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**Reading rubbish : using object assemblages to reconstruct activities, modes of deposition and abandonment at the Late Bronze Age Dunnu of Tell Sabi Abyad, Syria**  
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## CHAPTER 3. RESULTS

### 3.1 INTRODUCTION

This chapter deals with the analysis of finds and architectural remains from the Tell Sabi Abyad *dunnu* using the methodology set out in the previous chapter. Due to time restrictions for the research it was not possible to include all Late Bronze Age phases and all material remains from the site in this study. A subset of the data was therefore selected. As the spatial extent for the research it was decided to analyse all spaces within the outer *dunnu* wall (figure 3.1). This was done because it comprises a coherent spatial unit according to the architectural layout of the *dunnu*. Also it was believed that these spaces would yield a representative selection of data about the function and use of the *dunnu*. As a temporal framework for this study it was decided to focus on Level 5 (from the original periodization, see paragraph 1.3). Unlike the preceding and succeeding phases, Level 5 was clearly recognized in every trench of the site and has yielded abundant finds and architectural remains. Additionally, it was clear from the outset of this research that the *dunnu* both flourished and deteriorated during this Level. It was therefore believed that this would yield a comprehensive view of the changing function and use of



Fig. 3.1: The architecture of the Tell Sabi Abyad *dunnu* with indication of the location of the sectors within the walls.

the settlement at the end of its fully functioning life span. From the analyses described below it is indeed clear that within the relatively short time-span which is discussed, a large variety of activities were carried out, signalling a constantly changing use of the *dunnu*.

For the sake of clarity the architectural layout of the *dunnu* was divided into several sectors. These sectors have in their turn been subdivided into separate areas (figure 3.1 and 3.2 below). This subdivision of the architecture in sectors

and areas was used in all studies which were undertaken in the framework of the ‘Consolidating Empire’ project (Brüning and Plug 2016; Düring 2016; Fantone 2016; Lanjouw 2016). The extent of the sectors was determined by the architectural layout and functional characteristics of the general areas. It was for instance decided to group together all spaces in the south-west which were all in some way related to food preparation. Additionally, the spaces are well connected to one and another but are somewhat isolated from the rest of the *dunnu*. Therefore, as the spaces seemed to form a coherent whole, they were defined as the south-western sector.

Within the outer *dunnu* wall six sectors were defined. Four of these are located in the corners of the *dunnu* (north-west, north-east, south-west and south-east) and two are defined as the two structures which stood in the centre of the settlement (the residence and the central building). The further subdivision of these sectors into areas was also achieved by looking at the functional and architectural relationship between spaces. The areas are designated with numbers, for instance ‘area 1 of the SW sector’.

Within areas one last subdivision was applied. To be able to easily refer to individual spaces (rooms or courtyards) in areas, they were assigned a letter in alphabetical order (see for instance figure 3.3 below). This system was adopted from the work of Brüning and Plug (2016). In their work, naming of spaces commenced with the architectural layout of level 6 of the *dunnu*. After a significant change in architectural layout, new names were assigned to newly constructed spaces. Therefore the names of spaces in the Level 5 architecture do not always start with the letter ‘A’. In area 5 of the NE sector for instance, rooms ‘A’, ‘B’ and ‘C’ were present in the preceding Level 6 but not anymore in Level 5. The spaces which are discussed in the current study are therefore labelled with the letters ‘D’ until ‘H’. Although this may seem confusing in the light of the current study, it ensures that the interpretations from the different publications can be easily compared.

A notable exception to this subdivision is the central building in which every room was assigned an area number (see paragraph 3.5). This numbering corresponds with earlier publications about this structure (Akkermans *et al.* 1993; Klinkenberg and Lanjouw 2015) and is therefore maintained.

The discussion below follows the same subdivision into sectors and areas. Each sector is introduced, and all areas within are discussed in separate paragraphs. For each area a plan is presented which includes the space numbering, all relevant features and the floor level finds which are discussed in the text. Additionally, for every area a ‘Sequence of Events’ model is presented which illustrates the chronological order in which events have taken place in that area. This model also includes references to features such as ovens and bins and deposits from that area (see paragraph 2.4). Where relevant these feature names and deposit numbers are indicated in the text between brackets, for instance ‘oven AM’ and ‘deposit 27’.

A general trend which is observable in the discussion below is that the architectural layout and the construction of features are the most informative lines of evidence for the reconstruction of the earliest use and the intended function of spaces. Most objects, even those from

floors, were found in refuse contexts or were deposited during abandonment. The objects therefore are more related to the later use of the areas under discussion. This is clearly illustrated by the ‘Sequence of Events’ models in which the features are connected to early events and most of the deposits to the last events.

## 3.2 THE NORTH-WESTERN SECTOR

### 3.2.1 Introduction

The north-western sector of the level 5 *dunnu* is composed of four areas (figure 3.2). These comprise of the main entrance to the *dunnu* together with a toilet structure (4), a large courtyard (2), a series of spaces known as “Tammitte’s office” (3) and two spaces with a less formal function (1). The sector could be entered from outside the *dunnu* wall through a doorway in the north of area 4. This doorway probably served as the main gate into the *dunnu* during this phase (see below). From the large courtyard one passageway led to the north-eastern sector and to the central building. Also the monumental residence was reached from this courtyard. In this sense it was a nodal point in the circulation of people through this part of the *dunnu*.

In the preceding phases the main entrance into the *dunnu* was located directly north of the central building (see figure 1.4: level 6B). At the start of the sequence which is described here this situation was altered by the construction of a new gate and courtyard, area 4. After this renovation the sector was in use as a reception court and for administrative activities. The administrative activities are suggested by the discovery of a large group of cuneiform tablets in area 3. Although most of these objects were probably discarded as secondary refuse, it is argued in paragraph 3.2.4.2 that they were probably used in the direct vicinity. The presence of a baked brick floor in the main courtyard may indicate that the space had a representative function. At some point however, this floor was destroyed and the architecture of the sector appears to be in a dilapidated state. Subsequently, new renovations were carried out. These involved

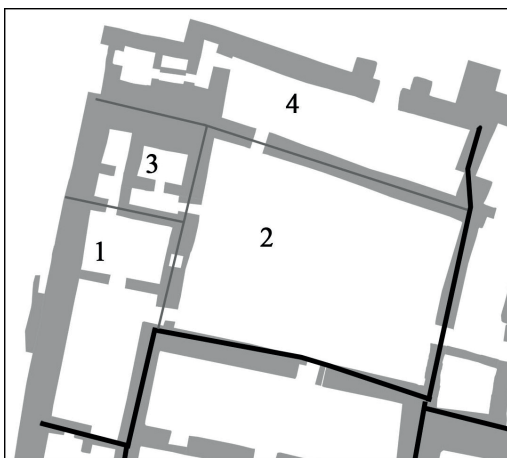


Fig. 3.2: The areas in the north-western sector.

the deposition of soil and refuse layers on the floors and the construction of new floors on top of these layers. Additionally, small walls were constructed inside doorways, perhaps for structural reinforcement. After these renovations the sector was used in a different fashion. The finds and features from area 1 in this later phase for instance indicate that the area was used for pottery production and food processing.

The sequence which is discussed below per area therefore illustrates a significant change in the function and use of the north-western sector. The sector was first

used as a representative, official quarter, and through time changed into a sector which was concerned with production processes. Remarkably, in other areas, in particular in the south-west of the *dunnu*, the function and use remained the same in these periods. The monumental residence however follows the same path as the north-western sector. It is therefore very likely that these two sectors were closely related in function and use.

### 3.2.2 Two outside spaces (area 1)

Area 1 is located in the south-west of the sector and consists of two rectangular spaces adjacent to one another, space A and B (figure 3.3). At the start of the sequence described here the wall which separates these spaces was not yet built and the area consisted of one long open

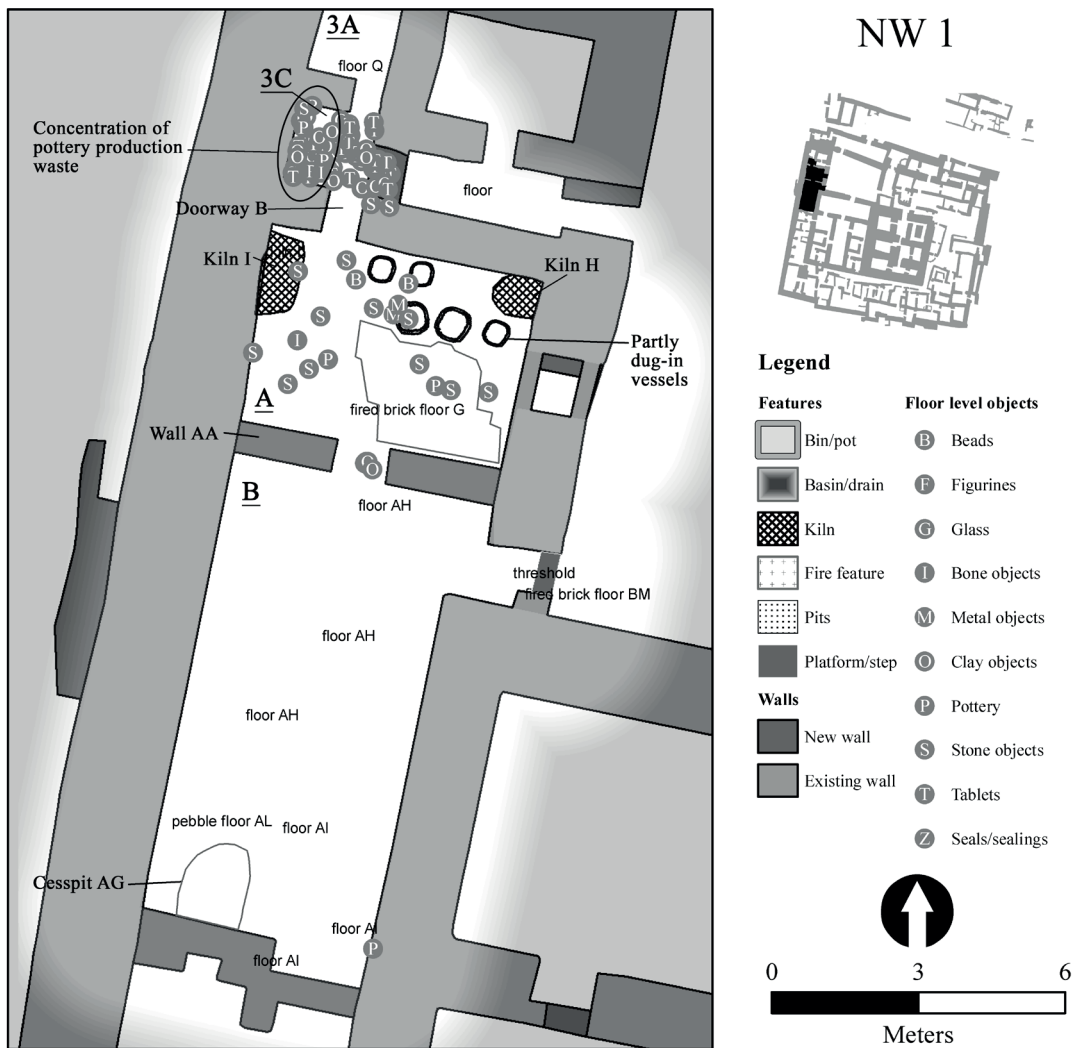


Fig. 3.3: Architecture and floor level finds from area 1 of the north-western sector.

space. During this phase the area could be reached from the large courtyard through a doorway in space A. The floor from this phase (AW/AL/AC) consisted of a loam layer with a pebble layer on top of it. This may indicate that the area was used for outside activities. Unfortunately, the floor was badly damaged and only one single find, a fragmented stone implement, was recovered from this floor (deposit 104), not enough for an assessment of the use of the space.

In the second phase, a layer of soil was deposited on top of the floor and the separating wall (AA) was built. In room A a baked brick floor (G/J) was constructed. Additionally the doorway which connected room A with the courtyard was closed off and made into a niche. To keep the area accessible a new doorway was constructed from space B towards the courtyard. Also in the north side of space A a new doorway was constructed. This doorway led to two spaces

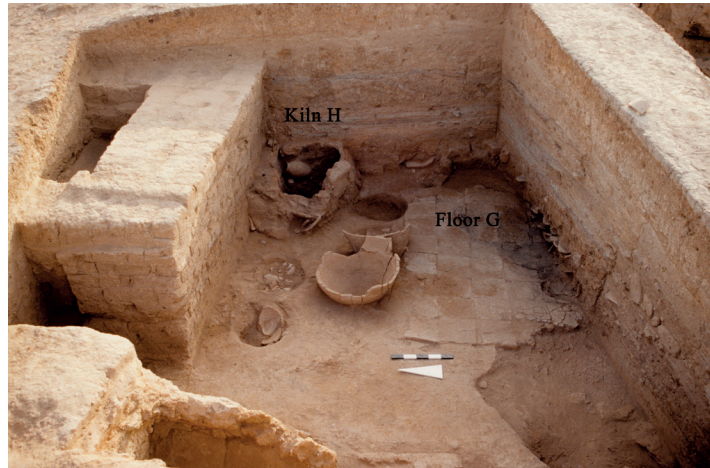


Fig. 3.4: The floor of room A during the excavation looking east. In the back to the left the remains of kiln H can be seen. Also the remains of semi dug in vessels and the baked brick floor are visible (photo by P.M.M.G. Akkermans).

which were previously in use as a bathroom and belonged to area 3. By the construction of the doorway these two rooms (3A and 3C) were incorporated into area 1 (also see paragraph 3.2.4). Space A was probably in use for a while in conjunction with the baked brick floor. As the presence of a baked brick floor is often associated with a representative function (Akkermans and Wiggermann 2015; see paragraph 3.4), it is conceivable that the space was in use as an office or reception room for a while. The floor was however largely demolished at some point, and a careful analysis of its function in the space is therefore not possible anymore. The destruction of the floor may be related to the construction of two kilns (I and H) and five vessels which were partly dug into the ground. It is at the location of these features that the floor had been removed (figure 3.4). The construction of these features is related to the last use phases, which are characterized by pottery production and food preparation. These phases are discussed below.

### 3.2.2.1 Pottery workshop

Two pottery kilns were constructed in space A (kiln I and H; figure 3.3; also see Duistermaat 2008: 163). It is unknown if the two kilns were in use simultaneously. Large amounts of pottery production waste such as unfired and overfired pots were found in this room, hardly any of these items on the floor were recorded as objects unfortunately. The unfired pots and fragments

were found in two places, in kiln H and in room 3C in the north. In this room the clay objects which were found were the clay stubs of freshly shaped vessels, cut off from the bottom just after shaping. These objects were found grouped together around the corner in the room (figure 3.3; figure 3.18: deposit 97). The deposit only contained the clay fragments, and was therefore low in variety and highly structured. Additionally, the objects have low replacement cost as they are clay production waste. Therefore, considering the fact that the objects were deposited in an out-of-the-way location indicates that these were deposited here as primary or provisional refuse and that therefore this space, or a directly adjacent space, was used for pottery shaping.

Although no finds were recorded in space B, this place was perhaps also used for pottery production. It was suggested by Duistermaat (2008: 164) that extensive fire damage to the floor and walls may have been caused by open air firing of large pots. In addition to these activities, a large cesspit (AG) was constructed in the south of this space. This feature was connected to a toilet which was reached from the monumental residence.

#### 3.2.2.2 *A make-shift kitchen*

Probably after the pottery kilns were out of use, five large vessels were partly dug into the floor of the space A. Because of the position of the vessels (figure 3.4) at least kiln H could not be reached anymore. Although kiln I could be reached after placing the vessels, their association with food processing (see below) makes it improbable that the space was also still used as pottery workshop. Therefore, the presence of the vessels most likely marks a new use phase of the area.

Along with the large ceramic vessels, large amounts of fragmented ceramic and stone artefacts were deposited on the floor of the room (deposit 16). Interpreting the process by which these objects were deposited is slightly problematic because the majority of artefacts has not been registered as objects. Because of the fragmented state of the ceramics only two bowls with a bent, or carinated, side were registered as objects. This type of ceramic, the so called carinated bowls, is the most frequently found objects in the excavation. Their function is not directly clear from their shape as they could have been used for multiple purposes. Their preponderance in the ceramic assemblage is due to both their large quantities in the past as well as their sturdiness – many were discovered in an undamaged state.

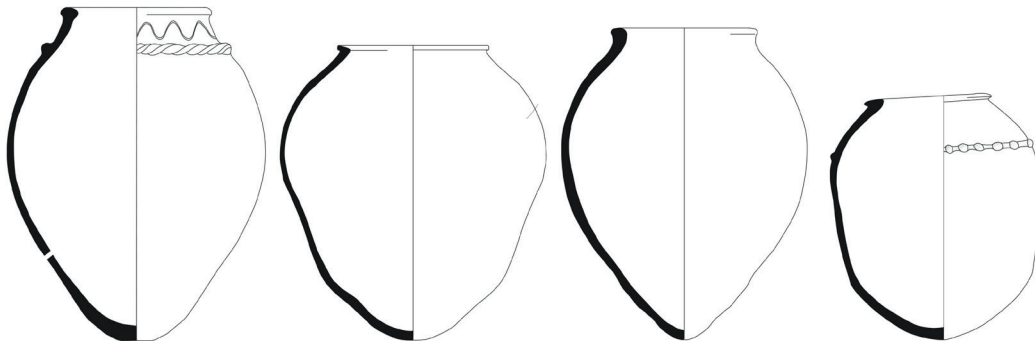


Fig. 3.5: Pottery from room A, area 1 of the north-western sector (adapted from: Duistermaat 2008: Fig. VI.3). Scale 1:20.

However, within the same deposit, post-excavation many ceramic fragments were refitted into full vessels, yielding mostly carinated bowls, straight sided bowls and a number of very large storage pots which are rare in the Tell Sabi Abyad assemblages (figure 3.5). The reconstruction of the complete vessels demonstrates that the objects were most likely complete when they were deposited. In particular the large cooking pots are helpful with the reconstruction of the mode of deposition. These vessels are likely to be left behind in a building at abandonment as they are difficult to transport. These therefore indicate that the deposit was left behind as abandonment stage, or *de facto*, refuse.

Other finds which were discovered on the floor were ten stone tools, most likely used for grinding or hammering, one complete bronze sickle and nearly one hundred ostrich eggshell fragments. The presence of the bronze sickle in this context is puzzling as the object appears to be in good condition and probably had a high monetary value. All other objects in the deposit however are related to the process of food processing. This high level of structuring strengthens the interpretation that these items were left behind in their location of use, as *de facto* refuse or, in the case of the egg shells, as primary refuse.

In addition to finds from the floor of the space, Fantone (2016) has recorded the presence of a relatively high proportion of herbs and spices among the macro botanical remains from this room, further reinforcing the interpretation of the use of the room for food preparation.

### 3.2.2.3 *Abandonment*

When space A was no longer in use for food preparation, the room was left to the elements as is suggested by a one millimetre thin layer of encrusted clay on the objects in the room. This thin, hard layer is described by the excavators to be the result of natural sedimentation in an open area. The doorway between space A and B was blocked, perhaps around the same time. In the southern space, space B, no other indications for activities were found. Both spaces were eventually covered with a layer of compact brown loam (deposit 18; 19; 102), probably as the basis for a new floor higher up.

### 3.2.2.4 *Sequence of Events*

Although not many objects were retrieved from most floors of area 1, still a large number of activities could be reconstructed (figure 3.6). Most events are related to the architectural changes which have occurred in the area. This is most apparent in the start of the sequence which describes the initial construction of the area and continues with the construction of the later division wall (AA). The contemporaneity of several events occurring in the separate spaces such as the construction and use of the cesspit and the blocking of doors is hard to establish and therefore follow separate lines.

The Sequence of Events clearly shows that although two activities, pottery production and food preparation, were most obvious from the archaeological record, many other events have occurred prior and subsequently to these. The events which cumulatively make up the area 1 sequence is comprised mainly of architectural modifications but these clearly demonstrate that many activities were carried out intermittently.



### 3.2.3 The central courtyard (area 2)

Area 2 of the northwestern sector is better known as the central courtyard, a large open space measuring 17 x 12 metres, serving as a connection hub for several areas in this part of the *dunnu* (figure 3.7). The area was probably pivotal for the circulation of people through the *dunnu* at this time (Lanjouw 2016). Importantly, the central courtyard gave access to the monumental residence. As such, it must have had a representative function, which is also indicated by the presence of a floor made of baked mudbricks. However, as with all spaces in the *dunnu*, a great variety of activities has taken place here, denoting a constantly changing function of the courtyard. A particularly significant change of use of the central courtyard is illustrated by the demolition of the baked brick floor (see below).

The floor (AG/CG/BU) was constructed on top of a burnt loam floor (AZ) and was probably originally present in the entire courtyard. The floor most likely continued through the doorway into the monumental residence where the remains of a similar floor were found (see paragraph 3.4). It is therefore assumed that the central courtyard was constructed to function in association with the residence, probably as a reception court but perhaps also to entertain large groups of people. Additionally, the small apartment or office to the west, area 3, was most likely in use by the steward of the *dunnu* while he performed his administrative tasks (see paragraph 3.2.4). The central courtyard could therefore also be used by him to receive guests and deal with tradesmen.

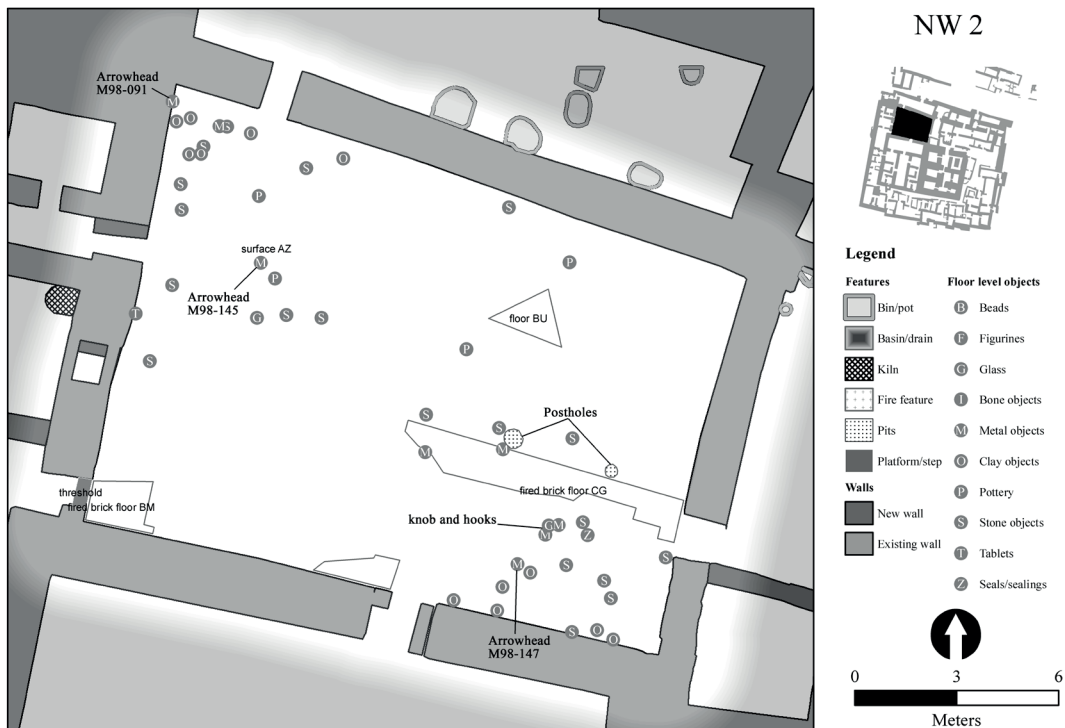


Fig. 3.7: Architecture and floor level finds from area 2 of the north-western sector.



Fig. 3.8: The courtyard, area 2 of the north-western sector, looking south-east. The remains of the baked brick floor are visible in the foreground (photo by P.M.M.G. Akkermans).

At some point however the baked brick floor was largely demolished by the removal of many of the baked bricks. Perhaps these bricks were reused somewhere else, although this location has not been found in the excavation. Many bricks broke during their removal and many resulting brick fragments were discarded in the corners of the courtyard (figure 3.8). Among these piles of debris and on the (remains of the) floor 47 other objects were found (deposit

6). One third of the objects ( $n=20$ ) consists of broken and fragmented grinding- and polishing stones. Also five ceramic objects were found, only one of which was complete. These stone and ceramic objects are a common occurrence in the deposits of Tell Sabi Abyad and because they are mostly damaged or fragmented it is likely that they were deposited as secondary refuse.

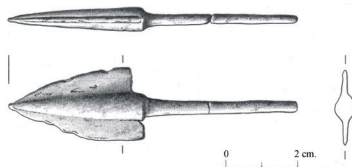


Fig. 3.9: Bronze arrowhead (M98-147) from courtyard area 2 of the north-western sector (fig. by R. Timmermans).

Several other objects however suggest a different mode of deposition. In particular three bronze arrowheads (figure 3.9), ten clay sealing fragments and the remains of a doorknob and associated bronze hooks (figure 3.10) imply that the deposit comprises of a palimpsest, containing at least some primary refuse. In what manner the arrowheads have ended up in the courtyard remains unclear unfortunately. They were found in different parts of the courtyard (see figure 3.7) and may have been accidentally left behind among the refuse on the floor.

The aforementioned sealings, door knob and hooks were mainly found in a concentration in the south-east of the courtyard. These objects were most likely used to close and seal doors. The knob was originally fixed to the wall next to a door. A rope or hook was attached to both the door and the doorknob, and an amount of clay was applied on the knob. This clay was subsequently impressed with a seal. In this way the door could not be opened without breaking the seal. The impression which was left on the clay can in many cases still be recognized on the excavated fragments. A study into these sealings from Tell Sabi Abyad (Duistermaat in prep.) has yielded a catalogue of seals which were found in the *dunnu*. Figure 3.11 demonstrates the spatial distribution of the different sealing types in and around the central courtyard, labelled with their catalogue number. The plot indicates that similar sealings were discarded together, which may indicate that they were discarded close to their location of use.

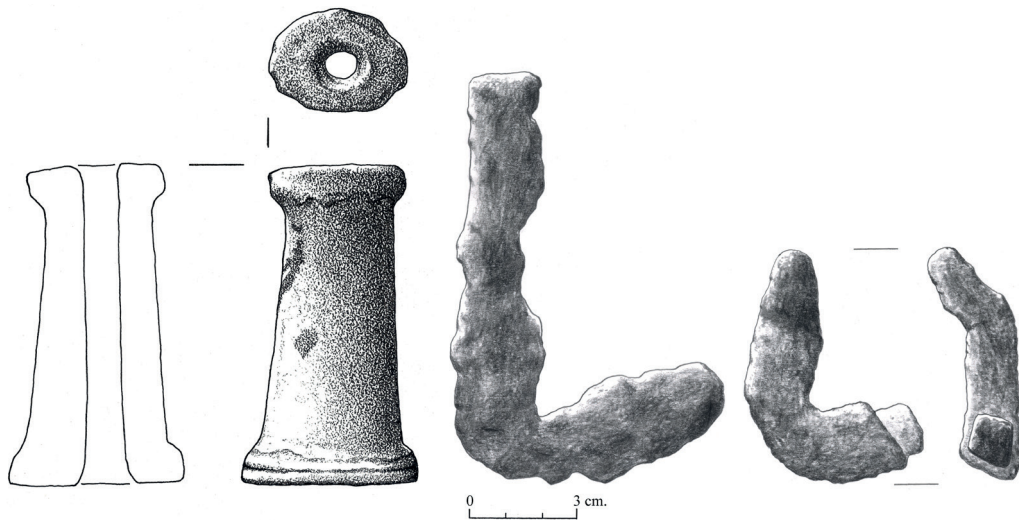


Fig. 3.10: Ceramic doorknob and bronze hooks from courtyard area 2 of the north-western sector (fig. by R. Timmermans).

As a double door was most likely present at the entrance of the monumental residence, it is conceivable that the objects mentioned above were once used to seal these doors. This would indicate that the residence was closed and sealed in some periods, implying it was not used by the regular inhabitants of the *dunnu* themselves. Conceivably, the main user of the residence was the owner of the *dunnu*, the viceroy of the Assyrian Empire.

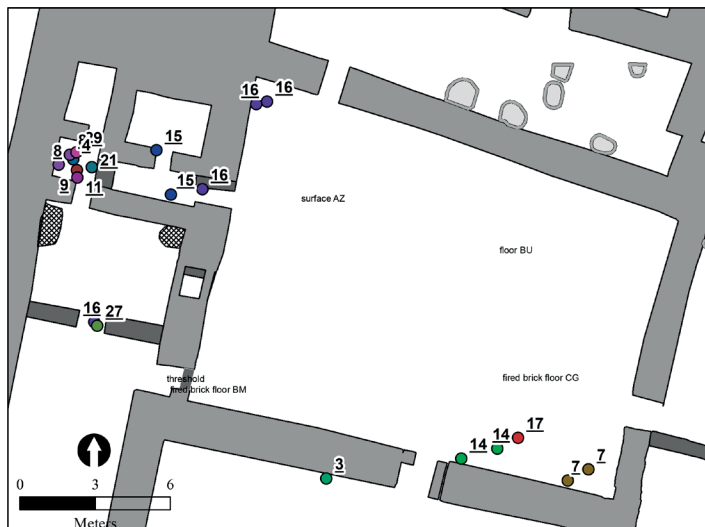


Fig. 3.11: Distribution of sealings in the courtyard and nearby rooms of the north-western sector. The sealings are labelled with the catalogue number of the image which was impressed in the clay.

The double door of the monumental residence was at some point renovated and reduced in width (see paragraph 3.4). Perhaps the removal of the sealings and knobs can be related to this event. Interestingly, although the debris which resulted from the architectural modification was discarded on the floor of the central courtyard, the residence was still in use for some time as is evidenced by finds from the building (see paragraph 3.4.2). This implies that the courtyard was probably also

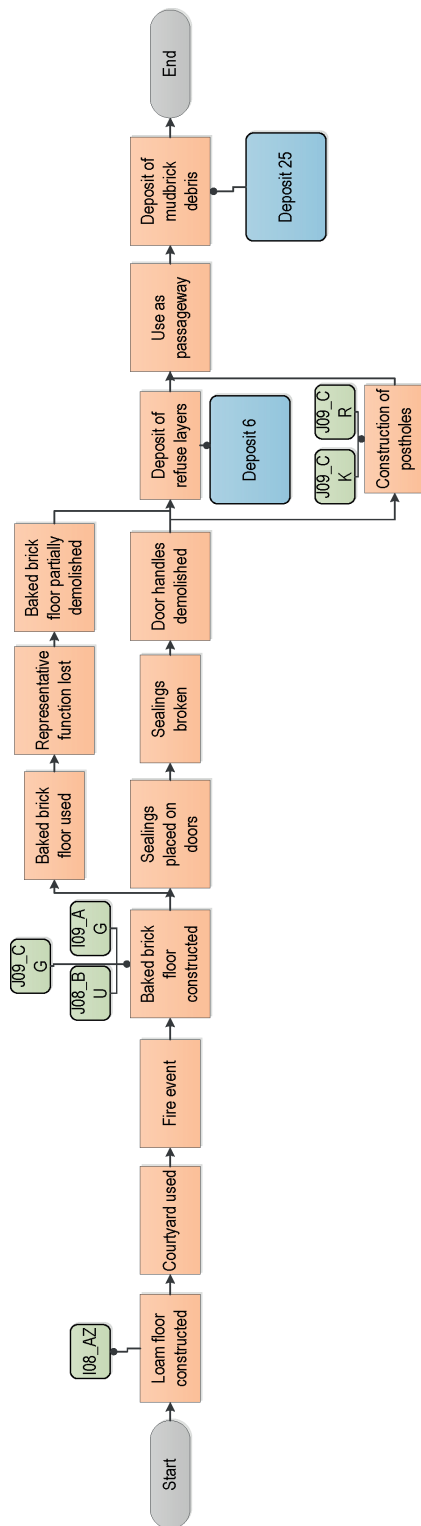


Fig. 3.12: Sequence of Events of area 2 of the north-western sector.

still in use after the demolition of the baked brick floor. Clearly, at this time the representative function of the courtyard was no longer important.

The function and use of the courtyard in this later period is difficult to determine as not many objects are indicative of later uses. Many of the objects which may have ended up on the floor were discarded here as secondary refuse, indicating that the courtyard was used as a refuse dump. As much of the floor debris was also still located in the courtyard, it is conceivable that the area was mostly used as a passageway. Probably during this phase two postholes (CK; CR) were dug in the courtyard, perhaps indicating that there was a need for some roofing. Later yet, the area was covered with a 50 cm thick layer of mudbrick debris and brown soil (deposit 25) for the construction of a new floor higher up.

Because the area consists of a single space, the related Sequence of Events is relatively straightforward (figure 3.12). Many of the activities which were carried out in the area probably did not leave any physical traces. Social interaction for instance, although important in daily life, left virtually no trace in the archaeological record. As the central courtyard was probably a nodal point for the circulation of people through the *dunnu* it is likely that social interaction between people was an important aspect of the courtyard.

### 3.2.4 “Tammitte’s office” (area 3)

To the northwest of the large courtyard a series of connected rooms was excavated (figure 3.13). They consist of a room (B), a bathroom structure (A and C) and a hallway connecting them (D). These spaces have yielded some 135 cuneiform tablets during excavation. As most of these tablets were written by or directed to Tammitte, steward of the *dunnu*, this area has often been called the

Office of Tammitte (Akkermans and Wiggermann 2015). There are however two problems with this interpretation. Firstly, a large part of the tablet concentration was discarded as secondary refuse as is discussed below. Secondly, the area was used in a variety of ways, not only as an office or apartment. The events which have taken place in the area can be roughly divided up into two phases. It commences with the construction of the area and a mudbrick floor. Subsequently, after a use phase the floor is partly demolished and the tablet-rich soil layer is deposited on top. The second phase starts with the construction of a new floor on top of these deposits. Additionally the doorway between spaces C and D is blocked with a small wall and a new doorway is constructed on the southern side of room C. In this new phase rooms A and C were used in conjunction with area 1. Rooms B and D were probably used as storage space.

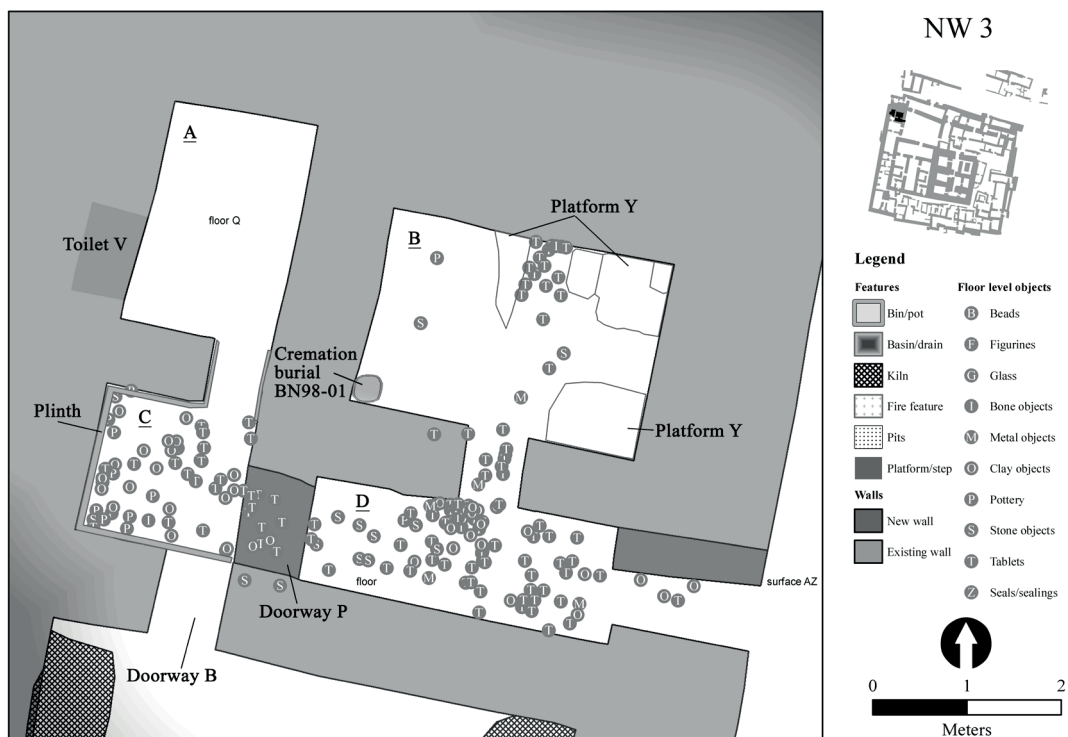


Fig. 3.13: Architecture and floor level finds from area 3 of the north-western sector.

#### 3.2.4.1 *The start of the sequence*

The start of the sequence is denoted by the construction of the walls, the toilet (V) in room A and a floor made of baked mudbricks (Q; S; T; U) in the entire area. In the rooms A and D this floor was lined with a water resistant plaster, and a plinth made of baked mudbricks along the wall was put in place to prevent water damage of the walls. In the eastern corners of room B two mudbrick platforms (Y) were discovered. Probably also in the north-western corner of the room such a platform was once present. It has unfortunately been largely demolished by a later pit.

The layout of the area indicates that it was used for either residential purposes, an apartment, or as an office with en-suite bathroom. A similar layout is seen in other apartments in the *dunnu* (see for instance paragraph 3.4 and 3.7.4). Not many objects were found on the floor, relating to this early use of the area. Only in room B, which may have functioned as a bedroom or office, 20 objects were registered. Among this deposit (deposit 20) two damaged stone objects, a damaged carinated bowl and a bronze lump were found. As these objects are very common among the Tell Sabi Abyad find assemblages, they are all damaged or fragmented and they do not seem to have a strong functional relationship with the room they were found in it is possible that they were deposited here as secondary refuse.

The remaining objects are fourteen tablet (fragment)s and two envelopes. Most of these objects were found in a concentration in the north of the room on the floor in between two mudbrick platforms. As all the objects are related to administration this group is highly structured and probably was deposited as either primary or provisional refuse (see table 2.1). This in turn would indicate that the tablets were used in this room, implying that the room was indeed an office of the steward. However, as other concentrations of tablets and envelopes in this area are interpreted as secondary refuse (see below), this interpretation should be taken with caution.

#### 3.2.4.2 *The tablet concentrations*

After the use of the area as either apartment or office a part of the baked brick floor was removed. In particular in the hallway, space D, all bricks were taken out. After this event a layer of brown soil was deposited on top of the floors. In rooms C and D this soil layer contained 153 registered objects, consisting of clay tablets (n=84), envelopes (n=9), sealings (n=21), tokens (n=16), weights (n=7) and other objects (n=16). 50 percent of the objects was fragmented, 22 percent was damaged and 28 percent was complete.

During the excavation it was supposed that the objects from this deposit, and in particular the tablets, were deposited in a rushed event (personal communication P.M.M.G. Akkermans and F.A.M. Wiggermann). A sealing which was discovered in room D which displayed the negative of a box further directed the interpretation of the deposit towards a scenario in which a wooden case full of tablets was dumped in the hallway during rapid abandonment. In the current study this interpretation is questioned. The spatial distribution of the objects and several refits between them, as well as the overall content of the deposit point toward an interpretation of the deposit as secondary refuse (see below). It is important to note however that, unlike other examples of secondary refuse, the location of this deposit is probably closely linked to the location of use of the objects.

