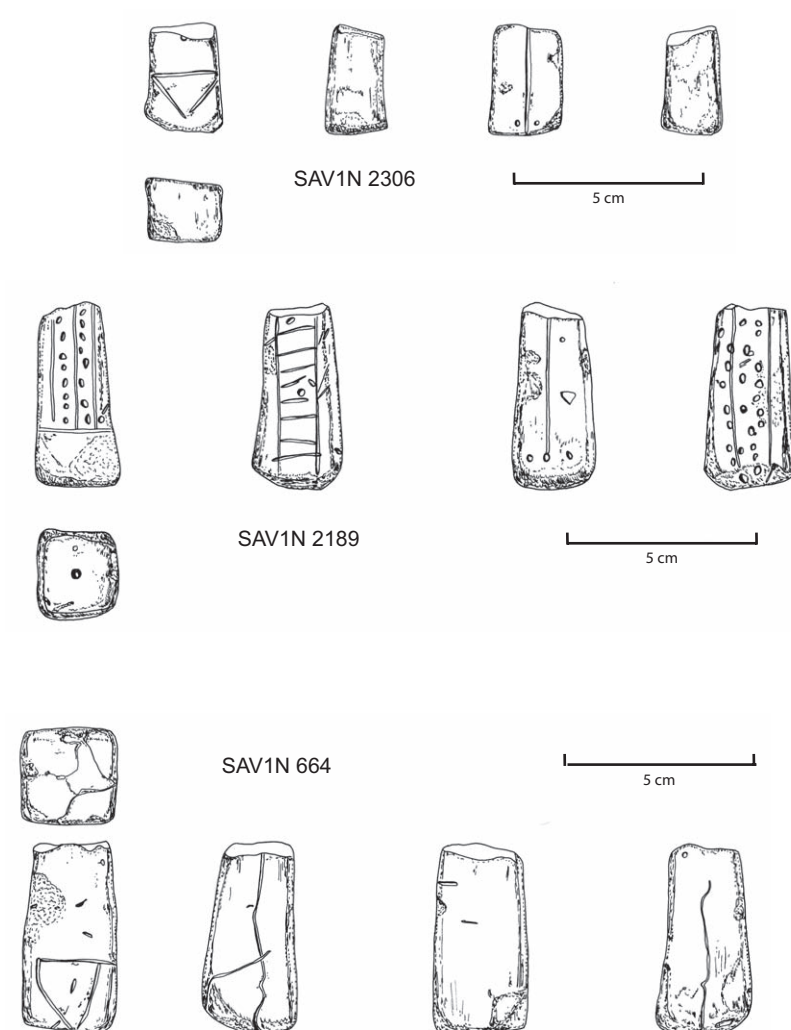


Fig. 85 Rudimentary female figurines from SAV1 North (SAV1N 2306, 2189 and 664)

Among the hand-modelled animal figurines of poorly fired clay,<sup>553</sup> small ram statues appear, possibly depicting the god Amun (SAV1N 2221).<sup>554</sup> The clay figurines of bulls, on the other hand, might fall into a well-attested Nubian tradition of cattle representations (e.g. SAV1N 588).<sup>555</sup>

#### B) Personal adornment

Beads are attested in various shapes (disc/ring, conical, drum-, barrel- and tube-shaped) and in a range of

materials (49 in faience; 30 in other materials, including clay and bone).<sup>556</sup> Some examples are quite large and of irregular shape, possibly representing pendants. At present, all of the beads seem to be Egyptian in style,<sup>557</sup> and the small number of the amulets from SAV1 North probably postdates the New Kingdom. Only four scarabs were found at SAV1 North, one of which is from Level 1 and is probably Post-New Kingdom in date. Two pieces derive from Level 2, leaving only one scarab originally attributed to Level

<sup>553</sup> Cf. GIDDY 1999, 307–315, pls. 68–70. See also some figurines from Buhen, MILLARD 1979, 146–148, pl. 52.

<sup>554</sup> Cf. STEVENS 2006, 61, 110.

<sup>555</sup> Cf. cattle representations from Quban: EMERY and KIRWAN 1935, fig. 33 and Askut: SMITH 2003, 132, fig. 5.32. At Amarna, over 70 figurines were unidentifiable, but might have included cows (STEVENS 2006, 110).

<sup>556</sup> For cylindrical pottery beads see GIDDY 1999, pl. 25.

<sup>557</sup> Cf. SMITH 2003, 106–110 who differentiated a Nubian from the Egyptian style for the personal adornments at Askut. For a selection of Egyptian beads from New Kingdom funerary contexts in Nubia with parallels for SAV1 North see WILLIAMS 1992, 123–130, fig. 17.



Fig. 86 Basin SAV1N 2313 from Level 3

3. The latter, SAV1N 693 ( $16 \times 12 \times 7$ mm), shows a symmetric floral design on its base and should be 18<sup>th</sup> Dynasty in date (Pl. 37). This scarab was documented as found north of Wall 035N, placing it just outside building unit N27. However, during the post-excavation processing this wall was established as being younger than Level 3. All in all, none of the scarabs can be archaeologically associated with the 18<sup>th</sup> Dynasty at SAV1 North. However, SAV1N 615 (Pl. 38), a well-preserved steatite scarab ( $1.6 \times 1.2 \times 0.8$ cm) shows the royal name of Thutmose III on its base. Though it was excavated in Level 2, leaving some doubts about its date,<sup>558</sup> the discovery of good parallels for its design on seal impressions from SAV1 East (Feature 15)<sup>559</sup> make it almost certain that SAV1N 615 is a relic of the period of Thutmose III.<sup>560</sup>

### C) Household items

Stands and supports appear at SAV1 North primarily as pottery vessels and are very common (see

III.4.5). Large rectangular stands and basin-like installations are present as well (e.g. SAV1N 2313, Level 3, in burnt clay, Fig. 86). One fragment of a small unfired clay table or other piece of furniture has survived (SAV1N 720).<sup>561</sup> Some pieces of large, tubular-shaped ovens were found, circular in diameter and in coarse, low fired Nile silt ware, but unfortunately come from fills rather than closed contexts.<sup>562</sup> Sixteen mud stoppers for various vessels were recorded and are mostly of the common conical type or hemispherical (Fig. 87).<sup>563</sup> SAV1N 418, from Level 3 in Square 180/2270, is a partly broken conical stopper ( $10.4 \times 9.6 \times 6.6$ cm, Fig. 87). Its front side shows traces of a rectangular stamp, unfortunately illegible, but confirming that the Egyptian practice of using stamped jar stoppers, mostly for wine jars, was also present at Sai.

A comparably small number of fragments of uninscribed seals were documented, which may have been primarily used for sealing small box-

<sup>558</sup> The scarab was excavated in 2010 in the area of N27 – where exactly, remains unclear; only “west of Wall 36” was noted.

<sup>559</sup> These seal impressions will be published elsewhere; for the find circumstances see BUDKA 2015b, 44–45.

<sup>560</sup> For the general broad date range of scarabs with the name Menkheperre of Thutmose III see JAEGER 1982; lately see also LOHWASSER 2013, 229.

<sup>561</sup> Cf. the more common stools and tables in stone, GIDDY 1999, pls. 31–34; PRELL 2011, 94–95.

<sup>562</sup> For examples of ovens of this type see Elephantine (*in situ* evidence) and South Abydos (BUDKA 2006, 114 with references for Elephantine).

<sup>563</sup> Cf. e.g. SEILER 2005, 118–119, fig. 58.

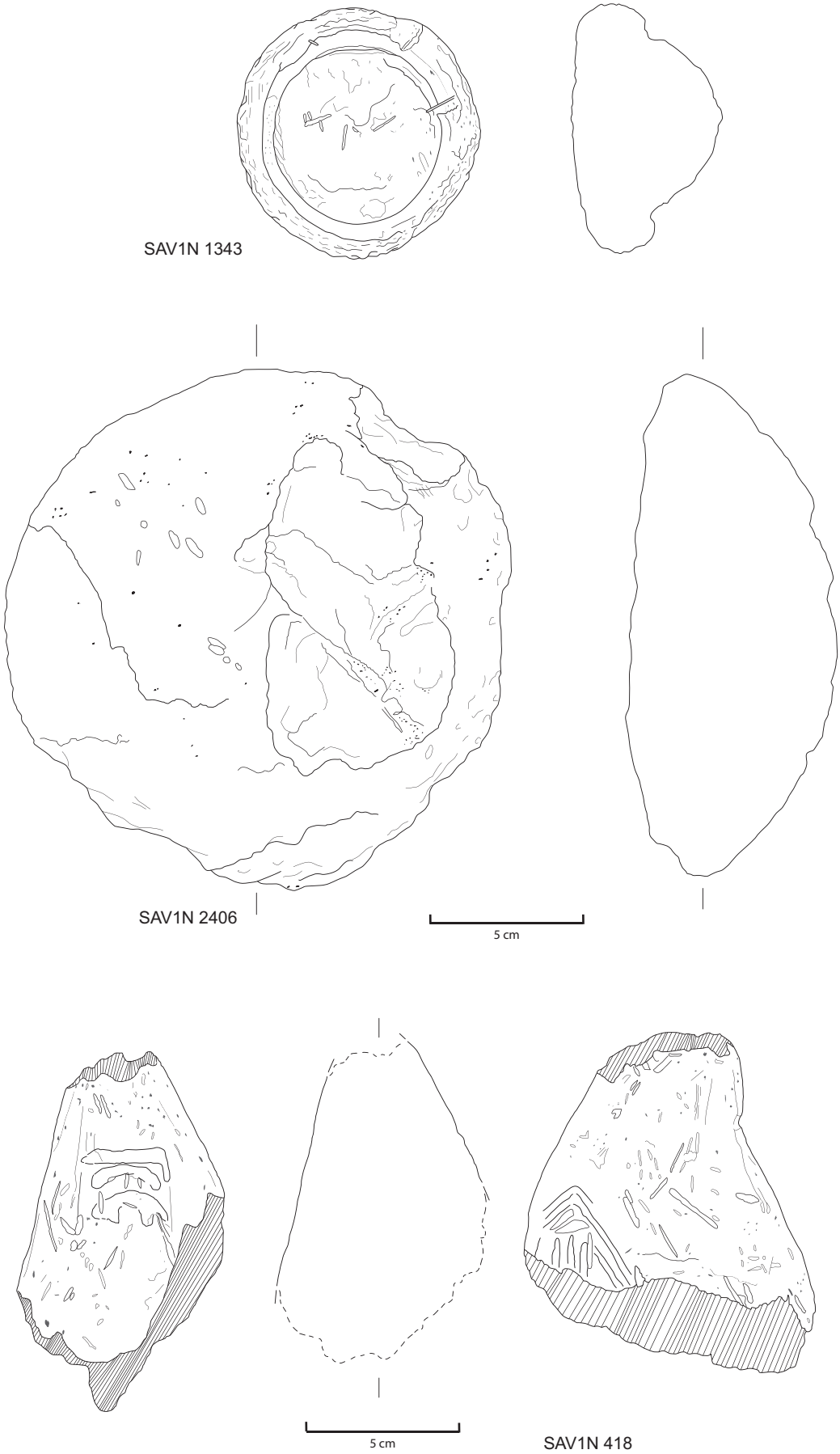


Fig. 87 Mud stoppers (SAV1N 1343, SAV1N 2406 and SAV1N 418) from Level 2 and Level 3

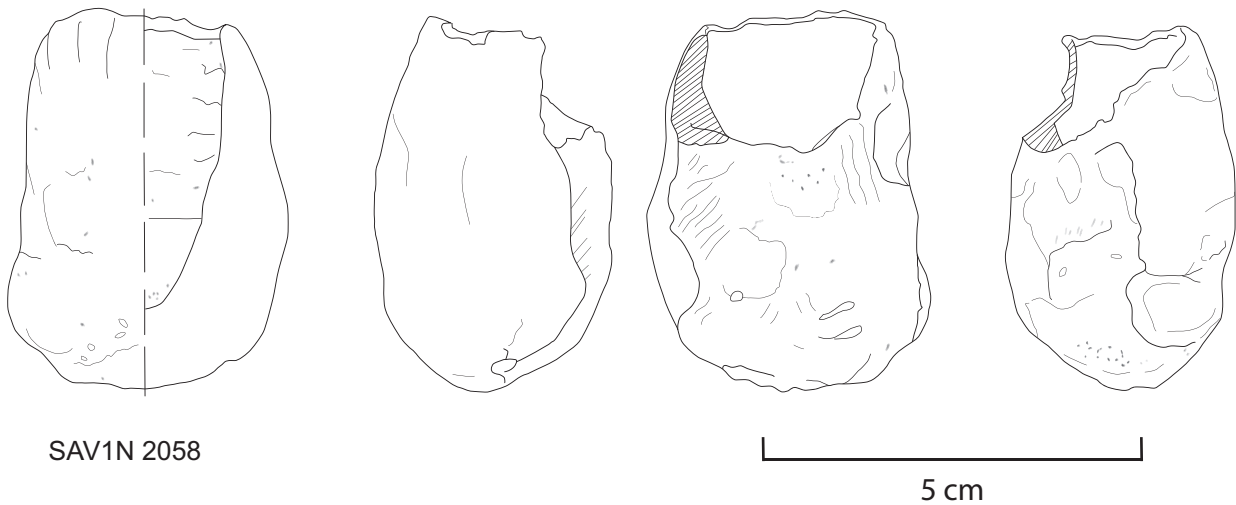


Fig. 88 Sealing (or miniature vessel?) SAVIN 2058, Level 3

es (27 pieces, including uncertain fragments, cf. Fig. 88). SAVIN 2058, found in Level 3 just north of building unit N12, is a hand-made mud object that seems to have previously held closed some kind of object (Fig. 88). During the course of excavation at SAV1 North by SIAM, no fragments of seal impressions were found (cf. end of this section).

#### D) Tools and instruments

The largest group of tools at SAV1 North is those made of stone and comprises weights, querns,

grinders, hammer stones, pounders and pestles, polishers and burnishers, a small number of possible whetstones and finally miscellaneous and/or multi-functional stone tools (see IV.3).<sup>564</sup>

Another small category of tools is the cosmetic instruments of typical Egyptian types, especially small palettes, grinders and dishes. A completely preserved example of a small granite dish with strong traces of use is SAVIN 323 (from Square 180/2270, Level 2, Fig. 89.1). A New Kingdom date for this rectangular palette (13.1 × 8.4 × 3cm) is

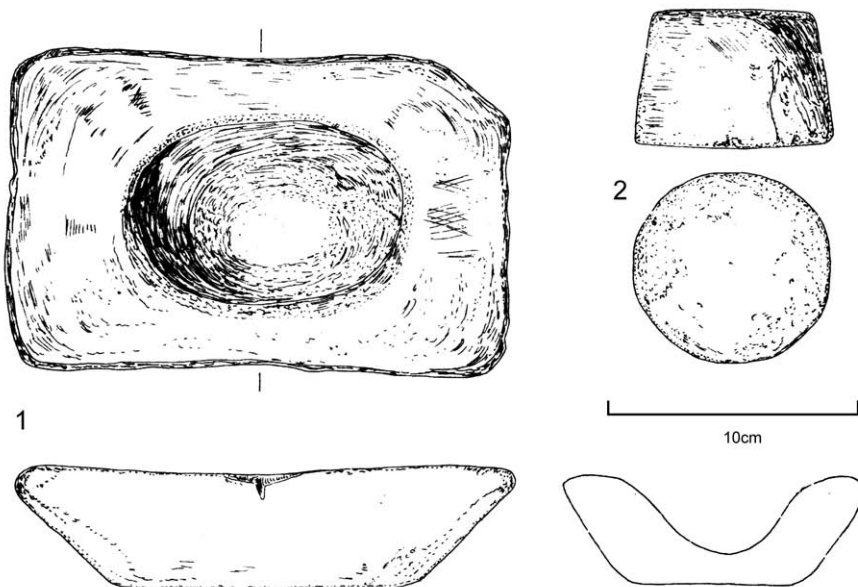


Fig. 89 Cosmetic palette SAVIN 323 (1) and grinder SAVIN 761 (2)

<sup>564</sup> Cf. GIDDY 1999, pls. 39–50; PRELL 2011, passim.



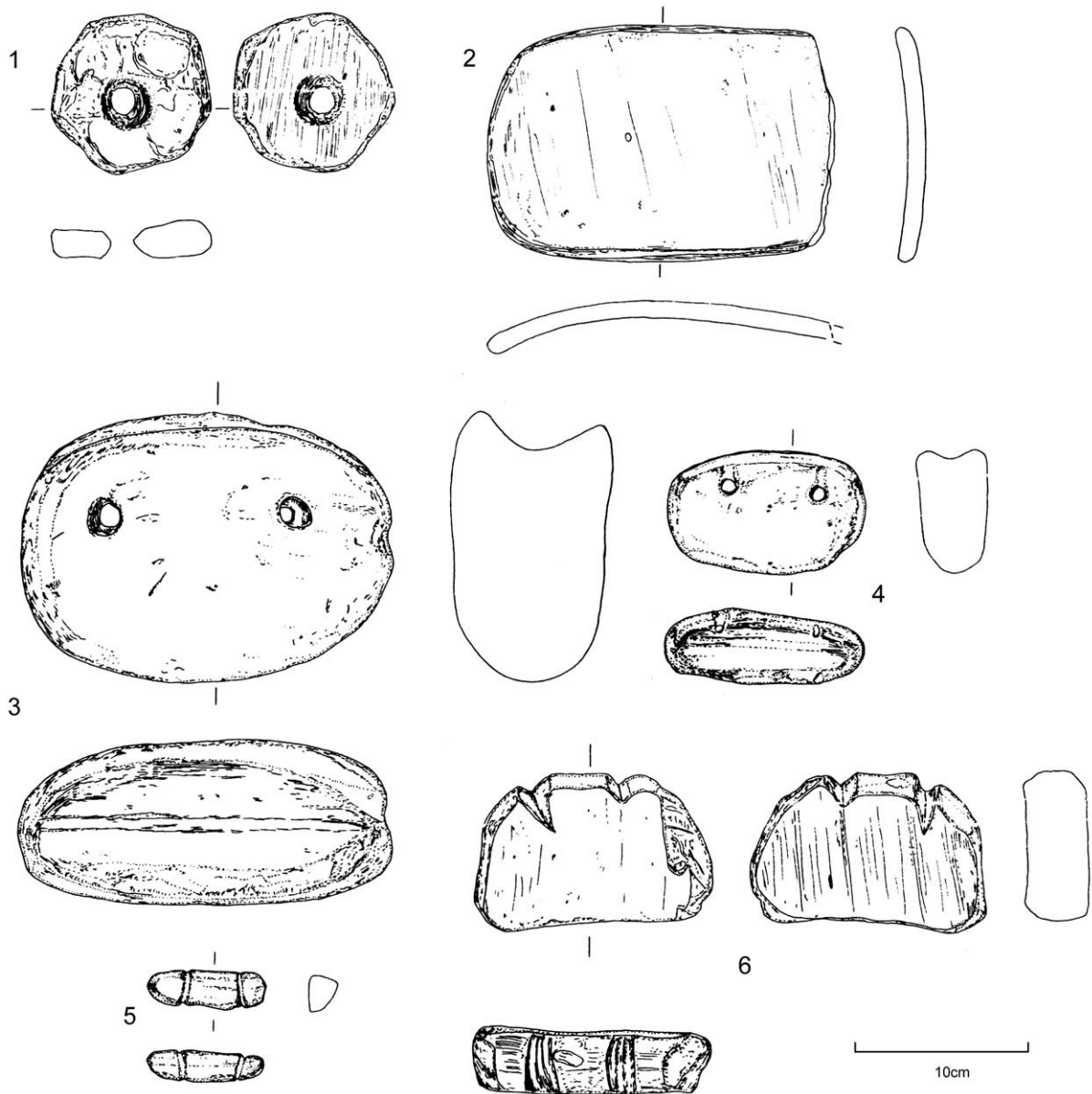


Fig. 90 Re-cut pot sherds and weights from SAV1 North

likely, with parallels at Elephantine<sup>565</sup> and Askut,<sup>566</sup> but with slight variation: its inner depression is not rectangular like the cited comparisons, but ovoid. Such a shape for the outline is also attested at Sai for another cosmetic dish, SAVIN 1655.<sup>567</sup> This example is much smaller in size than SAVIN 323 and may be in a local Nubian style, as proposed for similar pieces from Askut.<sup>568</sup> For actually grinding material on palettes or dishes like SAVIN 323, a device like SAVIN 761 (Fig. 89.2) was possibly

used, which again finds comparisons at Askut.<sup>569</sup> As an object from Level 3, SAVIN 761 is significant for reconstructing cosmetic tools of the mid-18<sup>th</sup> Dynasty on Sai.