If the tablets and associated artefacts were deposited on a floor level during a catastrophic event, they would be present on one horizontal plane and would be concentrated on the location of deposition. Post-depositional processes could have altered their position somewhat but other floor contexts at the site have demonstrated that this did not occur very much. The tablet-rich deposit in area 3 was found mainly in spaces C and D, as well as in the doorway

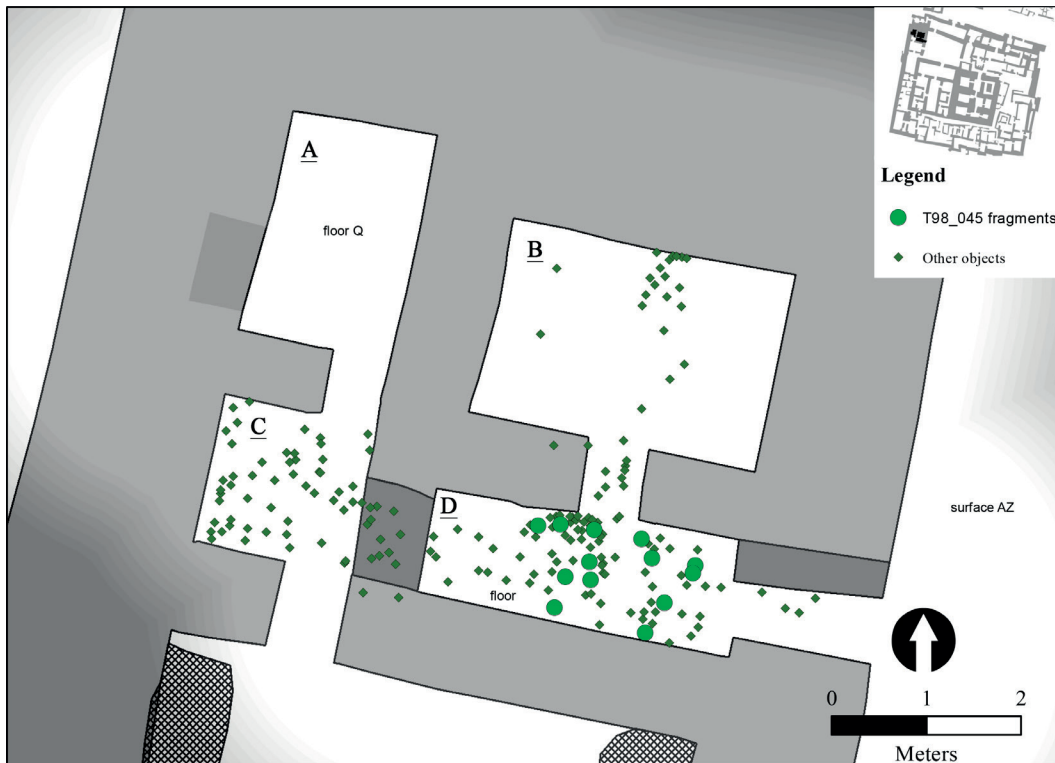


Fig. 3.14: Distribution of all finds from area 3 of the north-western sector. The large green circles indicate the location of fragments of tablet T98-045.

between these two spaces (see figure 3.14 and 3.15 for the distribution of all objects and figure 3.16 for the distribution of tablets). From the spatial distribution it seems unlikely that the tablets were deposited as one catastrophic event. Rather, they appear to be spread out throughout the rooms.

Additionally, the objects were found in a layer of soil of approximately thirty centimetres thickness (figure 3.15 and 3.16). The objects appear to be mixed-in with the soil, rather than being covered by it. This indicates that the objects were deposited along with the soil. Several tablets were apparently fragmented before deposition as many fragments were refitted after the excavation. Of tablet T98-045 twelve fragments were excavated in room D. The horizontal distribution of these fragments is plotted in figure 3.14. Unfortunately of only five of these fragments an elevation is known. These few fragments however already illustrate that the individual pieces were deposited on wide-ranging elevations. Again this indicates that the objects were not simply discarded on the floor of the rooms.

Some aspects of the tablet-deposit are less straightforward. As illustrated in figure 3.16 the vertical distribution of tablets displays a patterns in which most complete objects were located high in the deposit. This could signify that the deposit was gradually built up, and that

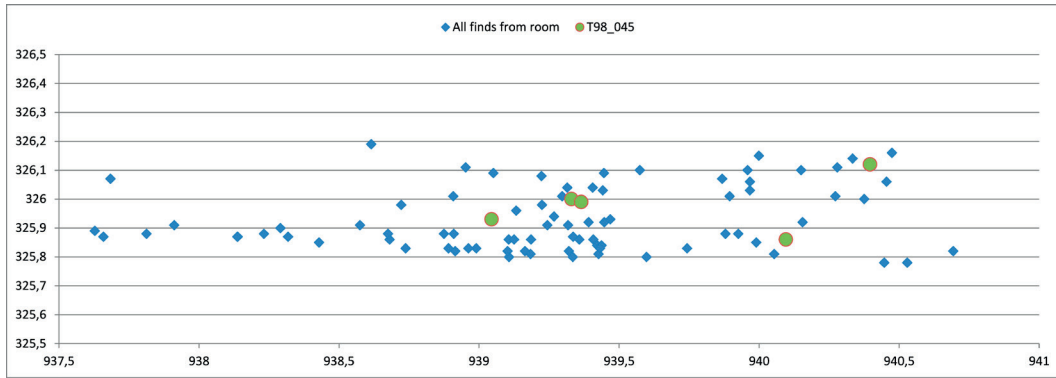


Fig. 3.15: Vertical distribution of all finds in room D of area 3 of the north-western sector. The values in both axes are in metres. Similar to Fig. 3.14 the fragments of tablet T98-045 are indicated with large green circles.

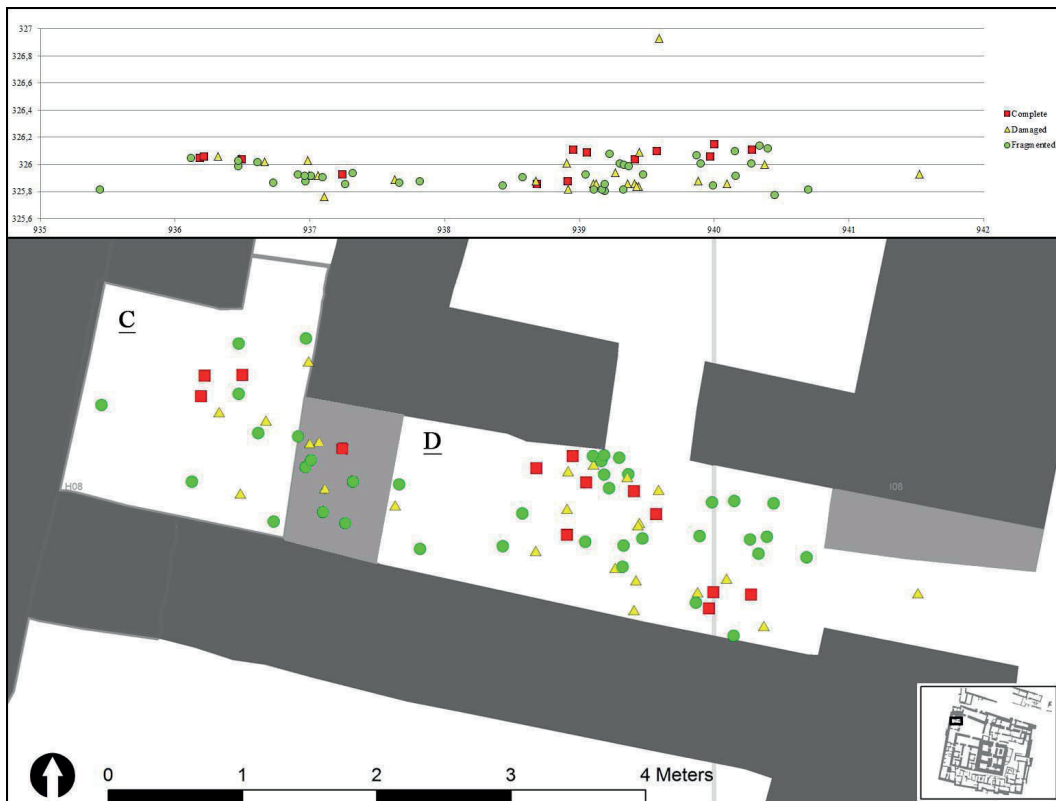


Fig. 3.16: Horizontal and vertical distribution of tablets and tablet fragments in rooms C and D of area 3 of the north-western sector. Red squares indicate complete tablets, yellow triangles are damaged tablets and green circles indicate tablet fragments.

the lower parts of the deposit were trampled, damaging the tablets. In this scenario the tablets which were deposited higher in the sequence were less trampled. The vertical distribution of refitted fragments of T98-045 however indicates that the deposit is not a simple horizontally laminated deposit.

One other refit was found between a tablet fragment in this deposit (T98-040) with a fragment (T99-005) which was discovered on the bottom of the cesspit (AG) in area 1 of this sector (see paragraph 3.2.2.1). It remains entirely unclear why these fragments have apparently travelled so far from each other but it clearly illustrates that the processes which underlie the deposition of cuneiform tablets are far from straightforward.

Analysing the deposit using the methodology set out in chapter 2 yields an alternative perspective. Following the deposit characteristics described above it is unlikely that the deposit is the result of a catastrophe. Also, because the deposit is extensive in size and contains mainly damaged objects, the processes of caching and loss can be excluded from the list of potential modes of deposition. As the deposit can be regarded as a dump or pile, it is unlikely that it was left behind during abandonment as *de facto* refuse. According to its context the most likely mode of deposition is secondary discard. However, nearly all finds can be related to administrative activities, indicating a high degree of structuring, typical for primary and provisional refuse.

There is a scenario in which the deposit may be considered to be the result of both provisional and secondary discard. Perhaps the person who worked with the tablets, the steward of the *dunnu*, kept a pile of discarded tablets in or near his workplace, as typical provisional refuse. If at some point this collection was too large, he discarded them as secondary refuse. Unlike other refuse, the documents had to be discarded with care as to ensure that they cannot be retrieved. It is likely that if area 3 was renovated, these objects were deliberately discarded in a soil layer which was deposited to level the area for a new floor. The practice of discarding tablets in construction layers was attested elsewhere in the *dunnu* (see paragraph 3.6.3.3 and 3.7.4) and also, for instance, at the contemporary site of Tell Fekheriye (Pollock 2005; Bonatz 2013). The contexts in which tablets were discovered vary greatly per site and within sites, and most studies into these objects focus on the textural content, rather than the archaeological contexts (Pollock 2005: 311). It is therefore hard to make statements about the comparative significance of the mode of deposition.

If the tablets were indeed deposited as secondary refuse, it is questionable whether the objects were also used in this location. The fact however that several tablets were found on a floor level in the adjacent room B, and that the area can be interpreted as an apartment indicates that a functional relationship between the tablets and the area may still exist. It is possible that this apartment was indeed the residence of the main administrator of the *dunnu*. He may have received guests and done business in the large courtyard in front of this apartment. The hypothesised pile of provisionally discarded tablets would then be in the direct vicinity of this apartment. The renovation of the area perhaps provided the suitable circumstances to purge the objects permanently.

### 3.2.4.3 A rich cremation burial

On top of the floor in room B a layer of brown soil was deposited. Through this soil layer a small pit was dug in its south-western corner. In this pit a ceramic jar was buried containing the cremated remains of two individuals (Akkermans and Smits 2008). The jar was sealed with a cloth, which was covered with a clay sealing. Why this was done remains unclear. Apart from the two individuals, the jar contained a wealth of personal ornaments and other objects (figure 3.17). Apart from the personal ornaments, also the remains of animals were found, most interestingly the third phalanx of a lion. It was suggested this might have belonged to a lion-skin cloak (Akkermans and Smits 2008: 253).

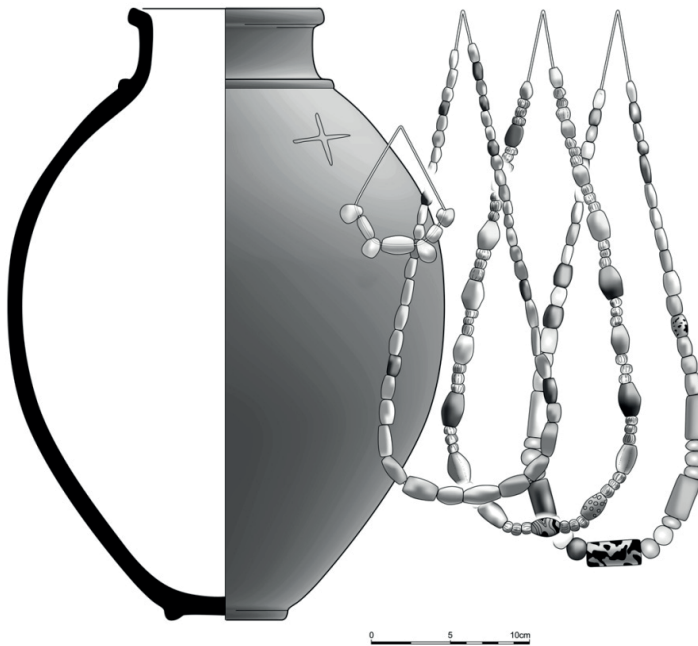


Fig. 3.17: Vessel from room B in area 3 of the north-western sector with several necklaces which were found within (from: Akkermans and Smits 2008: fig. 2).

These valuable items may be indicative of the high status of the interred individuals. As cremating the deceased was considered a non-Assyrian custom (Tenu 2005), it is implied these individuals originated from a different cultural background. As the main administrator of the *dunnu*, the steward Tammitte, bears an Anatolian name, Düring *et al.* (2015: 44) have suggested that this burial could be his. Perhaps the other individual was his wife. If this burial can indeed be equated with Tammitte it is tempting to suggest that he was interred in what used to be his residence or office.

### Division of the area

After the deposition of the tablet-rich soil a new loam floor was constructed in all rooms. On top of this floor the function of the apartment seems to have changed completely. The bathroom could not be used anymore; it was buried under the soil deposit. Additionally during or after the construction of the floor the area was divided in two by the blocking of the doorway (P) between room C and D. A new doorway (B) was constructed on the southern side of room C. It is unclear what the function was of rooms B and D in this new phase. In room D only a dug-in cremation jar, supported by two smaller vessels, was discovered. No other objects indicate the function of these spaces.

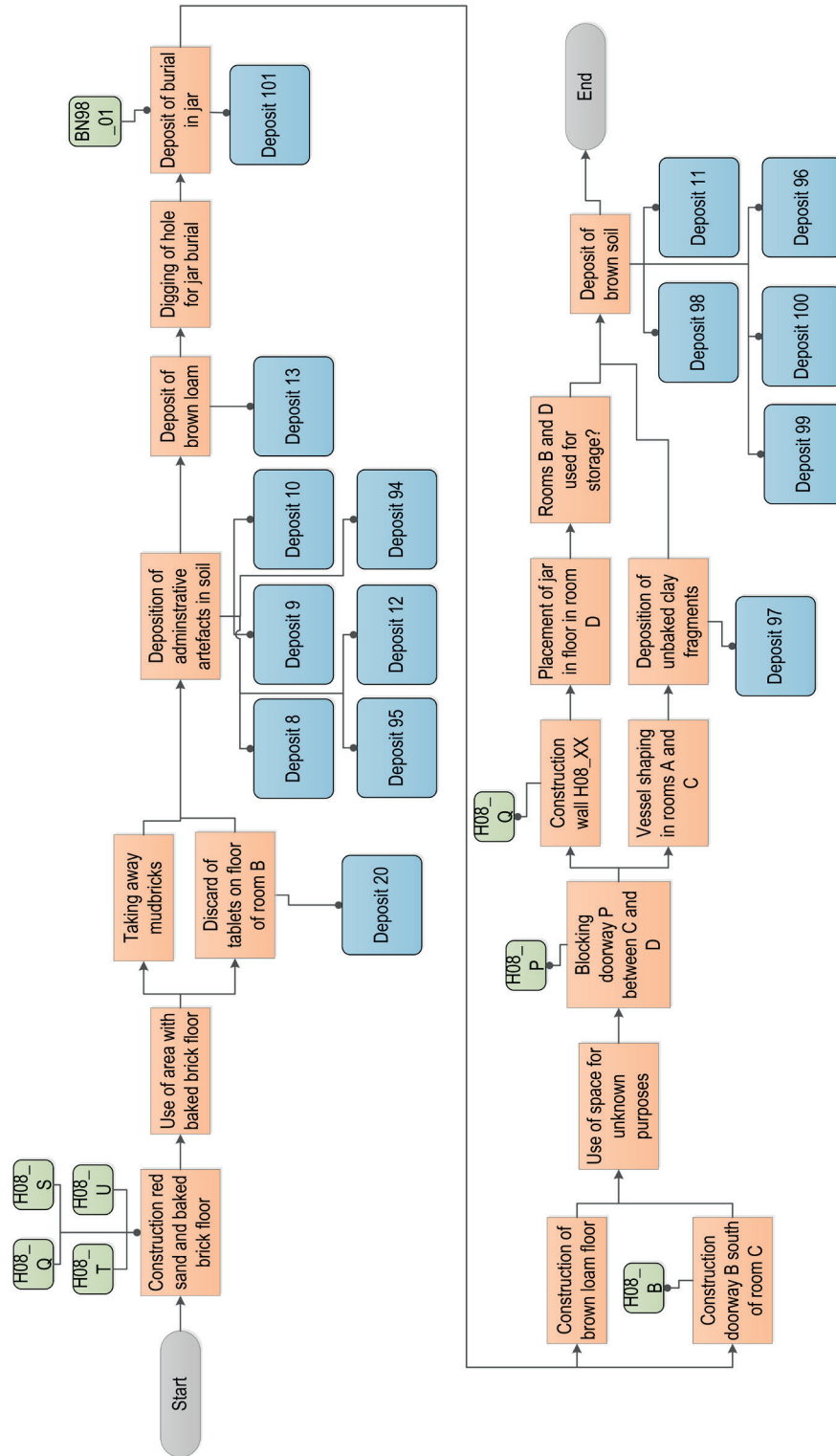


Fig. 3.18: Sequence of Events of area 3 of the north-western sector.

Rooms A and C were entered through the newly constructed doorway leading in from the south. Area 1 was used for pottery production, as evidenced by the presence of two kilns and much production waste (see paragraph 3.2.2.1). Also room C was probably used in conjunction with this process as it was littered with a large number of unbaked pottery fragments (see also Duistermaat 2008: 163). A concentration of production waste on a floor level is indicative for a primary refuse deposit. This suggests that in the direct vicinity of this room ceramic vessels were shaped, prior to being fired in area 1 to the south.

#### 3.2.4.4 Conclusion

The area which was known as the ‘office of Tammitte’ was used in a large variety of ways. The layout of the area and the presence of the baked brick floor and the toilet suggest that the area was first used as a residence. The discovery of a cluster of cuneiform tablets on the floor of room B indicates that the area was perhaps also used as an office or for the storage of administration.

Later deposits of brown soil with many administrative artefacts such as tablets, envelopes and sealings were interpreted as the result of secondary discard. However, considering the high degree of structuring of the deposit, it is likely that the objects within were discarded near their location of use.

After the deposition of these layers the area drastically changed in function. Room B was used for the internment of a cremation burial, and the western rooms, A and C were used in conjunction with area 1. The pottery production waste in this area indicates that these rooms changed from bathroom to pottery workshop. As is clear from the Sequence of Events (figure 3.18) the activities which could be charted for this area are indeed played out ‘in sequence’.

#### 3.2.5 The entrance hall and bathroom (area 4)

Prior to the construction of the walls which make up area 4, this constituted a space outside the *dunnu* wall (figure 1.4: level 6B). The construction of the walls of area 4 was part of a large renovation phase which included the blocking of the main gate directly east of this area. The motivation behind this renovation can perhaps be elucidated from the new layout of this entrance structure. The old gate entered into a narrow passageway which led directly into the heart of the *dunnu*. The new construction consisted of a 16 x 4 metre large courtyard (figure 3.19; room D) and an attached toilet structure (rooms A, B and C). Unlike the earlier entrance structure, this courtyard was constructed perpendicular to the entrance way, making it more difficult to continue walking into the *dunnu*. Possibly therefore area 4 was constructed to better control the flow of people into the *dunnu*. It is conceivable that courtyard D was used to receive people and deal with business, without the necessity of these people entering the *dunnu* proper. The toilet and associated rooms B and C can in this regard perhaps be interpreted as a restroom for visitors to clean up before a meeting or as the apartment of a guard or administrator who dealt with these guests.

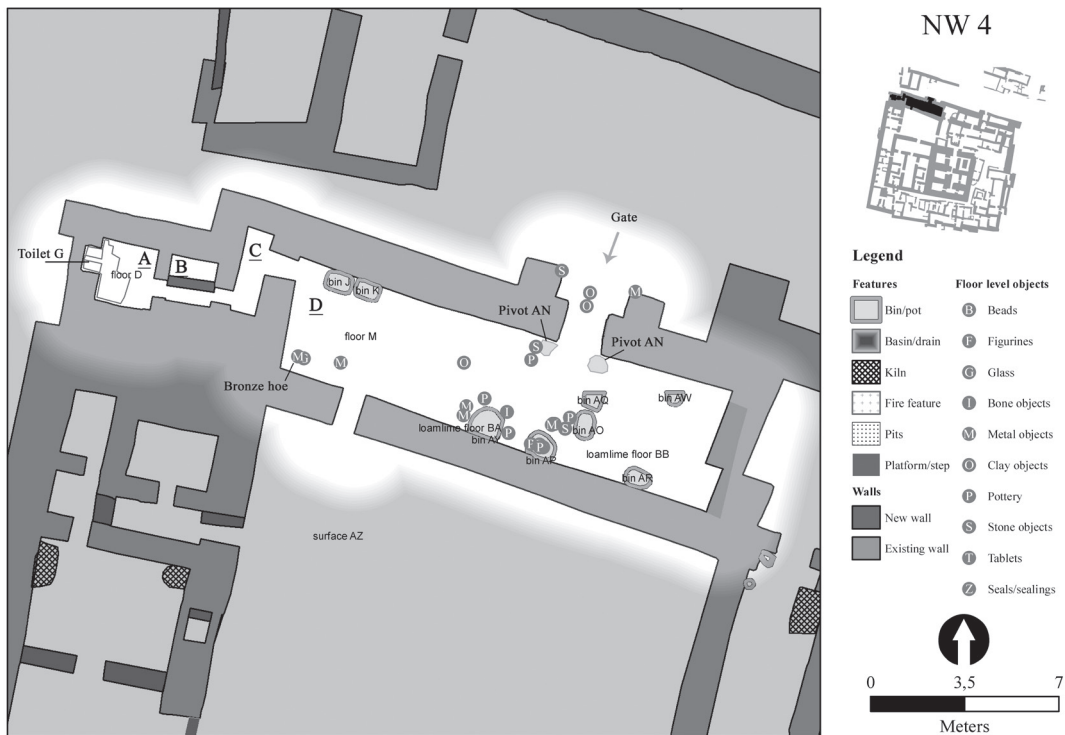


Fig. 3.19: Architecture and floor level finds from area 4 of the north-western sector.

Area 4 was probably used in a variety of ways. Eight bins were constructed in the course of its use, the location of one of these suggests that the doors of the gate were no longer in place (see below). After some time the courtyard was in a dilapidated state, evidenced by piles of debris which were found against the walls. These were possibly the result of the demolition of the floor in the central courtyard located south (see paragraph 3.2.3). The toilet structure was also renovated. The baked mudbrick floor in toilet A was partly demolished and a soil layer was deposited on top. The construction of a new toilet on this higher level however indicates that the function of these rooms did not change.

### 3.2.5.1 *The architecture of area 4*

As mentioned above, the sequence which is discussed here commences with the construction of the outer wall of area 4 and the associated gate. The thickness of the outer wall was suggested to represent a second storey on top of parts of it. In particular on the corners some researchers have inferred the presence of towers (Akkermans and Wiggermann 2015). From the archaeological remains, other than the width of the walls, there is, however, no direct support for this reconstruction. Therefore in this report only the ground floor will be discussed.

Both the toilet (G) as well as the floor (E) in room A were constructed of baked bricks, covered with a thick water resistant plaster layer. All other rooms in the area were fitted with a

loam floor. According to field notes the loam floor in courtyard D was repeatedly renovated, resulting in a laminated sequence of loam layers. Near the gate however a fragmented pebble layer was discovered. Perhaps this was originally present in the entire space. Although a large heap of baked brick fragments was discovered in the south-western corner of the courtyard, no traces of a former baked brick floor were found in the courtyard. Therefore it is likely that this relative small amount of debris was in fact part of the destroyed floor in the central courtyard (area 2, see paragraph 3.2.3) or from the floor in room A which was also demolished at some point.

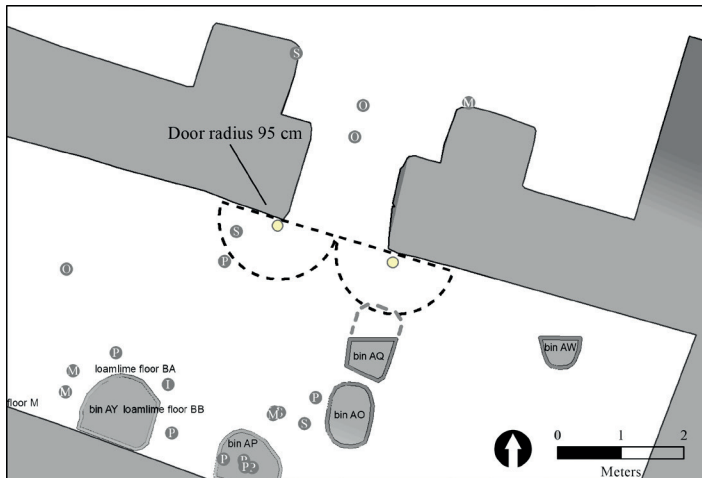


Fig. 3.20: Plan of the entrance of courtyard D of area 4 of the north-western sector. The turning circle of the doors are indicated with the dotted lines.

Two pivots (AH; AN) were found on either side of the entrance gate. These indicate that the gate was fitted with double doors. As the distance between the pivots is 1,90 metre the width of the doors can be reconstructed to be 95 cm wide (figure 3.20).

Other features in courtyard D are eight bins which were constructed in this space through time. None of the bins overlap, which makes it impossible to determine the chronological order in which they were constructed.

Only the location of bin AQ perhaps reveals a chronological relationship. Although the northern part of the feature was not excavated because it was located in a section baulk, its shape suggests that it was larger. Its location would probably have conflicted with the radius of the gate door (see figure 3.20). This may indicate that when this bin was constructed, the door was no longer in use. If the gate was no longer in use as such perhaps courtyard D also no longer functioned as a reception court at this point.

A postulated new function is difficult to determine however, due to a scarcity of finds or residue from the bins. They may have been used for short term storage of food, perhaps for the distribution of rations. One bin (AP) did yield several finds. Two carinated bowls, a large jar and a nipple based goblet, all complete, were found in the bin (deposit 22). Their complete state suggests that they have not been deposited here as refuse. Additionally, as the objects are all related to the distribution or consumption of food and drink, the deposit, however small, can be considered to be highly structured. As the objects do not seem to be of high economic value, the deposit is interpreted as *de facto* refuse. This in turn indicates that the objects were probably used in conjunction with the bin. A possible interpretation is that these objects were used to scoop out and distribute food or drink from the bin. Another interpretation however could be that not food but the ceramics themselves were stored in the bin.



Fig. 3.21: Toilet G in room A of area 4 of the north-western sector looking west (photo by P.M.M.G. Akkermans).

On the west side of courtyard D a series of rooms were constructed which comprised of two small rooms (B and C) and a toilet or bathroom (A). The toilet itself was constructed with two brick platforms as foot rests and a gutter leading out of the wall (figure 3.21). A small jar was placed in the ground next to the toilet. This was probably used in association with the toilet, perhaps to clean oneself after defecation. Considering the size of room A (2 x 2,3 metre) it is conceivable that it was used for both washing as well as defecating. Rooms B and C were possibly used for resting or as changing rooms. The sequence of rooms leading up to the bathroom is attested for most lavatory structures in the *dunnu* and also for instance at contemporary Tell Fekheriye (Bonatz 2013; Migchelsen 2013).

### 3.2.5.2 *Objects from the floors*

Apart from the ceramic jar no objects were found on the floors of rooms A, B and C. The floor of the reception court however yielded eighteen objects (deposit 3). Most of these were broken or fragmented, usually an indication for a refuse deposit. In addition, the floor was littered with fragmented mudbricks, pieces of charcoal and pottery shards. Remarkably however, several bronze objects were found within this deposit, amongst which two arrowheads, a pin and a large complete hoe or adze (figure 3.22).

These objects, in particular the large bronze hoe, are in stark contrast with the debris and broken items left on the floor of the court. Following the probability matrix, a high replacement cost is often indicative of either caching or unintentional deposition such as loss or deposition during a catastrophe. The location of the bronzes on the floor of the court and the lack of indications for a catastrophic event therefore suggest that the items were lost or left behind at abandonment. The large hoe was discovered under a pile of broken baked bricks, which possibly derive from the central courtyard to the south. Perhaps the tool was left after it had been used to remove bricks from the courtyard. Subsequent burial under some wall or roof debris may have prevented people from retrieving the object.



Fig. 3.22: Complete bronze hoe from courtyard D of area 4 of the north-western sector (fig. by R. Timmermans).

Interestingly, three arrowheads were also found in the central courtyard, area 2, due south of this space. Perhaps their presence in these areas indicates that the courtyards were often frequented by armed soldiers, either as guards of the *dunnu* or as visiting soldiers.

After courtyard D was no longer in use a renovation was carried out. A 60 centimetre thick deposit of dark soil, mudbrick debris and burnt mudbricks (deposit 23) was deposited on top of the old floor, levelling the area for a new floor higher up. As was mentioned above, this also occurred in rooms A, B and C (deposits 1; 2; 126-9). However, in room A, a part of the mudbrick floor was first removed. These were perhaps reused for the construction of a new toilet higher up. This however is assigned to a new phase which is beyond the scope of this study.

The Sequence of Events (fig. 3.23) clearly illustrates that the features in the area were assigned to the earlier phase and the finds relate more strongly to the later phase. It demonstrates that the interpretation of the function and use of the area is heavily dependent on the available evidence.

### 3.2.6 Conclusion: function and use of the NW sector

At the start of the sequence described here, most rooms and floors were newly constructed. The presence of two bathrooms and an extensive baked brick floor point to an official, representative function for this general area. In addition to these features, a large collection of cuneiform tablets was found in area 3. Although these objects have probably been discarded as secondary refuse, based on the structured composition of the deposit and its location in an apartment, it is argued in paragraph 3.2.4 that they probably were used in the direct vicinity.

The general picture which emerges from the architecture and objects from this phase is one of a representative area in which visiting tradesmen and officials could be received by the administrators of the *dunnu*. Two levels of access were present, the first was the courtyard in area 4. The second was the central courtyard which is area 2 of this sector. It is conceivable that these levels of access indicate a level of importance. The first courtyard in this sense was used for day to day administrative tasks by a low ranking official, while the central courtyard was the domain of Tammitte, steward of the *dunnu*. A third tier of importance could be perceived to be the courtyard of the monumental residence, which was reached from the central court.

At some point this representative and administrative function of the sector disappeared. The baked brick floors in the courtyard, the apartment (area 3) and the toilet in area 4 were partly demolished. In all areas except for the central courtyard a layer of soil was deposited. In the apartment this deposit contained a large amount of tablets, envelopes, sealing and other administrative artefacts. During this renovation phase the doorways which led to and from the central courtyard were remodelled by the construction of small walls inside them. This indicates that the sector was still in use despite the dilapidated state of the floors. Finds and features from area 1 indicate that the sector was used for first, the production of pottery and, second, food preparation.

The sector underwent significant use changes within the period discussed here. Most importantly, the loss of the representative function can probably be related to the decline of the condition of the monumental residence (see paragraph 3.4). Considering the central position of the building in the architecture of the *dunnu*, this perhaps signifies a change of the role of the *dunnu* in the local society, and perhaps in the Assyrian empire. These issues will be discussed in more detail in paragraph 4.4.2.



### 3.3 THE NORTH-EASTERN SECTOR

#### 3.3.1 Introduction

The north-eastern sector of the *dunnu* consists of five areas (figure 3.24) in which many features and objects were found. The northern part of the *dunnu* was quite well preserved in general and has yielded the clearest architectural modifications through time. An interesting example of these is area 1. This area used to include the main entrance gate of the *dunnu*. During renovation this gate was closed off and a new gate was constructed in area 4 of the north-western sector (see paragraph 3.2.5). After renovation the old gate was used by the brewer of the *dunnu*, possibly as a tavern (see below). The renovation therefore involved a significant use change of the area.



Fig. 3.24: The areas in the north-eastern sector.

Other areas in this sector (2, 3 and 5) were most likely mainly used for residential and administrative purposes, as well as for storage. In addition, area 3 yielded the extensive remains of a kitchen structure in which large meals could be prepared. Lastly, area 4 is characterized as a connecting area, consisting of an alleyway along the central building and a large open courtyard towards the south-east. The sector is connected to the north-western sector by a doorway in area 1. The courtyard in area 4 has an open connection to the south-eastern sector. Also the central building is reached from this sector. Because area 5 is closely connected to area 3, these are discussed in sequence. Area 4 is therefore discussed after area 5.

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#### 3.3.2 Pints and pottery (area 1)

As mentioned above, in the previous phase of the *dunnu* the main entrance gate was located in the north of area 1. The construction of walls AQ/AS/CD transformed the area in front of the former gate into a closed room (room A; figure 3.25). South of room A the former hallway was also converted into a room (B), measuring 7 by 3 metres. Further south in this area space C is located. This space, measuring 3 by 3 metres, originally consisted of only the two side walls. In the phase discussed here the space was closed off with wall N. Because of the lack of

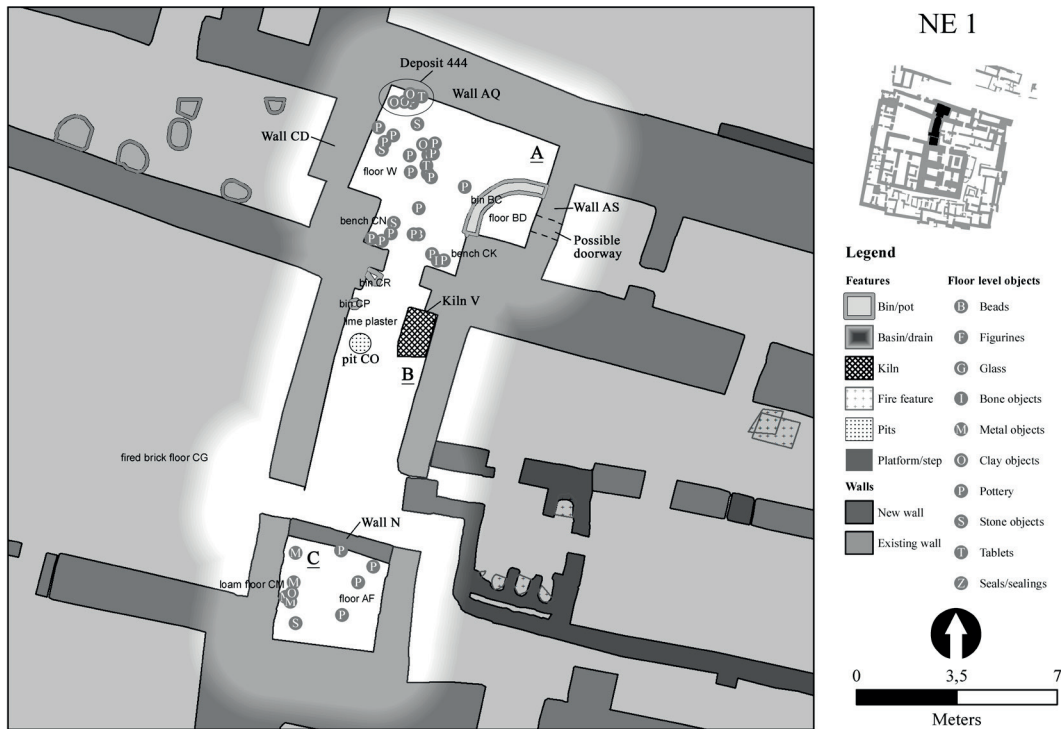


Fig. 3.25: Architecture and floor level finds from area 1 of the north-eastern sector.

a clear doorway into the space it was interpreted as a silo (Akkermans 2006: 204). Although this interpretation is questioned in the discussion below, a different probable function of the space has not been found.

Room A has also been the subject of earlier studies and was dubbed the “office of the brewer” due to the discovery of several tablets which were concerned with the distribution of beer (Wiggermann 2010: 33; Akkermans and Wiggermann 2015: 100). From the current study it appears that also the find material from the floor of this room can be related to the production and consumption of beer. This might therefore corroborate the earlier interpretation of the space. This was however not the only function of the space during the sequence discussed here. At some point a small pottery kiln (V) was constructed in space B. This feature indicates that the use of the area underwent a significant use change. The features and finds from space A and B will first be discussed below. Space C will be discussed separately afterwards.

### 3.3.2.1 Spaces A and B

After the construction of the northern walls at the start of this sequence, a loam floor was constructed in rooms A and B. The layout of these rooms was determined largely by the pre-existing walls. In the northern part the buttresses and two benches which were part of the gate construction were still in place. This suggests that the use of the spaces did not require a specific alteration of their layout.



Fig. 3.26: Room A of area 1 looking south-east (photo by P.M.M.G. Akkermans).

In room A an additional rounded wall was constructed up to a metre in height. This was probably done to create a large bin structure in the south-eastern corner of the room (bin BC). A small rectangular ‘window’ was constructed in its wall, some 40 centimetre from the floor (figure 3.26). This window was plastered on the inside, but the rest of the wall was not. The northern part of the rounded wall has subsided a bit in the past, indicating a lack of upkeep during the last phase of its existence. What the bin structure was used for is unclear, no parallels are known for the structure and no finds from within hint at particular activities. Considering its shape and location in the corner of the room however, it is likely that it was used as a storage space. Objects which were found on the floor of room A also indicate that storage of beverages and food may be an important part of the function of the space (see below). Perhaps the function and use of the bin can also be associated with this.

In the eastern wall (AS), at an elevation of approximately 1,5 metre above the floor a doorway or window was found (see figure 3.26). If this was indeed a passageway it connected room A with area 2. Similar to room A, the objects in area 2 also relate to beer production and it is suggested in paragraph 3.3.3 that this was in fact a brewery. Perhaps the passageway indicates that the function and use of bin BC was related to area 2. It could be postulated for instance that the bin was the storage space for the brewed beverages from area 2.

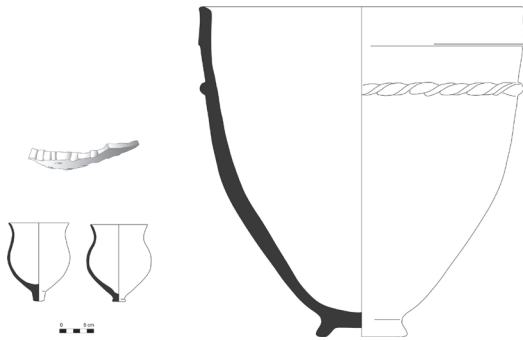


Fig. 3.27: Goblets, strainer and large pot from the floor of room A of area 1 of the north-eastern sector (from: Duistermaat 2008: Fig. IV.91L; IV.91Q; IV.57).



Fig. 3.28: Pottery concentration in the south-western corner of room A (photo by P.M.M.G. Akkermans).

### 3.3.2.2 *Finds from the floor*

The objects which were found on the floor of room A were assigned to deposits 116, 118 and 444. The objects were divided into different deposit types based on their spatial distribution. Firstly, deposit 444, a collection of small objects, consisting of two small, complete carinated bowls, a broken jug, two fragmented clay jarstoppers and a clay envelope and damaged tablet, was found in the north-western corner of the room. The location of the objects is striking, they seem to be deposited in a cluster in this corner of the room, in an out-of-the-way location. Although this could suggest that the objects have fallen from some furniture or a wall, a large amount of charcoal and other small debris around the objects indicates that a designation as provisional refuse is more likely.

Another important aspect of deposits, the degree of structuring, is often difficult to assess. Although the objects in a deposit were perhaps used together in some activity, this cannot always be determined based on their shape and formal function. For the current deposit, it also cannot be established beyond a doubt that the objects were used in conjunction with one and another. Most of the objects however relate to consumption in general and drinking in specific. Also the tablet from this deposit describes the issuing of beer to personnel (T99-004; Wiggermann 2010: 33). It therefore seems plausible that this group of objects represents a provisional refuse deposit containing items which were used in this space.