38 objects were classified as weights, many of which are made of baked clay or re-used pottery sherds (21 objects, Figs. 90.3–4). Most common are clay axe head types, which were interpreted as net-weights at Elephantine (18 pieces of Cornelius von Pilgrim's Type A).<sup>570</sup> This is also the most like-

<sup>565</sup> VON PILGRIM 1996a, 171–172, fig. 74, pl. 30b (from House H 46a, larger in size than SAVIN 0323).

<sup>566</sup> SMITH 2003, 111, fig. 5.15E.

<sup>567</sup> BUDKA and DOYEN 2013, 185–186, fig. 14.

<sup>568</sup> See SMITH 2003, 111, fig. 5.15A citing parallels from Adindan.

<sup>569</sup> SMITH 2003, 111, fig. 5.15F.

<sup>570</sup> VON PILGRIM 1996a, 275–276, fig. 120.

ly classification for the pieces from SAV1 North, though at other sites such items have been labelled as loom weights or as multi-functional devices.<sup>571</sup> Weights in stone are rare from SAV1 North (six pieces) though one example is the elongated piece SAV1N 1173, made in steatite (Fig. 90.5).<sup>572</sup> No dating can be proposed since it derives from Level 1, but it falls into von Pilgrim's Type B of net-weights.<sup>573</sup> Von Pilgrim's Type C is represented at SAV1 North by only three pieces of re-cut pottery sherds (e.g. Fig. 90.6).<sup>574</sup> The small number of this type of weight is interesting, as it is typically very common in Egypt.<sup>575</sup> The preference on Sai for the clay axe head type might indicate centralised organisation for the distribution of these objects, rather than *ad hoc* production like Type C. A similar situation at Askut was interpreted by Smith as reflecting a "centralized system of food production."<sup>576</sup> One might add here that, according to the Nauri decree, fishing rights in Nubia were owned by temples<sup>577</sup> and restricted access to fishing devices could correspond to this.

Of the 46 artefacts classified as re-used pot sherds, most were probably used as scrapers (Fig. 90.2). Re-cut pot sherds are common tools with multiple functions at New Kingdom domestic sites, attesting to material-saving recycling processes within Pharaonic culture (e.g. at Qantir<sup>578</sup> and Elephantine<sup>579</sup>). Such re-use of ceramics is also attested in Nubian cultures, e.g. for cosmetic palettes.<sup>580</sup> Three examples of the 46 re-cut sherds from SAV1 North are made from Nubian wares. SAV1N 594 (Fig. 90.2) is a body sherd from a Canaanite amphora, recycled as scraper at Sai. The sherd selected for this piece probably held some advantages for both its future use and the production as a tool: a hard fabric with low porosity, a thin wall thickness and a convenient bend for a good grip of the scraper.

In addition to authentic tools, further re-shaping of ceramics is notable in SAV1 North for the pro-

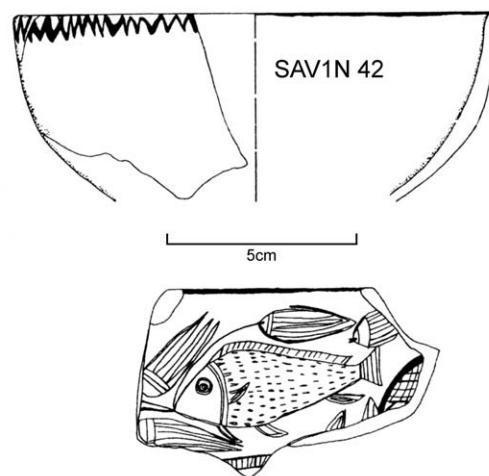


Fig. 91 Nun bowl SAV1N 42

duction of lids. As is commonly known from Egypt, dishes and plates were sometimes re-cut to be used as lids or covers (see SAV1N 2312 from building unit N12, Pl. 45).

#### E) Non-ceramic vessels

A small number of stone (twelve) and faience (eleven of various types + 49 Nun bowls) vessels were excavated in fragmented condition at SAV1 North. Especially noteworthy is a small calcite beaker with a ledge (SAV1N 0064), which finds parallels in both Egypt and Egyptian sites in Nubia.<sup>581</sup> Six lids for small cosmetic vases (kohl vases) were recorded (see SAV1N 2194 from N12D, Pl. 46).<sup>582</sup> Within the group of faience vessels, several fragments represent Nun (or marsh) bowls (Fig. 91) which are common from the 18<sup>th</sup> Dynasty to the Late New Kingdom. Unfortunately, almost all of the 49 such pieces come from the uppermost Levels 1 and 2 and are therefore not conclusively datable. Only a single piece was derived from Level 3 and is clearly of 18<sup>th</sup> Dynasty date (SAV1N 465, a small body-herd with a geometric pattern). The best preserved rim sherd is SAV1N

<sup>571</sup> E.g. GIDDY 1999, 193; MILLARD 1979, 127 and pl. 103. For loom weights, which are different in shape, see e.g. KEMP and VOGELANG-EASTWOOD 2001, 392–403.

<sup>572</sup> Cf. BUDKA and DOYEN 2013, 186, fig. 15.5.

<sup>573</sup> VON PILGRIM 1996a, 276–278, fig. 121, especially fig. 121c.

<sup>574</sup> VON PILGRIM 1996a, 278, fig. 121.

<sup>575</sup> VON PILGRIM 1996a, 279, fig. 123.

<sup>576</sup> SMITH 2003, 101.

<sup>577</sup> Cf. MORKOT 1995, 177.

<sup>578</sup> RAEDLER 2007; PRELL 2011, 92.

<sup>579</sup> Cf. KOPP 2005b; see also BUDKA 2010c. For Third Intermediate material from Tanis see BRISSAUD and COTELLE 1987.

<sup>580</sup> See WILLIAMS 1993, 45 with note 49.

<sup>581</sup> SMITH 2003, 111, fig. 5.15B.

<sup>582</sup> Such cosmetic items are common burial gifts; see on Sai cemeteries SAC4 (GRATIEN 1985, pl. IVa) and SAC5 (MINAULT-GOUT 2004; MINAULT-GOUT and THILL 2012). For further kohl pots in New Kingdom tombs in Nubia see e.g. WILLIAMS 1992, *passim*.



Fig. 92 Clay balls from Level 3, SAV1N 2176 (N27) and SAV1N 2198 (N12)

042, regrettably coming from Levels 1 and 2 in Square 190/2270 (Fig. 91), but clearly datable to the 18<sup>th</sup> Dynasty on stylistic grounds. Nun bowls like SAV1N 042 attest to the Egyptian tradition of these vessels connected with regeneration in the domestic context of SAV1 North.<sup>583</sup>

#### F) Models, games and unidentified pieces

16 small tokens or pottery discs of unclear function<sup>584</sup> and twelve miniature balls in both fired and unfired clay (possibly to be identified as game stones) fall into this category.<sup>585</sup> The miniature clay balls (Fig. 92) find exact parallels from Egyptian sites like Amarna and are probably related to the ritual of the first haircut.<sup>586</sup> Two pieces from Level 3 derive from building units discussed in Chapter II, SAV1N 2176 (N27) and SAV1N 2198 (N12) (see IV.4), and are datable to the mid-18<sup>th</sup> Dynasty.

\*

Implications of the most common objects for reconstructing activities at SAV1 North, especially for weaving, fishing and grinding corn, were already discussed elsewhere.<sup>587</sup> An interesting aspect that should be emphasised related to the location of Sai in Upper Nubia is the scarcity of textual evidence within the categories of small finds. Jar docketts are extremely rare,<sup>588</sup> as are traces of sealing practices – no seal impressions are so far documented from SAV1 North and only four scarabs represent these objects, which are usually numerous at Egyptian domestic sites of the period.<sup>589</sup> However, analysis of this situation must be cautious due to the excavation technique: sieving was not conducted for the deposits in SAV1 North, while systematic sieving of fill from pits, silos and cellars at SAV1 East and SAV1 West has resulted in the discovery of numerous seal impressions.<sup>590</sup> Thus, seal impressions are likely to have been also part of the material remains of SAV1 North.

Another aspect of the material culture from SAV1 North contrasting to contemporaneous sites in Egypt is that moulds for small faience objects are missing.<sup>591</sup> One may conclude that, unlike the

<sup>583</sup> For the domestic context of marsh bowls cf. GIDDY 1999, 267; STEVENS 2006, 178–180. For Nun bowls in New Kingdom tombs in Nubia see e.g. WILLIAMS 1992, 131.

<sup>584</sup> Cf. GIDDY 1999, pls. 72–73.

<sup>585</sup> Cf. a large number of model balls from Amarna, of which some are similar to the ones from SAV1 North; STEVENS 2006, 112–115.

<sup>586</sup> See ARNST 2006.

<sup>587</sup> BUDKA and DOYEN 2013, 198–201.

<sup>588</sup> BUDKA and DOYEN 2013, 198–199. Cf. also the small amount of docketts (two) from the complete material of The Scandinavian Joint Expedition to Sudanese Nubia (both from the cemetery of Fadrus, site 185), see HOLTHOER 1977, 58, 82.

<sup>589</sup> Cf. GIDDY 1999, 54–76, pls. 15–17, 64. Cf. the same number of scarabs (four) found in New Kingdom levels at Askut (SMITH 2003, 113). Smith proposed a direct link between this phenomenon and changing organisational patterns of Egyptian control, in contrast to the Middle Kingdom and the Second Intermediate Period. For scarabs from tomb contexts on Sai, see: Second Intermediate Period examples from cemetery SAC4, GRATIEN 1985, pl. IV; New Kingdom and Napatan pieces from SAC5, THILL 2004.

<sup>590</sup> Cf. BUDKA 2015b, 45.

<sup>591</sup> Only a single mould (SAV1N 1823) was recorded from Level 2 and is of unclear date, most probably Post-Pharaonic. For faience moulds common at Egyptian sites see GIDDY 1999, 243–250, pls. 53–54 with diverse parallels.

main residential sites in Egypt like Memphis and Amarna, no faience production was carried out in the New Kingdom town of Sai. However, the presence of faience beads from SAV1 North, including “double ring beads”, may attest to a local bead production on a small scale (see IV.4.4).

### 3 MACROLITHICS FROM SAV1 NORTH<sup>592</sup>

The variety of types and materials of stone tools found in SAV1 North is limited, mainly to pounders or hammers, grindstones, handmills, whetstones and abrasive stones. Some of these objects were likely also multi-purpose tools. The most common materials noted here are natural quartz boulders, sandstone and quartzite (silicified sandstone).

#### 3.1 Pounders/hammers

The outline and sections of pounders/hammers from SAV1 North are often naturally oval, round, plano-convex or bar-shaped. The natural surface of the objects is typically smooth and even, an important factor for good handling. Concentrations of percussion marks attest to the use as a tool. According to the shape of the boulder, these marks can be arranged circumferentially, especially if the pounder was used over a longer period. Some well-worn pieces have only small remains of the original surface of the boulder left, while other examples were barely used and show only few small concentrations of percussion marks.

The large quantity of hammer stones (320 pieces) from SAV1 North finds close parallels at Qantir<sup>593</sup> and Amarna<sup>594</sup>. The functional use of these hammer stones was recently discussed by Andreas Tillmann, who suggests an industrial use in relation with metal production.<sup>595</sup> While this is possible for material found at Qantir, at SAV1 North another function is more likely – hammer stones were also used for napping the surface of smoothed grindstones.<sup>596</sup> At SAV1 North, this functional use might explain the large quantity of pounders, their association with numerous grindstones/querns (444 pieces)<sup>597</sup> and

their provenance of domestic structures with silos and grinding emplacements (cf. IID.1).

#### 3.2 Whetstones

Whetstones, of which a minimum of 19 pieces were found at SAV1 North, are mainly made from sandstone (white, yellow, red),<sup>598</sup> a material on which sharpening stone knives does not produce grooves.<sup>599</sup> Whetstones that do contain the distinctive grooves, like SAV1N 2174 and SAV1N 2031 (see IV.4.1), likely result from use with metal tools or fish hooks.<sup>600</sup> Since no metal objects dating to the New Kingdom were documented at SAV1 North, this remains tentative. In addition, with only three pieces exhibiting grooves, evidence from SAV1 North is rather scarce. A minimum of six abrasive stones in quartzite were documented from SAV1 North, deriving mostly from Level 2. As Silvia Prell has demonstrated for the material from Qantir, “Schleifsteine” made of quartzite are a distinctive group of abrasive stones.<sup>601</sup> The material resulted in smooth and almost polished surfaces, which differs from the rough surfaces of whetstones made in sandstone.

#### 3.3 Grindstones

The 440 grindstones known from SAV1 North are mainly made from quartzite (red, yellow, white, pinkish), showing a medium to coarse graininess; only a few examples are made of sandstone. The outline of the grindstone is often ovoid, while the grinding surface can be flat or concave.<sup>602</sup>

#### 3.4 Handmills

Like the grindstones, the 122 handmills from SAV1 North are mainly manufactured from quartzite, with a small number of sandstone examples. The outline is again often ovoid and the grinding surface can be flat, convex or concave according to the wear. Sections from the handmills are predominately plano-convex. They come in a variety sizes and can be quite large, making it difficult to distinguish them

<sup>592</sup> I wish to thank Silvia Prell, who studied the macrolithics from SAV1 East and SAV1 West in 2015 as part of the ERC project AcrossBorders. Unfortunately, the complete material from SAV1 North was no longer available for study subsequent to construction work on the magazine of the French excavation house in the fall of 2015. The following is therefore of preliminary character, as more detailed analysis of the originals could not be undertaken.

<sup>593</sup> TILLMANN 2007, 50–55; PRELL 2011, 31–40.

<sup>594</sup> BOYCE 1995.

<sup>595</sup> TILLMANN 2007, 50–55.

<sup>596</sup> TILLMANN 2007, 55 (“Aufrauung glattgeschliffener Mahlsteinarbeitsflächen”) with literature and parallels. Cf. also PRELL 2011, 31 for various functions of hammer stones.

<sup>597</sup> Cf. PRELL 2011, 72–79.

<sup>598</sup> Cf. KEMP and STEVENS 2010b, 436–441; PRELL 2011, 50–53.

<sup>599</sup> PRELL 2011, 48–52; KEMP and STEVENS 2010b, 443–444.

<sup>600</sup> Cf. KORHONEN 2014.

<sup>601</sup> See PRELL 2011, 44–72.

<sup>602</sup> Cf. PRELL 2011, 72–73.

from grindstones.<sup>603</sup> However, differentiation is possible by the nature of the surface treatment of the back: the convex back of handmills is always smoothed, at least at the raised parts, to facilitate the grip. Several pieces from SAV1 North are much worn and only a few centimetres thick.

#### 4 SELECTED OBJECTS FROM LEVEL 3

Similar to the ceramics, only fragmented information is currently available for the objects discovered in the building units of Level 3. Most of the material is associated with structure N12.

##### 4.1 Finds from building unit N24

The objects from Level 3 in building unit N24 are at the first glance rather insignificant. Two stone tools were found south of Wall 8N: a small fragment of a much eroded sandstone grindstone (SAVIN 297, 8.9 × 8.9 × 4.3cm) and a schist hammer (SAVIN 299, 9.4 × 7.3 × 5.4cm). Close by, west of Wall 08W, a large double-handed stone pounder (SAVIN 2427, 21.3 × 11.3 × 9cm) was found, broken at one end. Its use is attested by percussion marks at the preserved end (Pl. 39).

Most interesting, however, are the four grindstones and two handmills discovered along Wall 08W during fine cleaning in N24. One of these grindstones (SAVIN 2432, 30.7 × 17.4 × 11cm, Pl. 40, see IIB.3.4.1) was almost intact and set perpendicular to the wall. It is a large fragment of a sandstone grindstone with a smooth, flat top surface through use, while the remaining sides are roughly shaped. Below SAVIN 2432, covered by a 3cm thick occupational deposit, was a second, more fragmentary example (18 × 16 × 5cm),<sup>604</sup> which was found lying parallel to the western wall. Two additional broken sandstone grindstones were found nearby and are complemented by the fragment of a handmill, SAVIN 2430, which is broken at both ends. The top surface of the handmill is flat and somewhat rough, while the base is rounded and slightly smoother – perhaps the mill was not well used. Another handmill, SAVIN 2428 (Pl. 41), was found in a slightly higher position along Wall 08W.<sup>605</sup> It is largely complete and almost rectangular in shape. It was well used, as it is smooth and flat on the top and bottom surfaces while rough around the circumference.

These macrolithics from N24, which attest to grinding activities within the structure and clearly belong to its early phase of use, are complemented by an adornment piece. Within Installation N24A, a small faience disc bead with a diameter of 8mm was found at the bottom of the installation, along Wall 07S (SAVIN 2426, Pl. 42).

##### 4.2 Finds from building unit N12

Within N12, no differentiation was made for which part of the building unit the objects were found, making a functional interpretation impossible. In addition, similar to the pottery, the objects recovered from the area of N12 are numerous, but often associated with the upper levels, especially Level 2. For example, sandstone fragment SAVIN 2031 (8.2 × 7.3 × 4.1cm) comes from the interior of N12, but at Level 2. This fragment has one smooth surface, interrupted by two grooves that intersect off-centre. This object finds a parallel from Level 3, west of Wall 53, also from the interior of N12: SAVIN 2174 is a similar sandstone piece (4.7 × 6.4 × 2.7cm) with two intersecting grooves on a smoothed surface (Pl. 43). Both objects could be whetstones – a similar piece from the delta site Tell el-Retaba was labelled as tool sharpener<sup>606</sup> and some of the whetstones from Qantir also possess grooves (see above).<sup>607</sup> Prell has stressed that sandstone is well suited for whetting and sharpening metal tools, such as knives and adze.<sup>608</sup> Otherwise well attested at New Kingdom settlement sites in Egypt and Nubia, no fishing hooks or other metal tools were found at SAV1 North, making any connection to these whetstones tentative.<sup>609</sup>

Besides SAVIN 2174, 38 other objects from the interior of N12 can be dated to the early to mid-18<sup>th</sup> Dynasty according to parallels (Fig. 93). Most common are the macrolithics, mainly in sandstone and quartz: three pestles, two palettes, nine grindstones, one handmill, four hammer stones and one possible polishing stone. In combination with the quern emplacement, these objects confirm grinding activities within N12. The remaining finds from N12 show more variety, with two beads, two axe head type of clay weight (SAVIN 2045, Fig. 90.3 and SAVIN 2046, Pl. 44), one seal (SAVIN 2270; 8.1 × 5.15 × 5.1cm) very similar to SAVIN 2058 (Fig. 88), three small mud balls (e.g. SAVIN 2198, see Fig. 92) and

<sup>603</sup> Cf. PRELL 2011, 77–78.

<sup>604</sup> Its top was levelled at 159.93m, its base at 159.88m, lying over the gravelled ground.

<sup>605</sup> Its top was levelled at 159.99m, its base at 159.96m.

<sup>606</sup> RZEPKA et. al. 2013, 267–268, figs. 34–35.

<sup>607</sup> PRELL 2011, 48 and 52–53.

<sup>608</sup> PRELL 2011, 48, 50 and 52.

<sup>609</sup> Cf. SMITH 2003, 101–103, fig. 5.5.