The reference to beer drinking appears to be present in deposits 116 and 118 as well. Located in the middle (118) and the south-western corner (116) of the same room, the combined deposit consists of a large number of broken but complete ceramics. These ceramics are related mostly to activities surrounding serving and consuming of drinks. A large plate, akin to a serving dish, as well as five goblets were deposited as complete objects (figure 3.27). Several other ceramics, however, can be related to the process of beer brewing. Among many ceramic shards, two large containers and a fragmented strainer were discovered in the south-western corner of the room (figure 3.28). Additionally, at least three large jars were discovered standing against bin BC (see figure 3.26). All these objects are relevant to the process of beer production as will be discussed in more detail in paragraph 3.3.3.

The position of the objects against the wall of the bin and in the corner of the room suggest that they were placed in an out of the way location. The complete state of many of the objects from this deposit furthermore indicates that the objects were left on the floor after use. As nearly all objects can be related to beer production and consumption, the structuring of the assemblage can be considered high. Therefore the deposit should most likely be viewed as abandonment stage refuse.

Although the goblets and serving tray, as well as the jars could indicate that the space was mainly used for the consumption of beer, a number of finds are more strongly related to the production of the beverage. Perhaps, therefore, the room can be interpreted as a space in which the brewer stored his tools and the end product. Additionally, perhaps beer was also distributed and consumed here. In this sense, perhaps space B functioned as a drinking location.

Space B yielded no objects to indicate a strong relation with room A. Two bins (CP and CR) were however constructed here, indicating that the room was in fact in use. Bin CR was constructed of several baked bricks and was lined with bitumen on the inside. Bin CP was made of clay and was simply plastered on the inside. Next to this bin a depression in the loam floor was discovered which would have probably held a large round based jar (CO). It is conceivable that thirsty travellers were given the opportunity to consume their beverages in the immediate vicinity of beer distribution. The bin and basin against the western wall can in this sense perhaps be interpreted as a wash basin. Jars full of beer could have been set in the floor and drunken from by the guests reposing along the walls of room B. This scenario could explain the lack of furniture and finds from the room. As an example, figure 3.29 illustrates a modern gathering of people in a mudbrick house. People are sitting on carpets and the only piece of furniture which would survive in the archaeological record is a wash basin in the corner of the room. Perhaps a similar situation can be suggested for room B.



Fig. 3.29: A recent example of consumption in a mudbrick house, with just one wash basin as imperishable furniture (from: Coockson 2010: Fig. 94).

### 3.3.2.3 Pottery workshop

After abandonment the rooms were no longer kept clean. In room A layers of waste gradually accumulated on the floor. In space B waste material was deliberately dumped for the creation of a new floor 50 centimetres higher than the old floor. In the north-eastern corner of this space, against the former gate, a pottery kiln (V) was built with its fire chamber dug into the floor. Peculiarly, the entrance to the fire chamber was in the north, which means the kiln had to be fuelled from room A (figure 3.30). No evidence was found which indicates that the pottery shaping process also took place in these rooms (see also Duistermaat 2008: 368). The presence

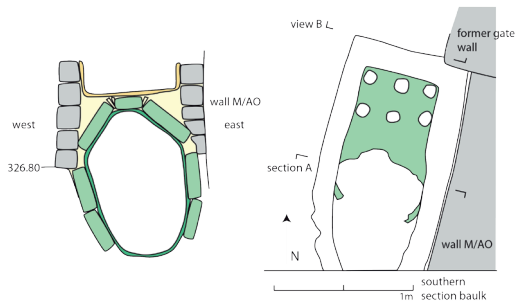


Fig. 3.30: Section and plan of kiln V in room B of area 1 of the north-eastern sector (from Duistermaat 2008: Figs. B.21 and B.22).

of the kiln in the area might also suggest that the room was already in ruined state and was considered an outside area. A thin layer of mud plaster on the inside of the kiln might be taken as an indication that the kiln was not reused often and was therefore not in use for a long period of time. Although it has not been attested how often such a plaster layer needed to be replaced, it is significantly thinner than the plaster layers in other kilns from the site (Duistermaat personal communication).

#### 3.3.2.4 The 'silo'

Room C, in the southern end of area 1, was originally constructed of only its two side walls. As these were in line with the former entrance gate of the *dunnu*, it could be postulated that the space housed a guard or administrator to receive visitors in. At the start of the sequence described here, this space was closed off with an abutting wall (N). Because no entrance to this structure was found at ground level, it was assumed that the space was entered from the top, similar to a silo. Consequently the space was interpreted to have been used to store barley or other foodstuffs (Akkermans 2006: 204). The size of the inside space of the silo was however not sufficient for the amounts which were probably stored in the *dunnu*. Texts have suggested that approximately one million litres of barley was stored at one point (Wiggermann 2000: 195). The whereabouts of this grain heap is unfortunately not specified in cuneiform texts. One interpretation is that the roof or second storey of the central building was used for this purpose, as it would provide the necessary space (Klinkenberg and Lanjouw 2015: 172). This does not however mean that the space under consideration here was not used for this purpose, albeit on a smaller scale.

To be able to use the space as a silo for grain sacks or loose grains there is one precondition which has to be met – the walls should be able to hold the weight. The amount of barley which could be stored in this space was largely dependent on the stability of the structure. With a floor plan of twelve square metres every one metre high layer of barley with a specific weight of 650 grams per litre would have weighed 7,800 kilos. Although it is beyond the scope of this research to make detailed calculations of the side pressure this would generate in the space, it will suffice to mention that if the space was filled up for three metres, it would have contained the weight equivalent of nearly five large Asian elephants (each weighing 5000 kilos). Given that the northern wall of the 'silo' was merely abutted and not bonded to the side walls it seems unlikely that it could resist such pressure.

Despite these structural arguments against the use of the space as silo, finds from the space are indicative for a use in the realm of storage or food distribution. On the floor of the space four nearly complete ceramic vessels were discovered (deposit 445). These are a large jar,

two carinated bowls and a slightly damaged goblet. The objects were found in a burnt layer on top of the floor, which was covered with charcoal and burnt seeds or grains. As the objects were complete at deposition and relatively low in replacement cost it seems most likely that they were left as *de facto* refuse. This means they were left behind after the last use of this space. The large jar was perhaps used to serve as storage vessel. Perhaps the smaller ceramics were used for the scooping of grain from a bag or jar.

Given the evidence presented here, the space which was commonly known as the ‘silo’ was probably not used strictly as such, and particularly not for very large quantities of food. Possibly however it was used for temporary storage during the distribution of rations outside the central building. The end of use of space C is indicated by the burnt remains on its floor. Possibly a large fire destroyed both the content and the construction. Later yet, layers of loam and mudbrick debris were deposited on top of the floor (deposit 195).

### 3.3.2.5 Conclusion

In conclusion, in the preceding phase area 1 was a pivotal node in the flow of people into the *dunnu*. At the start of the sequence described here the area was transformed into an elongated series of rooms, deep inside the *dunnu* layout. The fixed features such as the large bin (BC) and the objects which were found on the floor of room A suggest that the area was strongly related to the production and consumption of beer. One possible interpretation could be that the room A was used to “store and pour” and room B to “clink and drink”. The discovery of a tablet which describes the issuance of beer to personnel further indicates that the head brewer of the *dunnu* was at work here.

Distribution of food may have also occurred in this area. In the southern side of the area a large storage facility, space C, was constructed which was perhaps used to hand out rations of grain. The thick layer of charred grain which was found on the bottom of the space indicates that indeed several bags of barley must have been present. However, the space had not been purposefully constructed for the bulk storage of foods.

At some point rooms A and B were no longer used as a tavern. Many of the items which had been used before were discarded on the floor. At this time the area had lost its role for social gathering and was primarily used as a dump. When about half a meter of soil and refuse had been deposited on the original loam floor, a new floor and a sunken pottery kiln were constructed. The presence of this kiln further suggests that this had turned into an out-of-the-way area.

Also space C lost its function at some point. A thick layer of burnt grain on the bottom of the structure indicates that this was either caused or ensued by a large fire. How this relates chronologically with the use of the north of the room is unclear from the stratigraphy (figure 3.31) but if the distributive function of the area was present in the north and south simultaneously, perhaps the termination thereof was as well.



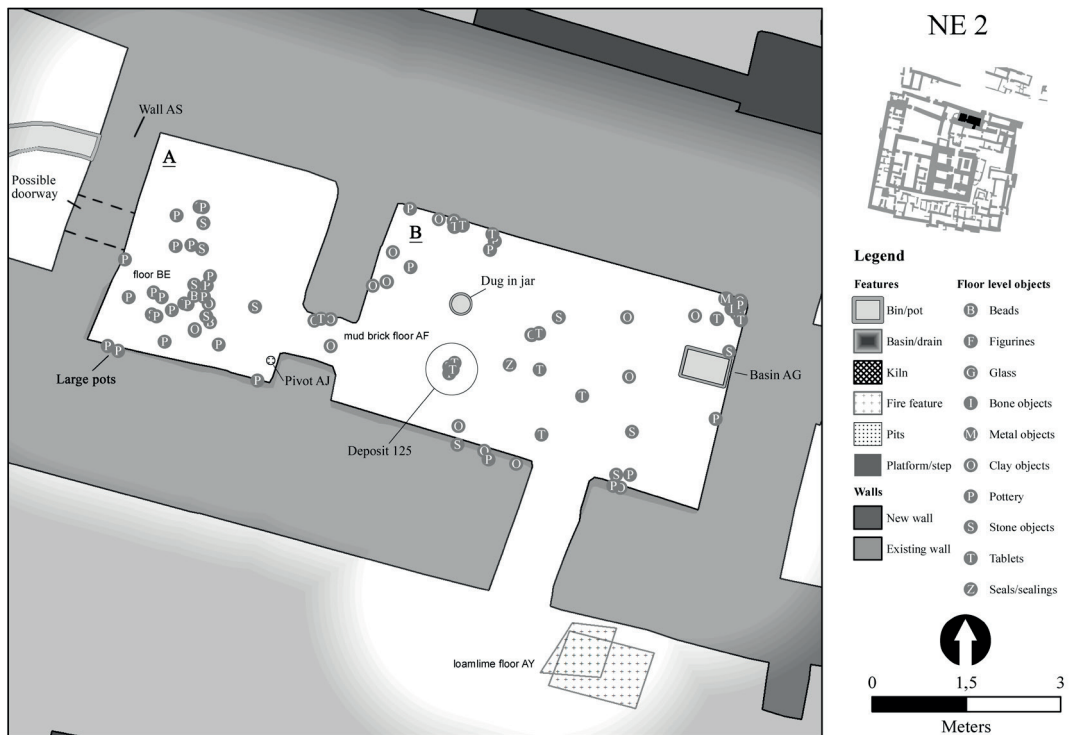


Fig. 3.32: Architecture and floor level finds from area 2 of the north-eastern sector.

### 3.3.3 Brewery and office (area 2)

Area 2 of the north-eastern sector is composed of two rooms, labelled A and B (figure 3.32). The area could be entered through a doorway in space B. As mentioned above however, the area may also have been connected to area 1 through a doorway in wall AS some 1.5 metre above the floor (paragraph 3.3.2.1). In previous research mostly the presence of several tablets in the room B was highlighted (Wiggermann 2010; Akkermans and Wiggermann 2015). The finds from the rooms are however of a more varied nature. Most notably a collection of ceramics from room A indicates that the area possibly was used for beer production. The tablets which were

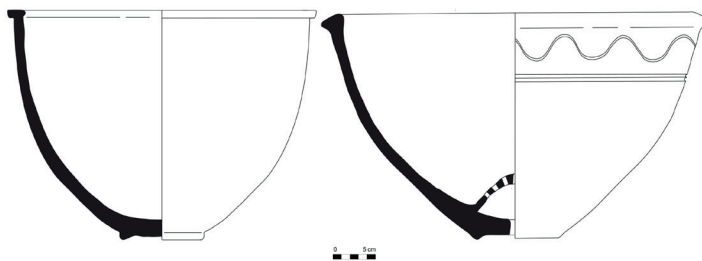


Fig. 3.33: The large pot and strainer, or *nazzittu*, from room A of area 2 of the north-eastern sector (from: Duistermaat 2008: Figs. IV.69b and IV.59a).

found in both rooms were deposited later than the use of the area as brewery, indicating that these relate to a later use of the rooms. The sequence of activities which were carried out in this area therefore indicates that the area transformed from production area to a residential or official area.

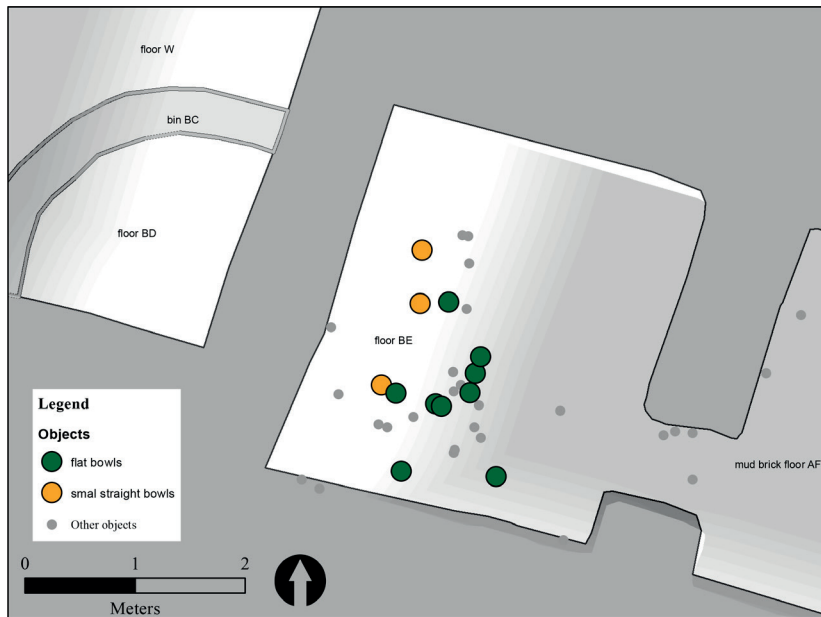


Fig. 3.34: Distribution of carinated bowls on the floor of room A of area 2 of the north-eastern sector.

### 3.3.3.1 Room A

As mentioned above, room A was connected to the adjacent area through a door or window high up. Apart from this throughway, the only route into the room was through the doorway from room B. A pivot hole in the inside of the doorway (AJ) indicates that the room could be closed off and, if necessary, locked from room B.

33 objects were registered on the floor of room A, most of which were found in the southern part of the room (deposit 121). The deposit contained twelve large carinated bowls, seven potstands, two large pots (one of which is fitted with a small strainer; figure 3.33), seven stone tools, two beads and three clay objects. The damage pattern of the objects in this deposit is remarkable. 66 percent of the objects was complete, 12 percent was damaged and 22 percent was fragmented. This indicates that the deposit was most likely not discarded as primary or secondary refuse. Additionally, the size classes are unusual. Nearly 60 percent of the objects are considered large in size. Unfortunately, due to the multi-functional character of most ceramics in this deposit, a determination of the degree of structuring cannot be easily determined. The large amount of complete and large objects is however strongly indicative of a *de facto* refuse deposit, left behind during slow abandonment.

Among the deposit twelve carinated bowls were found. Three of these were small, cup-shaped bowls and nine were large, straight-sided bowls. Curiously, all straight-sided bowls are of a very similar shape and size, suggesting that they were produced together. The three small bowls were found in the west of the room while all the straight-sided bowls were found eastward of these (figure 3.34). Their clear spatial organization might be indicative of their untouched position on the floor of the room. Again this indicates that the objects on the floor were left at abandonment.

If the objects from the floor level deposit of room A were left behind as *de facto* refuse, it means that the objects were once stored or used in this room. Interestingly, based on parallels from Tell Bazi (Otto 2006; Zarnkow et al. 2006), the large pots mentioned above were interpreted by Duistermaat (2008: 459) as germinating vats for beer brewing. Consequently, room A may have functioned as brewery or as storage space for the brewer. In order to understand the group of artefacts from this deposit in the context of beer brewing, this process is shortly introduced below. The recipe which is used by the authors cited below is based on the “Hymn to Ninkasa”, a Sumerian tablet from approximately 1800 BC (Prince 1916; Black et al. n.d.; Sallaberger 2012). This Sumerian text describes in a poetic manner in honour of goddess Ninkasa the process of beer brewing and has been recently reevaluated by Sallaberger (2012). By approaching the issue of beer brewing in the ancient Near East in an interdisciplinary fashion, Sallaberger attempts to understand the Sumerian text with knowledge of the technological aspects of beer brewing and archaeological evidence for the necessary tools for the process. His reconstruction of the beer brewing process includes the preparation of two main products, sourdough (fermented barley) and malts (germinated barley), which are, in a second step, combined to brew the end product through further fermentation.

To produce the malt large amounts of barley were soaked in a large pot with a base hole, a vessel with the Akkadian name *nazzittu* or *namzittu* (Duistermaat 2008: 459). After soaking, the barley was drained by letting the water out through the hole in the bottom. Subsequently, the barley was dried in the sun to stop the germinating process (Zarnkow 2006a; Zarnkow 2006b). After drying, the malted barley was mixed with water and the sourdough into large jars. According to brewing experiments, after approximately 36 hours the beer could be consumed (Zarnkow et al. 2006a). Because the end product contained all the malted barley it had to be consumed using filters and straws. The amount of beer which was produced was approximately eight times the volume of the initial germinating vat (Duistermaat 2008: 459). The volume of the germinating vat therefore indicates the volume of beer which could be produced in one brewing event.

The germinating vat (or *namzittu*) which was found in room A of area 2 has a maximum capacity of 18.91 litres (Duistermaat 2008: 214). The other pot from the same de-



Fig. 3.35: The western part of the floor of the western room of area 2 of the north-eastern sector looking south. Several pot stands are on the floor as well as the remains of large vessels in the back corner (photo by P.M.M.G. Akkermans).

posit was slightly smaller. This pot had a maximum capacity of 13.79 litres (Duistermaat 2008: 234). Possibly, the *namzittu* was placed on top of the smaller pot when straining the barley. Because most of the volume of the *namzittu* was taken up by soaked barley, the amount of strained liquid would probably not exceed the volume of the smaller pot.

Large jars which were found from the same phase in the *dunnu* have yielded volume measurements of on average 16 litres, only slightly less than the volume of the discussed *namzittu*. It could therefore loosely be stated that one brewing event with this *namzittu* would have resulted in approximately eight full jars of beer. Unfortunately no jars were found in room A. However, the room did yield ceramic stands which could be used to hold jars, seven in total, a number close to the hypothesized yield (figure 3.35). Although entirely speculative, perhaps the jars which held the end product were taken away, leaving behind only the ceramic stands to reveal their earlier presence. Although the proposition that the room was used as storage space by the brewer cannot be rejected, it is appealing to suggest that this room was indeed used for brewing beer. If the amount of stands from the room are indicative of the yield from the discussed *namzittu*, it could even be proposed that the resulting beer was relatively strong.

A connection between the carinated bowls from this deposit and the brewery can be postulated on the basis of their regular shapes. The fact that there are two groups of similar looking bowls (cup-shaped and straight-sided) might indicate that the bowls were obtained from the potter directly after firing. A letter from grand vizier Ili-pada to the steward of the *dunnu*, Tammitte, indicates that certain potters were in fact employed by a brewer (Wiggermann 2008). Therefore, perhaps the brewer ordered not only his specific beer vats but also some ‘ordinary’ bowls. This could strengthen the interpretation of this find assemblage as the brewer’s toolkit.

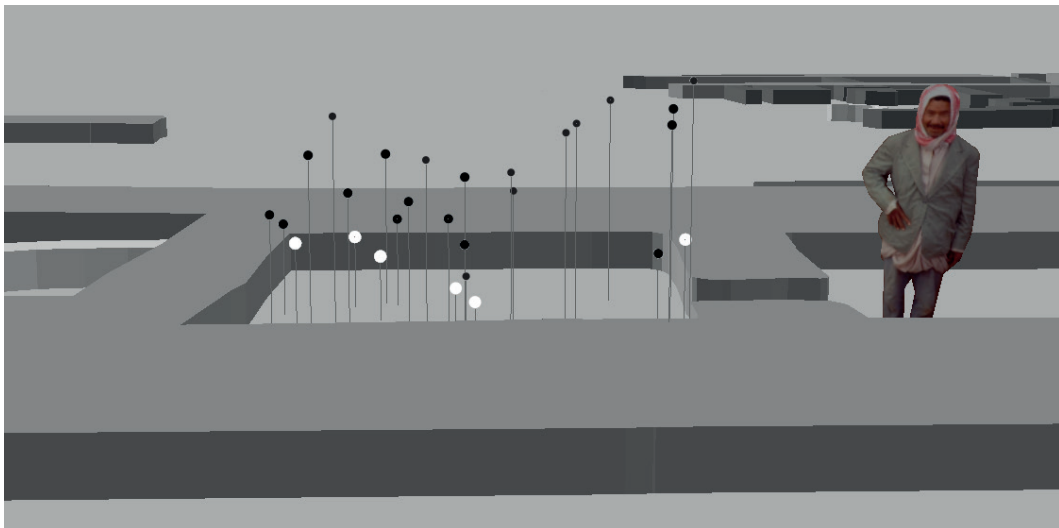


Fig. 3.36: 3D view of room A of area 2 of the north-eastern sector, looking north. The white dots indicate the location of tablets and tablet fragments. Black dots are other finds from the soil layers in the room. The vertical lines indicate the elevation of each object. The individual standing to the right is 1.60 metre tall.

### 3.3.3.2 *A subsequent refuse dump*

Some time after the room was in disuse a fire occurred, burning the floor and much of the pottery on it. Also the pivot hole in the south-east of the room contained much charcoal during excavation. This means that the conflagration must have been quite extensive, but whether the fire was intentional or accidental cannot be stated. After this fire occurred several layers of soil and refuse accumulated on top of the floor assemblage. Three-dimensional visualization of the distribution of the objects suggests that the soil layers and therefore also the objects within were deposited in separate layers, with distinct object types per deposited layer (figure 3.36). The lowest, first deposited, layer contained (fragments of) cuneiform tablets. Above this layer, a large number of ceramic objects were found on top of which soil with stone artefacts was found. This stratification of object types is indicative of a structured deposition process in which specific waste deposits were discarded. Perhaps the tablets in the lowest layer were discarded after use in room B, in which numerous tablets were discovered in floor-level deposits. If this was the case, it suggests that room B was in use after the fire occurred in room A. Perhaps therefore room B was in use longer than room A.

### 3.3.3.3 *Room B*

Room B measures approximately 6 by 3 metres. The room was fitted with a loam floor in which two features were dug. Against the east wall of the room a small plastered basin (AG) was constructed and in the western side of the room a large jar was dug in the ground (see figure 3.32).

36 objects were registered on the floor of the room. These objects probably ended up on the floor through several different modes of deposition. Four clay tablets which were found together in the centre of the room for instance were probably deposited during rapid abandonment or during a catastrophe (deposit 125; see below). Concentrations of objects in the corners and against the walls on the other hand suggest that these were discarded as primary or provisional refuse. Other objects, located in the middle of the room are however very similar to the items which were present along the walls. It is therefore very difficult, if not impossible, to separate this floor level assemblage into different modes of deposition. Consequently, the objects were grouped as one deposit (109) which should possibly be considered to represent a combination of primary and provisional refuse.

Of the 32 objects in deposit 109, five are tablets and twelve are clay sealings. This means that a substantial half of the objects are related to administrative activities. Other objects are seven damaged carinated bowls, five stone tools, two goblets and one small clay stamp. Although a large portion of the objects can be related to administration, this is not sufficient to consider the deposit highly structured.

Additionally, half of the objects are fragmented, possibly indicating that the objects were discarded as refuse. However, along the walls of the room, several tablets were found together with their envelopes, indicating that these tablets were opened, read and discarded in this very room. These objects therefore indicate that at least a part of the object assemblage was discarded as primary or provisional refuse. This in turn indicates that the room was used for administrative activities.



Fig. 3.37: Section of collapsed wall Z in room B of area 2 of the north-eastern sector. Visible on the photograph is that 50 centimetre of soil and refuse had accumulated on the floor before the collapse occurred (photo by P.M.M.G. Akkermans).

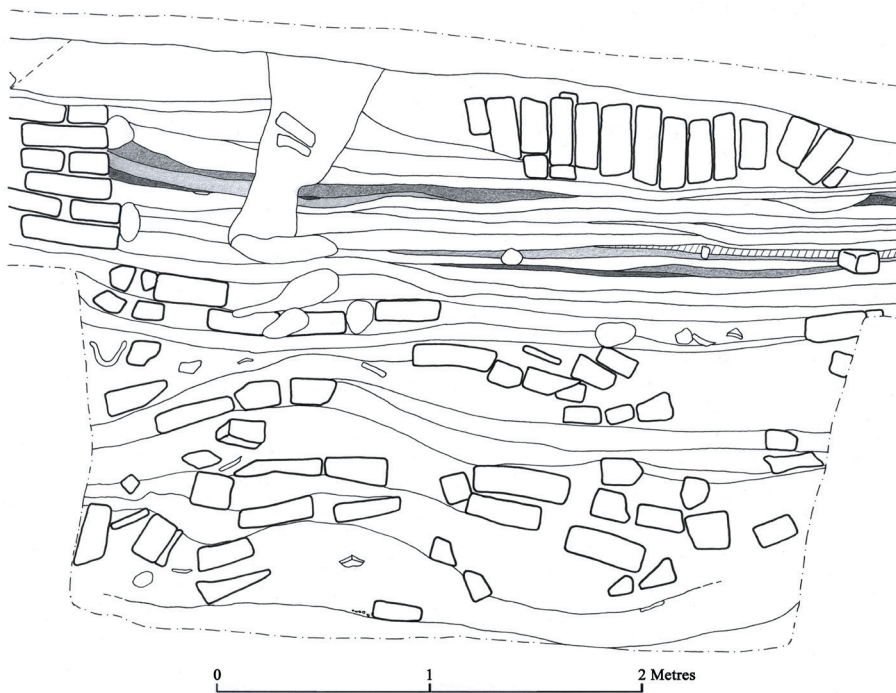


Fig. 3.38: Section through room A of area 2 of the north-eastern sector, looking west (fig. by R. Timmermans).

Another four tablets from this same deposit (109) were found spread over the floor of the room. Perhaps these were deposited as primary refuse, shortly before abandonment. It could also be postulated however that the objects were discarded during abandonment, as *de facto* refuse.

Another four tablets were grouped in a separate deposit (deposit 125; see figure 3.32). These objects were found lying directly next to each other. Additionally, textual analysis of the tablets has shown that these tablets consist of unbroken debts, which means they were part of an active administration, in contrast to the broken envelopes and discarded letters in the rest of the room (Wiggermann personal communication). Their remarkable concentration together has led some to think that they were left behind here in a wooden box (Wiggermann 2010). Although a possible container cannot be reconstructed beyond a doubt, the concentrated position on the floor does indicate the objects were deposited together. A likely scenario is that the objects fell from a shelf or container on the wall after abandonment.

After the room was abandoned a large amount of burnt material accumulated on top of the objects on the floor. Remains of burnt reed, grain and wood indicate that at some point the roof had caught fire and collapsed down. Later yet, even the walls of the building collapsed into the room. A part of the collapsed northern wall was found lying on top of a 50 centimetre thick soil deposit (figure 3.37). This may indicate that remains from an upper storey of the building had fallen on the floor before the walls collapsed. A large amount of fragmented objects from within these layers may however also indicate that the space was used as a refuse dump for some time before structural collapse. Whatever the case, these destructive events mark the end of use of area 2 of the NE sector.

#### 3.3.3.4 Conclusion area 2

Although the processes which occurred in area 2 are similar in both rooms, it is unclear how they were chronologically related. Room A was used as either a brewery or as a storage room for the tools of the brewer. After the room was no longer in use as such a fire broke out and subsequently the room was used as refuse dump. Several layers of soil containing discarded objects were deposited in the room. A section drawing of the deposits in this room is offered in figure 3.38. It clearly demonstrates the horizontal layering of these refuse deposits. Several clay tablets were located in one of the lowest refuse deposits.

Room B was used for either residential or official purposes. Many tablets were found in contexts which indicate that the objects were in fact used in that room. Perhaps the discarded tablets from room A are related to this use phase of room B (figure 3.39). At some point also room B was abandoned and a fire broke out. Afterwards, some soil and refuse accumulated in the room but not to the degree witnessed in room A. After the accumulation of 50 centimetre of deposits on top of the floor the northern wall collapsed into the room. Perhaps this wall was deliberately demolished to prepare the area for a new construction.

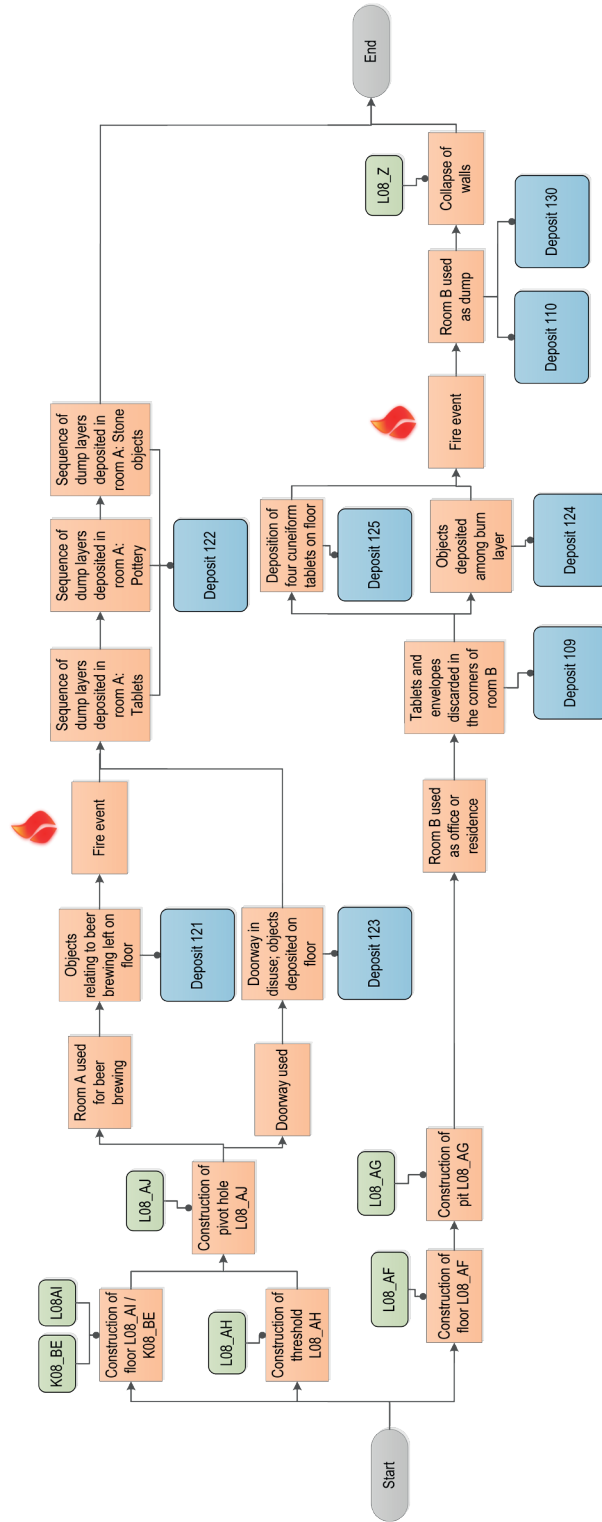


Fig. 3.39: Sequence of Events of area 2 of the north-eastern sector. The two separate fire events are emphasized by small flames.

### 3.3.4 Residential spaces and a kitchen (area 3)

Area 3 consists of five spaces (figure 3.40). These spaces (A-E) are closely related to each other in function and use. The northern spaces (A, B and C) were mainly used for domestic purposes. For spaces B and C it is suggested that they constitute the apartment of a high official of the *dunnu*, perhaps the main steward. In the south of the area, space E was a courtyard, perhaps used by this same administrator to receive guests. Space D, in the south-west of the area, is a kitchen structure in which large meals could be prepared. Many objects were found on the floor of this structure. How these objects ended up on the floor is uncertain and discussed below. Because the area is quite large, the discussion below is divided up into the different rooms or spaces. First the northern room A and B/C are discussed. Subsequently the related courtyard is reviewed. The kitchen D is dealt with last.

#### 3.3.4.1 Room A

Room A of area 3 consists of a long, rectangular space, measuring 14 by 3.5 metres. The room was fitted with a loam floor (AV/AY) which was renewed multiple times. In the north the room has a doorway which is connected to area 2 of this sector which is discussed in the previous paragraph. To its east, the room gives access to room B of this area and to the south rooms D and E could be reached.

One fixed feature was discovered in room A. In the north-east of the room, next to the doorway leading into area 2, a hearth (BO/AZ) was constructed. The hearth consisted of a mudbrick platform with a central depression. In its corner a small ceramic jar was dug in, perhaps to serve as an ash pot or to store tinder. It seems to be an integral part of the hearth structure since it had been kept in its place until abandonment.

Although the floor of this large hall was covered with pottery fragments, hardly any complete objects were registered. One main find concentration in this room was located in the south-western corner of the room (deposit 131). This cluster consists of six ceramic bowls, a tablet with its original envelope as well as a bronze object interpreted as a razor, fitted with tweezers on one end. The object assemblage bears close resemblance to the deposits in the other rooms of area 3. Particularly striking is that in all rooms one corner was used to discard objects amongst which cuneiform tablets and clay envelopes. This may indicate that these rooms were used and abandoned simultaneously.

The location of the deposit in the corner of room A suggests that it concerns a provisional refuse deposit. Perhaps the objects were part of the 'sweepings' which ended up in the corner. Five of the ten objects from this deposit were however complete, which may indicate that the objects were left behind at abandonment. Perhaps their presence in the corner of the room indicates the former presence of a cupboard or shelf in this location.

Aside from the cluster of objects in the south-western corner, hardly any objects were registered in room A. This suggests that at abandonment the space was left in a rather clean state. As no evidence was found for production processes or storage in this room, it is likely that the room was used for domestic activities. Another option is that the space was used as a dining room, in conjunction with the kitchen to its south, room D.

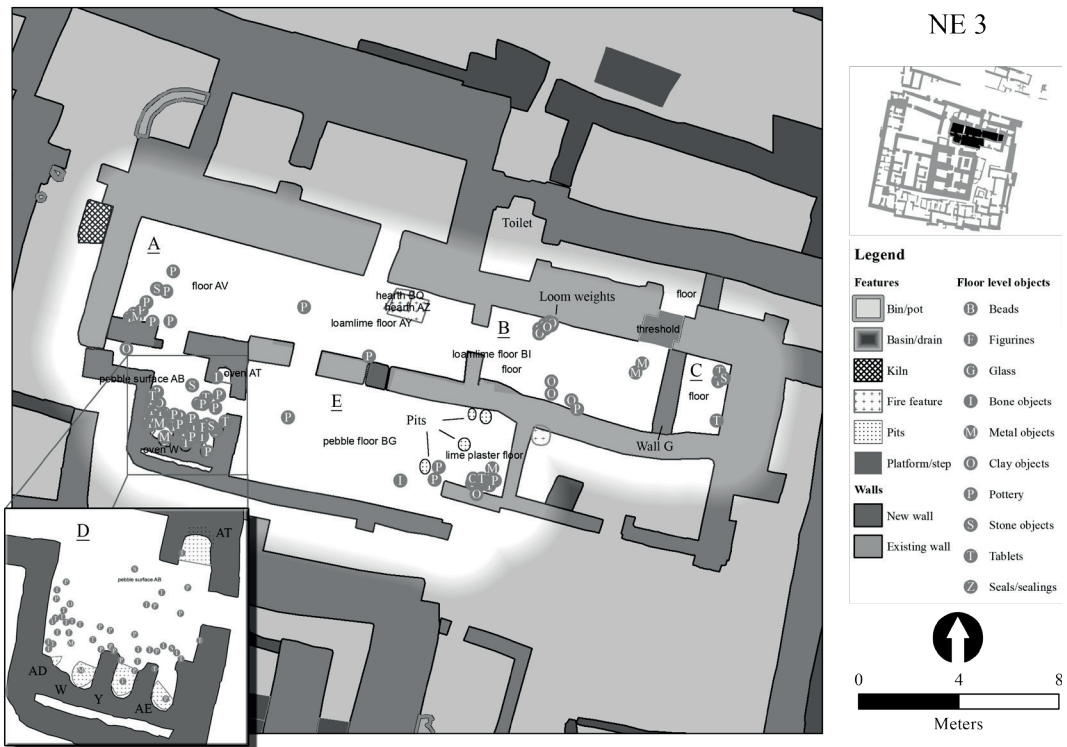


Fig. 3.40: Architecture and floor level finds from area 3 of the north-eastern sector. The inset in the lower left zooms in on room D including the oven structures which were found there.

### 3.3.4.2 Rooms B and C

As an extension of room A, to the east two other elongated spaces were present. Spaces B and C together measure 10 metre in length and 3 metre in width. These spaces were once a single hall but this was split in two by the construction of a wall G at the start of the phase discussed here. If and how room C was accessed after the construction of wall G is uncertain. Room B was connected to room A in the west and to a corridor and toilet in area 5 in the north.

The layout of the rooms, in particular the connection between room B and the toilet in area 5, indicates that room B was used for domestic activities. Because several tablets were found in the room it was suggested by Frans Wiggermann (personal communication) that this space may have functioned as the private residence of the steward of the *dunnu*. How the majority of objects ended up on the floor of the room is however not straightforward as is discussed below.

Fourteen objects were registered on the floor of room B. These include a fragmented bronze bracelet, a lead slag, two clay sealing fragments, two ceramics and seven clay loom weights. The loom weights are perforated clay spheres, measuring on average 4 centimetre in diameter. They were found in a concentration in the north of room B. Their clustered distribution indicates that they were deposited together. Perhaps a loom was located at this location, which would fit the interpretation of the space as domestic structure.



Fig. 3.41: Pottery on the floor of room B looking east (photo by P.M.M.G. Akkermans).

In addition to the registered objects a large amount of ceramic shards was found on the floor of rooms B and C (figure 3.41). Because most of the ceramics on the floor were fragmented only a few were registered as objects. Post excavation refitting has however yielded many complete shapes which were analysed by Kim Duistermaat for her PhD research (Duistermaat 2008). These analyses demonstrated that many of the ceramics from the room were small and large storage jars. Additionally, many of the ceramics from the rooms were repaired in the past by the application of gypsum on cracks and breaks. The storage jars could have been used to store food stuffs and drink in these rooms. The large amount of repaired ceramics from this room may however also indicate that the rooms were in fact used to store and mend ceramics.

Among this ceramics-rich deposit four cuneiform tablets (deposit 205) were found in room C. Two of these are letters regarding Ili-Pada and Tammitte, the other two relate to the issue of beer by the local brewer Baligunaya (Wiggermann 2010: 19). Interestingly, this brewer is also mentioned on tablets which were found in area 1 of the NE sector. Because the tablets were found close to the wall of the room, it could be postulated that they were discarded as provisional refuse. The objects were however found on varying elevations, indicating that they were not deposited simultaneously.

The large amount of complete objects suggests that the deposit was the result of either a catastrophe or abandonment stage refuse. The concentrated location of the clay loom weights indicates that these were left behind at this location. Also the particular location of the tablets

in the east of room C is indicative of a structured spatial distribution of objects. This in turn could be indicative of *de facto* refuse. The objects were however deposited on varying elevations. The soil in between the objects contained burnt reeds and charcoal. This might indicate that the ceiling and perhaps higher storey of the structure had burned and collapsed. Consequently, perhaps a portion of the floor level assemblage of these rooms is the result of this collapse. This would explain the presence of objects on the floor of room C, which was probably not accessible due to the construction of wall G.