Excavation number	Object type	Material
SAVIN 1896	artefact	sandstone
SAVIN 1910	artefact	clay
SAVIN 1936	artefact/weight?	sandstone
SAVIN 2167	artefact	sandstone
SAVIN 2174	whetstone	sandstone
SAVIN 2201	artefact	clay
SAVIN 2312	re-used pot sherd (lid)	clay
SAVIN 2273	lid	mud
SAVIN 2156	ball	mud
SAVIN 2197	ball	clay
SAVIN 2198	ball	clay
SAVIN 2034	pestle	quartz
SAVIN 2035	pestle	sandstone
SAVIN 2275	figurine? (leg of animal?)	clay
SAVIN 2284	animal figurine?	clay
SAVIN 1871	pestle?	sandstone
SAVIN 1894	grindstone	sandstone
SAVIN 1895	grindstone	stone
SAVIN 2043	grindstone	sandstone
SAVIN 2054	grindstone	sandstone
SAVIN 2061	grindstone	sandstone
SAVIN 2063	grindstone	sandstone
SAVIN 2131	grindstone	sandstone
SAVIN 2140	grindstone	quartz
SAVIN 2150	grindstone	sandstone
SAVIN 2044	handmill?	sandstone
SAVIN 2062	palette?	sandstone
SAVIN 2179	palette?	shist
SAVIN 2024	hammer stone	sandstone
SAVIN 2026	hammer stone	shist
SAVIN 2050	hammer stone	quartz
SAVIN 2141	hammer stone?	stone
SAVIN 1903	bead	faience
SAVIN 2155	bead	clay
SAVIN 2181	polishing stone?	quartz
SAVIN 2045	weight	clay
SAVIN 2046	weight	clay
SAVIN 2270	sealing	mud

Fig. 93 List of finds from building unit N12, Level 3

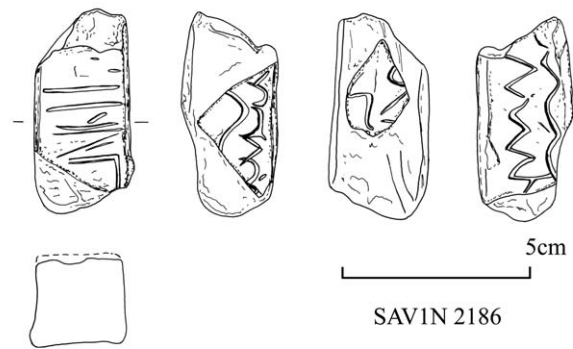


Fig. 94 Female figurine SAVIN 2186 from silo N12D

two very small, undiagnostic fragments of clay animal figurines. The re-used ring base of a pottery dish, SAVIN 2312 (Pl. 45), re-worked to function as a lid, is well dateable to the early to mid-18<sup>th</sup> Dynasty.

#### N12D

A total of twelve objects were documented from N12D (Fig. 95), the silo that also yielded a large amount of pottery. Six of these are stone tools: one pestle, one hammer stone, two grindstones and two handmills. These finds correspond nicely to the functional interpretation of building unit N12 connected with bread making and grinding (IID.1).

The other objects from N12D include one fragment of a small animal figurine (possibly a bull), a fragmented lid of a kohl pot in calcite (SAVIN 2194, Pl. 46), one rudimentary female figurine, a faience bead and a fragmented axe type net-weight (see IV.2.1). The rudimentary female figurine (SAVIN 2186, 5.48 × 2.48 × 2.6cm) is especially noteworthy, despite its broken state of preservation, because it combines a typical Nubian pattern of wavy incised lines<sup>610</sup> with Egyptian stylistic features (Fig. 94).<sup>611</sup> Similar rudimentary figurines with comparable decoration were found at Buhen.<sup>612</sup>

#### 4.3 Finds from building unit N26

Nine objects were recovered from Level 3 in building unit N26. Of these, two fragments of leather, SAVIN 2202 and 2212, are clearly of Post-New Kingdom date (probably quite recent) and attest to the dis-

<sup>610</sup> See, e.g., a net-weight found at Elephantine in Nubian fabric and with un-Egyptian incised decoration; see VON PILGRIM 1996a, 276, fig. 120b.

<sup>611</sup> BUDKA and DOYEN 2012, 183.

<sup>612</sup> E.g. MILLARD 1979, no. 747, pl. 53.

Excavation no.	Object type	Material	Findposition
SAVIN 2159	artefact	faience	Level 3, from the interior of N12D
SAVIN 2183	pestle	stone (schist?)	
SAVIN 2128	handmill	schist	
SAVIN 2132	handmill	sandstone	
SAVIN 2194	lid	calcite	
SAVIN 2168	animal figurine	clay	
SAVIN 2186	female figurine	clay	
SAVIN 2180	grindstone	sandstone	
SAVIN 2250	grindstone?	sandstone	
SAVIN 2135	hammer stone	quartz	
SAVIN 2200	bead	faience	
SAVIN 2267	net-weight	clay	

Fig. 95 List of finds from silo N12D

turbed state of the deposits in N26. A small bead, SAVIN 2256, is also of unclear date. The other objects here are mostly stone tools: two pounders, one handmill and one polishing stone. Finally, a small clay ball (SAVIN 2176, Fig. 92) and a jar stopper of hemispherical shape (SAVIN 2256) were also found.

#### 4.4 Finds from building unit N27

Only two small items from building unit N27 were documented as Level 3. SAVIN 730 is a sherd of Medieval date that was recut to a disc (possibly as a token or game piece), illustrating that mixed and disturbed contexts are also found in Level 3 (cf. III.1). SAVIN 2154 is two adjoined faience ring beads (8 × 4.1mm). Although this is clearly not a sealed context, a New Kingdom date is likely for these beads and they could attest to local faience production, despite the lack of moulds from SAV1 North (see IV.2.1).

### 5 FUNCTIONAL ASPECTS OF FINDS FROM SAV1 NORTH

In general, objects known from New Kingdom settlements in Nubia cover a large spectrum of functions, from personal items and tools, to storage and food production, and references to fertility and religious acts.<sup>613</sup>

Several groups of objects from Sai fall into the category of rebirth, fertility and well-being, comparing nicely to finds from Amarna in Egypt.<sup>614</sup> Firstly, rudimentary female figurines, faience Nun bowls and specific ceramic vessels like duck-bowls and feminoform vessels can be highlighted.<sup>615</sup> All of these objects are known from domestic, funerary *and* temple contexts.<sup>616</sup> Interestingly, several domestic contexts of the 18<sup>th</sup> Dynasty (Memphis, Amarna, Elephantine and Sai Island) show female figurines archaeologically associated specifically with Nun bowls.<sup>617</sup> Nude female figurines are not only connected with sexuality and childbearing, but with a complex ideology that is difficult to define in the modern mind-set.<sup>618</sup>

Regeneration is also closely related to ancestor cult and the commemoration of individuals. At Amara West and Sesebi, anthropoid busts attest to the invocation of ancestors within the houses,<sup>619</sup> while domestic shrines have been identified at Askut and Mirgissa.<sup>620</sup> No such installations have been identified to date at Sai, though pot stands and footed bowls with a gypsum-coating found at SAV1 North<sup>621</sup> might be related to such shrines.<sup>622</sup>

All in all, the functional aspects of finds from SAV1 North seem to correspond to their counterparts at Elephantine and Amarna. However, there

<sup>613</sup> BUDKA and Doyen 2012–2013, 200–201.

<sup>614</sup> STEVENS 2006; cf. BUDKA and Doyen 2012–2013, 183–187.

<sup>615</sup> See BUDKA 2016a.

<sup>616</sup> Cf. BUDKA 2016a with references.

<sup>617</sup> See GIDDY 1999, 28–31, 267, pls. 8–12; STEVENS 2006, 178–179.

<sup>618</sup> Cf. WARAKSA 2009; BUDKA 2016a, 77–78; DOYEN 2016.

<sup>619</sup> SPENCER 2014b, 49.

<sup>620</sup> Cf. SMITH 2003, 124–133.

<sup>621</sup> BUDKA and DOYEN 2013, 201.

<sup>622</sup> Cf. SMITH 2003, 127, fig. 5.25; STEVENS 2006, 193–194.

are elements of private religion specific to sites like Sai, with Egyptian votive objects appear side by side with Nubian style objects, as well as hybrid-types that combine both traditions.<sup>623</sup> This local aspect of a complex mixture of lifestyles finds parallels in other Egyptian sites located in Nubia, for example at Askut,<sup>624</sup> and corresponds with the ceramic evidence from SAV1 North (cf. Chapter III). The local style of some objects and pottery vessels seems to suggest that both Egyptians and Nubians settled at SAV1 North. However, “postulating hybridity from changes in the material culture”<sup>625</sup> generally faces considerable problems. Taking Amara West as case study, Neal Spencer has recently argued that individual choices and group dynamics may sometimes be more significant than cultural identities.<sup>626</sup> This probably also holds true for SAV1 North and underlines how little we still know about the occupants of this sector of the New Kingdom town of Sai.

## 6 THE CHARACTER OF THE MATERIAL CULTURE FROM SAV1 NORTH

Even though only part of the material from SAV1 North could be processed, the information gained from the objects is significant for the reconstruction of certain activities, which may also be relevant for the function of the architecture and buildings. As mentioned in Chapter II, the building units of SAV1 North at Level 3 are frequently associated with grinding activities. The large quantity of stone tools found here – querns, pounders and hammer stones – find comparisons in Egypt, but are also known in the indigenous Nubian tradition. The attested quern emplacements at SAV1 North are typical Egyptian, as is the surrounding architecture.

The very high number of grindstones (444 from SAV1 North) indicates that these were used for more tasks than just cereal grinding: some of the grindstones are probably connected with extracting gold from quartz stones<sup>627</sup> and others show traces of pigments.<sup>628</sup> The numerous pounders/hammers (320 from SAV1 North) are perhaps associated with the cutting and trimming of the grindstones.<sup>629</sup> It must be stressed that pounders/hammers of the same types as those from SAV1 North are also frequent

at the Christian sites on Sai,<sup>630</sup> making an exclusive New Kingdom date for all of the material from SAV1 North very unlikely.

The assumption that grindstones were used at SAV1 North for purposes other than grain seems to be supported by the insignificant number of functional ceramics associated with bread. Conical bread moulds are nearly absent, whereas the quantity of flat bread trays is larger (see III.4.5). The abundance of conical bread moulds recently excavated at SAV1 East clearly illustrates that this type of functional pottery was common within the town, but not in SAV1 North. Since these bread moulds are more common for temple and ritual contexts,<sup>631</sup> it is likely that SAV1 East represents the place of use/deposition of these cones in connection with Temple A. However, it cannot be ruled out that the actual bread was produced somewhere else. Other than building unit N12, no rooms suitable for baking were found in SAV1 North, again supporting the idea that it was not grain that required such numerous grinding tools at the site.