In conclusion, the most likely explanation for the deposits in rooms B and C appears to be a combination of abandonment stage refuse and structural collapse. Whether the objects which have fallen down from the second storey were left there as *de facto* refuse or were still used is unclear. Whatever the case, it is likely that the objects were once part of the activities which were carried out in the general area. Therefore while room B served as a domestic structure, as apartment, the higher storey was used for repair and storage of ceramics. Unfortunately this does not explain the presence of the tablets in room C. Conceivably, these were discarded in the room after the collapse of the upper storey of this house.

### 3.3.4.3 *Space E*

Less clear in architectural layout than other spaces in area 3 of the NE sector, space E is interpreted as an open courtyard, because the clay floor (BG) was compacted by rain water (Brüning and Plug 2016). The space was entered from the large courtyard of area 4 and gave access to rooms A and D. Four pits were found in the east of the courtyard. Remarkably, these pits yielded large quantities of animal bones, possibly the result of cooking activities in room D.

Similar to rooms A, B and C the courtyard yielded a small amount of registered objects. In the west two pot stands were found and a cluster of objects was discovered in the south-eastern corner. Similar to room A, it is suggested that either the space was regularly cleaned or that the activities which were carried out in this room did not result in the accumulation of objects. The two pot stands can still be interpreted as abandonment stage refuse but these do not indicate a specific function or use of the courtyard.

The cluster of objects in the south-east was probably deposited in another manner. The cluster consists of 27 envelope fragments, 3 sealings and a fragmented ceramic bowl. The similarity of the objects indicates that they were discarded as a group after use. The fact that the deposit is composed of fragmented objects and their location in the corner of the room further suggest that the deposit is either primary or provisional refuse. Either way, this suggests that the envelopes were opened in this space. Use of the courtyard in the administrative domain ties in well with the notion of the adjacent room being the private residence of the *dunnu*'s main administrator, the steward (see above). The courtyard could have been used to receive guests and to handle day to day business. In a later stage, the courtyard may have functioned in conjunction with the adjacent kitchen (see below), as is indicated by the large amount of animal bone waste.

#### 3.3.4.4 Room D, the kitchen

Archaeologically by far the most intriguing space in this area is room D. This small space has yielded extensive remains of cooking structures as well as vast amounts of finds (figure 3.42), some related to the kitchen function, others definitely not. The text below first describes the architectural layout of the space, after which the finds are discussed.

Before the southern walls of area 3 were built, the space was a large courtyard in front of the central building. By the construction of the walls, the passage along the central building was made much narrower. Room D was rather small, measuring 2.5 by 4 meters. The room had two doorways, one to its north and one in the eastern wall, towards courtyard E. The room contained a small niche in the north-western corner, possibly used as a cupboard.



Fig. 3.42: Southern part of the kitchen, room D of area 3 of the north-eastern sector, looking west (photo by P.M.M.G. Akkermans).

After the construction of the walls an extensive cooking structure was built in the room. Both on the northern as well as on the southern side of the room several fire places were constructed. Curiously, the cooking installation in the south was constructed while leaving some 25 centimetres of space between it and the southern wall. Perhaps this was done to prevent fire damage on the wall. This southern installation consisted of five separate fire places next to each other. The northern cooking installation was badly damaged by a later pit dug through it but there was evidence for at least two fire places in this structure. It is likely that during the use as a kitchen the space was not fully roofed, so that light could come in and smoke could get out. This is however not a required feature. A roof or second storey on top of this kitchen cannot be excluded as a possibility.

The cooking installations were composed of several small mudbrick walls which created niches in which a fire would burn. The niches would function as braziers on which pots could be placed. The fire places have a considerable width between 40 and 50 centimetres with one exception of a small fire place in the west measuring 20 centimetres in width. The fire place walls were preserved to a height of 40 centimetres, the surrounding walls were preserved to a higher elevation which suggests that the fire places were preserved completely. The considerable width of the fire places indicates that large vessels were used in this kitchen. This in turn indicates the considerable size of the meals which could be prepared in this room.

### 3.3.4.5 Finds relating to the kitchen

49 objects were registered from the floor and fire places of room D. 13 of these objects could be related to preparation and serving of food (figure 3.46; deposit 108). Many ceramics which were deposited in this room were however fragmented and therefore not registered. The original number of kitchen-related objects was therefore probably higher. Several of the registered ceramics stand out because of their unusual appearance or distant provenance (figure 3.43). Most

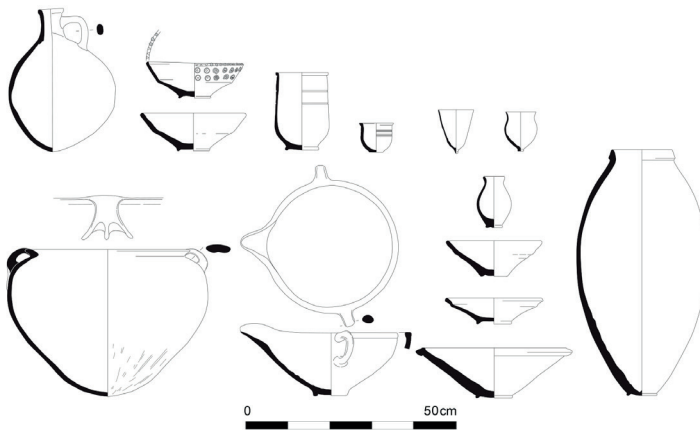


Fig. 3.43: Pottery from the kitchen, room D of area 3 of the north-eastern sector (from: Duistermaat 2008: Fig. VI.2). The pot in the lower left is cooking pot P93-308.

exceptional is the presence of one large broken but reconstructable pot which was deposited in the middle of the room (P93\_308). This pot is a large cooking pot with a rim diameter of 43 centimetres and a blackened base, indicative of its use on a fire. The pot had a capacity of over 40 litres and was produced of clay from Ugarit (Duistermaat 2008: 546-7). Its size indicates that it could have easily stood on the fire places in this kitchen and therefore most probably has.

The ceramic assemblage however yielded more unusual items. Several spouted bowls which were also found on this floor probably originate from the Jezira region (Duistermaat 2008: 532). A number of black ceramics yielded remarkable decorations not seen anywhere else in the *dunnu*. Thin section analysis of these ceramics has however shown that they were made from local Balikh clay (Duistermaat 2008). The pottery assemblage which was deposited on the kitchen floor therefore is composed of a large variety in shape, function and provenance. The objects comprise pots for food preparation, and serving.

### 3.3.4.6 Administrative artefacts and special finds

The majority of objects which were registered in this space did not relate to cooking activities. These objects have probably been deposited after the space was no longer in use as a kitchen. But how and why these objects were deposited here is unclear. The objects comprise of a large concentration of administrative artefacts (tablets and envelopes; deposit 194) and a selection of objects which can only be grouped with the term 'special' objects (see below; deposits 136-40). These special objects were discovered in the fire places of the kitchen. None of the tablets or other 'special' finds exhibited fire damage so they must have been deposited after the use of the space as kitchen.

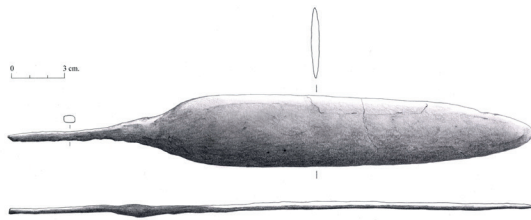


Fig. 3.44: Bronze spearhead from the kitchen of area 3 of the north-eastern sector (fig. by R. Timmermans).

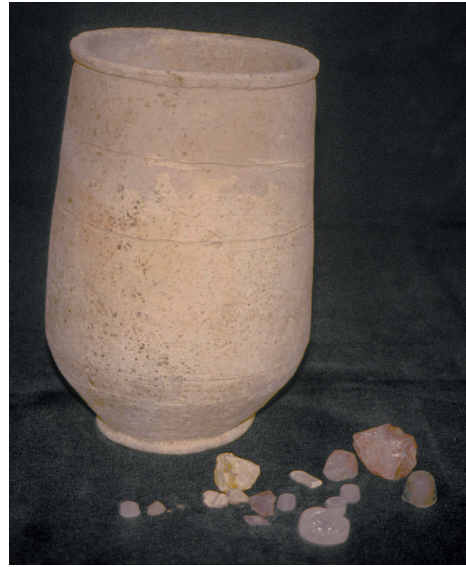


Fig. 3.45: Ceramic grain measure with bead maker's toolkit from the kitchen of area 3 of the north-eastern sector (photo by P.M.M.G. Akkermans, adapted by author).

The group of administrative objects consists of one sealing, about four envelopes and twenty tablets. They were deposited mostly against the western wall of the kitchen, partly lying on the western part of the cooking installation, partly on the floor. Their spatial distribution seems to indicate that a collection of objects has fallen against or along the west wall. Some tablets were totally fragmented. These fragments were however located very close to each other, indicating that they were broken at the spot and not transported. Their concentration against the west wall could indicate that the tablets were stored overhead in a cupboard or in a bag and fell down after abandonment. It was suggested before (Akkermans and Wiggermann 2015) that the tablets had fallen down from a higher story. The peculiar presence of administrative objects in a kitchen could indeed be explained by this notion. It is however completely unclear how the upper structure of the space was constructed.

The tablets were not simply deposited on top of the rest of the floor material, as one tablet was found lying on a shard which in turn was lying on top of a tablet. The process by which the tablets and associated objects were deposited on the floor of this room could therefore have been both a catastrophic event including the collapse of the walls as well as an act of secondary discard. As the soil in the room covering the objects was described as loose brown soil and not full of complete mudbricks, the possibility of secondary discard is more likely. The discard of large amounts of tablets was attested for in many places in the *dunnu*. Often the discarded collections were part of a layer which was deposited to fill a room for a new floor (see for instance paragraph 3.2.4). Perhaps the tablets in the kitchen area were deposited just prior to the deposit of soil which covered them.

There is one group of additional finds however which complicates the understanding of the abandonment of this space, the above mentioned 'special objects'. Two bronze objects (a long pin and a spearhead; figure 3.44), two bone objects (a comb and a piece of inlay) and a so-called ceramic grain measure containing the toolkit of a bead maker were found. The toolkit

consisted of several semi-precious stones, some flint implements and a bronze item (figure 3.45). These five finds were located in the fire places. The objects however neither relate to the cooking activities nor to the administrative objects attested in the room. Additionally, these objects appear to have no functional relationship with each other, except that they are all 'special' or apparently 'valuable' items.

The long bronze pin (24 centimetres long) and the spearhead (28 centimetres long) were undamaged and undoubtedly of a significant practical and economic value. Equally, the ceramic container with the implements and unfinished beads must have been of considerable worth. Considering the replacement cost of these objects it would be expected that an unintentional process underlies their deposition. However, as the objects are relatively large it seems unlikely that they were casually lost in the kitchen. There is however also hardly any indication for a catastrophic event to have occurred, other than the occurrence of the valuable items. This leaves us with one alternative explanation – that the objects were deposited in an act of caching. In this process valued objects are deliberately deposited into the ground for ritual reasons (ritual cache) or to be picked up later (banking cache). As the location in which the items were deposited is not suited for reclamation, the latter however seems unlikely. A ceremonial deposit of valuables is however also not strongly supported by other evidence. The objects are of a highly varied nature, both in material characteristics as well as functionally. The lack of clustering in the deposit also suggests that this was not the result of a structured deposition.

In the discussion above the artefacts which relate to cooking are interpreted as primary refuse. The tablet concentration is however considered secondary refuse, and most of the 'special' objects are believed to have been deposited in a different manner yet. Perhaps, if the 'special' were deposited during a catastrophic event such as a fire and subsequent collapse, then the deposition of the tablets should also be interpreted in this vein.

In conclusion, the few bronze objects and the bead maker's toolkit illustrate the complexity of deposition processes in abandoned structures. While the artefacts which relate to cooking are easily associated with the space, other objects, which would seem intrusive, are harder to link with the general narrative of the space. The presence of the tablets and 'special' objects is interpreted to represent either a deliberate discard process related to the construction of a new floor level, as the result of a catastrophic collapse or a complex process in which valuables were deposited deliberately with a ritual connotation. The most likely interpretation seems to be that the objects were left behind in the structure and perhaps forgotten and simply left behind. Their location in the oven structures is perhaps due to an accidental drop from a shelf of cupboard.

#### *3.3.4.7 Conclusion*

The north of area 3 of the north-eastern sector consists of two large rectangular rooms (A and B) which were interpreted as domestic spaces. Room A may have been used to accommodate groups of people for large dinners. Room B was more likely used as a residence. It is connected to a toilet structure in the north and yielded several finds which are indicative for domestic activities such as a group of loom weights. The vast majority of finds from this room may however be related to the collapse of an upper storey. It is suggested that this upper storey was used for the storage and repair of ceramics.

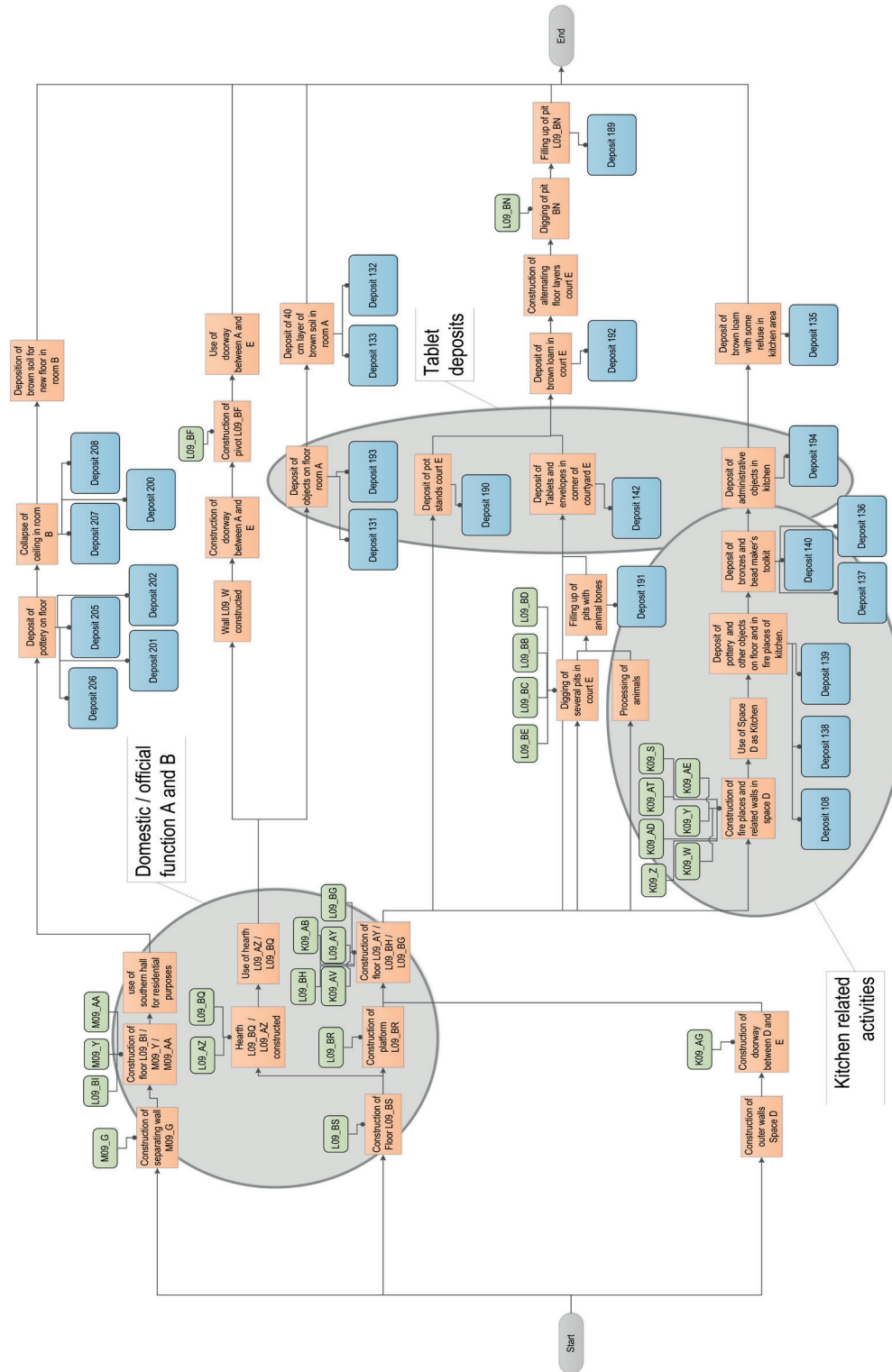


Fig. 3.46: Sequence of Events of area 3 of the north-eastern sector.

South of these rooms a kitchen (D) and courtyard (E) were present. The courtyard did not yield many finds, except for a collection of clay envelopes in its eastern corner. These objects indicate that the courtyard was used by an official during administrative activities. At some point however the court was also used for the discard of kitchen related refuse. This perhaps signifies a new use phase of the courtyard (figure 3.46).

The kitchen, room B, was composed of at least six fire places which had been constructed at the same time. Because these fire places were probably constructed simultaneously, and nearly all of them were of considerable size, the kitchen was probably constructed to produce large quantities of food. A large cooking pot which was found in the room was probably used on one of the fires. Its capacity was approximately 40 litres. This volume can be used in the calculation of the amount of food which could be prepared in this kitchen. If four similar pots were used simultaneously, filled for three quarters, 120 litres of food could be prepared in this kitchen. Taking into consideration the possibility that the cooked food was part of a larger meal, a maximum amount of intake per person would have perhaps been half a litre. The total amount of people who could be fed would then be 240, quite a large group indeed. The unusual pottery which was used and deposited in the kitchen indicates that this was not a common practice in the *dunnu*. The resulting interpretation for this kitchen could be that it was constructed only for the preparation of one or several large banquets. Particularly the presence of luxurious serving dishes could be an indication of a high profile dinner.

After the kitchen was no longer in use as such, many objects ended up on its floor and within the fire places. Many cuneiform tablets and other administrative documents indicate that these were perhaps discarded as secondary refuse. However, the presence of a number of objects with an apparent high replacement cost imply that other processes may have been responsible for the deposit. It is therefore possible that the large amount of objects have ended up in the kitchen after a catastrophic event such as a fire and subsequent collapse.

### 3.3.5 A residential corner (area 5)

Area 5 is closely connected to area 3 (figure 3.47). The area consists of a corridor (E) which leads to a toilet (D), a small room in which a cesspit was placed (G) and a long court which may have been used as stable or public space (H). Space F was closed off at the start of the sequence discussed here.

In the north-eastern corner of the area an abutment was constructed of five metres wide. This large construction was characterized before as one of the corner towers of the fortress (Akkermans and Wiggermann 2015: 98). Also in the North-east thick walls seem to illustrate the presence of a second storey and perhaps a corner tower (*ibid.*). Additionally, a set of stairs was located in corridor E in the phases preceding the sequence described here. Although these stairs were removed at the start of the sequence, an upper storey was still in use as is discussed below. The military connotation which is related to towers is in stark contrast with the internal layout of the area. The layout and finds from the area indicate that it was used mainly for domestic use.

#### 3.3.5.1 Corridor and toilet

Corridor E was remodelled several times. The most noticeable adaptations occurred just prior to the sequence described here. In a previous phase a long stairway had run along the wall. The bottom part of these stairs was cut to make way for the entrance. Additionally, two small

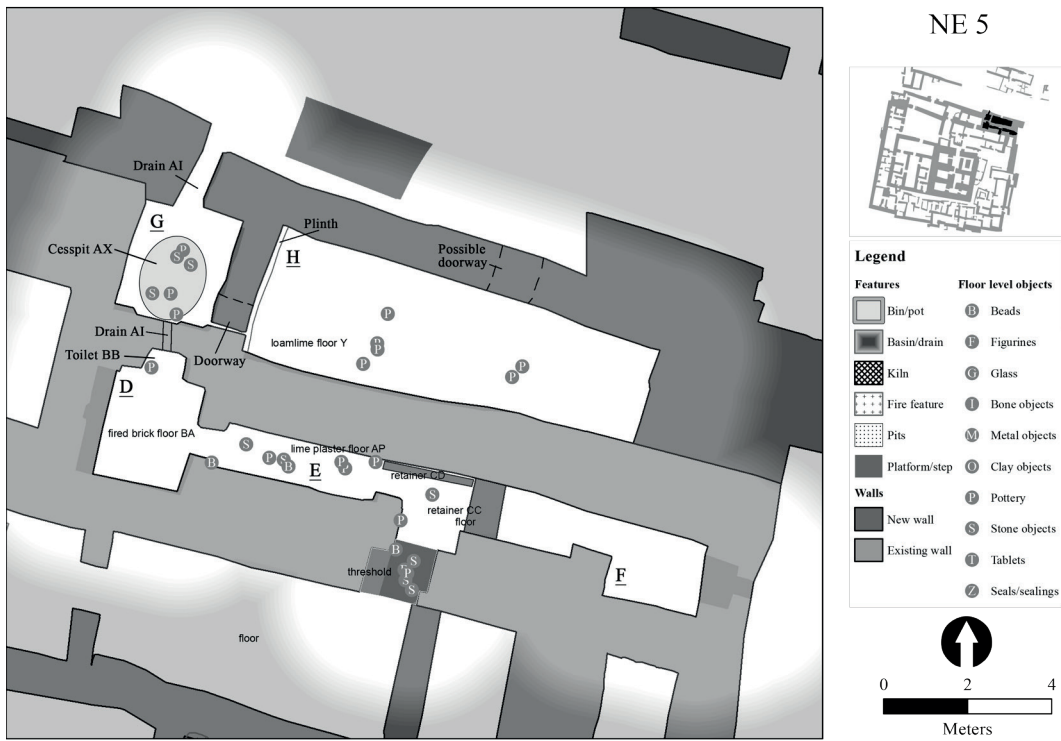


Fig. 3.47: Architecture and floor level finds from area 5 of the north-eastern sector.



Fig. 3.48: The toilet in Room D of area 5 of the north-eastern sector seen from the top (photo by P.M.M.G. Akkermans).

retaining walls (CC and CD) were constructed inside the corridor which blocked the eastern part of the original hallway (space F). After these alterations the corridor led to the toilet at its end (D). A loam floor was constructed in the corridor (AP/AB). The toilet was fitted with a bitumen-lined mudbrick floor (BA). Additionally, the lower parts of the walls in the toilet were lined with a mudbrick plinth running all along the room. The toilet itself (BB) was constructed of two raised platforms in a niche and a drain (AI) running through the wall into a cesspit (AX) on the other side (figure 3.48).

Finds from the corridor and toilet consist of eight damaged ceramics, seven stone tools, twenty beads and one broken cuneiform tablet (deposits 200, 201 and 202). More fragmented pottery shards were found on the floor of the corridor but because of their fragmented nature they have not been registered as objects. The large amount of ceramics in this deposit is similar to the situation in the room to the south. This large room, room B of area 3, was covered with large pottery fragments which have probably fallen from a higher storey (see paragraph 3.3.4.2). Possibly this was also the origin of the deposit in the corridor.

The large amount of beads in the deposit is striking. The assemblage consists of seventeen glass beads, one bone bead and two pendants. Of these pendants one was made of obsidian and the other of shell. The beads and pendants were found in various places in the corridor and in the toilet, displaying a wide spatial distribution. This distribution suggests that the objects perhaps fell from an upper storey as well.

In conclusion, spaces D and E were constructed to function as corridor and toilet. No other use of these spaces can be deduced from the objects which were found on the floors as these probably fell down from an upper storey (see figure 3.49). The finds do indicate that after abandonment the upper storey of these spaces was littered with objects, amongst which, a collection of beads and pendants. Perhaps this indicates that this object assemblage was left in a hurry.

### 3.3.5.2 *The Northern courtyard and cesspit*

The spaces in the north of the area consist of a small room containing a cesspit (G) and a courtyard which could possibly be accessed from outside of the *dunnu*. In the preceding phase the cesspit was located in an open space. At the start of this sequence the northern walls were constructed. A gutter (AI) was constructed which ran from the cesspit through the outer wall. In courtyard H a loam floor (Y/V) was constructed and a mudbrick plinth against the western wall. Additionally, a doorway between G and H was constructed.

Cesspit AX yielded four carinated bowls, two grinding slab fragments and a hammer stone. Because the objects are fragmented, low in apparent value and are not clearly structured, the deposit is most likely a secondary refuse deposit. Therefore, after the cesspit was no longer in use, the pit and the room were probably used as refuse heap.

Only six damaged carinated bowls were found on the floor of courtyard H. Because these objects could be used for a large variety of activities their presence on the floor of the courtyard does not aid in the interpretation of the space. Because the doorway into courtyard H was located on the outside of the *dunnu* proper, in its northern wall, the space may have functioned as a stable or public space. Perhaps the courtyard was used as a market stall or as a tavern. The entrance into space G would in that case have been convenient for those guests who needed to relieve themselves.

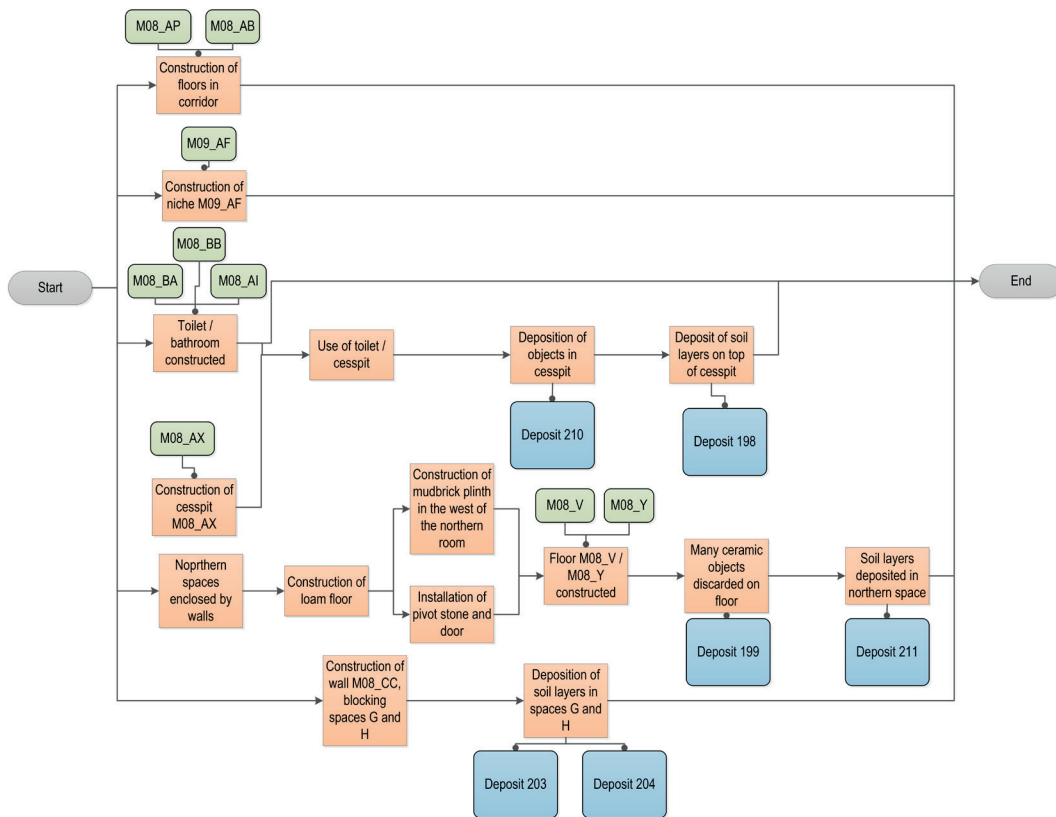


Fig. 3.49: Sequence of Events of area 5 of the north-eastern sector.

### 3.3.6 A courtyard and ephemeral structures (area 4)

Area 4 of the north-eastern sector is composed of a large courtyard and corridor along the central building (figure 3.50; A). Additionally, three small structures were present in the area. Structure B measures 7.5 by 3 metres and may have functioned as small domestic structure. Structures C and D are more ephemeral in nature and appear to have functioned as storage space.

The area, and in particular the courtyard, was important for the circulation of people through this part of the *dunnu*. It would have served as the connecting space between the south-east and the northern sectors of the *dunnu*. In earlier phases of the *dunnu* also the central building was reached through this area. The construction of walls to the north of the central building however complicated this route. It is therefore possible that during the phase discussed here, the courtyard of area 4 was not used to access the central building.

Unfortunately this part of the settlement was not excavated to a great depth, and within the few excavated deposits not a single floor layer was recognized. The courtyard, corridor and the structures were therefore probably fitted with a simple loam walking surface. Only in structure B were two features excavated. In its north-western corner an oven was constructed (oven V; figure 3.51). Adjacent to this oven a pit was found which was filled with animal bones (pit X; figure 3.52). These features suggest that the room was used for food preparation. This may indicate that the structure was domestic in nature.

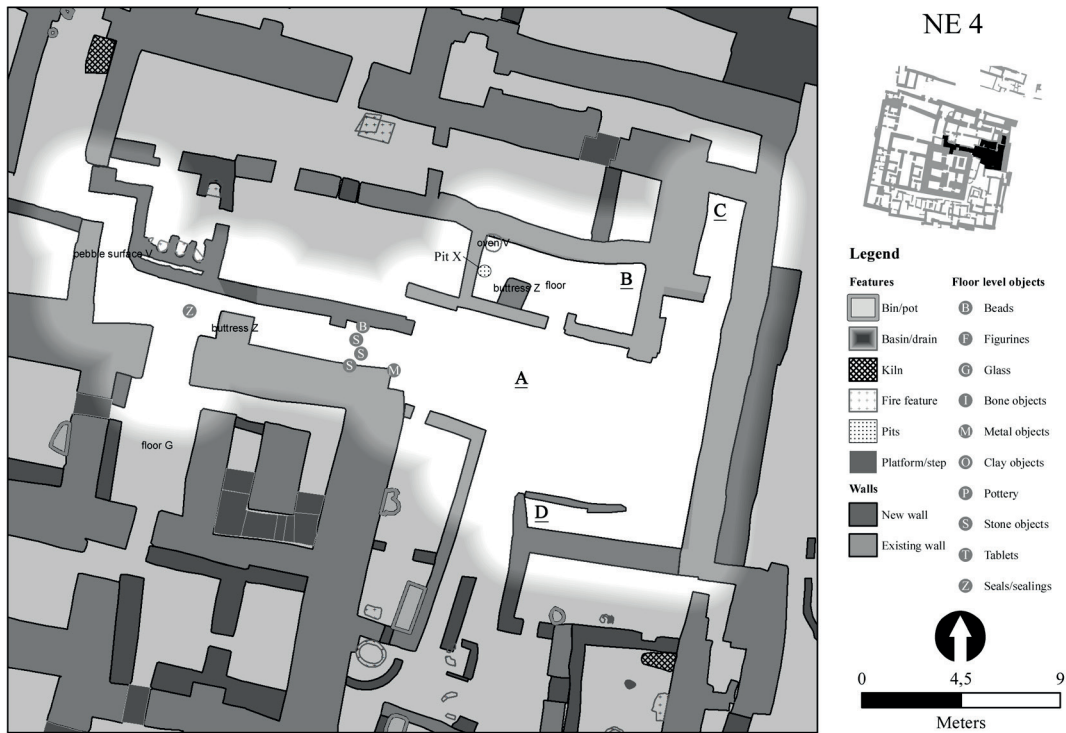


Fig. 3.50: Architecture and floor level finds from area 4 of the north-eastern sector.

Finds from area 4 are very sparse. Although excavation reports mention that many ceramic shards were found on the floor of the courtyard and corridor, only six objects were registered as objects, all in the corridor. Apart from one large complete grinding slab all of these objects are fragmented and damaged and were probably discarded as secondary refuse (deposit 196). One complete object however, an Assyrian cylinder seal, was found right in front of the entrance to the central building (deposit 197). Possibly one of the officials who worked in the *dunnu*, after administering and sealing certain goods in the central building, lost the item at departure.



Fig. 3.51: Oven V in room B of area 4 of the north-eastern sector (photo by P.M.M.G. Akkermans).



Fig. 3.52: Pit X filled with animal bones in room B of area 4 of the north-eastern sector (photo by P.M.M.G. Akkermans).

As mentioned, the location and layout of the area indicate that it served an important role in the circulation of people in this part of the *dunnu*. This function was however more prominent in previous phases. The large open space in the middle of the area probably functioned as open courtyard in which goods could be stored and traded. Equally it could be regarded as the meeting place for men and women working in the *dunnu*.

Space B was interpreted as a domestic structure, used for the preparation of food. Perhaps it was also used to house some people. Other structures in the area (C and D) appear too ephemeral in construction and size to have functioned as residences. Perhaps these structures were used for storage in conjunction with the courtyard.

As a consequence of the small amount of data about the activities in this area the Sequence of Events (figure 3.53) is quite straightforward. It is assumed that the area has served a multitude of functions in the public sphere, as marketplace, meeting point and for ad hoc storage of goods. At some point the courtyard and surrounding spaces were abandoned, and they were filled with rubble and soil with many objects such as ceramic shards and broken grinding stones.

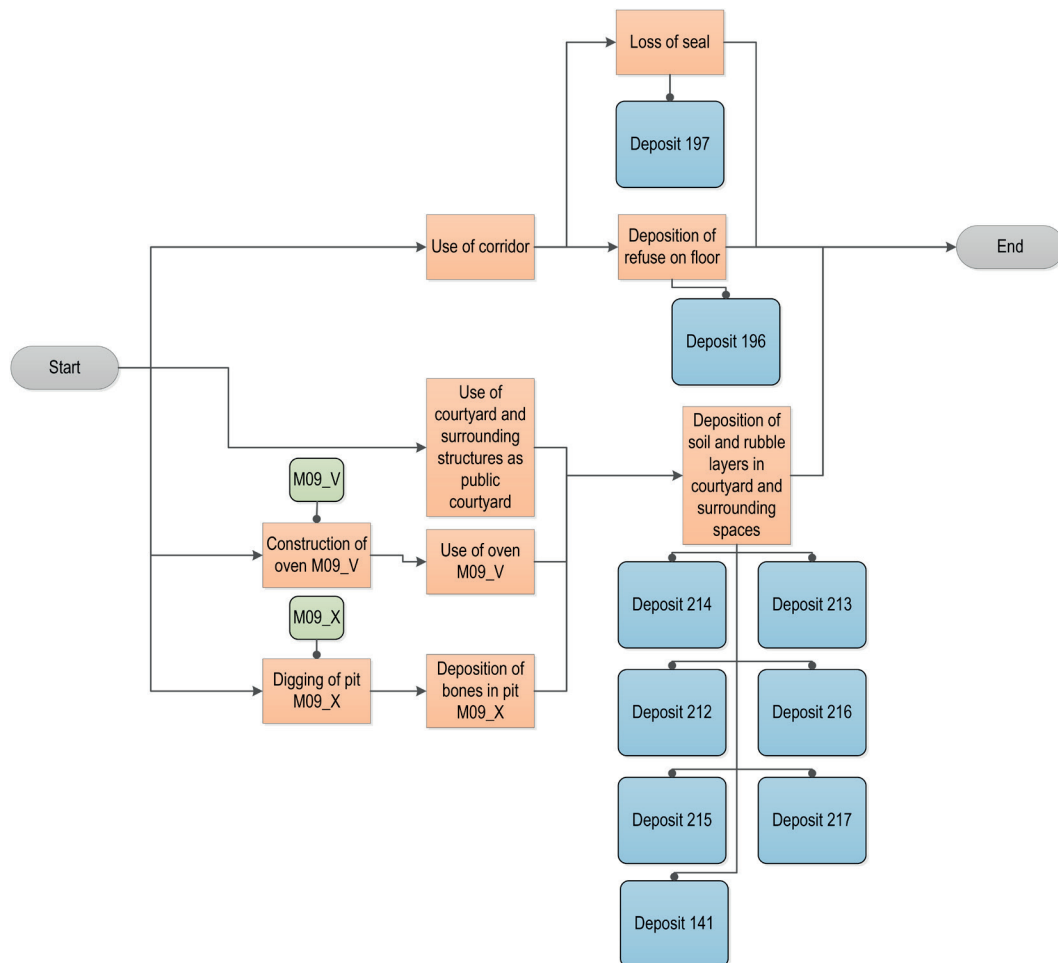


Fig. 3.53: Sequence of Events of area 4 of the north-eastern sector.

### 3.4 THE MONUMENTAL RESIDENCE

#### 3.4.1 Introduction

Two buildings very prominently stand out in the overall *dunnu* architecture: the so-called “central building” or “tower” and the “monumental residence” or “palace”. This residence was subject to much interest because of its apparent demise and downgrading to a mere barn (Akkermans and Wiggermann 2015). For the discussion here the area is divided into four parts, largely based on the route one would take upon entering the structure: first the front (northern) courtyard and associated doorways are discussed (area 1; figure 3.54). Next, the central hall and the eastern rooms (area 3 and 4) are considered, after which the western rooms including the associated bathroom outside the original walls (area 2) are discussed. Finally, an attempt is made to merge the chronologies from these separate areas and establish what the changing function and use of the building through time was.

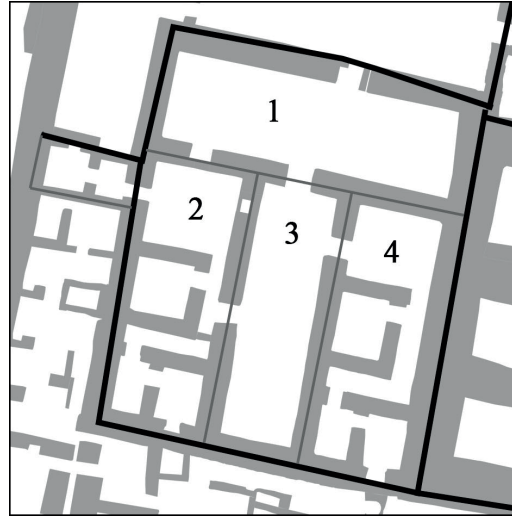


Fig. 3.54: The areas in the residence.

#### 3.4.2 Front courtyard (area 1)

The entrance to the monumental residence at the start of level 5 was quite grand: the outer wall was reconstructed to an imposing height of four or five meters (Lanjouw 2016) and the entrance was fitted with double doors. Also, the baked brick floor of the large courtyard in front continued through the double doors into the inner courtyard (figure 3.55). Apart from a representative function, the architecture was also of a more mundane practical nature. The high walls might have for instance provided added privacy and security to high officials working and reposing inside. Also the baked brick floor of the inner courtyard (AD/W) may have been constructed in part to be resistant to weathering. It sloped towards the entrance, for the efficient drainage of rain water. Two doorways led from the courtyard into the rooms of the residence. The middle doorway, leading to the central hall, has probably remained the same throughout the use of the residence. This doorway was probably fitted with double doors as two pivot stones (Y and Z) indicate. The second doorway was constructed to its west, leading into the western apartment (area 2). This doorway, like the main entrance into the courtyard, was remodelled extensively throughout the use of the residence.