In summary, the material remains from SAV1 North demonstrate that life in a New Kingdom Egyptian town in Upper Nubia included a variety of activities besides the common household tasks like cooking, bread making, fishing and spinning. The artefacts and pottery found here cover a large spectrum of functions, from personal items, games, cosmetic instruments and tools, to storage, food production and consumption, with additional references to fertility, regeneration, feasting and religious acts.

Household and cooking devices should always be considered in context, here within their find spot and architectural framework in the New Kingdom town of Sai. As demonstrated by the contrasting examples of SAV1 East and SAV1 North, the architectural remains of sectors within the town of Sai can differ considerably in size – for example, in the wall thickness of the buildings – but compare well for the material remains (pottery, stone tools, small finds),<sup>632</sup> though with certain dissimilarities regarding the quantities and proportions. This suggests that the prime usage of distinct areas within a town is not always reflected clearly in the material evidence, but may be diluted in the archaeological record.

<sup>623</sup> This can also be observed for the official cult in the Egyptian temples set up in Nubia, see TÖRÖK 2009, 228–229.

<sup>624</sup> Cf. SMITH 1995; SMITH 2003, 101–135.

<sup>625</sup> PAPPÀ 2013, 36.

<sup>626</sup> SPENCER 2014b, 47. Cf. also SPENCER 2014a.

<sup>627</sup> Cf. KLEMM and KLEMM 2013, 8–11.

<sup>628</sup> Cf. STOREMYR et al. 2013, 230.

<sup>629</sup> Cf. BUDKA and DOYEN 2013; STOREMYR et al. 2013, 230.

<sup>630</sup> Personal observation, Sai Island 2013.

<sup>631</sup> Cf. ROSE 2007, HC 2, 288.

<sup>632</sup> BUDKA 2017.



## V. SUMMARY

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by Julia Budka

The architecture, pottery and small finds from sector SAV1 North were presented in this volume, focusing on Level 3, and the aim of this last chapter is to further place these data into context within the complete town site. SAV1 North is located in the northernmost part of the New Kingdom fortified town of Sai. The mud brick architecture along the enclosure wall is dominated by modest buildings of small size, but with multiple periods of use. Dating from the mid to late 18<sup>th</sup> Dynasty, Level 3 is the best documented phase; this was the period when the Pharaonic town of Sai flourished, probably acting as the headquarters for the viceroy of Kush and equipped with Temple A and nearby pyramid cemetery SAC5.<sup>633</sup> The status of Sai as an Egyptian administrative centre is well traceable in the remains in the southern sector SAV1 – with the governor’s residence and large magazines – but is harder to grasp in SAV1 North. As will be argued in the following, this is not so much a specific problem of the sector and its remains, but rather a consequence of how little is at present known about the internal structure of New Kingdom temple towns in Nubia.

Sector SAV1 North is situated close to the eastern sandstone cliff of the island, and therefore also with proximity to the presumed landing place and the 18<sup>th</sup> Dynasty sandstone quarries.<sup>634</sup> It is also a short distance from the nearby Meroitic and Post-Meroitic cemeteries,<sup>635</sup> which probably explains the appearance of pottery and other finds from these periods. However, most common amongst the Post-Pharaonic remains is the Christian material. As discussed, deep pits were cut into the Pharaonic mudbrick structures, especially Enclosure Wall N4 (see I.3). Some of the walls in SAV1 North are Post-Pharaonic in date, possibly constructed in the Medieval period or in more recent times (cf. IIC.3).

SAV1 North is dominated by Enclosure Wall N4 – with a thickness of 4.26m and a presumed original height of ca. 8m,<sup>636</sup> the town wall was *the* characteristic feature of the site, probably long after the end of the New Kingdom. It is therefore not surprising that both the contemporaneous and later structures used this major structure for multiple purposes: for orientation and as “landmark”, but also as foundation for new constructions and a source for building material. Other than a general reflection of the east–west orientation of N4, there is little of a systemic grid seen in the layout SAV1 North. This contrasts markedly with the southern part of the town, excavated by Azim.<sup>637</sup> However, another Egyptian settlement in Upper Nubia compares in some respects to SAV1 North: the southern part of the 18<sup>th</sup> Dynasty temple town of Sesebi combines clear east–west lanes in a roughly orthogonal plan with a less systematic construction of walls and rooms in a slightly different orientation.<sup>638</sup> Thus, the fact that the general pattern is not as clearly defined in SAV1 North as in the houses of the southern sector (SAV1) is not unusual within an Egyptian settlement and certainly does not prohibit the idea of urban planning.<sup>639</sup>

The architecture, ceramics and finds suggest a functional interpretation of SAV1 North in connection with domestic activities, but also with workshops and storage installations. However, it must be stressed that, as demonstrated at other sites, rooms and units within Egyptian houses were frequently used for multifunctional purposes.<sup>640</sup> It is therefore likely that SAV1 North also had multiple functions, representing a space for diverse activities in the New Kingdom and subsequent periods. Some of these possible activities and functions will be discussed in the following.

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<sup>633</sup> BUDKA 2015b.

<sup>634</sup> This landing place and quarry was in use until Christian times, cf. HAFSAAS-TSAKOS and TSAKOS 2012.

<sup>635</sup> Cf. GEUS 2004; FRANCIGNY 2014.

<sup>636</sup> Cf. ADENSTEDT 2016, 29 for comments on the height of the town wall.

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<sup>637</sup> AZIM 1975; ADENSTEDT 2016.

<sup>638</sup> Cf. SPENCE, ROSE et al. 2011, 34, fig. 1.

<sup>639</sup> Cf. SMITH 2007.

<sup>640</sup> VON PILGRIM 1996a; ARNOLD 2014, 166.

## 1 THE ARCHITECTURE OF SAV1 NORTH

SAV1 North is an interesting sector in many respects and illustrates the diverse character of architecture within the town wall, contrasting significantly from the southern sector, SAV1 (cf. I.4).<sup>641</sup> The latter is completely Egyptian in character, follows a clear grid system and finds direct comparisons in houses in Egypt.<sup>642</sup> Whereas tripartite and courtyard houses prevail in the northern sector, Houses 1–3 of SAV1 are considerably larger and fall into Bietak's category of "snail" houses,<sup>643</sup> which are not attested in SAV1 North.

The remains in sectors SAV1 East and SAV1 West are still being excavated and any comparison with SAV1 North is preliminary. However, whereas SAV1 East already contrasts to SAV1 North, with one substantial administrative building (Building A), the western sector does show parallels. A narrow wall street and houses of half-brick thickness have been documented at SAV1 West east of the town enclosure wall and are very similar to the remains in the northern sector, also including storage installations/silos.<sup>644</sup>

In the area of Temple A, immediately south of SAV1 East, domestic architecture was revealed by Azim. These structures are slightly earlier than the Level 3 building units at SAV1 North, perhaps instead contemporaneous with Level 5/4.<sup>645</sup> Up to six rectangular blocks of mud brick buildings (G1–G6) have been identified by Azim,<sup>646</sup> which predate the temple founded by Thutmose III and are thus earlier than the reign of this king. They are similar in room arrangement to the houses in SAV1 and follow a grid plan.<sup>647</sup> Unit G1 comprises three contiguous dwelling units covering a total surface of nearly 200 m (11.58 × 17.04m).<sup>648</sup> The individual abutting houses are similar in size to Houses 1–3 of SAV1 (G1a: 63m; G1b: 50m and G1c: 84m), and thus much larger than the buildings in SAV1 North (see I.4). This planning pattern corresponds to what Michael E. Smith called "semiorthogonal urban

blocks,"<sup>649</sup> where individual houses abut one or more neighbouring houses, forming dense sectors. Interestingly, each house within G1 is equipped with a sub-rectangular silo. Even though silos are also common at SAV1 North, this high concentration of storage installations is different, like the "block"-arrangement, and contrasts to the building units discussed in this publication.<sup>650</sup>

All in all, SAV1 North and its architecture nicely illustrate the high level of potential diversity according to sectors within a fortified space, like the New Kingdom town of Sai. As mentioned above (I.1), formation processes at the site are very complicated, making the understanding of the remaining structures difficult. Pl. 4 illustrates the differences in height in the present excavated state of SAV1 North. With reference to the current topographical features, N27 stands out from building units N24 and N25 (V.1.2), seemingly some kind of central building at a very low level, while building unit N12 appears to be another special case (see V.1.1). Without the possibility to reconstruct the formation processes of the northern sector in detail, the question of whether all the buildings attributed to Level 3 actually belong to the Pharaonic phase must remain. This uncertainty is further maintained by another characteristic of SAV1 North – as Doyen stressed in Chapter II, many different brick formats were used within the building units. By contrast, only two formats are known at SAV1, with some additional formats deriving from reconstruction phases in the magazines.<sup>651</sup> The variability in brick formats at SAV1 North (with no clear pattern for usage, see IIA.3 and IIG) may simply indicate a functional or planning difference to SAV1. More likely, however, is that these various bricks are indicative of continuous restoration phases at the site, raising doubts that everything presented here as Level 3 is actually Pharaonic in date.

Research conducted as part of AcrossBorders from 2015–2016 has further illustrated the rich potential of SAV1 North. In 2015, a total of five

<sup>641</sup> Cf. ADENSTEDT 2016.

<sup>642</sup> See also FITZENREITER 1999, 120; ADENSTEDT 2016.

<sup>643</sup> BIETAK 1996, 24, fig. 1 (Type Ila, Group A).

<sup>644</sup> Cf. BUDKA 2015b.

<sup>645</sup> See BUDKA 2014, 61–62.

<sup>646</sup> AZIM and CARLOTTI 2011–2012, 28–31.

<sup>647</sup> Azim compared them to the Kerma rural settlement of Gism el-Arba: see AZIM and CARLOTTI 2011–2012, 35, note 59. See also BUDKA 2014, 61.

<sup>648</sup> AZIM and CARLOTTI 2011–2012, 30, fig. 6a.