The main entranceway into the courtyard was renovated at least twice before the residence was abandoned. The first renovation consisted of the addition of a wall (CH) on the eastern side of the doorway, a development seen in many doorways around the central court-

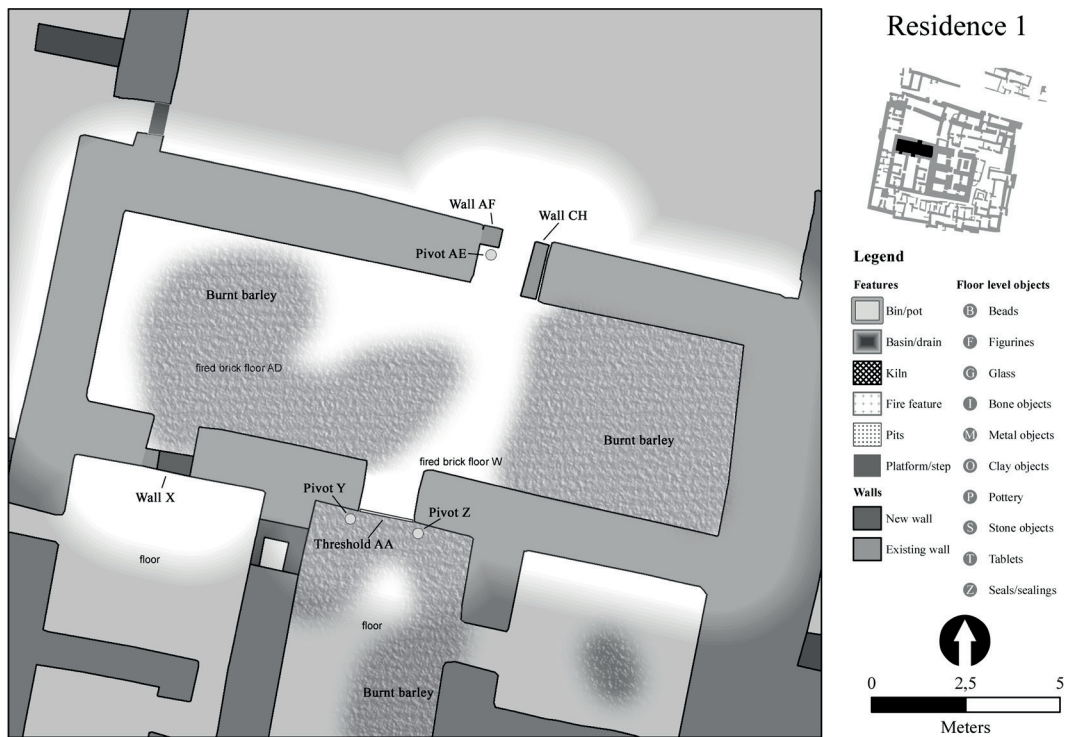


Fig. 3.55: Architecture and floor level finds in area 1 of the residence.

yard. This wall was probably put into place to buttress the doorway structure. On the western side of the doorway also an additional wall (AF) was placed, this time only a single mudbrick wide and long. Behind this wall a pivot hole (AE) was constructed to serve as the swivel point for a single door. The two separate walls in the doorway do not make sense as a single renovation and therefore imply two renovation events. A plaster layer on the inside of the western wall (AF), which continues along the residence walls, indicates that these renovations were not provisional, ad-hoc alterations but were purpose built for a longer time.

As mentioned above, also the doorway from the courtyard into the western apartment (area 2) was altered significantly through time. Initially the baked brick floor continued into the doorway and the door was used as passage. Later, a blocking wall (X) was constructed in the doorway. This wall was plastered on the side of the apartment, obscuring the former presence of this doorway. On the side of the courtyard a niche was created which may have been used for storage. Later the mudbrick floor which was present within this niche was taken out.

The changes to the architecture of the residence were not restricted to the doorways. In large parts in front of the residence, as well as inside, the baked brick floor was demolished. It is conceivable that these tiles were reused somewhere else and that the spaces described here simply lost their function for the time being. Many activities were still acted out however both inside and outside of the residence despite the squalid state of the floors.

#### 3.4.2.1 *Abandonment and conflagration*

The end of use of the front courtyard of the residence is indicated rather dramatically by the presence of large heaps of burnt barley on its floor. As the floor under the barley as well as the walls of the inner courtyard were burnt, it is most likely the cereals burned at this very spot. After the fire had ended, through time several layers of brown soil with refuse (deposit 146) were deposited on top of the burnt grain. Additionally, the heaps of charred grain were affected by wind and rain, visible as lenses of charred grain in the sections through the room. Among the deposits of refuse and other layers 27 objects have also been registered.

The objects from within these dump layers are characterized by a large variety in find categories, and low structuring. Seventy percent of the finds are pottery and stone objects, the remaining thirty comprising of clay objects, a bead, two small bronze items and one tablet fragment (see below). 85 percent of objects are broken or fragmented, the few complete objects are grinding slabs and one carinated bowl. Only two registered objects were described as being burnt. Two carinated bowls were burnt on the inside, possible through the use of them as an oil lamp, and are therefore not necessarily related to the conflagration in the courtyard. All characteristics of the deposit indicate that the objects were deposited here as secondary refuse and therefore do not relate strongly to the activities which were carried out in the courtyard. Interestingly however, the tablet fragment was found only eight centimetres above the floor level. The tablet describes a census of personnel, listing about 200 dependents and their rations. The presence of this tablet indicates that in the vicinity of the courtyard, despite the dilapidated architecture, the central administration was still at work.

#### 3.4.2.2 *Conclusion*

The analysis of the front courtyard indicates a strong difference between two distinct types of use; initially the residence was used for representative affairs and later, after the dilapidation of the architecture, for grain storage. However, the tablet which was found among the refuse layers may indicate that the building was also in this phase still in use by the administration (see below).

During the initial use of the area the entrance was probably an imposing double door. Also the baked brick floor was in use in this early phase of the building. It is highly probable that during its representative phase, the residence was not constantly in use, possibly it was only opened at the arrival of the owner of the *dunnu*. Broken sealings and faience doorknobs which were found in the large courtyard in front of the residence (see paragraph 3.2.3) may indicate that for a large part of its existence the residence was closed and sealed. This would explain the limited amount of damage and finds which seem to relate to this initial function.

For some reason the residence lost its representative function and the building was renovated several times. These events may have been rather violent and harsh as it would seem from the destruction of the doorknobs and related elements of the central entrance. The objects were simply discarded on the floor of the outer courtyard and the baked brick floors were partly demolished. The entrance was reduced to a single door passage by the construction of several walls inside the doorway. These renovations included new layers of plaster on the walls which continued on the new additions, indicating that these were plastered in the same event. The building



### 3.4.3 Central hall and eastern rooms (area 3 & 4)

The front courtyard of the residence (area 1) gave access to the central hall (area 3), which in turn gave access to the two apartments (area 2 and 4) in the residence (figure 3.57). In this paragraph the central hall and the eastern apartment, areas 3 and 4, are discussed. The entrance into the central hall was constructed with a double door. The hall was fitted with a loam floor. After entering the imposing fifteen metre long hall, the eastern apartment could be entered on the left side. This doorway was constructed with a single door and pivot (AQ). The apartment was composed of a room in the north (A), with a connected corridor (B). This corridor led to a small room (C) and a toilet structure in the south. This toilet structure consisted of two rooms with a baked brick floor. The first room (D) was perhaps used as dressing room while the second room (E) was used as a toilet and perhaps as bathing room. A toilet was constructed against the southern wall, consisting of two raised mudbrick platforms and a gutter which led through the wall into a cesspit located outside the building.

One renovation phase was attested in this area of the residence. The door to room C was originally located in the north of the room. This was closed off at some point and a new door was constructed from the corridor. Perhaps this was done to provide more privacy for the residents.

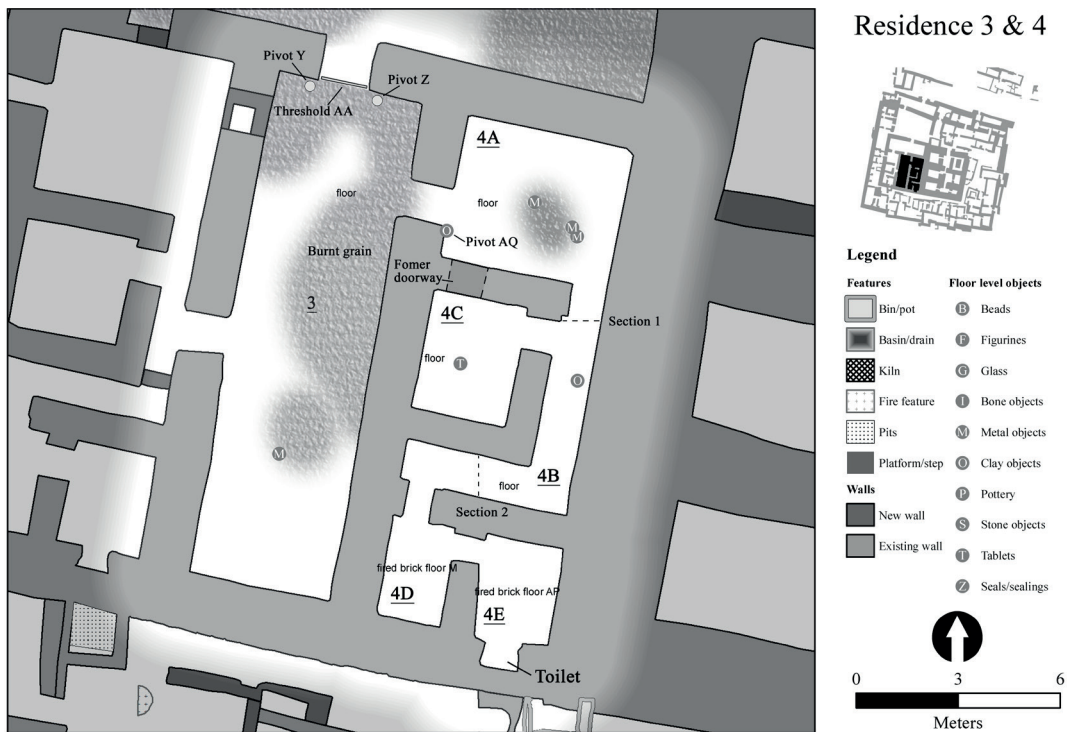


Fig. 3.57: Architecture and floor level finds from areas 3 and 4 of the residence.

### 3.4.3.1 Finds

Only one object was registered on the floor of area 3, the central hall. In the south a fragmented bronze ring was found. Due to its fragmented state it is difficult to assign a function to this objects. Consequently, the floor yielded no obvious indications for activities which were carried out there.

In the eastern apartment six objects were registered. In room A three bronze pins were found on the floor and a fragmented clay sealing was found in pivot hole AQ. One large clay jar stopper was found on the floor in corridor B and a clay tablet was discovered in room C. Perhaps the pins in room A were once part of a garment which was left here. The single occurrence of a tablet in room C may indicate that the apartment was visited by an official shortly prior to the abandonment and collapse of the room.

### 3.4.3.2 Abandonment and conflagration

In the courtyard many indications were found that the residence changed function through time (see paragraph 3.4.2). The architectural modifications of area 3 and 4 were however limited to the blocking of a doorway and the construction of a new doorway in room C of the apartment. Interestingly, although a considerable effort was taken to demolish the baked brick floor in the front courtyard, the floor in the bathroom was untouched. It seems therefore reasonable to assume that the apartment was in use until the onset of the large fire which destroyed the building.



Fig. 3.58: Section 1 (left) and 2 (right) in area 4 of the residence. Section 1 displays a large amount of mudbrick debris, possibly the result of collapse. The deposits in section 2 are layered, perhaps these were the result of a slower process of accumulation (photos by P.M.M.G. Akkermans).

A large amount of charcoal was found in pivot AQ, suggesting that the entrance door of the apartment was still in place. Also fierce burn marks in the south-western corner of the room suggest that the door burned down here. Large pieces of charcoal were found on the floor, possibly charred roof beams, suggesting the roof may have burned and collapsed on the floor. In contrast to rooms A and C, walls and floors in the bathroom were less affected by fire.

Also the walls of the central hall of the residence were affected by fire damage. Additionally, large heaps of charred barley were found along the walls. It is therefore possible that this was the main fuel for the fire which blazed through the building.

After the conflagration the building was abandoned. The burnt remains were left inside the building and in room A there is evidence that walls collapsed into the building. A profile section through the deposits in the north of corridor B (figure 3.58; section 1) reveals that at this location much mudbrick debris was deposited directly on the floor. A second profile section through this corridor further south (3.58; section 2) however illustrates that at this location different processes occurred. The lower deposits are laminated soil layers. Mudbrick debris, indicative for collapse, is present only in the higher layers in this section. Also in room C the deposits consist of numerous horizontally deposited soil layers containing damaged objects. This suggests that at this location the building was used as a refuse dump before structural collapse occurred.

#### 3.4.3.3 *Conclusion*

The central hall of the residence was most likely used for the reception and entertainment of guests. Additionally it was probably used as dining room for high officials residing in the building. The lack of finds from the floor of the hall indicates that the room was not used for many other activities. Equally, the apartment was kept clean throughout its use. It is likely that it was used for domestic purposes until the large fire occurred.

At the moment of the fire a large amount of barley was present in the central hall. This was probably stacked in bags along the wall and was caught in the conflagration. It was suggested for the front courtyard of the residence (see paragraph 3.4.2) that the building had turned into a barn. The evidence from the central hall and eastern apartment suggest that the function and use of these areas however hardly changed. Only the presence of these large amounts of barley in the central hall indicates a use different from domestic activities, albeit to a dramatic degree. Perhaps therefore the use change of the residence occurred only shortly prior to its abandonment. The use of the residence as barn was therefore not as significant as it was supposed from the evidence from the front courtyard.

The fire which occurred in the building was concentrated in the northern part of the residence. In room C and corridor B evidence was found that the area was first used as a refuse dump before the walls collapsed. Therefore the building must have remained standing in its ruined state for some time before later building activities levelled the area (see figure 3.59).

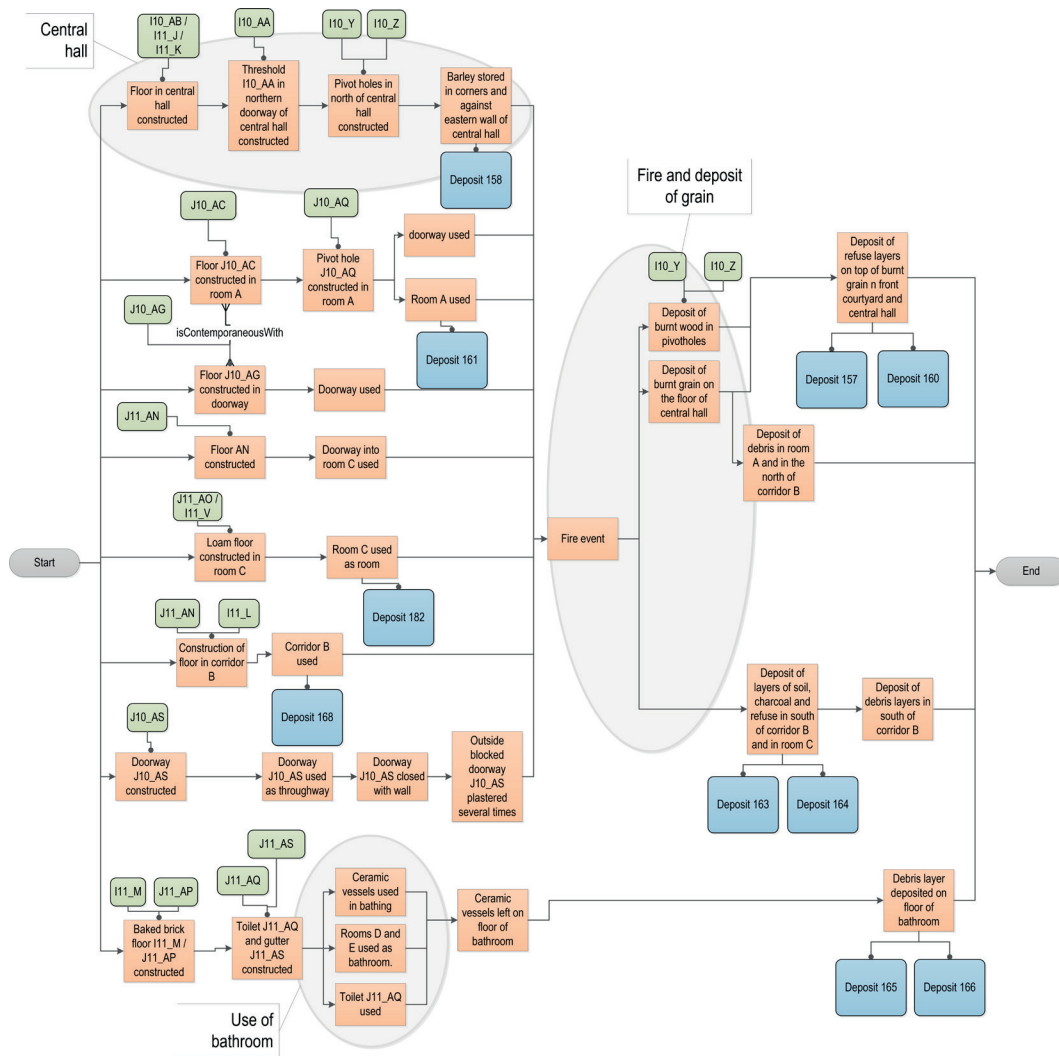


Fig. 3.59: Sequence of Events of area 3 and 4 of the residence.

### 3.4.4 Western rooms and additional bathroom (area 2)

Area 2 of the residence consists of the western apartment and an added toilet structure (figure 3.60). The layout of the apartment is very similar to that of the eastern apartment. Area 2 however was renovated a number of times during use. In particular the construction of the new toilet and the application of imprinted plaster on the walls of the apartment are indicative of several renovation moments. Additionally, three different doorways into the apartment have existed. The end of use is, similar to the rest of the residence, indicated by fire damage.

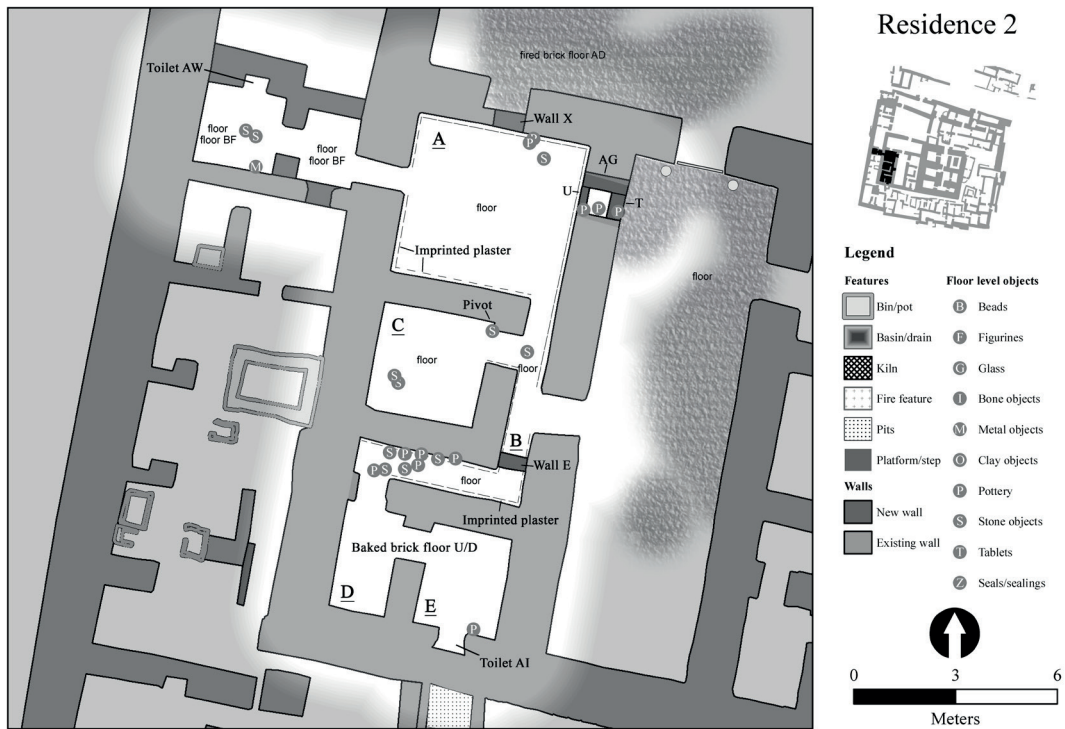


Fig. 3.60: Architecture and floor level finds from area 2 of the residence.

#### 3.4.4.1 *Layout and renovations*

When the residence was constructed the western apartment was composed of practically the same layout as the eastern apartment. A doorway from the central hall gave access into room A which was connected to a corridor (B) in the south. This corridor led to room C and a bathroom structure. This bathroom consisted of an anteroom (D) and a toilet room (E). Both these rooms were fitted with a baked brick floor. The rest of the apartment was fitted with loam floors. Perhaps at the onset of use of the apartment it could also be entered through a doorway in the north, from the front courtyard. The chronological relation between these doorways is however difficult to assess.

At some point, for unknown reasons, the southern bathroom structure was blocked off by the construction of wall E. A new toilet was constructed outside the building which could be reached from room A. Other renovations included the blocking of both doorways into the apartment. A new doorway was constructed from the central hall, which led, through corridor B, first to room C and then to room A. Because the new toilet was accessible from room A, the order in which rooms were accessed was thereby reversed. It is difficult to assess whether these renovations occurred simultaneously. However, because the resulting layout of the area consists of the same access pattern it does seem likely that this was the intended end result of the renovations.

The renovations did alter one important aspect of the apartment. Although the doorway from the front court was completely bricked up and plastered over, the entrance from the central hall was blocked with two small walls on either side of the door (U and T), creating a bin (AE) within the wall. The room was therefore not completely closed off from the central hall. It is unclear why this was done, as it would have resulted in a lack of privacy in room A.

#### 3.4.4.2 *Finds*

A total of 22 objects were found on the floors of area 2 of the residence. Three objects in the new toilet structure in the west are fragmented objects which were probably discarded in this space as secondary refuse. In the corridor in the south, nine objects were discovered. Also these were fragmented and should probably be related to secondary discard.

The remaining ten objects have probably been deposited as abandonment stage refuse. Firstly, a ceramic jar was set in the ground in the toilet in the south. This was originally probably used for sanitary purposes. In room C one stone mortar was found dug in the floor, probably placed there to function as pivot stone. Two other finds from the room are a complete stone grinding slab and an associated grinder. These objects were discovered on the floor lying next to each other. This may indicate that the objects were once used in the room. In room A two carinated bowls and a grinding slab, all undamaged, were found in the vicinity of a small pit in the north of the room. Additionally, two complete carinated bowls were found on the bottom of bin AE, as well as one on top of wall T of this bin. Because all these objects are complete, a catastrophe or abandonment stage deposit is implied. In either case, the objects were originally probably used in this room. Possibly in the last phase of use of the residence, room A and C were used for the processing and distribution of grains.

#### 3.4.4.3 *Imprinted plaster*

Another remarkable feature of the western apartment is the presence of deep imprints in the plaster of a number of walls (figure 3.61). The imprints were created in soft plaster probably with a wooden implement, diagonally from above. The imprints were made with a cylinder shaped object with a blunt end measuring some 2.5 cm in diameter. It is conceivable this was for instance the handle of a plastering tool. The reason behind the application of the plaster is unclear, it was interpreted as decoration but also as a base layer on which a second plaster layer should have been applied which would have hooked into the imprints. The interpretation as a base layer for a new plaster layer seems the most likely explanation, as the technique is known from contemporary mud architecture (Lanjouw 2016 and references therein). If this explanation is correct it means that the job was left unfinished, which implies a hasty departure or sudden change of function of the spaces.

The imprinted plaster was found along the walls of the northern room, the corridor and near the bathroom (see figure 3.60). It was applied before the doorways and corridor were blocked. This means that it occurred relatively early in the chronology of the area. Also, this means that the apartment was extensively used while the imprints were visible. Apparently, the representative, monumental nature of the residence was no longer present at this point.



Fig. 3.61: Imprints in plaster in corridor B (photo by P.M.M.G. Akkermans).

#### *3.4.4.4 Use and the end of use of the western apartment*

After the residence was constructed, it was most likely indeed used as a residential structure. Also the western apartment was used in this way. Curiously, through time the layout and appearance of the apartment changed (see figure 3.62). The imprinted plaster on the walls of the area indicate that the area was no longer in use as an imposing example of residential architecture. Architectural modifications however indicate that the layout of the apartment, and the presence of a toilet, were important aspects of the area. Following this, it could therefore be concluded that the area was still in use as a domestic structure.

Finds from the floors indicate that the rooms were perhaps used for the processing and distribution of foodstuffs. The presence of multiple carinated bowls and grinding tools indicates that the rooms may also have served a different function. Perhaps the area was used to process and distribute barley. It is unclear whether the function of apartment and gran distribution could have existed simultaneously. For instance, the construction of bin AE caused room A to be less private.

The end of use of the western apartment is just like the other parts of the residence marked by a large conflagration. Floors and walls in many places are burned and burnt grain, charcoal and ashes were deposited throughout the apartment. Curiously, burnt grain and charcoal have even ended up on the floor of the southern bathroom too, despite its blocked entrance. Perhaps these layers were deposited after the large fire. Similar to the eastern apartment, the southern spaces were not so badly affected by the fire and other refuse layers accumulated in these spaces as well.

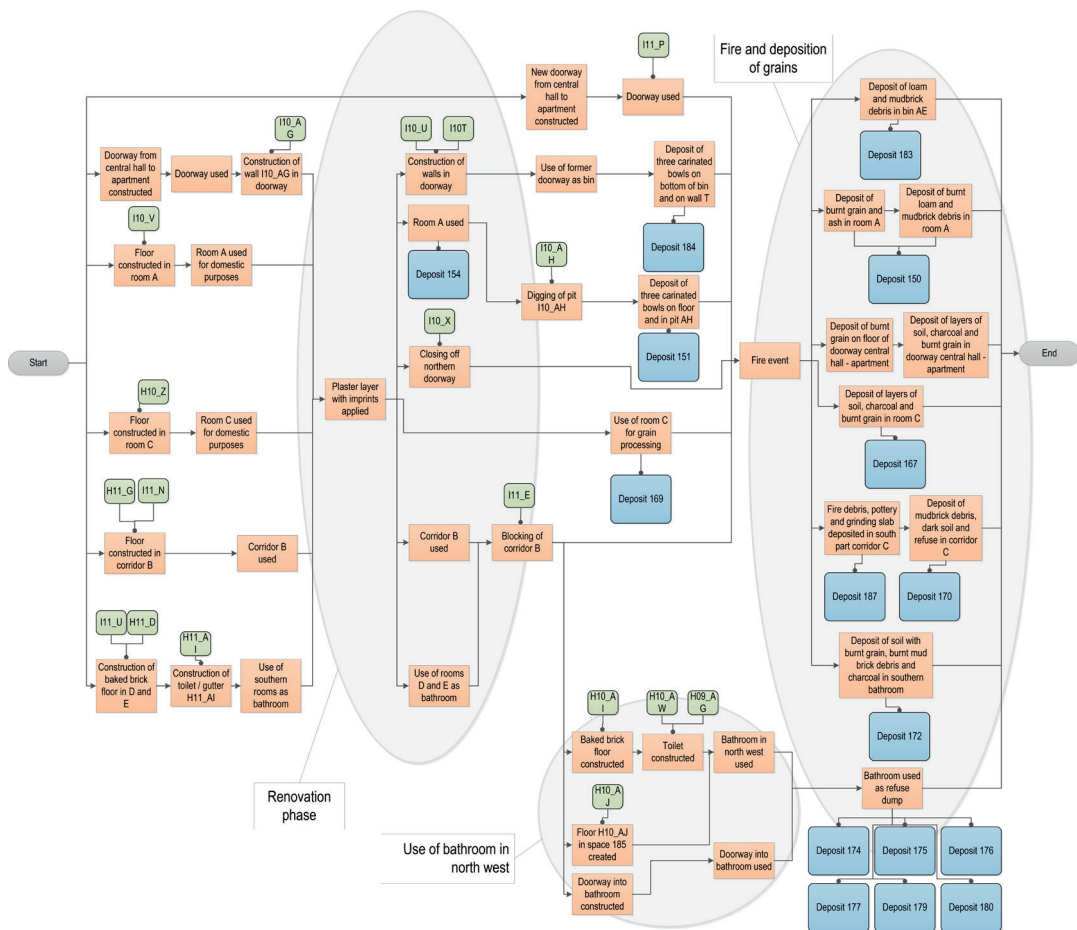


Fig. 3.62: Sequence of events of area 3 of the residence.

### 3.4.5 Function and use of the monumental residence

In its initial phase, the residential structure discussed here was most likely indeed used as a residence. The building was probably used only by the owner of the *dunmu* and perhaps other high officials during their visits. In the intervening time the structure could be locked and sealed as is evidenced by the broken off doorknobs and sealings outside the residence. The occasional use of the residence is also illustrated by a near absence of finds on the floors of the building and few alterations to the architectural layout during this phase. The building was constructed with a large front courtyard and a central hall with two apartments on either side. The front courtyard was paved with baked bricks, as a continuation of the larger outer courtyard. The patio was most likely used for receiving guests and performing administrative tasks. From this courtyard one could enter the central hall, probably used for “wining and dining”. From this central hall the two apartments could be reached. Largely similar in their layout, both apart-

ments are entered in the north into the first room, from which the second room was reached as well as, through a bent corridor, the bathroom. As an exception to the general emptiness of the floors, a couple of jars were found on the floors of the southern bathrooms, which were probably used for sanitary purposes in the bathrooms.

During the use of the building as residence, every once and awhile renovations took place and small changes were made to its layout. In the eastern apartment (area 4) the doorway into room C moved from the north to the east, making it more private. In the western apartment (area 2) a start was made with applying a new plaster layer on many of its walls.

The half-finished state of the plaster layer in the western apartment might be indicative of a sudden and rapid abandonment. However, despite the rough and irregular wall finish, the apartment was in use for a long time after this assumed abandonment. In first instance the rooms may have been used for largely the same domestic purposes. A major change occurred when the southern bathroom was blocked by a small wall and a new bathroom was constructed to the north-west of the building. The reason for this change in layout is not clear, the southern part of the building has not been preserved as high as other parts, obscuring potential structural problems with the walls and roof. During these later use phases the eastern apartment was largely unchanged, while the west wing now had three entrances, two of which were eventually blocked by walls. In the final construction of the western apartment its overall arrangement of rooms remained the same as the original layout which might therefore indicate a continuation of the residential function. The unfinished state of the wall plastering however suggests that the grandeur which was obvious in the first phases of the building had gone. Apparently through time the guests staying in the house were less accustomed to and in need of luxury. It could be postulated that rather than a high ranking figure such as the owner of the *dunnu*, in these last phases the residence was used to house the steward and his family.

The end of habitation of the residence is marked by a large transformation of its apparent function. Large heaps of charred barley on the floors of the courtyard and several rooms of the building attest to a use in the realm of grain storage, processing and distribution. Also the remains of a grinding installation on the floor of room C in the western apartment attest to the use of the spaces for the processing of agricultural produce. It is unclear for how long the rooms were used in this manner. It is highly conceivable that if the fire had not occurred, the presence of the large amount of grains would not have been visible in the excavation. Perhaps therefore this was a common occurrence in the 'residence' simply invisible to the excavators' eye. The low amount of objects which are related to processing and distribution of grains however indicates that these activities were not carried out on a regular basis.

3.5 THE CENTRAL BUILDING

3.5.1 Introduction

Among all the architecture of the *dunnu*, the central building stands out because of its size and solid construction (figure 3.63). The structure is large, it measures 23 by 20 meters, but two thirds of its surface area is composed of walls. These thick walls, measuring up to 3,5 metre in width, were interpreted in the past to have supported several building levels. The structure was therefore, understandably, dubbed “the Tower” in many publications (Akkermans and Wiggermann 2015: 91). In a recent paper about the central building (Klinkenberg and Lanjouw 2015) this interpretation is questioned and a new explanation for the width of the walls is given. In this publication the structure is also considered to have carried a heavy load, albeit not of many storeys but the weight of a large barley supply on the second floor.

The functional interpretations of the building reflect the variety of its potential uses, they include the use as a watchtower, a tablet archive (Akkermans *et al.* 1993: 9) and a jail (Wiggermann 2000: 175; Akkermans and Wiggermann 2015: 98), a prostitutes’ workplace, (Wiggermann 2010: 55), a treasury (Wiggermann 2000: 175), as a storage facility and for domestic activities (Akkermans and Wiggermann 2015: 98). Wiggermann (personal communication) has also tentatively identified the building as a *bit halani*, a ‘workhouse’, which was mentioned in several texts from the *dunnu*. Although all the activities indicated by these interpretations most likely took place in the building, it remains unclear what the main function or character of the building was. In the description below the naming of the rooms (numbered 1-9 in reading order) is used to better relate to earlier publications.

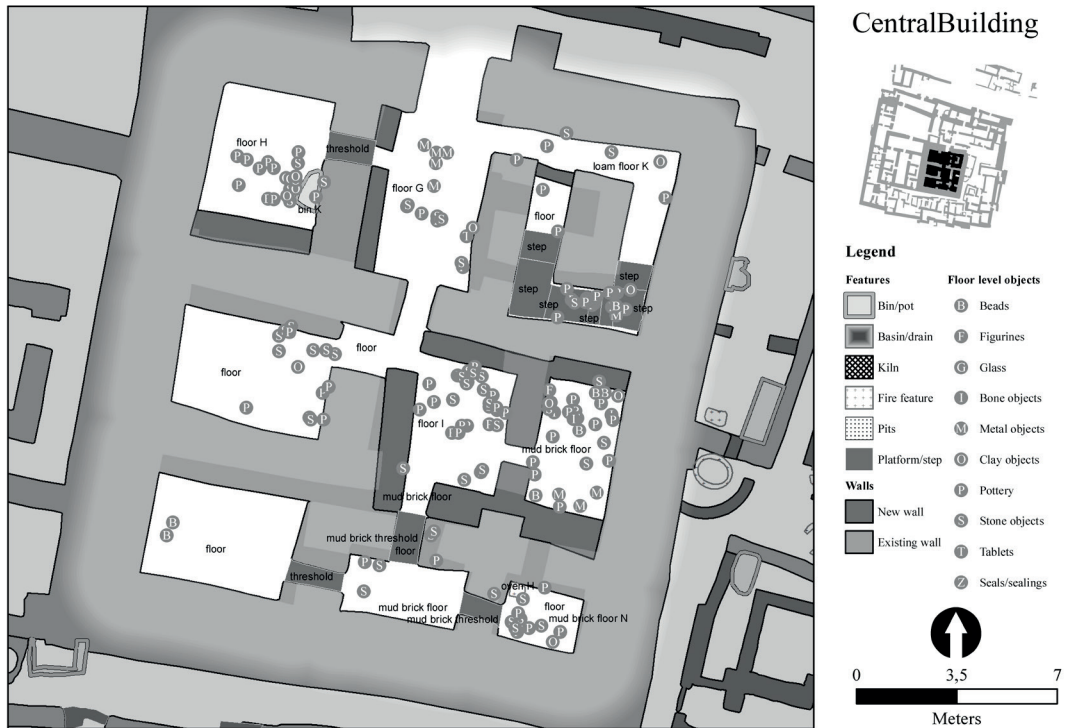


Fig. 3.63: Architecture and floor level finds from the central building.

### 3.5.2 The first construction

The first construction of the central building was ascribed to Level 7. Previously, this first construction has been attributed to Mittani presence at the site (Akkermans 1997: 243; Akkermans and Wiggermann 2015: 90; Brüning and Plug 2016). Its overall layout however did not change in the later phases which are clearly part of the Assyrian settlement. Also the function and use of its rooms display striking continuity. The building was therefore either constructed by the Assyrians or reused by them in the same way it was used before. Because the building may have been part of the earliest Assyrian presence at the site, its architectural sequence described here starts with this earlier phase.

At this early stage the building was constructed with a roughly square ground plan with sides measuring approximately 20 meter (figure 3.64). 12 rooms were constructed within, which are numbered according to the generic 9-room layout of later phases. The structure was entered from the north into room 2. From here, one could enter room 1, travel upwards along the stairs in room 3A or go deeper into the building through room 5. From this central room practically all surrounding rooms of the building could be reached. All doorways were between 1 and 1.6 metre high and constructed with arches (Akkermans *et al.* 1993: 14). The ceilings of the rooms was constructed with large wooden beams or they consisted of mud brick arches, this is not clear from the archaeological remains. The technique of mudbrick arches has at least been used for the doorways and also for the small vaulted room 3B, which could be entered from room 2. Two rooms, 7a and 9, were fitted with a mudbrick floor, room 1 and rooms 6a and b had a lime plastered floor and the remainder of floors were simply made of loam.

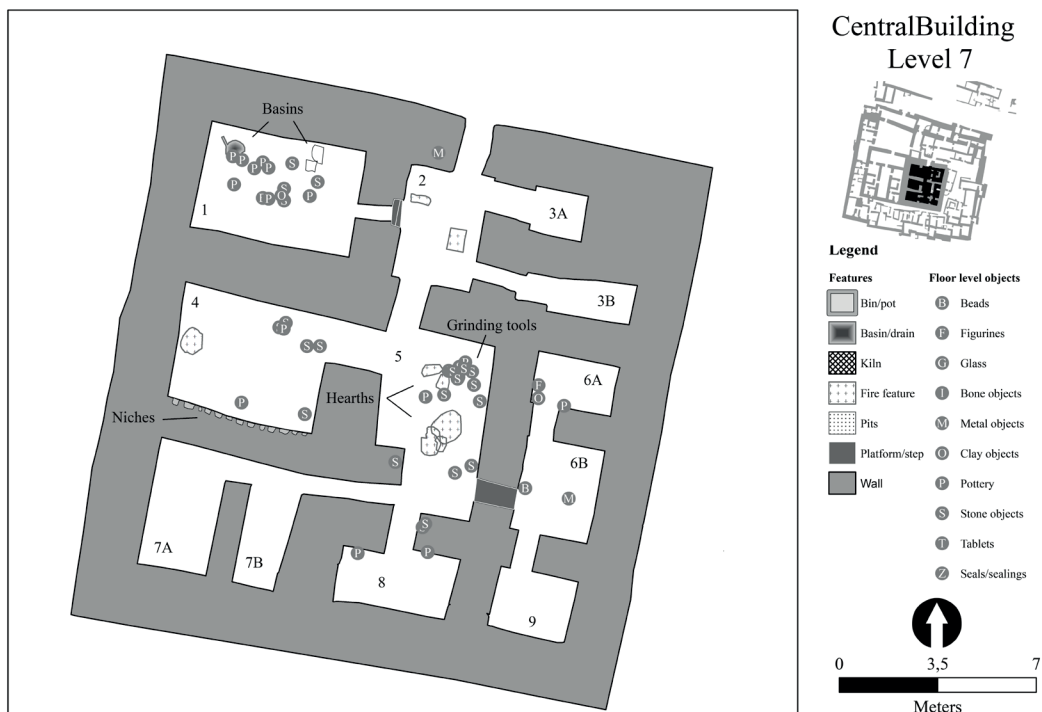


Fig. 3.64: The level 7 central building with finds and features.

Several features were found in the rooms of this early building. In room 1 two small dug-in basins were discovered (AG and AE). The lime plaster of the floor continued into these features. Because of this, they were perhaps used for either water or food related activities. Fourteen objects were registered on the floor of this room. This deposit includes one bead, one damaged pendant, a mudbrick mortar, two pestles, one grinding stone fragment, four complete carinated bowls and four complete ceramic grain measures. The objects were found among a thick layer of charcoal, ashes and burnt mudbrick debris which had fallen on the floor. This burnt layer may indicate that a catastrophic event ended the use of this room. Another interpretation may be that the room was already abandoned at the time of the fire. The object assemblage from the floor consists of mainly complete objects but also three damaged items. Therefore an interpretation of the assemblage as abandonment stage refuse is also possible.

Particularly interesting in this deposit is the presence of four complete 'grain measures', cylindrical ceramic containers with horizontal line decorations, possibly used for measuring set units of food or drink (Mallowan 1936; Duistermaat 2008: 237). Although the shape of these objects does not necessarily indicate their function and use, their clustered presence is conspicuous and indicates that they represent a certain functional group. If these objects were indeed used as grain measuring tools, perhaps they were used as such in this room. In turn, this may indicate that the objects were left behind because they belonged to the room they were found in.

In the central room, room 5, a large amount of grinding tools were found. The grinding tools are large slabs and smaller grinders, which would have been used together. In the room the artefacts are found in sets, nearly always one large slab and one smaller grinder together. This remarkable structuring suggests that the objects were deposited in their location of use as either primary or provisional refuse. The concentration of a large number of the grinding tools in the north-east corner of the room suggests that they may have fallen from a shelf on the wall. However, some grinding stones have also been found in other parts of the room, and, although this is hard to ascertain, possibly on different floor levels. The concentration of grinders and grinding slabs in the north-eastern corner should therefore perhaps be understood as part of a continuous process of use and discard in this room.

The continuous use of spaces is also indicated by several hearth features in rooms 2 and 5. These features were used for a considerable amount of time as they are related to subsequent floors constructed on top of each other. These features, together with large amounts of grinding tools among them, indicate that these rooms were mainly used for grain processing and possibly bread baking.

Room 4 also yielded a hearth but in addition a long row of niches were constructed in the southern wall of the room. These niches were interpreted as a possible tablet storage space (Akkermans *et al.* 1993; but see also Klinkenberg and Lanjouw 2015: 158). The hearth in this room was perhaps used to bake tablets.

Other rooms in the building have not yielded much evidence for other activities, it is conceivable that these were used for domestic purposes or that they were emptied before abandonment. Interesting in this regard is that the rooms which are located the deepest in the structure, rooms 7a and 9, were fitted with a mudbrick floor, possibly to serve as a more comfortable floor for a place to sleep.

### 3.5.3 The extended building

At some point an extensive renovation of the building was performed, this is allocated to level 6B. Although the southern part of the building was largely left standing, the northern part was demolished to a height of 50 centimetres above the ground. The new façade was constructed two meters further to the north (figure 3.65). Additionally a long wall was constructed along the outside of the building, encasing it (see also Lanjouw 2016). Also several small walls were built inside some rooms, perhaps to strengthen the floor on top or for the construction of new arched ceilings.

In this new construction, the function of most rooms was similar to the previous phase. The niches in room 4 were still present and visible and in room 1 again a large basin was constructed. Also the vaulted room (3B) under the stairs was still accessible in this time, although it was closed off at the end of this phase. A constant sequence of loam floors in rooms 2 and 5 reveals that also this area was used in much the same way as before. In room 2 also a cuneiform tablet (T93\_001) was discovered, which referred to the distribution of food to local workmen, *šilublu*, if this reflects the function and use of the building it also indicates continuity of use and function of the rooms.

Two remarkable contexts deserve to be mentioned in a discussion about this phase. Firstly, in the south of room 6 in a small pit a large amount of beads were found. The beads were clearly strung as a necklace or bracelet when they were deposited, multiple beads were found in a state of articulation. Their location in a pit in the corner of the room suggests that they were

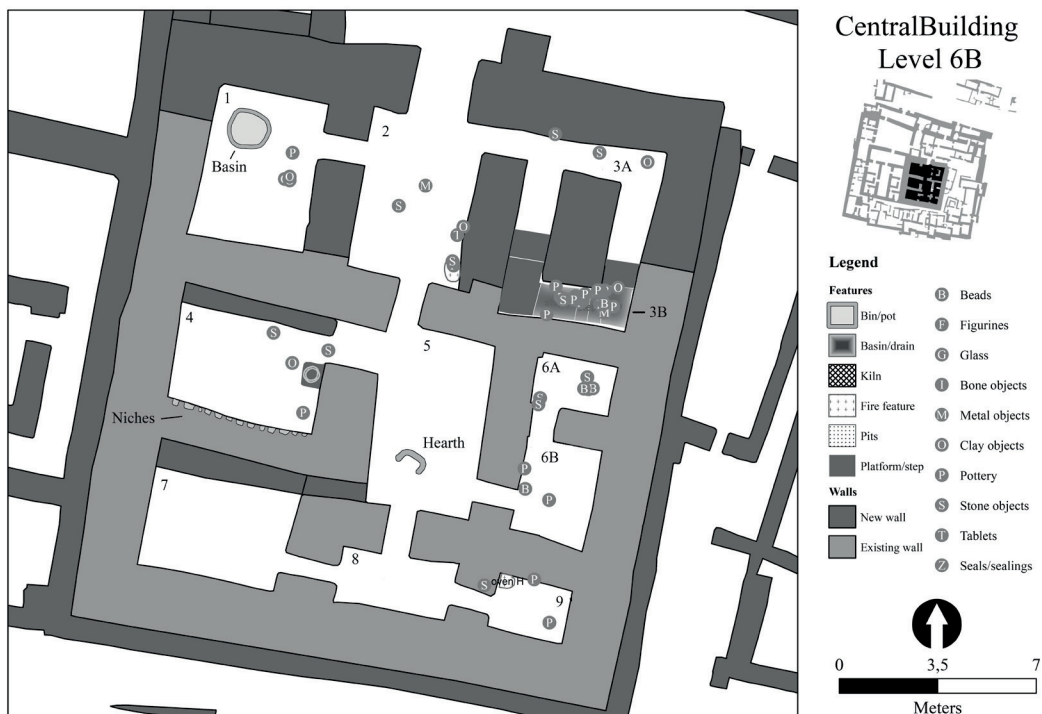


Fig. 3.65: The level 6B central building with finds and features.

deposited intentionally, however not as refuse discard. The objects therefore were most likely deposited as a cache, and since the location in a pit makes it unlikely that they were meant to be picked up later, perhaps the explanation for their deposition should be sought in the realm of ritual behaviour. In other words, this deposit should probably be considered a ritual cache.

The second context of interest entails the vaulted room under the stairs in the north-east of the building. As mentioned above the room was closed off at the end of this use phase. Curiously, no less than 24 complete objects were left on the floor of the space when it was bricked up. Amongst these were a large number of carinated bowls, some jars and a large bronze blade (figure 3.66). Although the function of the blade is uncertain, a close resemblance to a tool used in the construction of a mudbrick building (Etbul 2010) may indicate that it was used to shape bricks. The deliberate leaving behind of the objects may indicate that also this context represents a ritual act (Klinkenberg and Lanjouw 2015: 162). However, the spatial distribution of the objects within the space is far from structured and although the bronze blade may have been of considerable economic value, this cannot be said of the mass produced carinated bowls. Because several bowls were stacked on top of each other it is unlikely that the bowls contained any food or drink. Concluding, it remains unclear why all these items were left behind here, the lack of spatial organization among the objects suggests a certain degree of carelessness which may indicate that the objects were deemed not worthy to be re-used. In that vein the context should be cautiously interpreted as abandonment stage refuse.

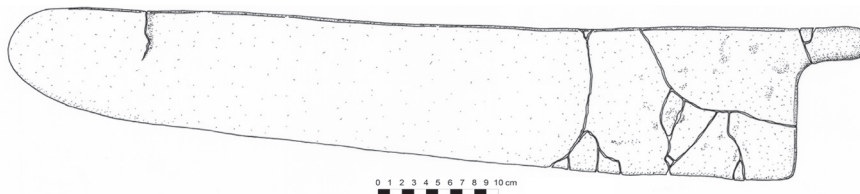


Fig. 3.66: Bronze blade from niche 3B in the central building.

#### 3.5.4 Further renovations

After some time the large building was in need of renovation, and several walls were constructed inside many of the rooms (level 5; figure 3.67). These were probably constructed either in order to strengthen the roof or to create new arched ceilings. Their construction inside the building illustrates that the amount of floor space in the ground floor was not deemed very important. Remarkably, after the construction of the new walls, of the 475 m<sup>3</sup> space that the building covered, only 150 m<sup>3</sup> was floor space, less than a third.

These alterations in the architecture were limited to the architectural layout of the building. The function and use of the rooms apparently hardly changed. Again in room 1 a large basin was constructed, this time ceramic in material, resembling a bath. Another recurring feature is a large hearth feature in the centre room, room 5. The niches in room 4 were however not visible anymore.

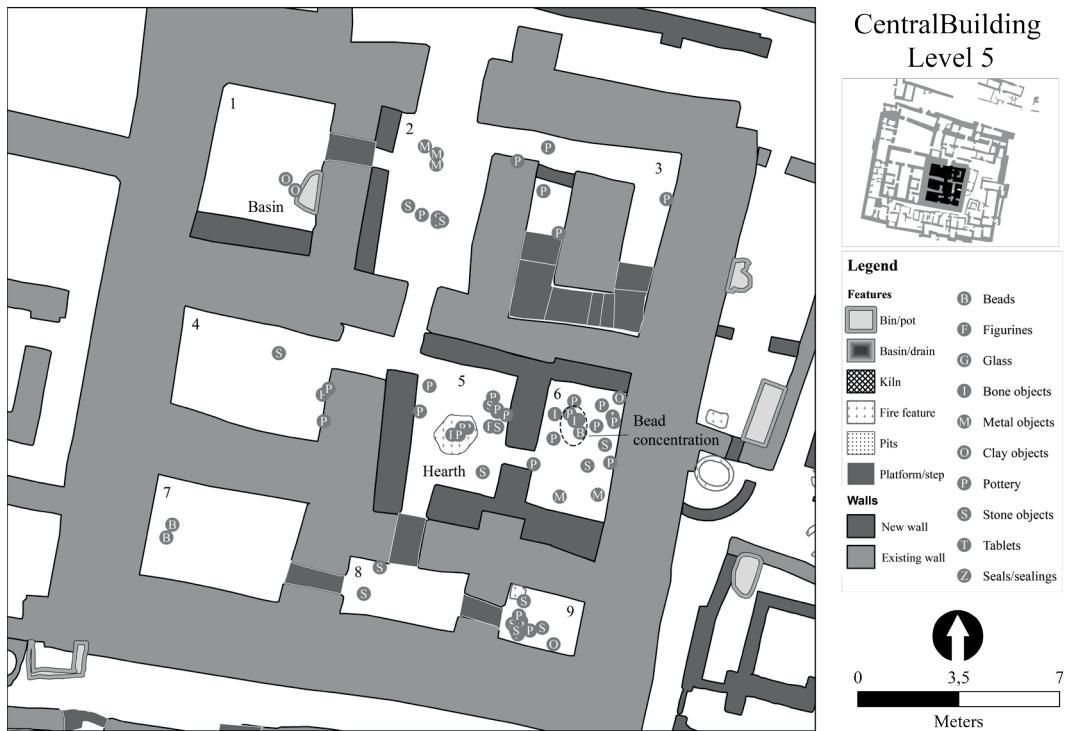


Fig. 3.67: The level 5 central building with finds and features.

Unique to this phase of the building is the large amount of finds from two rooms, 5 and 6. In both rooms large amounts of objects were deposited on the floor among much evidence for a large fire and structural collapse. In room 5 eleven pottery objects and two stone tools were found. Seven of these are large in size. Of these large objects, three are ceramic pots with a rim diameter of 28 to 36 centimetre. These pots and the discovery of a ceramic strainer in the deposit suggest that the objects were perhaps used in beer production (see paragraph 3.3.3). Because more than half of the objects from the room is considered large in size, it is conceivable that the deposit is *de facto* refuse, left behind during abandonment. Large scale fire damage in the room however indicates that a catastrophe may have struck the room and that the deposit is the result of this event.

Adjacent to this central room, room 6 was fitted with a mud brick floor and was also covered with finds. Seven ceramic vessels were registered on the floor. Three of these were tall storage jars, additionally one large pot, two carinated bowls and a rectangular ceramic box were found. The large storage jars were found along the walls of the room, they were probably placed in a slight depression in the floor in this location as was evidenced by the remains of several still standing jars (figure 3.68). In the middle of the room the smaller vessels were found, possibly fallen from shelves along the wall, higher up.

Another interesting discovery from this room is a large concentration of beads and pendants. The collection consists of approximately 425 spherical and oblong beads, five perforated shells, two perforated bone combs and six phallus shaped beads. Wiggermann (2010:

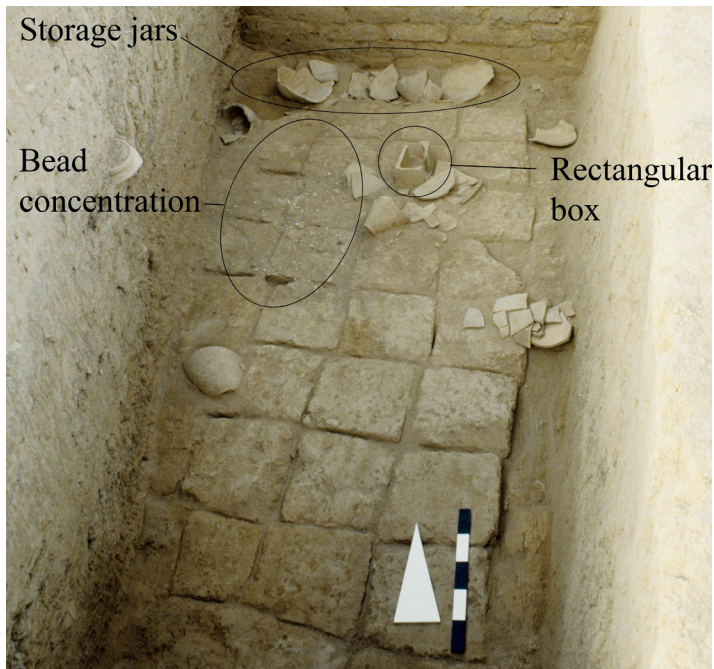


Fig. 3.68: The eastern part of room 6, looking north (photo by P.M.M.G. Akkermans).

49) interprets these items as part of the attire of prostitutes and consequently assigns a brothel-function to the building. Whether the objects were worn and used in this room or building is however entirely unclear. Their location on the floor of the room among the pottery seems to indicate mainly that the objects were stored here. The objects were found spread out over the floor, whether the beads were tied on strings at deposition is unclear. Although earlier publications do state this to be the case (Akkermans *et al.* 1993: 19; Klinkenberg and Lanjouw 2015: 167), photographs



Fig. 3.69: Beads on the floor of room 6. For scale, the rectangular box in the lower right is approximately 20 centimetres wide (photo by P.M.M.G. Akkermans).

of the floor deposit (figure 3.69) are not in accordance with this notion. In any case, the objects must have fallen from a shelf or container from the wall higher up.

From the undoubtedly valuable nature of the beads, pendants and the (content of) large storage jars, it seems that the room was abandoned in great haste. Burn marks on the floor and the objects indicates that a large fire has blazed through the room, probably together with room 5. All these factors combined indicate that the floor level deposits in these rooms are catastrophe deposits. In turn this suggests that the objects were indeed used or stored here.

The floor level deposits clearly indicate that the rooms were at least used to store food and drink, as well as beads or necklaces. The presence of the ornaments may suggest that the room was used by the central administration as a strong room for valuables. What the content of the jars was has not been demonstrated but perhaps these contained some of the more scarce food stuffs or perfume.

### 3.5.5 Function and use of the central building

As the most imposing building in the *dunnu*, the central building must have played an important role for the people who worked and lived in this settlement. Its size and robustness are indicative of its central position in the workings of the *dunnu*. In general, throughout its existence, the building has not changed dramatically in function or use. Its architecture was altered somewhat through time but the general layout has remained the same. Also, despite the constant architectural adaptations, features such as the basins in room 1 and the hearths in room 5 were consistently refashioned.

Apparently, the building fulfilled several roles at once, close to its entrance public spaces were used for the distribution of rations while the less accessible spaces were reserved for domestic use. A more official function could however also be attributed to some rooms, considering the presence of a (tentative) archive room and large storage facilities in room 6. Additionally, other functions, such as one of the rooms as a prison (Wiggermann, personal comment; Klinkenberg and Lanjouw 2015, 173) are harder to identify using archaeological remains.

Particularly invisible in the archaeological remains is what has occurred upstairs, on the roof or higher storeys. In line with the interpretation offered by Klinkenberg and Lanjouw (2015), it is assumed here that the massive construction of the walls of the building was put in place to support a large weight higher up. As evidenced by the large amount of grain processing and distribution activities in the building, and the *dunnu* in general, it is likely that the top storeys of the building were also in use in the agricultural sphere. The large weight which is implied by the (constantly renovated) walls of the central building is therefore interpreted to have comprised of agricultural surplus, barley.

The consistent use of the building through time ends with the large fire which is particularly evidenced in room 5 and 6 (see figure 3.70). In many rooms thick layers of debris were deposited, probably as the result of collapse. The northern three rooms seem to have been re-used later, but probably while the building itself was in ruins. During this time the rooms were probably used as a sheep or goat pen (Klinkenberg and Lanjouw 2015: 171).

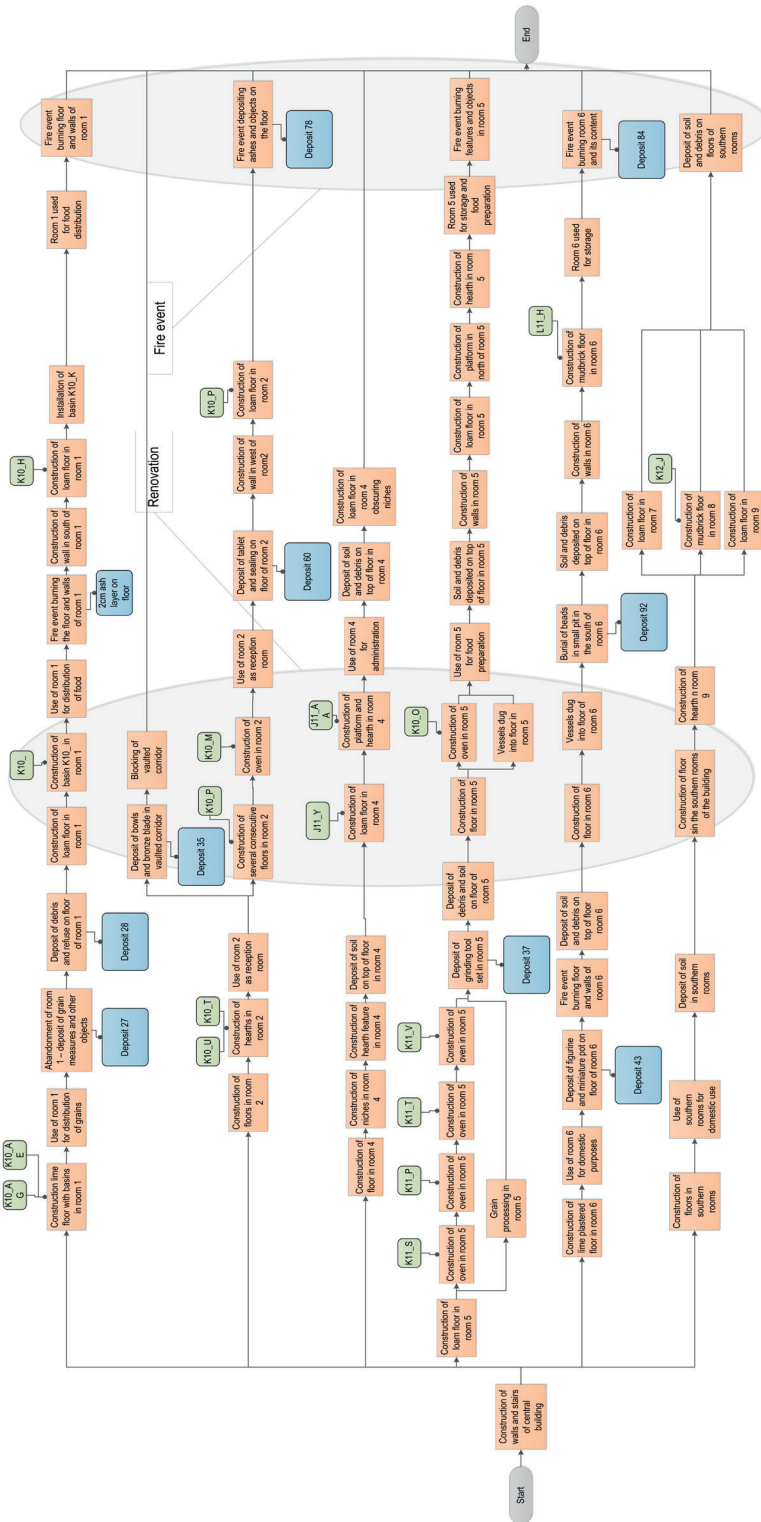


Fig. 3.70: Sequence of Events of the central building.

### 3.6 THE SOUTH-WESTERN SECTOR

#### 3.6.1 Introduction

The south-western sector comprises a large part of the western flank and the majority of the southern part of the *dunnu* (figure 3.71). The extent of the sector is defined on the basis of clear access patterns. The sector can only be entered on the ground floor through one doorway in the east. Because the area was much used perhaps other entrances were present higher up. The locations of these however remain unidentified. This may partly be due to the state of preservation of walls, which due to erosion is quite limited in this part of the *dunnu*. Overall the general impression which is obtained from the finds and features from this sector is one of large scale food processing. This is in line with earlier interpretations in which the (south part of the) sector was dubbed ‘Paya’s bakery’ (Wiggermann 2010: 22; Akkermans and Wiggermann 2015: 100). Although the majority of finds and features are in agreement with this notion, the sequence described here shows that a larger variety of activities occurred in this sector.



Fig. 3.71: The areas in the south-western sector.

The sector was divided into eight areas, each defined by grouping together spaces which had easy access to each other. As the different areas also had easy access to the surrounding spaces, the areas do not necessarily define the functional layout of the sector as it was used or perceived in the past.

#### 3.6.2 On the grind (area 1)

##### 3.6.2.1 Introduction

The south-western part of the *dunnu* was severely affected by erosion. Additionally, although in some places the Bronze Age remains occurred in deeper strata, the excavations were halted before reaching the lowest level 5 layers. The Bronze Age remains in the area west of the residence, area 1, were excavated to a depth of about 60 centimetres. This has resulted in a poor stratigraphic correlation with the general stratigraphy. It is however clear that the main floor levels which were discovered preceded the construction of the outer toilet of the residence (figure 3.72).



Fig. 3.72: Architecture and floor level finds from area 1 of the south-western sector.

The oldest remains in this area were found in a small trench which was dug through the floor of the bin (space D; bin Y) which was set against the residence wall. Although these finds and features predate the other floors and features known from the area, it is unclear what the layout of the area was at this point in time. The layout of the area in the period which is discussed here consists of two main parts. Small walls were constructed in the north of the area, creating spaces A and B. The southern part of the area consisted of a long open space (C) with one large bin (D) constructed against the wall of the residence. The discussion below starts with bin Y, and is followed with the objects and features which relate to the floor levels of area 1.

### 3.6.2.2 *Bin Y (space D)*

Because of its size, excavators have interpreted bin Y both as a room and as a bin. No door was found in the walls of the space so it was most likely entered from above. Because the floor of the bin was difficult to recognize, the space was excavated deeper than the surrounding area. In fact, the trench which was dug in the space was eventually deeper than the bottom of the walls of the bin. The floor which was reached at the end of this undertaking probably related to a different structure such as an earlier house.

The elevation of the floor of the bin was probably the same as the surrounding area. This notion is supported by the fact there is a large difference between the composition of the find assemblages above and below this elevation. The higher assemblage (deposit 290) is mainly composed of (fragments of) grinding stones while the lower assemblage (deposit 295) is characterized by a high number of clay objects (figure 3.73). Because in the surrounding floors also many grinding stones were found, the higher object assemblage from bin Y seems to be related to it.

The lower layer of soil and finds (deposit 295) consists of brown soil layer with mudbrick debris, lime spots and charcoal. The soil layer also yielded nineteen objects. Among these objects is one bone awl, a small corroded piece of bronze, one glass bead and sixteen clay items. The clay items consist of seven sealings, five tokens and four tablets.

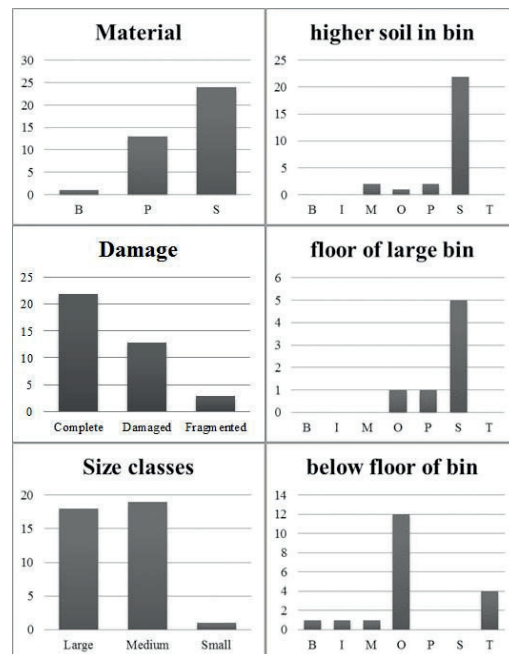


Fig. 3.73: Characteristics of objects from bin Y (B beads and pendants; I bone objects; M metal objects; O clay objects; P pottery; S stone objects; T tablets).

Only the bead and the awl were complete, the remaining items were damaged or fragmented (figure 3.73), characteristic of a refuse deposit. A soil layer containing mostly broken objects is usually characterized as a secondary refuse deposit. The few tablet fragments from the deposit were however all found in the top part of the deposit, indicating a certain degree of structuring. Perhaps these items were discarded in an area which was being built over. Also in other parts of the *dunnu* tablets were discovered in such contexts.

Interestingly however, also other objects relating to administrative activities were found in this deposit. Seven fragments of sealings were found, one of which still bears the imprint of a stamp seal. Other sealings show the imprint of ropes and ceramic vessels, so-called jar stoppers (figure 3.74). Four other clay objects from this deposit are interpreted as tokens (figure 3.75), which, although they are often dated to earlier periods, were used alongside the cuneiform administration (MacGinnis *et al.* 2014).

The location of the deposit and the state of the objects suggest that we are dealing with a secondary refuse deposit. However, considering that nearly all objects are made of unbaked clay and relate to administrative activities, the deposit is highly structured. In other words, the objects were probably discarded near their location of use. The deposit would in that case indicate that administration was carried out nearby in this early phase.

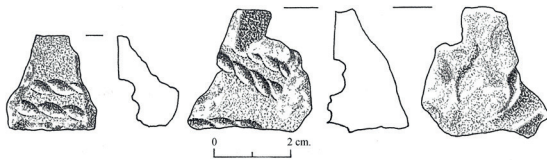


Fig. 3.74: Clay sealing fragments from the lower deposits of bin Y (fig. by R. Timmermans).

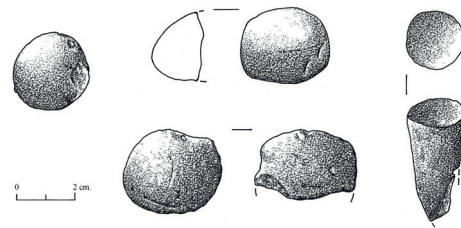


Fig. 3.75: Clay tokens from lower deposits of bin Y (fig. by R. Timmermans).

### 3.6.2.3 Two levels of grain processing

As mentioned above, the area was separated into a northern and a southern part. The northern part is constituted of rooms A and B. In the earliest phase, these rooms were reached from the north through a doorway in wall C. The doorway in wall U did not exist yet at this moment. From the floor of rooms A and B of this early phase seven complete carinated bowls were recovered, perhaps indicating that these spaces were used for domestic purposes. No other objects or features were discovered here.

The southern part of area 1, space C, was a large open space, divided into four separate niches by small walls which were set against the outer wall of the *dunnu*. The ground plan of space C suggests that this space could only be accessed from the south. Other entrances may however have been present higher up, using ladders or stairs. On the floor many ovens and bins were placed. Also some dug in vessels were recorded on photographs, further expressing the abundance of (semi-) fixed features in this area. Although the features were probably not all used at the same time, they were probably all used for food processing, in particular bread baking. The large amount of features indicates that the space was used for large scale for processing.

The niches mentioned above were created by the construction of several abutments against the outer wall of the *dunnu*. What the function was of these abutments and niches is uncertain, but the regular interval in which they were placed indicates that their functions were related. They were constructed either to shield the area from wind or to serve as a base for a construction on top. The latter could imply the presence of either a roof over the area or a wide walking surface on the outer wall. A different interpretation may be that, as is indicated by the presence of a large amount of grinding stones close to the abutments, they may have served as the bases of grinding installations. The pattern in which the bricks were laid underscores this last interpretation.

The largest feature in the area is the aforementioned bin Y, which was constructed against the residence wall. Its inside space measures 1 by 1.8 meters and it was at least a metre high. No entrance was found into the bin so it must have been accessed from the top. Therefore the space perhaps functioned as storage space, perhaps for grains. Finds from the floor level of bin Y (five stone tools, a ceramic bowl and a clay spindle whirl) are similar to those which were found on the floor of space C and are therefore probably deposited in the same manner.

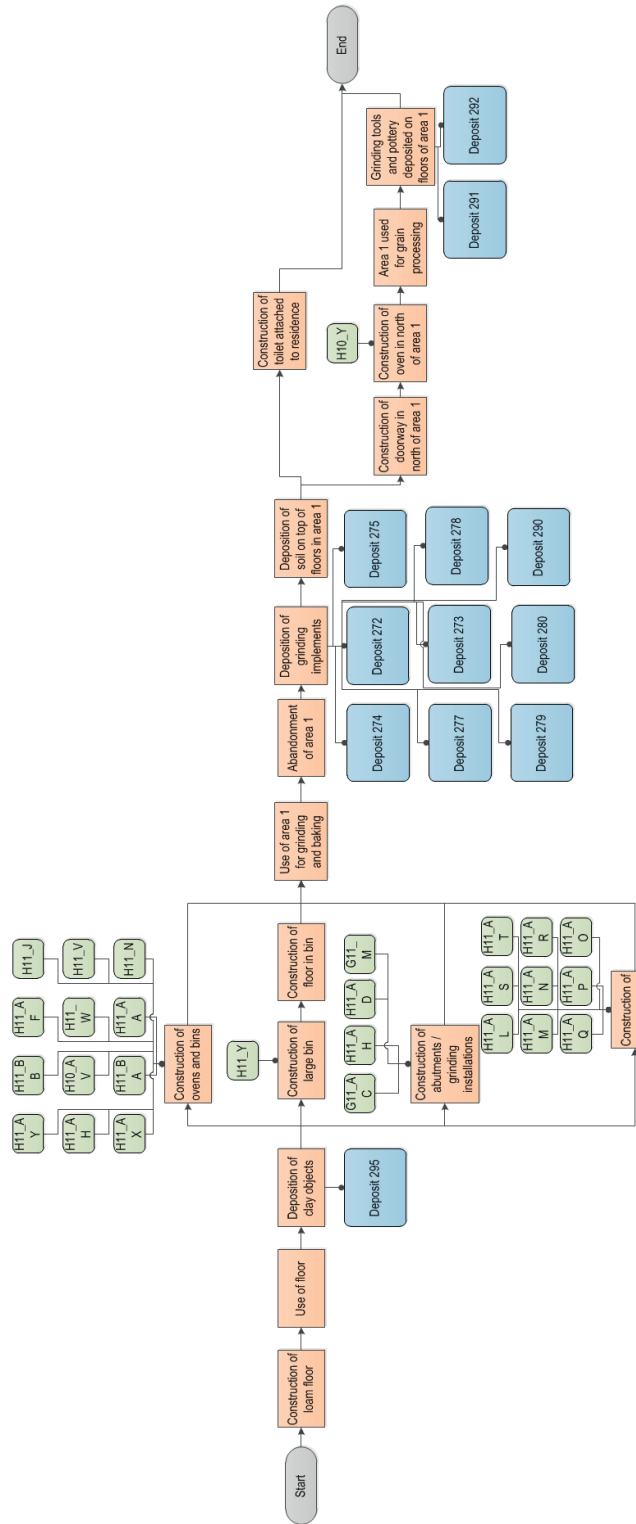


Fig. 3.76: Sequence of Events of area 1 of the south-western sector.

The floor of space C yielded a very specific and homogeneous find assemblage. The vast majority of finds are stone objects, a large portion of which are (nearly) complete grinding stones (figure 3.73). As the objects were probably used in grain processing they relate well to the functional interpretation of the features which are present here. Many of the objects were considerably large and most were complete. These factors combined indicate that the assemblage was deposited here as an abandonment stage, or *de facto* refuse, deposit. Consequently these objects must have been used in this location. They underscore the interpretation of the open space as large scale grain processing and bread baking site.

#### 3.6.2.4 Continuation

At some point the area was abandoned and renovated. Several architectural adjustments were made to this part of the *dunnu*. Chiefly, an entrance was made through the wall of the residence, and a part of the western area was made into a toilet. The doorway in wall C was closed off at this point. The southern area was enlarged slightly by the construction of a doorway in wall U. Rooms A and B which were previously associated with the north were now accessible from the south. On the floors of these rooms in this later phase one bin and five large grinding stones were found. This indicates that the rooms perhaps changed function into a grain processing space.

Unfortunately no floors from this phase were preserved in space C making it difficult to draw accurate conclusions about its function and use. In consequence, the Sequence of Events which was created for this area is remarkably straightforward (figure 3.76). It is conceivable, however, given that the newly associated rooms are so clearly demonstrating their function as grain processing location, this practice was still performed in the other spaces as well. In this case the southern space retained its original function and was even slightly enlarged. The presence of large and heavy objects on the floor of a structure is often taken as an indication of *de facto* refuse, left behind at abandonment. Similar to the previous phase, the area was probably slowly abandoned.

### 3.6.3 The corner rooms (area 2)

#### 3.6.3.1 Introduction

Area 2 of the south-western sector consists of four rooms in the south-western corner of the *dunnu* (figure 3.77). In the far corner room A is located which is connected through hallway B to room or open space C. Space C in turn gives access to room D and the connected room E. This area was heavily affected by erosion, leaving only a shallow horizon of architectural remains dating to the Late Bronze Age. This has made linking these archaeological strata to the overall chronology of the site difficult. Moreover, the area has suffered from substantial leveling activities in the past, further complicating the stratigraphic correlation.

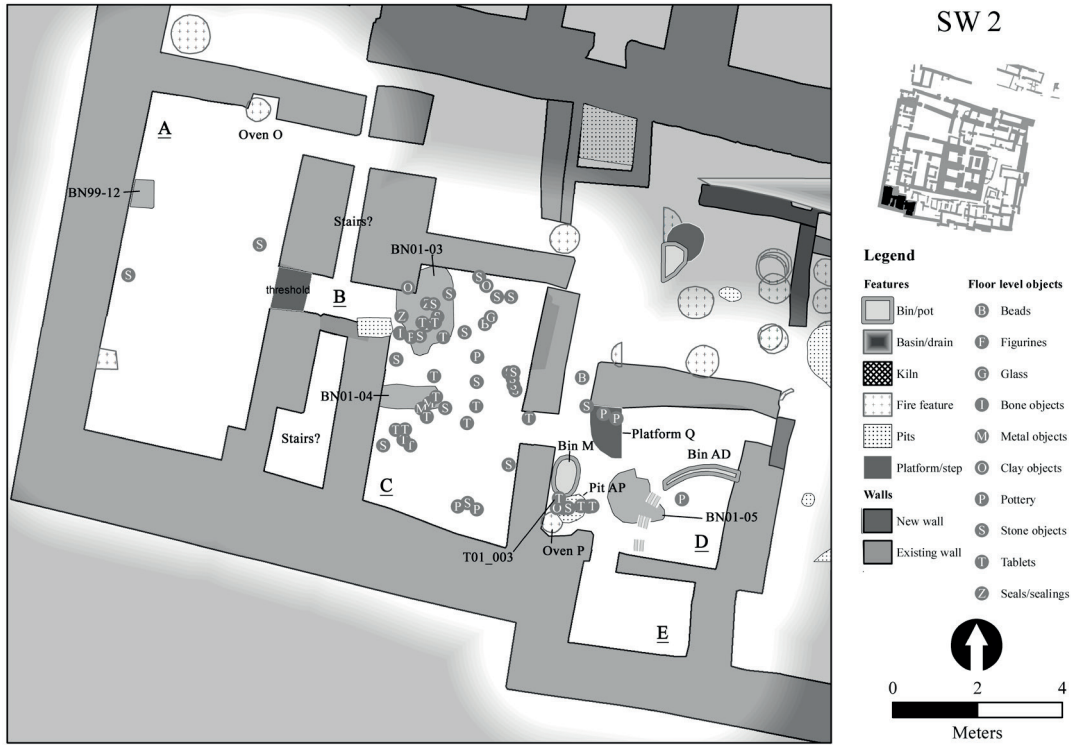


Fig. 3.77: Architecture and floor level finds from area 2 of the south-western sector.

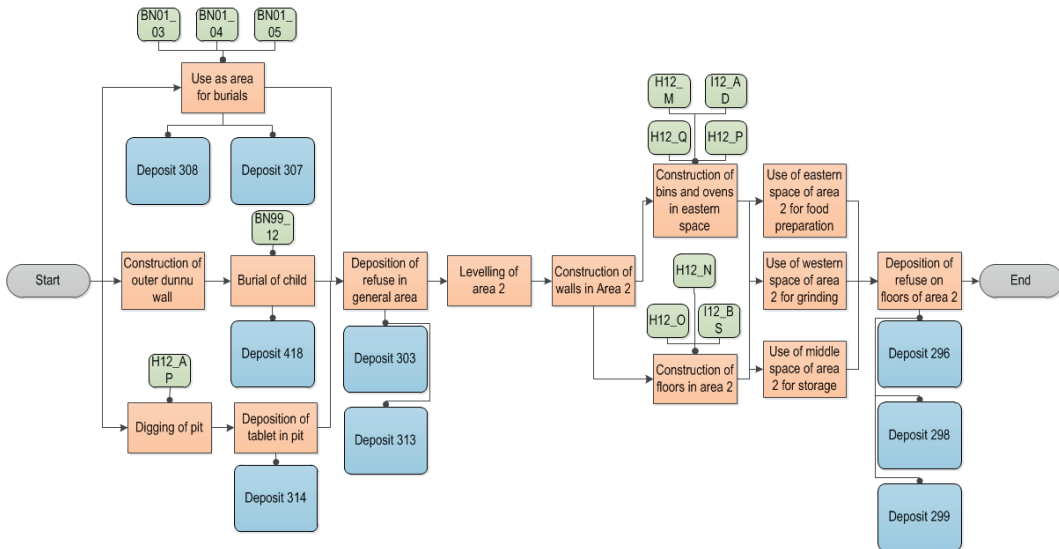


Fig. 3.78: Sequence of Events of area 2 of the south-western sector.

A general Sequence of Events was established for this area however (figure 3.78). After the outer wall of the *dunnu* was constructed the area was used as an open space, providing room for burials and outdoor activities. Some structures were perhaps present but these were obliterated by levelling activities. After the levelling of the architecture in this area, new walls were erected and the area was used as a residential space, possibly inhabited by baker Paya, whose cuneiform tablets were discovered on top of this floor level. At some point the area was in disuse, refuse accumulated on the floors of the spaces and it was built up again. Remains from the ensuing phases have unfortunately not been preserved.

### 3.6.3.2 Phase 1: outside activities and burials

As mentioned above, the earliest phases of Assyrian habitation of the southern areas has not been preserved well, mainly because of levelling activities in this area. The abrupt top boundary of the Neolithic layers suggests that these were levelled to provide a horizontal surface for the Late Bronze Age construction. It is therefore difficult to reconstruct the layout of the area in this period. The fragmentary information indicates that after the outer *dunnu* wall was constructed some structures were built in the area. Refuse layers on the ground however indicate that the area was used as an outside space. Also several burials from this period were found. At least three of these burials predate the later constructions which are described below as they were found clearly underneath some of these constructions. One of the burials (BN99-12) was discovered lying parallel to and at the same depth as the outer wall in the west. As this is a common pattern at Tell Sabi Abyad, this could indicate that the wall predates the burial. In turn this indicates that the use as burial ground occurred within the walls.

Evidence of other activities in this area is scarce due to later erosion and demolition. One find should be mentioned however. In an oven structure or fire pit (pit AP) which was dug deep into the Neolithic layers a large cuneiform tablet was found (T01\_003). The tablet was dated by its eponym Kastiliasu to the year 1209 BC (Wiggermann personal communication). The tablet contains a census of personnel and describes in detail large quantities of food products, produced around the *dunnu*. It is therefore an indication of the substantial nature of work which took place in and around the *dunnu* before the main architectural layout of the southern part of the *dunnu* was constructed. Also, it provides us with an absolute date post quem for the deposition of the higher lying soil and construction of the architecture on top.

### 3.6.3.3 Phase 2: Paya's realm

After and during the use of the area as outside space a number of refuse and soil layers accumulated on top of each other. After some time the whole area was renovated, the surface was levelled, many walls and new floors were laid out. This new phase is most likely to be correlated with the construction of the residence and the renovation of the central building (level 6B). The corner of the outside wall in area 2 was constructed with very thick walls. This has led the excavators to interpret the corner as the base of a tower (Akkermans and Wiggermann 2015: 98). The size of the walls does suggest that a higher storey was present, but in what shape or form this was remains uncertain. In hallway B perhaps stairs were once present (Brüning and Plug 2016).