<sup>649</sup> SMITH 2007, 13.

<sup>650</sup> Cf. BUDKA 2015b, 51 for a possible connection between this domestic quarter and the early 18<sup>th</sup> Dynasty "bridge head" on Sai.

<sup>651</sup> ADENSTEDT 2016.

profiles were taken here by Miranda Semple, providing soil blocks for thin section manufacture and micromorphological analysis. Processing of these data was conducted in 2016 by Sean Taylor and Sayantani Neogi. Although the detailed results will be published elsewhere,<sup>652</sup> some of the most important information from these samples is present here, providing new ideas about the possible function of SAV1 North.<sup>653</sup>

### 1.1 N12 as a case study

N12 is probably the best preserved of the Level 3 excavated structures in SAV1 North. It has provided important information for the pottery corpus (III.5.2) and its complex phasing clearly illustrates the short-lived periods of use in buildings at SAV1 North.

As already mentioned (I.4), though the ground plan of N12 is completely Egyptian, the internal surface area of about 27m makes it much smaller than other examples of tripartite houses. However, N12 does find parallels in Nubian fortresses (e.g. Uronarti and Buhen), suggesting that its size is not a coincidence, but rather suggestive of its use and users (see below, V.3).

Although N12's original construction phase is clearly associated with Level 3, the major rebuilding phases, like that of Wall 42S, are more difficult to date. The ceramics indicate that the last phase here correlated with Level 3 is actually already a later abandonment phase and the deposits found within N12 testify the use of the structure as waste area – something that is rather unlikely to have happened during the proper use life of the building.<sup>654</sup> The main purpose of the micromorphological sampling programme was acquiring additional information on the functional interpretation of the structure. From the archaeological perspective, the installations within N12 all appear related to the preparation of bread: the (long-term) storing of grain (N12D), the temporary storing of grain ready to be processed (N12E and N12F), grinding implements to produce flour (N12C),<sup>655</sup> and finally, an oven room in which to bake

bread (N12A). This seemingly straight-forward interpretation of N12's installation was now scientifically tested against the micromorphological evidence.<sup>656</sup>

As mentioned in Chapter II, the southeastern part of building unit N12, in particular the so-called oven room N12A, showed deposits interpreted in the field as ashy and charcoal rich layers (IID.5.1.1). To get a better understanding of this feature, three samples were taken in N12A: Samples 8.1 and 8.2 (along Wall 42S) and Sample 7 (at the corner between Walls 42S and 42E).

An important outcome of this sampling is that among the most striking properties of these occupational deposits are articulated phytoliths, as well as chaotically and randomly distributed single phytoliths. These had been misinterpreted as ash-rich deposits because of their low bulk density, silty texture, colour (often pale grey, similar to ash) and most importantly because of their elevated calcium carbonate content.<sup>657</sup> These accumulations of phytoliths are in general considered characteristic signatures of domestic anthropogenic refuse. Ethnographic and archaeological studies have shown that plant waste accumulates on sites for a multitude of reasons, producing large quantities of phytoliths within archaeological deposits.<sup>658</sup> To this end, plant residues associated with the stabling and feeding of domestic animals, grain storage, threshing floors, remains of matting and bedding, roofing or thatch and bark and chaff-mud plaster are just a few of the possible scenarios. Certainly, at least some of the phytoliths from N12A can be associated with animal activity as there are dung fragments and spherulites intimately associated with this line of evidence.<sup>659</sup> For the others, grain storage and possibly matting/roofing are also probable sources in the case of N12A.

The interpretative data of the two samples taken from a thick deposit against Wall 42S, the southern wall of N12 (II.D.2.1), can be described as follows. Sample 8.1 is a very porous deposit dominated by the presence of articulated phytoliths. The dominance of phytoliths suggests that this had been a very organic

<sup>652</sup> AcrossBorders Vol. II (in preparation).

<sup>653</sup> As these results were obtained subsequent to the excavation itself (August 2016), they were not available for inclusion of the architectural report by F. Doyen, submitted in April 2016.

<sup>654</sup> Cf. ARNOLD 2014 for evidence of cleaning Egyptian houses and removing waste outside the town.

<sup>655</sup> See already BUDKA and DOYEN 2013, 177.

<sup>656</sup> The following data is based on the report by S. Taylor and S. Neogi.

<sup>657</sup> See ALBERT et al. 2008.

<sup>658</sup> Cf. ALBERT and WEINER 2001.

<sup>659</sup> PORTILLO and ALBERT 2011.

<sup>660</sup> PORTILLO and ALBERT 2011.

rich deposit – almost certainly a midden – that was subsequently subjected to geochemical transformations. The other lines of evidence supporting this interpretation are the frequent charcoals and spherulites from animal dung, as well as bone and plant tissue.<sup>660</sup> Although there are certainly fragments of wood charcoal and a proportion of ash within the deposit, the perceived ashy properties recognised in the field were due to the elevated quantities of opal silicate phytoliths. Furthermore, the calcium carbonate is largely derived from the decomposition of bone rather than that of wood ash.<sup>661</sup>

Like Sample 8.1, Sample 8.2 is also characterised by the presence of large quantities of phytoliths. The presence of occasional dung fragments associated with spherulites supports the hypothesis that at least part of this midden deposit<sup>662</sup> was formed by the waste from stabling or animal holdings.<sup>663</sup>

The third sample in N12A was taken from the deposit against the southeastern corner, at the junction of Walls 42S and 42E (IID.5.1.1). Sample 7 shows the incorporation of a wide range of anthropogenic refuse, mostly organic in nature. These include charcoal fragments, ashy fabrics, and fragments of pottery and bone. The micromorphological evidence suggests that this deposit is most likely to have formed, not during the use life of the building, but rather during the abandonment phase when buildings can be convenient places to deposit waste.<sup>664</sup> Beside the anthropogenic refuse, the presence of various pedofeatures is indicative of many post-depositional processes active at the midden, and in turn on the site. Bioturbational features, along with excremental fabrics, suggest post-depositional decomposition and reworking of the sediments by fauna.<sup>665</sup>

To conclude, the micromorphological evidence from N12A attests to domestic refuse. The fragments of bones and pottery suggest that this layer was associated with daily household activities related to food preparation. The argument is further strengthened by the high quantities of organic residues observed in this layer, probably also resultant from domestic activities.

All in all, the interpretation of N12A as an oven room and its connection with bread making and grain corresponds to the micromorphological evidence. However, the microarchaeology illustrates certain *caveats* concerning two aspects: 1) formation processes, especially distinguishing deposits of an abandonment/post-use phase from the prime use; 2) functional interpretation. The problems of the latter in Pharaonic mud brick houses were already stressed by von Pilgrim and others: room functions were almost never exclusive, several activities took place in the same room, and activities might change from time to time or have seasonal aspects.<sup>666</sup> Furthermore, sometimes activities may be traceable in rooms other than their primary location. For example, even if there is a space specifically for stabling animals, the animals must enter and leave this room, potentially also leaving traces of their existence in other areas of the structure.<sup>667</sup> In addressing the former point (1), the first results from micromorphological samples in N12A are highly relevant, as they clearly prove that the rebuilding phase of Wall 42S was built directly upon an area full of domestic waste.<sup>668</sup> Furthermore, the suggestion to associate some of the so-called ashy layers in N12A – actually mostly plant remains (phytoliths) – with fills from the abandonment phase rather than the concrete use of the room would correspond to the ceramic analysis, which indicates that contexts attributed to Level 3 comprise up to five or six generations.

Much potential for the functional analysis of complicated sites with multiple formation processes, like SAV1 North, therefore lies in the implementation of a micromorphological sampling programme. This line of research should be strengthened in the future at settlement sites in Egypt and Nubia.

## 1.2 N27 as a case study

Building unit N27 represents another special case in SAV1 North and, other than N12, it does not find close parallels in Egyptian house types. Although Doyen compared N27 to Type I of Bietak's Group B (IIF.1),<sup>669</sup> its architecture should be regarded as rath-

<sup>661</sup> MATTHEWS 2005.

<sup>662</sup> Cf. SHILLITO and MATTHEWS 2013.

<sup>663</sup> COURTY 2001. See also MACPHAIL and GOLDBERG 2010.

<sup>664</sup> Cf. SCHIFFER 1987. For complex waste management in an Egyptian settlement by the example of Elephantine see ARNOLD 2014. For Amarna as a New Kingdom case study see SHAW 2012.

<sup>665</sup> KOOISTRA and PULLEMAN 2010.

<sup>666</sup> VON PILGRIM 1996a, 205–217; see also ARNOLD 2014.

<sup>667</sup> Animals, especially goats and sheep, are well attested at SAV1 North; see SALIARI and BUDKA 2017.

<sup>668</sup> Similar observations were made in SAV1 East during the field season 2016.

<sup>669</sup> BIETAK 1996, 24, fig. 2.

er unusual. This may correspond to the before-mentioned dissonance of houses from “standard types” (I.4), which is likely to have been a common and integral part of dynamic ancient societies other than previously thought, mirroring individual choices in shaping houses. However, it is also possible that the present state of N27 actually represents a compendium of several different building phases. Finally, it is also possible that N27 is simply a functionally different structure, as discussed below to illustrate the diverse evidence. N27 does not correspond to any known ground plan of Egyptian houses from other sites, especially at its eastern entrance area.

Another unusual feature is the installation N27A, a so-called storage bin that is unfamiliar to comparable pieces from SAV1 North or other sites like Elephantine. Doyen proposed to connect N27A with the stone protruding from the wall in room N27/3, labelling them together as a “grinding emplacement” (IIF.5.3). Neither the stone nor the “bin” seems to fulfil the requirements of this interpretation. Rather, it is possible that N27A is instead the foundation of a stone basin, which has since been removed. The stone in N27/3 could also be related to some now lost installation. Without scientific sampling and analysis, the reddish material described by Doyen in the interior of N27A, presumed to be connected to heating activities inside the bin, remains unclear. Similar reddish materials as coatings/plaster were observed in SAV1, in both the governor’s palace and the magazine area.

Though the unusual ground plan of N27, especially its eastern part, has no parallel in Egyptian housing, a comparison *can* be drawn with certain structures at Amarna. Here, Ian Shaw has documented animal pens that are characterised by a semi-circular entrance area, as well as the incorporation of stone and wood as building material with the mud brick.<sup>670</sup> Both stone (see N27/3) and wood (Wall 35W) were also integrated into walls of N27. Use as animal pen could explain the unfamiliar layout of the entrance area towards the east, although it was not semi-circular in shape,<sup>671</sup> and may also elucidate the proposed stone basin in N27A. Furthermore, the character of the archaeological deposits as described

at Amarna is an intriguingly direct comparison with SAV1 North; the pens in Amarna were built on an “accumulation of organic rubbish”<sup>672</sup> and dark organic layers were documented as fills. At SAV1 North, organic rich deposits were documented in the neighborhood of N27 and in N12 (see above), while Level 3 was generally described as “characterised by a distinctive brown colour.”<sup>673</sup> Moreover, rubbish heaps were also documented next to the animal pens at Amarna, potentially explaining the large amounts of waste accumulated in the area of N12.

However, several other aspects of N27 challenge the interpretation as animal pen: no coprolites were documented during excavation and no stone basins were found associated with the structure, other than the possible foundation N27A. Furthermore, the ceramics found in N27, including a complete squat jar of mid-18<sup>th</sup> Dynasty date (Fig. 81), are more likely to be connected with a domestic use of the structure.

To conclude, N27 illustrates the major problems connected with functional interpretation of architecture in cases lacking proper understanding of the formation processes through multiple-phases of use. For N27, the most probable interpretation is as a domestic unit suitable for various household activities, especially in the large open courtyard N27/1, but also in which animals were (at least temporarily) sheltered, perhaps in the side rooms. The latter usage may likewise also apply to the very small side rooms along the western wall of N26 (see IIE) – the lack of preserved access to N26/2 may indicate its function as small pen for goats or sheep, which are known to have narrow perimeter walls without opening.

## 2 MATERIAL CULTURE OF SAV1 NORTH

Even more than the architecture, the pottery and objects from SAV1 North are responsible identifying the site as part of an Egyptian town. As highlighted in Chapter III, the pottery compares well with material from Elephantine and Abydos, with some features attesting to a local style. This style is not exclusively Nubian, but shows aspects of hybridity. The same holds true for the finds, which are mostly Egyptian in character, but contain features like incised decoration on Egyptian female figurines that

<sup>670</sup> SHAW 1984.

<sup>671</sup> A semi-circular structure of Post-Pharaonic (probably Medieval) date was set in Square 180/2270, against the southern side of Enclosure Wall N4. Together with the deep pits in the enclosure wall and thanks to similar evidence from

SAV1 West, it is possible that this later installation is also connected with animal pens/shelters.

<sup>672</sup> SHAW 1984, 40.

<sup>673</sup> BUDKA and DOYEN 2013, 175.

probably have Nubian origins. These hybrid vessels and finds indicate a complex entanglement of the Nubian and Egyptian cultures at SAV1 North, probably pointing towards a mixed society with various social elements (see below). Recent works have stressed that “hybridisation and entanglement have a temporal dimension”<sup>674</sup> and a diachronic approach to the Egyptian-Nubian relations on Sai is necessary. For example, the quantity of Nubian vessels seems to decrease slightly after Thutmoside times, perhaps reflecting a stronger degree of Egyptianisation than in the early 18<sup>th</sup> Dynasty.<sup>675</sup>

In general, stone tools are the most common category of finds (60%) from SAV1 North. These macrolithics are comparable to finds from Egyptian New Kingdom sites, but also find parallels in the Nubian cultures. Unfortunately, due to the difficulties in dating them, these tools can only be used for functional interpretations of closed and well-dated contexts, which are rare at the site (see building units N24 and N12).

Despite of the lack of seal impressions from SAV1 North, the sporadic discovery of scarabs indicates that goods were packed and sealed at the site.<sup>676</sup> This corresponds to activities in Egyptian and Nubian towns in general, and may also relate to the function of Sai as an administrative centre. Net-weights (IV.2.1) attest to fishing activities and the predominance of the so-called axe head type, finding parallels in Elephantine and Askut, suggests a degree of formal control of fishing on Sai, mirroring the character of the town as a state controlled foundation.<sup>677</sup>

### 3 THE CHARACTER AND FUNCTION OF SECTOR SAV1 NORTH

Almost two thirds of the New Kingdom fortified town of Sai is still unexcavated and a detailed assessment of the entire town’s evolution is therefore not possible (Fig. 1). However, as outlined here, the understanding of the internal structure of the town was much improved by establishing the character SAV1 North and comparing it with other sectors of the site. In general, the buildings of the northern sector show individualised properties, but are essentially Egyptian types of domestic buildings. The use of Egyptian house types is *per se*, however, not an indication that Egyptians were necessarily the occupants – they

could also have been Egyptianised Nubians, living in the Egyptian centre of Sai Island and therefore in Egyptian architecture (see below).<sup>678</sup>

SAV1 North illustrates that, though an Egyptian temple town may need its representative stone cult building (Temple A), administrative units (Building A and the governor’s residence SAF2) and associated structures including large storage rooms (sector SAV1), space for general household activities is still required. SAV1 North was obviously not the main residential area within the town, but rather a sector facilitating multiple functions of daily life, such as the stocking and storing of goods, food production, food serving and consumption and animal husbandry.

Level 3, the focus of the present publication, represents the heyday of Pharaonic Sai. Certain characteristics of the site, and SAV1 North specifically, are particularly addressed through the ceramics – from Thutmoside times onwards, a high variability of ceramic wares can be observed including imports from Egypt, the Western Oases, Canaan and the Aegean world (see III.2.5).<sup>679</sup> This corpus is very similar to the 18<sup>th</sup> Dynasty and early Ramesside material from Elephantine, placing Sai within the New Kingdom empire stretching as far as the Fourth Cataract and beyond. However, the connection between these “luxury wares” and the occupants of Sai remains unclear:

- Was it perhaps appealing for the Egyptians living on Sai to be perceived by the local inhabitants as cosmopolitan Egyptians?
- Was the range of painted ceramic vessels, so different from the Nubian pottery style, used to demonstrate the sophistication of the officials?
- Or was it perhaps important for an Egyptian himself, living abroad, to surround himself with things and objects from home, evoking the international sphere from cities like Memphis and Thebes?
- And finally, could this also hold true for Egyptianised Nubians working for the Egyptian administration and living in an Egyptian-style town?

Apart from the attractive, but unprovable, idea of an active role for ceramic vessels in creating a

<sup>674</sup> SPENCER 2014c, 57. Cf. also BUDKA 2015b, 50.

<sup>675</sup> See BUDKA 2015b, 50.

<sup>676</sup> Cf. ARNOLD 2014, 154–157.

<sup>677</sup> Cf. BUDKA 2014.

<sup>678</sup> FITZENREITER 1999, 120.

<sup>679</sup> Cf. BUDKA and DOYEN 2013, 193–196, fig. 23.2.

“Pharaonic lifestyle” on Sai Island,<sup>680</sup> it is also possible that imported and nicely decorated vessels were simply regarded in Upper Nubia as pretty “knick-knacks with exotic cachet.”<sup>681</sup> In the end, it is infeasible to attribute a single meaning to an entire object type and it remains to be tested how the ceramic corpus of New Kingdom Sai contributes to the reconstruction of lifestyles on the island. This will be undertaken through the ongoing analysis of material from all sectors of the town, especially the new excavation areas SAV1 East and SAV1 West.

At present, it is still too early to provide conclusive answers about the inhabitants of Sai during the New Kingdom and their cultural identity. However, from the detailed assessment of SAV1 North, some thoughts are possible. The architecture of the northern sector is dominated in Level 3 by buildings with half-brick thickness, most of which contain open courts and likely had only one storey.<sup>682</sup> Given the small size of these buildings, living space was therefore probably quite restricted. It is notable here that small tripartite houses are also known from Nubian fortresses, where they have been interpreted as standardised units for military occupants. It is thus possible that the original small units of SAV1 North, set up at the same time as the construction of Enclosure Wall N4, were intended as quarters for Egyptians who settled and worked in Sai, arriving in connection with the new building programme after the defeat of the Kerma Kingdom. In this early phase, it is likely to assume that these settlers included various officials of military rank, as well as craftsmen and others – probably travelling within small, labour related communities and not with their own families.

Kate Spence has convincingly argued that at Amarna, second storeys of houses (which are more common than previously thought) were spaces for female family members and generally dedicated to family life.<sup>683</sup> Could the layout of the small building units in SAV1 North relate to the lack of women in this part of the town? The larger, more standardised houses of the southern sector (SAV1) are comparable to the Amarna houses and a second storey is here more likely, perhaps indicating that higher officials were living there together with their families.<sup>684</sup> The brief phases of the building units in SAV1 North could therefore relate to changes on the social level, possibly supporting the idea that individuals had much impact on creating living room, even in a state-controlled town like Sai. These dynamics are also clearly reflected in the material culture, in particular the pottery.

With many unsolved questions and a range of possible scenarios connected with the occupants of Sai and, in particular SAV1 North, one should keep the following in mind: Rather than drawing artificial borders between Egyptians, Nubians, and their respective lifestyles, the aim should be to reconstruct social, economic and cultural identities at the local level. Such identities change, interact and merge, allowing a more direct approach to diverse aspects of life than a stereotype perspective derived primarily from textual references.<sup>685</sup> As hopefully demonstrated throughout this publication, SAV1 North has the potential to highlight the complexity of life in the Pharaonic town of Sai and further contribute to the understanding of settlement patterns in Upper Nubia.

<sup>680</sup> Cf. BARRETT 2009, 227.

<sup>681</sup> BARRETT 2009, 226.

<sup>682</sup> In general, houses of half-brick thickness would have been able to support a second storey; for example, similar to the pilasters at SAV1 North buttresses are attested at Amarna and have been interpreted in this way: SPENCE 2004, 129.

<sup>683</sup> SPENCE 2004.

<sup>684</sup> Evidence from the pyramid cemetery SAC5 (see MINAULT-GOUT and THILL 2012) attests to family burials from the reign of Thutmose III onwards, clearly indicating the presence of women and children in the New Kingdom town of Sai.

<sup>685</sup> See BUDKA 2017.





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