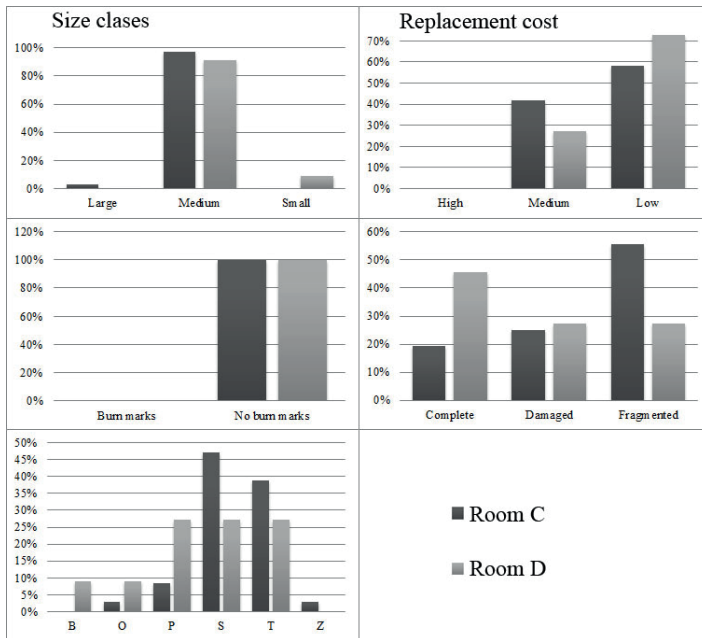


Fig. 3.79: Characteristics of objects from the floors of rooms C and D of area 2 of the south-western sector (B beads and pendants; I bone objects; M metal objects; O clay objects; P pottery; S stone objects; T tablets). Note that the Y-axis is set to percentages.

In room C a comparable assemblage was found on the floor, albeit including a large number of grinding stone fragments. The deposit contains three ceramic bowls, a spindle whorl, four flat stones interpreted as polishers or anvils, one stamp seal, fourteen cuneiform tablets and twelve grinding stone fragments (see figure 3.79).

In addition to the registered objects a large collection of storage vessels may have been present on the floor of the middle room, indicated by the concentration of shards on the floor which is visible on photographs (figure 3.80). However, most striking amongst the find material from both rooms is the presence of cuneiform tablets. Apparently, many of the items relate to a certain baker named Paya (Wiggermann 2010: 22). The tablets represent small receipts of flour and bread on a day to day basis. It should be considered that in antiquity many hundreds of these small receipts must have existed, and that we are dealing with a small subset of surviving elements (Wiggermann, personal communication).

How the objects ended up on the floors of room C and D is not completely evident. The objects are varied, mostly damaged or fragmented, and medium sized. These characteristics suggest that the deposits in both rooms are the result of secondary discard. The location of the objects on the floors of the rooms however directs the interpretation towards *de facto* or primary refuse. Also the presence of the tablets in both rooms suggests that perhaps multiple processes were responsible for the composition of the final assemblages.

Room A of area 2 is poorly preserved due to erosion. Rooms C and D however were better preserved and yielded a substantial find assemblage from their floors. In addition, in room D a number of features were constructed on the floor. Two bins, an oven and a mudbrick platform could be recognized during excavation. Room C however was free of features. The features in room D suggest a function of the room in the realm of food production. The finds from room D however do not relate directly to this activity. Three stone polishing stones, two carinated bowls, a ceramic jar, a

The presence of the tablets can perhaps be understood in relation to the levelling layer which was deposited on top, in order to construct a new floor. Similar to other tablet-bearing contexts in the *dunnu*, perhaps the objects were discarded there deliberately to bury them in the construction.



Fig. 3.80: Pottery concentration in room C of area 2 of the south-western sector. Many tablets were found underneath this shard cluster (photo by P.M.M.G. Akkermans).

The tablets could indicate that an office was located in the direct vicinity of these rooms. However, none of the rooms in this area can be identified with certainty as an office or residence. It is conceivable that this office was located on a higher storey. Another interpretation yet may be that because the tablets are all fragments of receipts, these rooms were merely used for the distribution of foodstuffs by baker Paya. In that case the objects should be considered primary refuse.

In conclusion, area 2 of the south-western sector was badly eroded in the past. This makes it difficult to ascertain the function and use of room A and hallway B. The layout of B however suggests that stairs were once located there, indicating that a higher storey could be reached from there. The objects and features from the floors of rooms C and D hint at several activities. Bins and an oven in room D were probably used for food preparation. Possibly this room must be viewed as a small apartment in concordance with room E. Equally this small space could be used as storage space. The function of room C is unclear, despite the large amount of registered objects from the room. Pottery shards which are visible on the photographs of the room indicate that the room was left with many ceramics located on the floor. This could indicate that they were left there at abandonment. The presence of many tablets in this same context however designates the deposit as refuse discard. The rooms were most likely used for domestic purposes and may have functioned, from time to time as office of baker Paya.

### 3.6.4 Many ovens (area 3)

#### 3.6.4.1 Introduction

Area 3 of the South-western sector is a large area consisting of eight interconnected rooms (figure 3.81). The area consists of four rooms in the south (A, B, C and D) and four spaces abutting these to the north (E, F, G and H). The area is located along the corridor which runs around the two large central buildings of the *dunnu*. Because of the discovery of a large amount

of ovens and related grinding implements the area has often been dubbed the bakery of Paya (Akkermans 2006: 208; Wiggermann 2010: 22). The rooms described here give good evidence for the use of the area as bakery. However, it should be stressed that the related structures and artefacts were perhaps used only for a relatively short period (Akkermans 2006: 207). Other uses of the area may be simply invisible to the archaeologists' eye. In addition to the complexity of such sequences, unfortunately the stratigraphic analysis of this area was not yet available during the current research. Therefore the results presented here are a rather simplified representation of the actual archaeological remains.

The rooms in the south were constructed first, followed by the construction of the northern spaces. Rooms E-H contain a large amount of ovens while the southern rooms A-D are largely lacking in these or other features. Also the finds concentrate particularly in the north. Among the assemblages found on the floors in these spaces many ceramic bowls were found but most strikingly, an abundance of grinding stones. The difference in amount of ovens might indicate that the northern rooms were mostly used for bread baking and other outside craft activities, while the southern rooms were used in a domestic manner. The difference could however also be partly caused by erosion of the architecture in the south. Below first the four southern rooms and subsequently the northern spaces will be discussed.

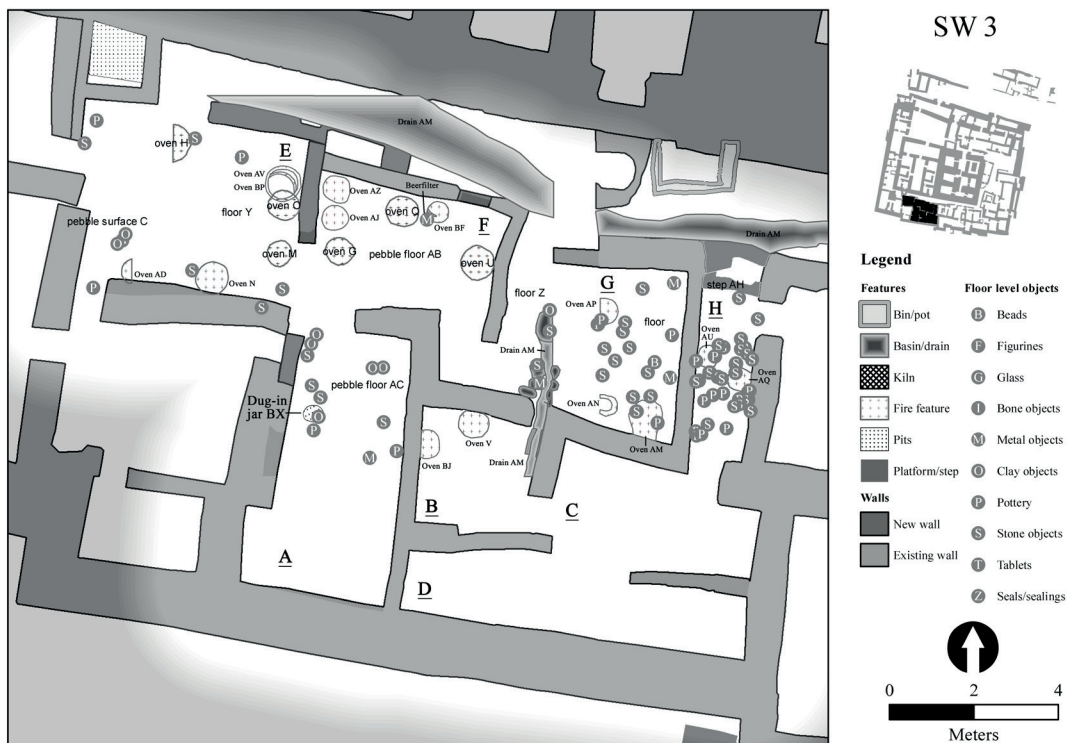


Fig. 3.81: Architecture and floor level finds from area 3 of the south-western sector.

#### 3.6.4.2 Rooms A, B, C and D

In the layout of this part of the area room A is separated from the other rooms. This room could be entered from rooms E and F in the north through a doorway. Two floors were discovered in the room, the lowest being floor BT. On this loam floor two fragments of jarstoppers and two damaged stone tools were found (deposit 380). Additionally, a large ceramic jar was dug into the floor (BX). The jar was in a complete state and was therefore left behind at abandonment (deposit 382). The damaged state of the other objects indicates that they were discarded as refuse. In view of the lack of features on the floor it is conceivable that the space was used for domestic purposes.

After the deposition of approximately 20 centimetre of soil on top of floor BT a new floor was constructed. On this loam floor (AC) also four objects were registered (deposit 381). One bronze fragment, a clay jarstopper, and two grinding stones were found. Also these objects were mostly damaged, and were therefore probably discarded refuse. It is however remarkable that this deposit is very similar to the deposit on floor BT. Perhaps this indicates that the use of the room did not change through time.

Room B yielded no finds but there were two ovens constructed in the corner of the room. This perhaps indicates that the space was unroofed for ventilation. Additionally, a small gully or drain (AM) ran from the north through this space. This drain probably continued into room D and from there through the outside wall of the *dunnu*. Unfortunately, both room C and D were so badly affected by erosion that apart from the walls no architecture or objects could be retrieved from there. The function of these rooms can therefore not be established with great certainty. It is however reasonable to assume that also these spaces were used for domestic purposes. Perhaps space B functioned as a small courtyard for the preparation of food.

#### 3.6.4.3 Spaces E, F, G and H

The northern four spaces were constructed abutting the southern rooms. The walls of spaces E and F were possibly free standing. They indicate that this part of the area was most likely used as courtyards. A number of ovens were excavated in these spaces, corroborating this notion. Most of these features were constructed in spaces E and F. In contrast, the majority of finds were found in spaces G and H. Four bowls and five grinding stones were found in room E. Except for one small complete carinated bowl all objects were broken or damaged. The objects however strongly relate to the features in the space. All the evidence indicates that the space was used primarily for food processing.

One find in space F does however not relate to the function of food production. A large bronze beer filter was found in oven Q of this space (deposit 384). Beer filters were used at the end of straws to filter the malt from beer while drinking (see paragraph 3.3.3). Because the objects were made of bronze it could be assumed that they were relatively high in replacement cost. Why it was deposited in an oven is therefore unclear. Perhaps this item is more related to the domestic nature of the spaces in the south.



Fig. 3.82: Drain AM (photo by P.M.M.G. Akkermans).

In spaces G and H two phases could be recognized. A floor (AV/BD) was constructed in both spaces in which several ovens were constructed. In space G three, and in space H two ovens were found. Additionally in space G a large drain was constructed (figure 3.82). This drain led water from the corridor in the north towards the south of the area.

At some point a layer of soil was deposited in these spaces. New floors (AI/AL) were constructed on top of this layer. Interestingly, no features were found on these higher floors. In both spaces however a large number of objects were registered. In space G sixteen objects were left behind on the floor (deposit 390). The deposit consists of seven grinding stones, four other stone tools, one fragmented stone bead, two carinated bowls, a ceramic jar and, remarkably, a complete large bronze spearhead. Four of the grinding stones were large and three were complete, this could signify that they were left behind at abandonment. Most of the other objects were damaged or fragmented which suggests

that they were discarded as refuse. The bronze spearhead however is an extraordinary item in the assemblage. It is unclear how this object relates to the other items in the room. Its location in the corner of the room perhaps suggests that it was stored there. A spear perhaps stood in this corner against the wall and was left behind at abandonment.

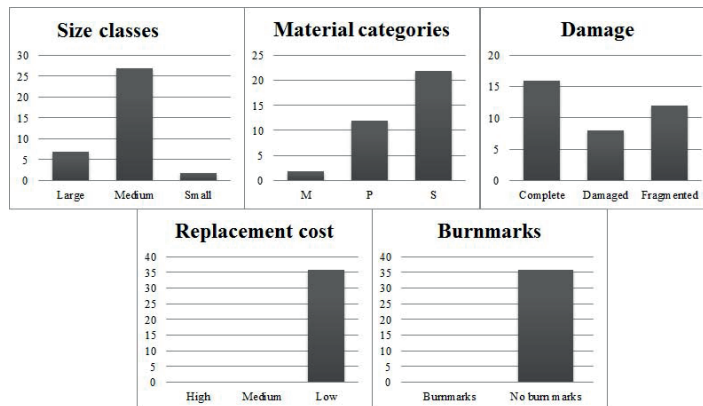


Fig. 3.83: Characteristics of objects from room H, area 3 of the south-western sector (M metal objects; P pottery; S stone objects).



Fig. 3.84: Object concentration on the floor of room H (photo by P.M.M.G. Akkermans).

The floor in room H yielded 36 objects (deposit 398). This deposit consists of seventeen grinding stones, four other stone tools, nine carinated bowls, three ceramic jars and two small bronze fragments. Nine of the stone tools and seven of the bowls were in a complete state (figure 3.83). Additionally, many broken ceramics were found in the space which were perhaps complete during deposition (figure 3.84). This large amount of complete items in the assemblage indicates that the objects were deposited either as abandonment stage refuse or during a catastrophe. Because no clear fire damage was found in the room it seems most likely that the objects were left behind during abandonment. Because the space is only 1.3 metre wide it seems unlikely that all the objects were used in this space. More likely is that the objects were stored in space H. Perhaps a large cupboard was located along the wall.

#### 3.6.4.4 Conclusion

Area 3 was used in a variety of ways (figure 3.85). A lack of features and finds from the southern spaces (A, B, C and D) indicate that these were probably used as domestic structures. Erosion processes however obscured much of the evidence for these spaces. The northern spaces were built up with many ovens. In particular in the two western spaces E and F many ovens were constructed. although this also occurred in spaces G and H in the initial phase which was discussed above, subsequent use of the spaces focussed more on grinding and storage of grinding tools.

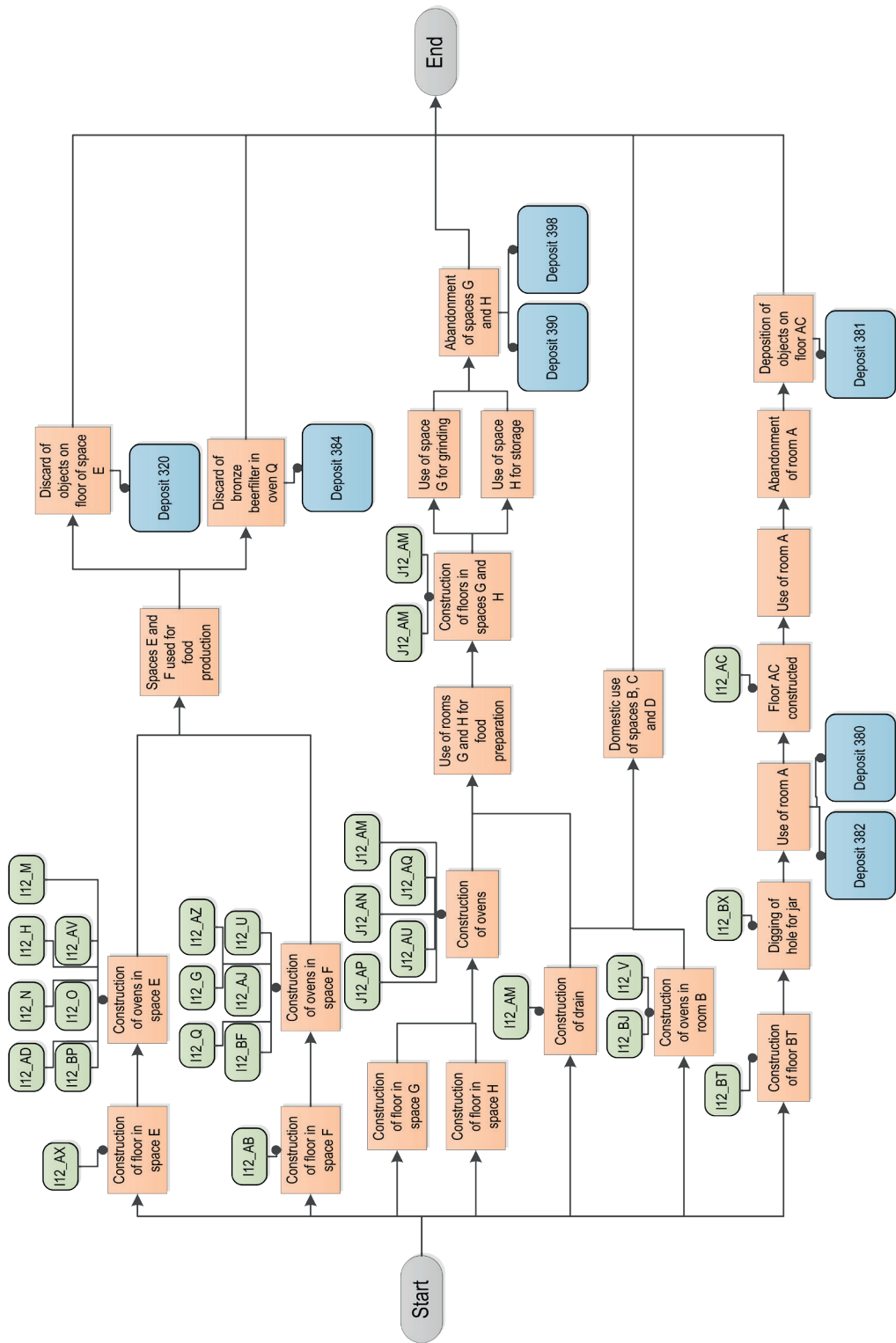


Fig. 3.85: Sequence of Events of area 3 of the south-western sector.

### 3.6.5 The corridor along the central buildings (area 4)

#### 3.6.5.1 Introduction

Area 4 consists of the long corridor along the south side of the central building and the residence, it also includes two rooms, on either end of the passageway (figure 3.86). The area was considered an important route through the *dunnu* as it connects all southern spaces to each other. Also it seems from the ground plan of the *dunnu* that the south-western part of the *dunnu* could only be reached through this corridor. Despite its apparent function for the movement of people through the sector, through time many ovens and bins were constructed in the passage. These structures must have hampered the circulation of people. Therefore, perhaps additional routes were available for people to reach the western parts of this sector. The brief discussion below includes a more detailed description of features and finds from the area as well as the changes which occurred through time.

#### 3.6.5.2 Features and finds from the corridor

In the early phases of the *dunnu* area 4 consisted of a large open space south of the central buildings. As buildings were constructed in the south of the *dunnu*, this space became progressively smaller. The final layout of area 4 is similar to a corridor or alleyway along the central buildings of the *dunnu*. The corridor could be entered in the east around the corner of the central building. It gave access to most of the spaces of the south-western sector.



Fig. 3.86: Architecture and floor level finds from area 4 of the south-western sector.

A large gully (BG/AW) formed in the corridor at some point. This was probably the result of rainwater runoff from the roofs of the central buildings. The water was collected in the gully and directed to the centre of the area where it was channelled through a drain (AM) southwards (see paragraph 3.6.4). Many ceramic shards were found on top of the gully, perhaps these were deposited here to prevent the floor from getting muddy. Of course, the shards may also have been deposited here by the flow of water.

On top of the floor level through which the gully ran several features were constructed. Firstly, attached to the residence, two cesspits (X and AR) were dug in to the ground. Small walls were constructed around these pits. Drains connected the toilets in the residence to the cesspits. Perhaps the pits were covered with lids to keep smells inside. East of cesspit AR a large bin and several ovens were constructed (figure 3.87). Some of these ovens were constructed overlapping other ovens. This indicates that they were not used at the same time. Perhaps one oven was in use at a time. The sequence of ovens from the corridor is then a result of a process in which these structures were built next to each other, one at a time.

The room which is attached to the east end of the corridor was fitted with a bin and an oven. Although this space gave access to several rooms in this corner of the sector, it is possible that the space itself was also used for domestic purposes and for the production of food. Additionally, it may have functioned as an anteroom for the spaces it gave access to. No objects were registered in the space.

In the gutter in the corridor nineteen objects were registered (deposits 322 and 379). One grinder, three beads and fifteen fragments of a bronze pin hafted in ivory were found. These fragments consist of fourteen small fragments of bronze and one ivory fragment which contains a small fragment of bronze (figure 3.88). Possibly these fragments were once part of one object which ended up in the western part of the gully. Through time it may have disintegrated and the fragments were taken along by the water. This would explain the spatial distribution of the objects. The object was perhaps a hair- or clothing pin. Similar to the beads which were found in the gully, the objects may have been accidentally lost in this area.



Fig. 3.87: The corridor along the central buildings, area 4, looking east. The shard pavement in the corridor indicates the location of a gully (photo by P.M.M.G. Akkermans).

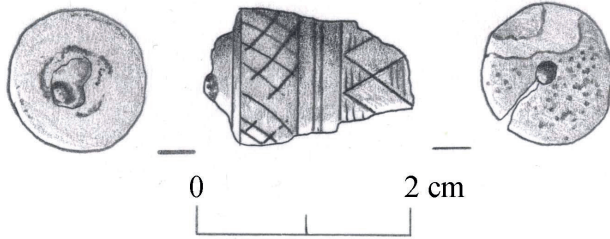


Fig. 3.88: Fragment of an ivory object with a bronze pin stuck inside (fig. by R. Timmermans).

### 3.6.5.3 Conclusion

The area south of the central buildings was gradually built up. While at first it consisted of a large open space, used for burials and haphazard oven construction, in due course buildings were erected in the south against the outer *dunnu* wall. As time progressed more structures appeared in the area. The final constructions resulted in a corridor or alleyway of approximately one metre in width.

The corridor has always been considered important for the circulation of people through the *dunnu*. However, several features such as ovens, bins and a large gully were constructed in this area. These features may have hampered the movement of people. Therefore, it is very likely that other passageways were also present, for instance along the roofs of the sector or on top of the outer wall of the *dunnu*.

In this view the corridor may be interpreted both as a passageway as well as an area for food production (figure 3.89). Perhaps the corridor was used in a time when all other spaces available for bread baking were occupied. In this sense the constructions in the corridor may be viewed as a final stage in the building up of the south-western sector. The first constructions were set against the outer wall, later buildings were constructed abutting these and the last spaces left for the construction of ovens was the corridor along the walls of the central building and residence.

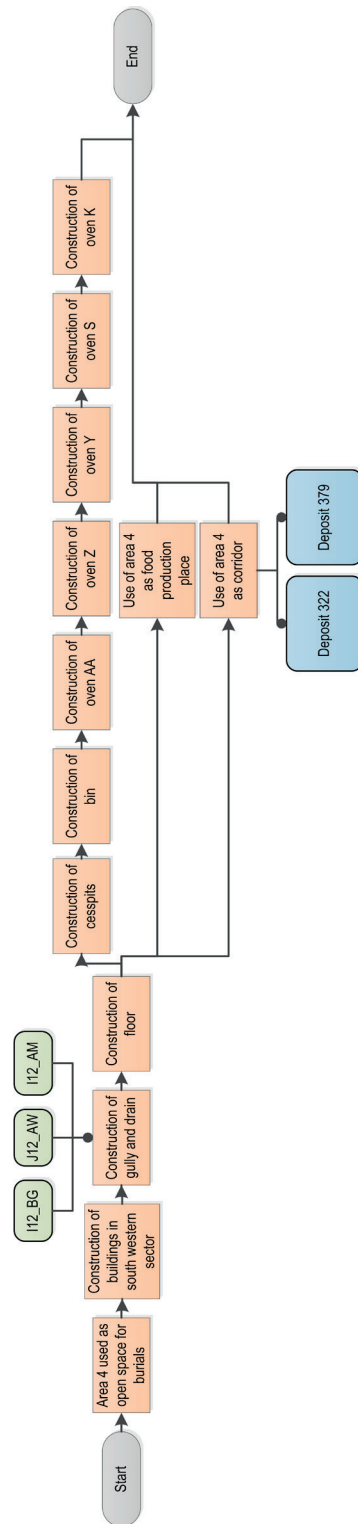


Fig. 3.89: Sequence of Events of area 4 of the south-western sector.

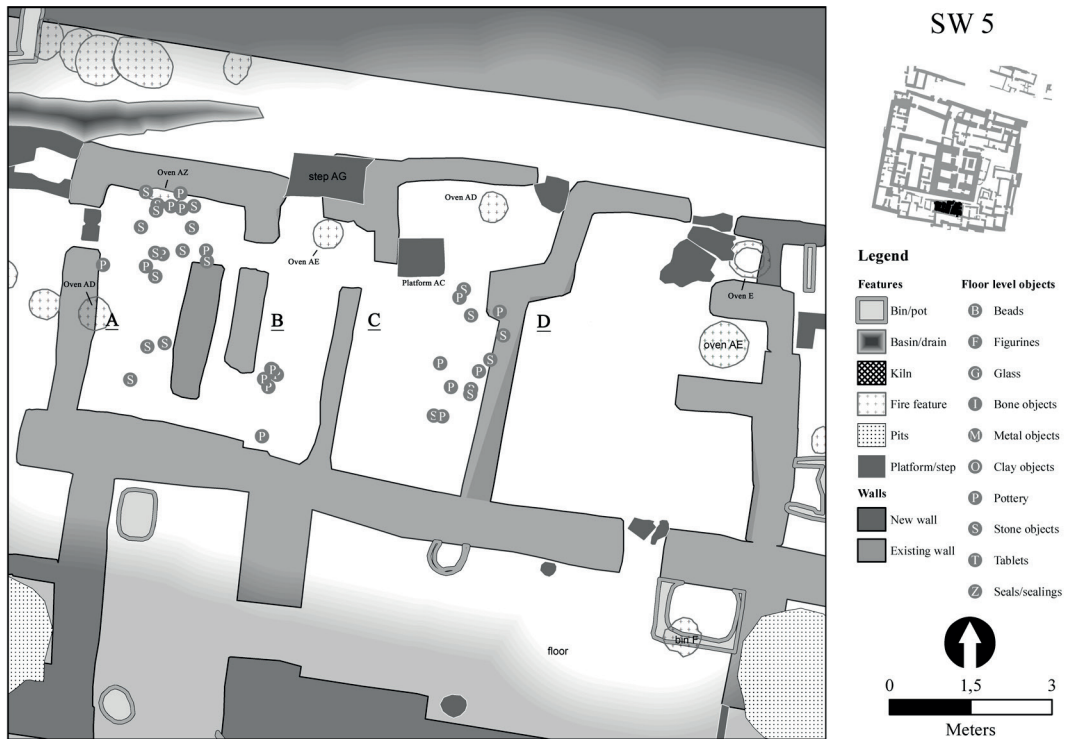


Fig. 3.90: Architecture and floor level finds of area 5 of the south-western sector.

### 3.6.6 Domestic architecture (area 5)

#### 3.6.6.1 Introduction

Area 5 consists of four spaces named A, B, C and D (figure 3.90). rooms A, B and C were connected to each other by doorways, in addition rooms B and C could also be accessed from the corridor of area 4. Room D could only be accessed from this corridor. All rooms were situated a bit lower in elevation than the corridor, which meant small steps had to be constructed to pass into the rooms from the north.

The presence of several ovens and many grinding stones on the floors of the rooms indicates that the spaces were probably used for food processing. This interpretation is in line with the surrounding areas which yielded similar results. The area is discussed in two parts, first the two western rooms (A and B) are discussed after which rooms C and D are examined.

### 3.6.6.2 Rooms A and B

Rooms A and B were fitted with a baked brick floor and a brick plinth along the wall, reminiscent of bathroom structures seen in other areas. However, no toilet construction was found in this area. The floor was badly damaged at some point so its exact function is unfortunately not clear. During the construction of room A a niche was left in its western wall, in which an oven (AD) was constructed. Clearly, the room was designed with this construction in mind, signifying that the space was intended to be used for food preparation. Also in room B an oven was constructed, albeit simply on the floor in the north.

During the use of room A a second oven (AZ) was constructed, this time in the northern wall. Instead of the procedure employed before, in which a large niche was constructed for the placement of the feature, in this case the oven was cut out of the wall (figure 3.91). Why this was done in this manner is unclear. Also the question remains whether this difference in construction signifies a difference in function. In any case, the room was clearly in use for the preparation of food.

Twenty objects were registered on the floor of room A. Thirteen of these were stone implements, mostly grinders and pestles. The remaining seven consist of four carinated bowls and three ceramic jars. Of the ceramics, only two carinated bowls were intact during excavation. Six of the stone objects were complete when excavated. Interestingly, the adjacent room to the west (room H of area 3), yielded large amounts of complete stone tools. That room was interpreted as a storage space for these objects. Conceivably, in room A these tools were put to use in food preparation.

The objects which were found in room B are five carinated bowls. Interestingly, the objects were found in a small cluster in a complete state on the floor of the room (figure 3.92). Their complete state suggests that the objects were not discarded as refuse. Their low replacement cost may indicate that the objects were left as abandonment stage refuse. The objects are unfortunately a commonplace appearance among the archaeological remains of the *dunnu* and do not aid in the interpretation of the activities which were carried out in the room. Probably also this room was used for the preparation of food.



Fig. 3.91: Oven AZ in room A (photo by P.M.M.G. Akkermans).



Fig. 3.92: Carinated bowls on the floor of room B (photo by P.M.M.G. Akkermans).

### 3.6.6.3 *The two eastern rooms*

Rooms C and D of area 5 were accessed from the corridor in the north down some steps. These stairs were renovated through time after the construction of new floors. This indicates that the elevation difference was simply taken as a fact and not deemed problematic. Both room C and D were divided internally in compartments and niches. Room C was paved with shards and stones and was divided into two parts by the layout of the room and by the construction of platform AC. This platform may have been used to hold a grinding slab, as was suggested for the buttresses in area 1 of the SW sector.

Room D was constructed with three niches built against its eastern wall. The middle niche was used to contain a large oven (AE). This oven was 80 centimetres in diameter, it was dug 45 centimetres into the ground and its top was 20 centimetres higher than the floor. White burnt fibrous material was found in the oven, perhaps indicating that in this oven different fuel was used than usual. Consequently, perhaps the oven was used for a specific purpose such as smoking of food. In time, also in the northern niche of room D an oven (E) was constructed. This oven was however smaller in size and was perhaps used for bread baking.

Finds from the floor of room C consist of six stone objects and seven ceramics. The stone objects are grinders and pestles and the ceramics comprise of carinated bowls and one small jar. Most of the objects were incomplete at excavation but, because a large amount of shards were present on the floor during excavation, perhaps several complete ceramics were deposited and fragmented post-depositionally. The size (medium and large), the low replacement cost and low amount of complete objects indicate that the assemblage was probably *de facto* refuse. Similar to other rooms in this area the room was probably used for food preparation. It is however unclear whether food was prepared for large groups, in a communal effort, or that these rooms were used by small families. Because room C is not suitable for large groups, it is conceivable that the latter interpretation of domestic use is the most probable.

Room D however is much larger in size and yielded large features which were perhaps used for the preparation of food. Unfortunately, due to later digging activities in this area, no finds were recovered from the floor of this room. Its large-scale food preparation features however indicate that the function of the room was probably similar to the other rooms in this area.

### 3.6.6.4 *Conclusion*

Area 5 of the south-western sector consists of several rooms which were constructed against the houses which abutted the outer *dunnu* wall. The architectural layout, as well as the features and finds from the area point towards a continuous use of the area in the realm of food production (figure 3.93).

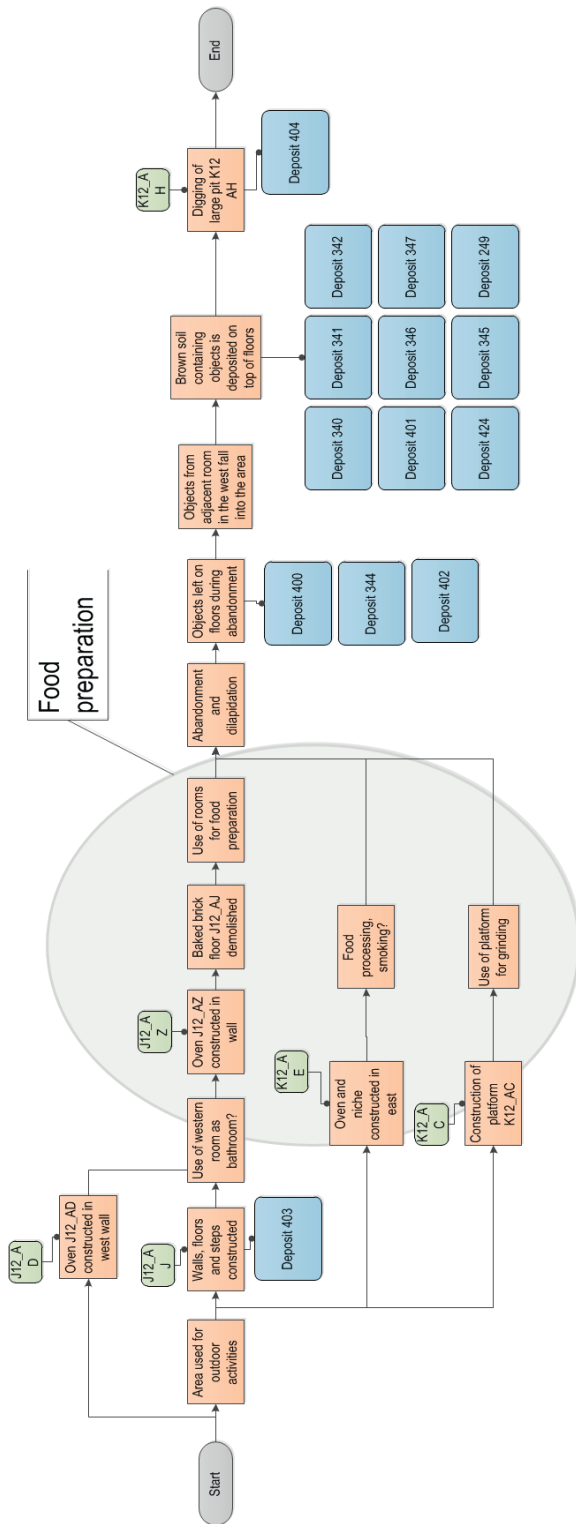


Fig. 3.93: Sequence of Events of area 5 of the south-western sector.

The previous interpretation of the area as the domain of baker Paya may still be applicable. However, the area may well have functioned to prepare a large variety of foods, not just bread. In particular the large ovens in room D were perhaps used to smoke and dry meats. Additionally, the grinding stones which were found may also have been used to grind a large variety of products, not only grains. From textual evidence from the *dunnu*, Wiggermann (2000: 197) has for instance found evidence for the production and use of chick peas, fennel, sesame, cumin, coriander and pistachio. Obviously a plethora of other food-stuffs such as vegetables, meats and poultry may have been prepared here too.

Additionally, perhaps the area was used in a domestic manner. Although no clear domestic spaces were identified, it is conceivable that this area was used by several families living in this part of the *dunnu*. These people may have had their residence on the higher storey or in the spaces closer to the outer *dunnu* wall.

### 3.6.7 A bakers' residence? (area 6)

#### 3.6.7.1 Introduction

Area 6 consists of three rooms: A, B and C (figure 3.94). Room A is a narrow space, which perhaps contained stairs to an upper storey. From room A, down some steps, room B could be reached. This rectangular room contained many bins and ovens and was probably used for food processing. Room C could be accessed from room B and from a corridor to its east. Also in room C a bin was present, but no ovens were found here. Interestingly, in a niche in the southern wall of room C a collection of tablets was discovered. These indicate that the room was used for official or administrative purposes. The layout of the rooms further suggest that the area may have functioned as a residence. The discussion below first describes rooms A and B and is followed by an assessment of finds and features from room C.

#### 3.6.7.2 Rooms A and B

Room A is a narrow room which was built along the façade of area 6. The size and layout of the room suggest that it could not be used for many activities. The space was probably used as a storage space or it contained a set of stairs which could lead to the roof or an upper storey. Against the western wall of the space a bin was constructed. Perhaps this was used in conjunction with the entrance into room B. Perhaps the bin contained water and was used as a wash basin for people entering or exiting room B.



Fig. 3.94: Architecture and floor level finds from area 6 of the south-western sector.

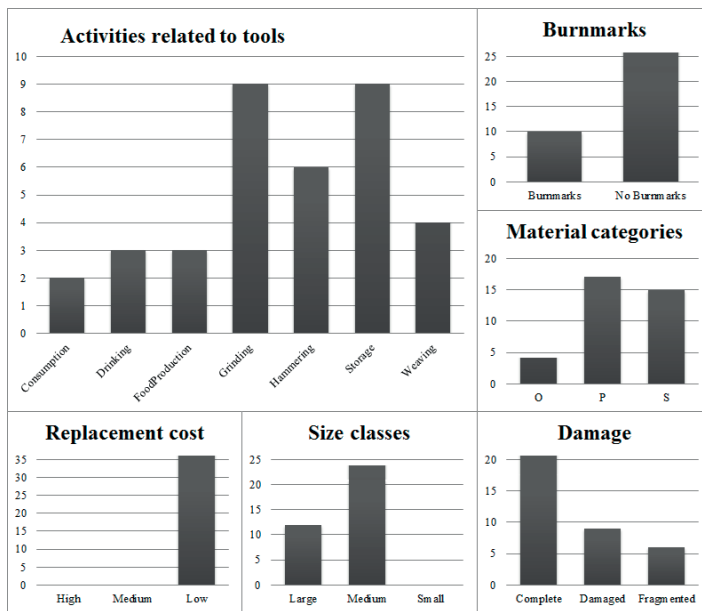


Fig. 3.95: Characteristics of objects from floor of room B (O clay objects; P pottery; S stone objects).

however also have been used to prepare the dough for bread baking. Subsequently, bread could be baked in the ovens which were present in the room.

36 objects were found on the floor of room B. Seventeen of these were ceramics, fifteen were stone tools and four objects were made of clay (figure 3.95). Nine ceramics were complete, and seven of these were large in size. This could indicate that the objects were part of a *de facto* refuse deposit. However, one third of the objects were burnt, which indicates that the deposit may also be the result of a catastrophe. Also in bin H four objects were found, two complete pestles and two ceramics. The ceramics are a damaged flask and a complete nipple based goblet. Both ceramics show traces of fire.

The ceramics from the floor are mainly bowls and large storage jars. The stone tools are predominantly grinding stones. These ob-

Room B was entered down some steps from room A. The room measured 4.3 by 2.6 metres and contained four ovens, two bins and a grinding installation. All features indicate a use of the space for food preparation. The grinding installation could be used to grind barley, which could be stored in the bins along the walls. Remains of charred grains in the large bin in the west (H) suggest that this feature was indeed used for the storage of grains. The bins could



Fig. 3.96: Floor of room B, looking north. In the foreground the four clay balls are visible. The sherd pavement in the background is located in space A (photo by P.M.M.G. Akkermans).

jects indicate that the room was used for the preparation of food. This interpretation is in line with the suggestion offered by the features which were found in the room. One group of objects however seems out of place. Four perforated clay balls were found lying among the floor level assemblage (figure 3.96). They are interpreted as loom weights, implying that weaving was carried out there or in the vicinity.

The presence of the charred grain in bin H, together with the ovens and other features suggests that the room was mainly used for processing grain and baking bread. The storage jars and loom weights indicate that the room was used in a diverse manner. Perhaps the room was used as the private or specialized kitchen for one of the administrators of the *dunnu*.

### 3.6.7.3 Room C

While many features were constructed in room B, only a single bin (K) and a niche in the southern wall were discovered in room C. Also much less objects were found in this room. Eleven objects were recorded on the floor and six from the niche in the wall. The floor level assemblage (deposit 428) contains seven ceramics and four stone tools. All objects in the deposit were damaged or fragmented and three show traces of burning. Among other, non-registered, objects on the floor are goblets and storage vessels (figure 3.97).

Six tablets were found in the niche in the southern wall of the space. In figure 3.97 the location of the tablets is indicated behind bin K. The tablets were in a poor state of preservation at the moment they were excavated. Nonetheless, the project philologist Frans Wiggermann was able to read them as being administrative lists and a letter, mostly dealing with the issue of grain and flour to personnel. Some of the documents were written by or at least relate to Paya, the baker who is also attested in the western part of this sector.



Fig. 3.97: Floor of room C, looking south. In the background the niche which contained tablets is indicated (photo by P.M.M.G. Akkermans).

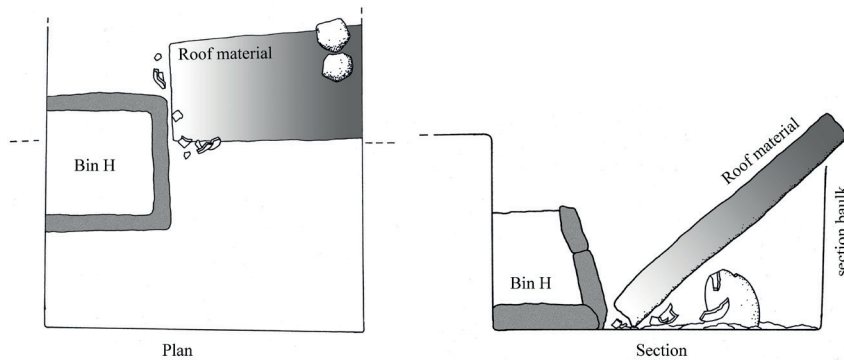


Fig. 3.98: Sketch of the plan and section of the collapsed situation in room B. Apparently a large part of the roof collapsed into the room, crushing several ceramics. The distance between the section baulk and the wall is approximately 1.5 metre (fig. by R. Timmermans).

The excavators interpreted the niche in which the tablets were found as a vault, and therefore the room as an office or residence of an administrator. Whether this interpretation of the context is valid remains unclear. Erosion processes and later digging activity have obscured much evidence. The concentration of the tablets in the niche and the lack of other such objects in the vicinity do however suggest that they were deposited here deliberately as a group. Considering that the tablets concern the work of the main baker of the *dunnu*, it can be stated that the objects relate well to the space they were found in. Therefore the objects can be understood as being part of either a catastrophe or an abandonment stage refuse.



Fig. 3.99: Plan of the Level 5 *dunnu*. Darker shade indicates a higher density of burnt objects.

If the objects were indeed kept in a small vault here it seems probable that the rooms represent the residence or office of baker Paya. Although several finds such as the goblets and clay balls indicate that this area is slightly different in nature than the other areas from this sector, the spaces have also yielded several features which are similar to the surrounding spaces. It is likely therefore that the area described here was also used for food production. An interpretation of office should therefore not be taken to indicate a 'clean' space.

3.6.7.4 *Abandonment and conclusion*

At some point the area was abandoned, with a large fire as either the cause or an ensuing event. Particularly room B, with many burnt objects on the ground was clearly part of a large conflagration. As mudbrick structures are usually hard to catch fire, it has either been the content of the room, for instance wicker baskets, wooden furniture or oil based products, which accidentally caught fire, or the room was purposefully burned down. After this fire had occurred the roof probably collapsed into the building. Figure 3.98 illustrates that large structural elements of the building collapsed onto the floor, crushing ceramics which were located there. This indicates that the collapse occurred directly or shortly after abandonment.

Curiously, although large fires were attested in several spaces in the *dunnu*, in none of these spaces so many burnt objects were found as in the rooms under investigation here (figure 3.99). Perhaps this is an indication of an accidental nature of the fire, the fire would then indicate a catastrophic event which ended the use of this building (figure 100). Many objects from this context were large in size and complete during deposition. This also suggests that it was a catastrophe deposit. Additionally, the spatial distribution of some objects seems in line with a rapid abandonment of the structure. In particular the striking assemblage of the clay balls (figure 3.96), whatever their function may have been, should be noted in this regard.

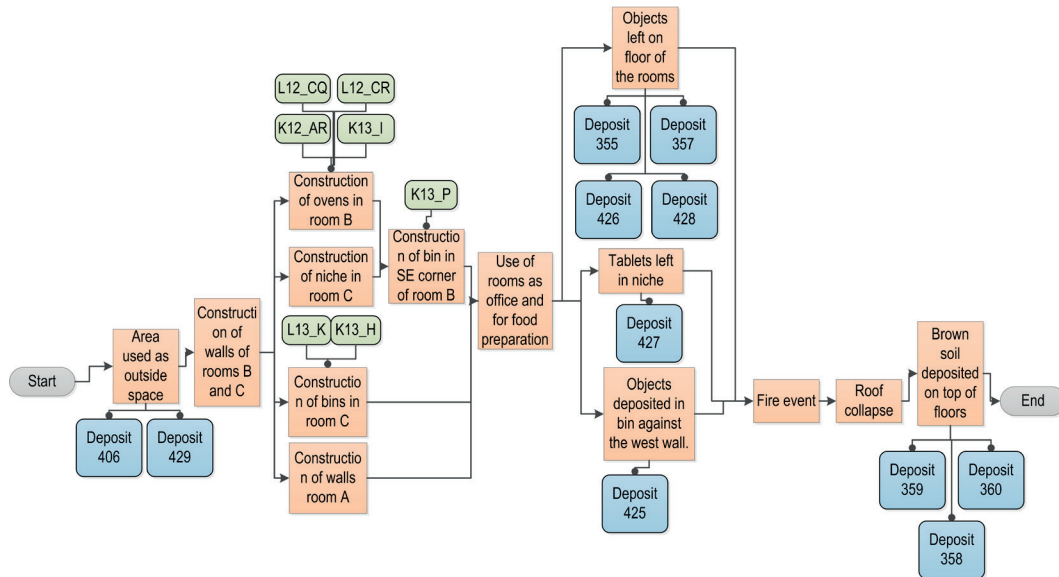


Fig. 3.100: Sequence of Events of area 6 of the south-western sector.

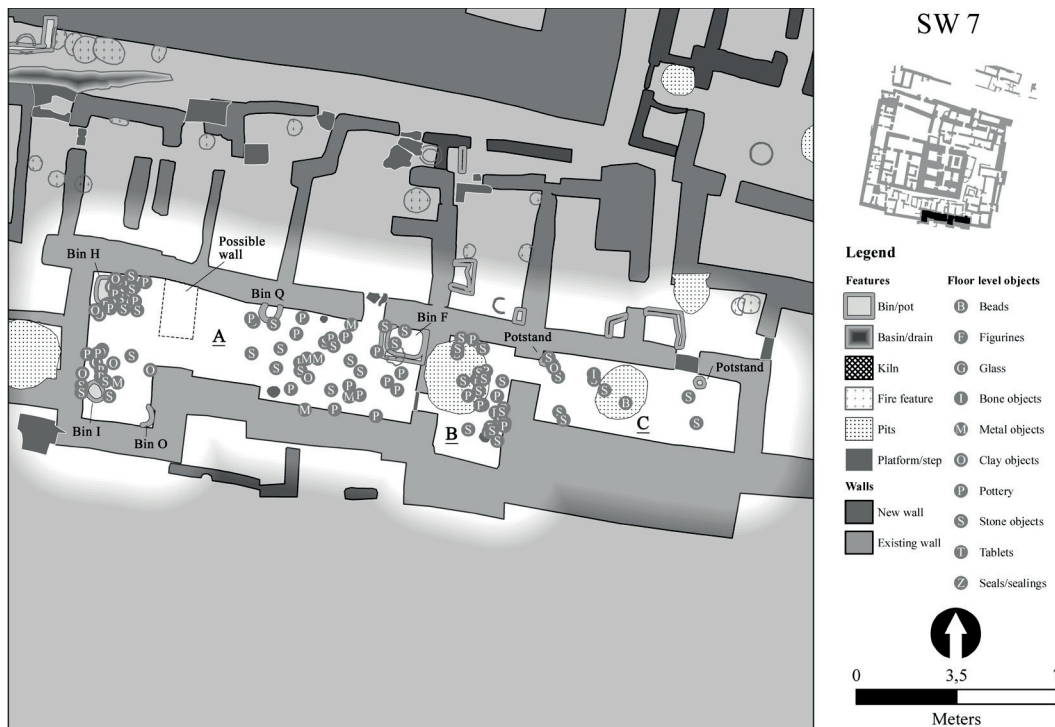


Fig. 3.101: Architecture and floor level finds from area 7 of the south-western sector.

### 3.6.8 Structures along the wall (area 7)

#### 3.6.8.1 Introduction

Area 7 of the south-western sector consists of three rooms, A, B and C, which were constructed along the southern outer wall of the *dunnu* (figure 3.101). The area suffered somewhat from erosion but still yielded many objects and features. During the earliest Assyrian phase the area was an open space, used for burials and small structures. At the start of the sequence described here the area was built up. The rooms were used for some time until a renovation was carried out. New floors were constructed 50 centimetre higher up. The function and use of most rooms however remained the same. In the discussion below, first large space A is discussed, after which rooms B and C are considered.

#### 3.6.8.2 Room A

Room A consists of a long hall along the outer *dunnu* wall. It is possible that the space was divided in two rooms in the past by a wall. However, a large pit was dug in the location of this possible wall making it impossible to reconstruct this with certainty. Because of this large pit and because space A was located in two different trenches, the middle part of the space is poorly known. Both the western as well as the eastern part of the space have yielded many finds and features however.

The first phase of use of the space is indicated by loam floor J. This floor level was recognized in both the west and the east of space A. In the west three bins were constructed. Two bins (O and I) along the southern wall were 60 centimetre wide, the northern bin (H) measured 90 centimetre. In the east of the space a bin was constructed against the northern wall and an oven was constructed near the entrance.

44 objects were found on the lower floor of the area. Among these objects were fifteen stone tools, fifteen ceramics and three bronze pin fragments. Additionally, in the west of the space eleven jarstoppers were found. All of these items are fairly large, measuring between fourteen and twenty centimetres in diameter. One of the jarstoppers is notably smaller, some 5 centimetre in diameter. Although all these objects are damaged, the damage is limited to the edges of the objects. This is the typical damage which is expected when a jarstopper is removed from a vessel. As most of the jarstoppers from this room were not fragmented more than this stage and the objects are relatively fragile, it seems reasonable to assume that they were taken off their vessels in this room.

These objects might reveal that the space was used as storage space, however, they could also be taken as signifying that many storage jars were opened here, and not stored. The space could therefore probably have been used to process food, as is also indicated by the bins. Another possibility is that the content of the jars was redistributed in smaller containers in this space.

Among the finds in the east of the space a large complete grinding stone and a large complete pot with a hole in the bottom were found. These large and complete items may indicate that they were left behind during abandonment as typical *de facto* refuse. This in turn suggests that the objects were used in this room as tools. This part of the space was therefore perhaps used for food processing and consumption. The large pot with the base hole may indicate that beer brewing was carried out in this space or in its direct vicinity.



Fig. 3.102: Bin H in room A. The bin was constructed in three tiers, stacked on top of each other (photo by P.M.M.G. Akkermans)

After the space fell in disuse, a layer of soil and refuse was deposited on the floor. This could be the result of refuse accumulation after or during abandonment or it could be a deliberate levelling of the room for the creation of a new floor some 50 centimetres higher. Due to erosion in the south this floor (K) was recognized only in the two northern corners of the space. In both corners a bin was present in this phase. Interestingly, the bin in the west (H) was in use in the previous phase too. During the renovation the wall of the bin was simply enlarged (figure 3.102). Around this bin three jar stoppers were found, as well as six complete carinated bowls. The fact that the bin was in use during both phases and that the find material from both phases is similar indicates a strong continuation of use.

In the east of space A also several objects were registered. Due to erosion the context of the objects is difficult to ascertain. Finds which were excavated in this layer are mostly grinding tools and ceramic bowls. This might indicate that the activities which were carried there were unchanged compared to the previous floor level. However, also a broken clay mace head was found, probably related to fighting. Like other rooms in this sector, weaponry was apparently present within domestic and craft related activity zones.

### 3.6.8.3 Room B

Many objects were found in room B but unfortunately, due to poor preservation of floors in this room it is unclear whether these belong to one or more floor levels. However, during the excavation a concentration of pottery and other objects (deposit 408) was considered to represent a floor level. Within this context many complete objects were found. It is therefore conceivable that this indeed represents a floor. This deposit consists of fourteen stone tools, twelve ceramic objects and one bronze needle (figure 3.103). The complete state and the apparent high replacement cost of the pin make it improbable that the object was discarded. Furthermore, eleven of the twenty seven objects in this concentration were complete. This also indicates that the deposit was not the result of refuse discard. Interestingly, only two objects are considered large in size. If the objects were left behind during slow abandonment a higher amount of large objects is expected. Therefore, possibly, this deposit was the result of rapid abandonment or even a catastrophe.

The objects in the deposit are related to food processing and consumption. Interesting is the presence of a damaged strainer among the pottery concentration found in the room (figure 3.104). This object, together with some of the large pots from the other rooms of the area, could be used in the process of beer brewing. It shows that the find complexes from these rooms are probably strongly related to each other and that the entire area therefore was used in the process of food and drink production.



Fig. 3.103: Bronze needle from room B of area 7 of the south-western sector (fig. by R. Timmermans).

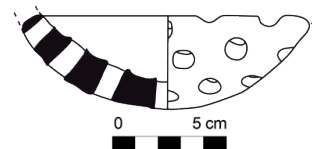


Fig. 3.104: Damaged strainer from the floor of room B of area 7 of the south-western sector (from: Duistermaat 2008: Fig. V.58).

3.6.8.4 Room C

Room C of area 7 is a long rectangular room with two doorways, one from the west and one coming from the north. The latter doorway was fitted with a door-step because of an elevation difference. Because of erosion processes not much of this part of the area is preserved. Additionally a large pit was dug through the room, destroying parts of the architecture. Two features did survive, next to each doorway a ring of stones was discovered. Perhaps these were used to hold a jar or pot. Their position next to the doorways suggests that they relate to entering and exiting the room. What they were used for is however unclear.

Ten objects were registered on the floor of the room. These include a bone plaque, a clay jar-stopper and eight grinding stones. Two of these grinding stones were large and complete. They were perhaps used in this space for food processing. All other finds from this room are damaged or fragmented and are likely deposited in the room as secondary refuse.

The function of the room is not easily explained due to the erosion and digging activities which have taken place. The relative low amount of objects in the room may however indicate that the space was left clean. Maybe this indicates that the room was used for domestic purposes.

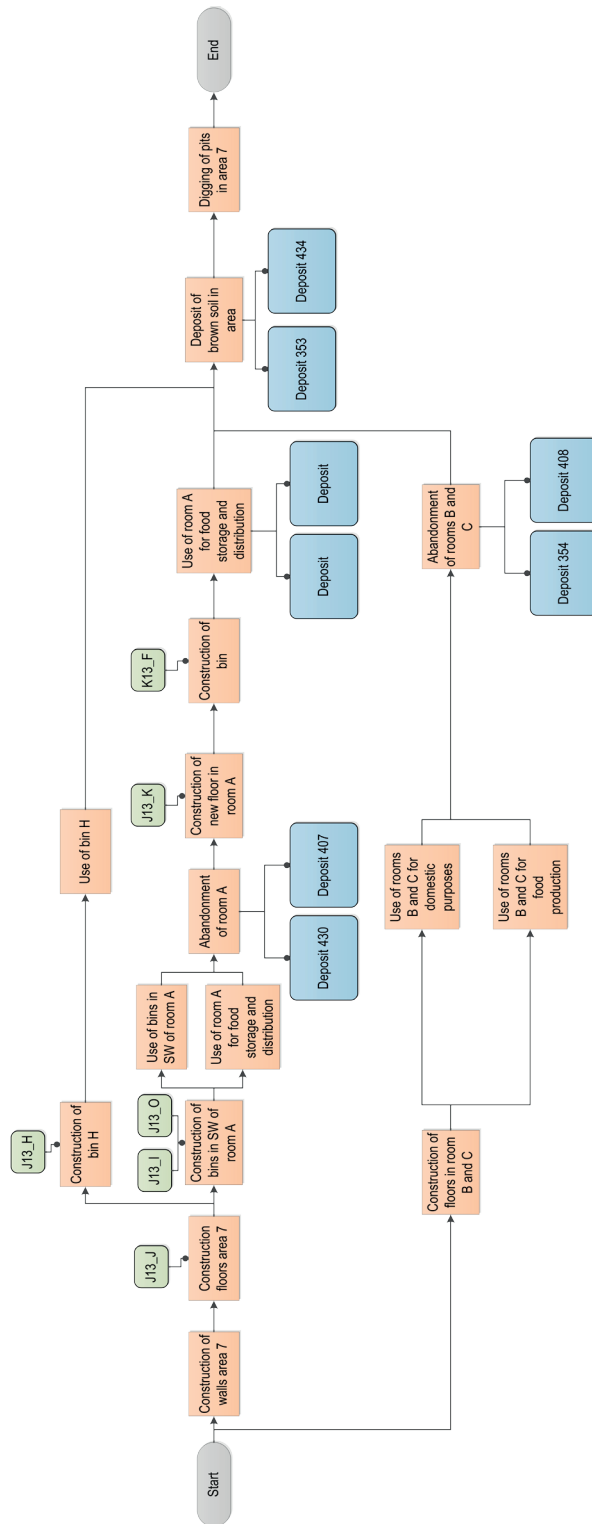


Fig. 3.105: Sequence of Events of area 7 of the south-western sector.

### 3.6.8.5 Conclusion

Area 7 of the south-western sector can perhaps be divided into two parts of equal size and layout. Space A may have consisted of two rooms, similar to rooms B and C. Erosion processes and digging activities unfortunately destroyed much of the architecture in the area. Therefore it is uncertain if this was indeed the case.

Two phases were reconstructed in this area (figure 3.105). Both phases yielded evidence for production and perhaps distribution of food. A continuity of use of the spaces is illustrated by bin H in the west of room A. This bin was constructed on the lower floor but was still in use after the area was renovated.

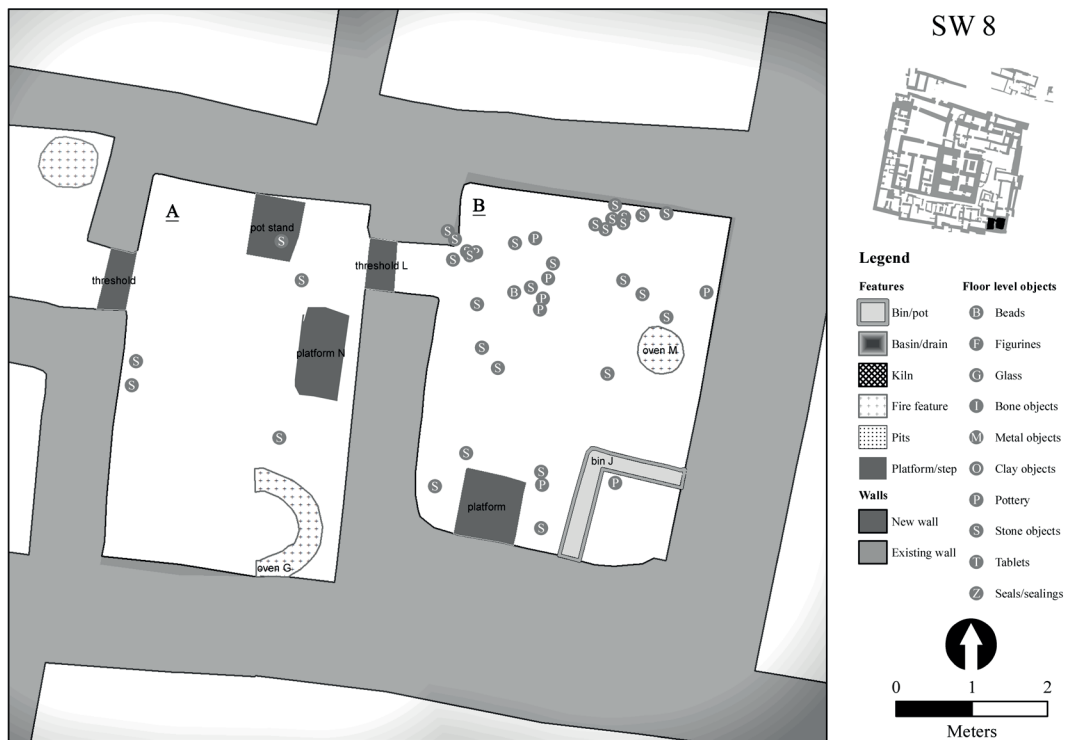


Fig. 3.106: Architecture and floor level finds from area 8 of the south-western sector.

### 3.6.9 Corner rooms (area 8)

Area 8 is located in the south-eastern corner of the *dunnu*. Because the area was connected to the corridor of area 4 it was grouped in the south-western sector. The area consists of two connected rooms, A and B (figure 3.106). The rooms are both rectangular and measure approximately 5 by 3 metres. Both rooms yielded a mudbrick platform and an oven. In room B also a large square bin was constructed. The platforms were constructed of mudbricks and perhaps supported a large grinding slab. If that was the case the rooms contained all features necessary for bread baking.

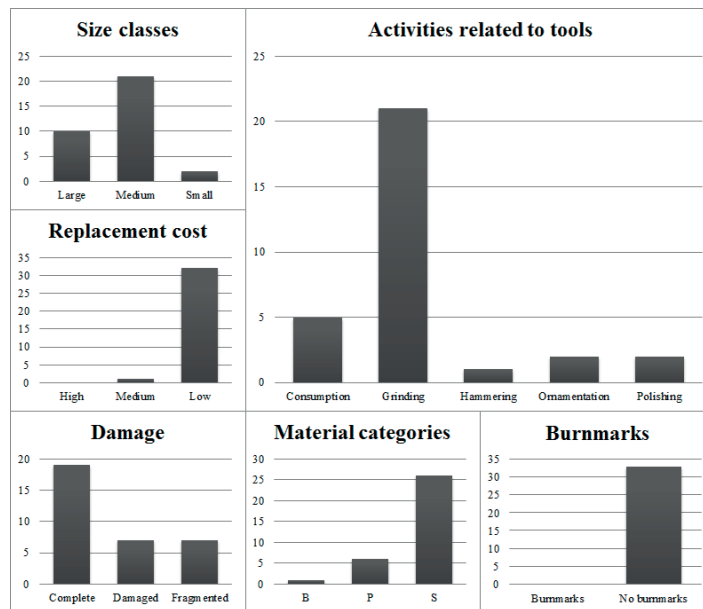


Fig. 3.107: Characteristics of objects from the floor of room B of area 8 of the south-western sector.

Finds from the rooms also indicate that food preparation was carried out there. In room A five objects were registered on and slightly higher than the floor. All of these objects are grinding tools, three of which are complete. Because two of the grinding tools are large in size, perhaps the objects were left behind during abandonment. However, considering that the other objects are fragmented, an interpretation as refuse deposit is also possible.

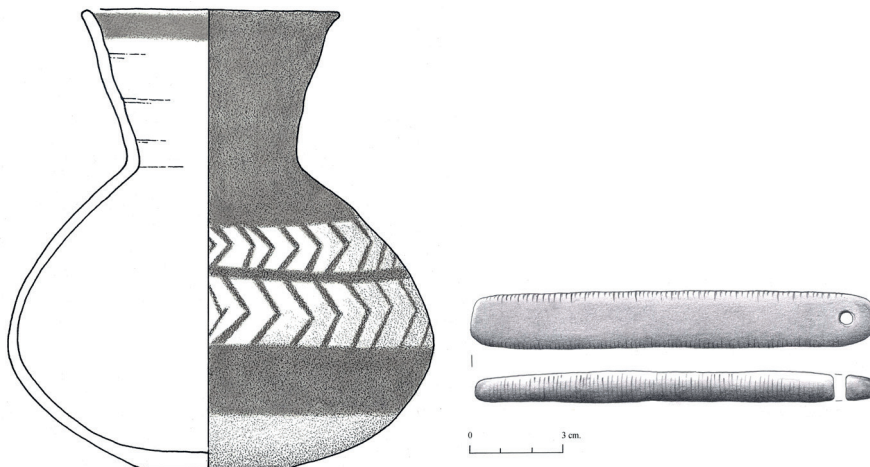


Fig. 3.108: Prehistoric (Halaf-period) jar and whetstone from room B of area 8 of the south-western sector (fig. by R. Timmermans).

In room B 33 objects were registered. Of these objects 26 are stone tools, five are fragmented ceramic bowls, one is a complete Halaf period Prehistoric jar and one is a perforated shell (figure 3.107). The stone tools consist of eighteen grinding stones, six pestles, a pivot stone and a whetstone. Nineteen objects are complete and ten objects, all grinding stones, are large in size. This large amount of large and complete grinding stones indicates that these objects were probably left here as *de facto* refuse. Therefore these objects were either stored or used in this room. Their concentrated distribution in the north of room B indicates that they may have fallen from a shelf.

The complete Prehistoric jar and the whetstone (figure 3.108) are rare among the find assemblages of Tell Sabi Abyad. The jar was probably found in the Neolithic deposits of the site by the inhabitants of the *dunnu*. It was excavated between the bin (J) and the mudbrick platform. It was therefore probably used as a container for food or water during food processing. The whetstone which was found in the room is an elongated smooth stone with a perforation at one end. The tool indicates that originally metal tools, probably knives, were used in this room, which required sharpening. Similar to other objects and features in this room, these were most likely also used in food processing.

Area 8 yielded a complete set of features and objects from one floor level. These objects and features appear very useful for the reconstruction of the activities which were carried out in the area. However, due to erosion not much area could be excavated. Therefore there is no information about the changes through time. Consequently, the Sequence of Events is very straightforward (figure 3.109). It should be noted however that although only a function of the area in food preparation was deduced from the find material, it is possible that also other activities were carried out there. In this vein it is conceivable that the rooms were used for domestic purposes, activities which leave little trace in the archaeological record.

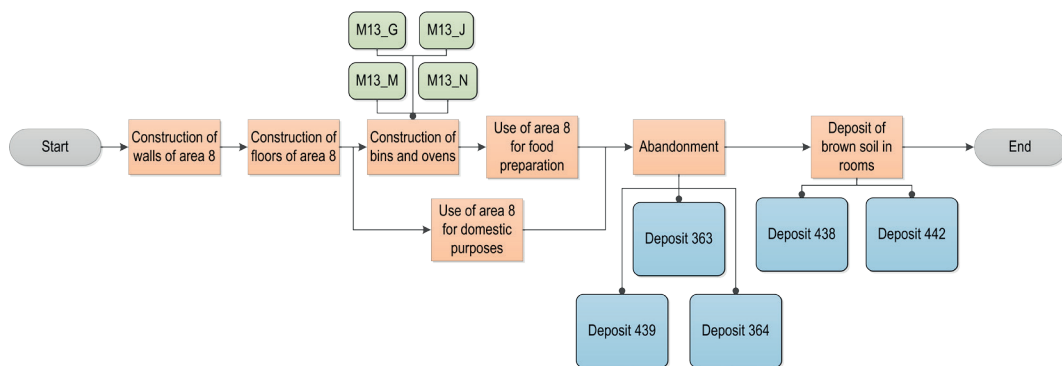


Fig. 3.109: Sequence of Events of area 8 of the south-western sector.

### 3.7 THE SOUTH-EASTERN SECTOR

#### 3.7.1 Introduction

The south-eastern sector is comprised of three areas, each fairly complex in layout (figure 3.110). Area 1 consists of a courtyard and a small structure set against the central building. This area provides access along the central building. Area 2 consists of several structures along the outer wall of the *dunnu*. Much refuse from pottery production was found in this area. Importantly this area includes an entrance through the *dunnu* wall. From area 2 one could also enter area 3, generally characterized as an office or apartment. The architecture is relatively well preserved in this sector and a large amount of finds was discovered in the ruins.

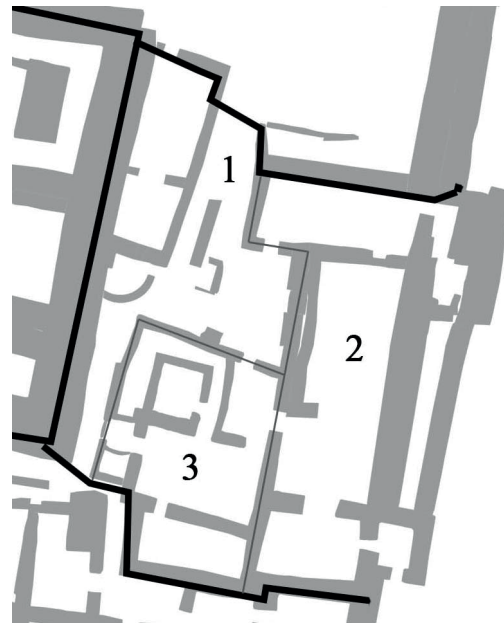


Fig. 3.110: Areas of the south-eastern sector.

#### 3.7.2 Courtyard and small building (area 1)

##### 3.7.2.1 Introduction

Area 1 of the south-eastern sector consist of a courtyard and corridor and a two-room structure set against the central building (figure 3.111). Two spaces, named A and B, were no longer present at the start of the sequence described here (Brüning and Plug 2016). Therefore, the naming of spaces in this area starts with the letter C. Spaces C and D comprise the courtyard and the corridor toward the south. Rooms E and F form the small structure set against the central building. Three phases were recognized within the sequence described here. The discussion below is based on this subdivision. The earliest evidence comes from a small trench inside room F which yielded a collection of beads. The second phase commences with the construction of the floors and features which are visible on figure 3.111. The final phase comprises of the abandonment and destruction of the architecture in the area.

##### 3.7.2.2 *The earliest evidence: a cache of beads*

At the start of this phase rooms E and F were already constructed. Unfortunately however, only in the south-east corner the earliest phase of the building was excavated. A rectangular

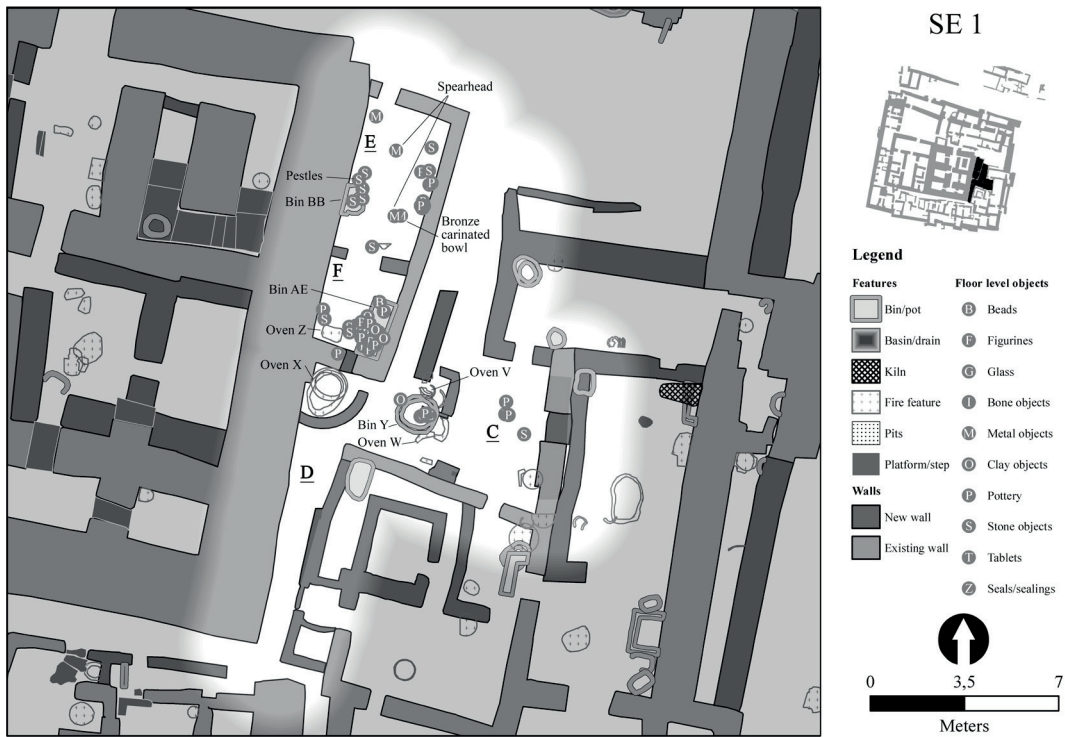


Fig. 3.111: Architecture and floor level finds from area 1 of the south-eastern sector.

bin (AE) was constructed in this corner. Within this bin two circular depressions were present. These probably once held two large jars. The feature indicates that short term storage and processing of foodstuffs possibly occurred in the room. The jars which were kept in this bin were not recovered during excavation. Therefore, at the end of use, the jars from the bin were taken away. Curiously however, inside the bin, in its north-west corner, a group of approximately 120 beads was discovered (deposit 246). How and why these beads were deposited here is unclear. Remarkably however, two clusters of beads were also found in room 6 of the central building, directly adjacent to this building. One of these clusters in the central building was interpreted as intentional deposition, while the other is interpreted as part of hasty abandonment and subsequent collapse (see paragraph 3.5.3). In view of the context of the beads in room F, the deposit can possibly be considered to be a cache. It remains unclear however if the individual who left the items behind meant to reclaim the objects at a later stage.

### 3.7.2.3 Architecture of the ensuing phase

At some point the area was renovated and new floors were constructed in rooms E and F (floors AY and AD). Also in courtyard C and corridor D a loam floor was probably present, but this was not recognizable as such during excavation. Along the east wall of room F two new de-



Fig. 3.112: Room F, looking east. In the background two depressions are visible which would have held jars, in the bottom right is oven Z (photo by P.M.M.G. Akkermans).



Fig. 3.113: Courtyard C of area 1 of the south-eastern sector, looking north-east. In the middle bin Y with the jar inside is visible (photo by P.M.M.G. Akkermans).

pressions were dug to hold jars (figure 3.112). Additionally an oven (Z) was constructed in the southern side of the room. In room E two ceramic jars were encased in a mudbrick construction (BB) against the western wall.

To the south of the building a quarter round wall (P) was constructed which enclosed an area in which a large oven (V) was constructed. A doorway in the south wall of room F was probably closed off when this oven was constructed. In courtyard C two other ovens (V and W) were constructed as well as a large bin (Y). This bin measured 1.3 metre in diameter and was constructed from mudbricks. Curiously, many of the mudbricks were imprinted with fingers, why this was done is unclear. The bin was dug into the ground for 60 centimetres and extended approximately thirty centimetres above ground. A tall jar with an upturned bowl as a lid was discovered inside the bin.

#### 3.7.2.4 Finds

On the floor of room F fourteen objects were registered. The deposit (220) consists of nine carinated bowls, three grinding stones, a clay jarstopper and a large bronze axe (figure 3.114). The floor of room E (deposit 219) yielded five pestles, three jars, three bowls, a ceramic flask, two large grinding slabs, a bronze spearhead and, from inside one of the jars, a small bronze carinated bowl (figure 3.115). Both rooms have yielded a rich assemblage of objects from the floor. This indicates that the objects were deposited in the same manner in both rooms. The type of objects which were found on the floors does differ per room however. In room F a large group of carinated bowls was found. In contrast, in room E five pestles were found in a concentration next to feature BB. Their clustered distribution next to feature BB indicates suggests a high level of structuring. Possibly the objects were used in this location for the preparation of food. Interestingly, according to the botanist working on the burnt grains (Fantone personal comment), in this building there is evidence for a particular crop (hulled wheat) which requires de-hulling before it can be further processed. This act of de-hulling is done by the use



Fig. 3.114: Bronze axe from room F of area 1 of the south-eastern sector (photo by P.M.M.G. Akkermans).



Fig. 3.115: Small bronze carinated bowl from room E (photo by P.M.M.G. Akkermans).

of pounding the crop with hammer stones or pestles. It is a reasonable assumption that this was undertaken in this room, using the pestles with the dug-in vessels and bins. In turn this suggests that the assemblage which was found here is highly structured and possibly represents a complete toolset.

The three bronzes which were found in the rooms are a remarkable discovery. Interestingly, in the soil deposit on top of the floor an additional spearhead and an arrowhead were found. These objects are probably high in replacement cost and indicate that the deposit was not the result of refuse discard. Rather, these objects indicate that the objects were left behind during rapid abandonment or during a catastrophe.

Fire damage on the floor and the walls of the building indicate that at some point a fire occurred in the structure. Also the presence of a jar filled with charred grain is an indication for this conflagration. Considering this fire damage and that many complete objects were present of the floor, it seems likely that the building was struck by a fire before the objects could be retrieved from within. Therefore the assemblage should be considered a catastrophe deposit. This in turn indicates that the objects which were found in the building relate strongly to its use.

Finds from the courtyard are less numerous. From bin Y seven objects were recovered and four objects were found in shallow pits in the east of the courtyard. The finds from bin Y comprise of the earlier mentioned jar and carinated bowl as well as three clay sealings, a loom fragmented clay weight and a badly damaged cylinder seal. As nearly all these objects are related to storage and they were found in a large storage bin, they appear to be found in an appropriate location. Consequently, these objects can be interpreted as primary refuse. The objects in the east of the courtyard are all fragmented and were probably discarded as secondary refuse.

#### 3.7.2.5 Conclusion

The principal function and use of rooms E and F should therefore be sought in the realm of food preparation and perhaps consumption. The presence of several bronzes however indicate that also other activities may have taken place there (figure 3.116). Perhaps the building, or its second storey or roof, also functioned as the residence of a soldier. The discovered weaponry was perhaps stored there temporarily. Another, more spectacular interpretation could be that the weapons were lost here during a violent raid on the *dunnu* of which also the conflagration could be a result. However, this would have probably resulted in a wider distribution of the weaponry and a higher amount of weapons overall.

The area was probably also important for the circulation of people through the *dunnu*. the corridor and courtyard provided the only ground floor access point into the south-western sector. However, the bins and ovens in the courtyard and corridor indicate that these spaces were frequently used for food preparation. Also food distribution may have taken place there. These activities would probably hamper movement through this area. Therefore either there was not much traffic through the settlement or there were other routes through the *dunnu*, for instance along the higher storeys or rooftops.



### 3.7.3 The servant's entrance and pottery workshop (area 2)

#### 3.7.3.1 Introduction

Prior to the sequence described here a structure consisting of two rooms was present in the north of this area. These rooms were dubbed A and B (Brüning and Plug 2016). These spaces were demolished before the sequence which is described here, therefore the naming of spaces below commences with the letter C (figure 3.117).

Area 2 could be entered from outside the *dunnu* through room F. This small space perhaps functioned as a guard room. From here room E could be reached in the south of the area. This room subsequently led to a large courtyard, space D. From courtyard D one could enter an apartment on the western side (area 3) and another courtyard (area 1). Attached to this courtyard to the north was room G, a rectangular space which gave access to a narrow space (C) which was probably a hallway towards a set of stairs which was reconstructed in space H (Lanjouw 2016). These stairs indicate that a second storey or roof was used. In his reconstruction of the architecture Lanjouw (2016) suggests that the outer wall of the *dunnu* was six metres high and that on top of rooms C and F guard posts were present.

In the past, two characterizations of this area were put forward. Firstly it was interpreted as the servant's entrance (Wiggermann 2000). This characterization contrasts the area with the monumental gate in the north of the *dunnu*. The second characterization of the area is that

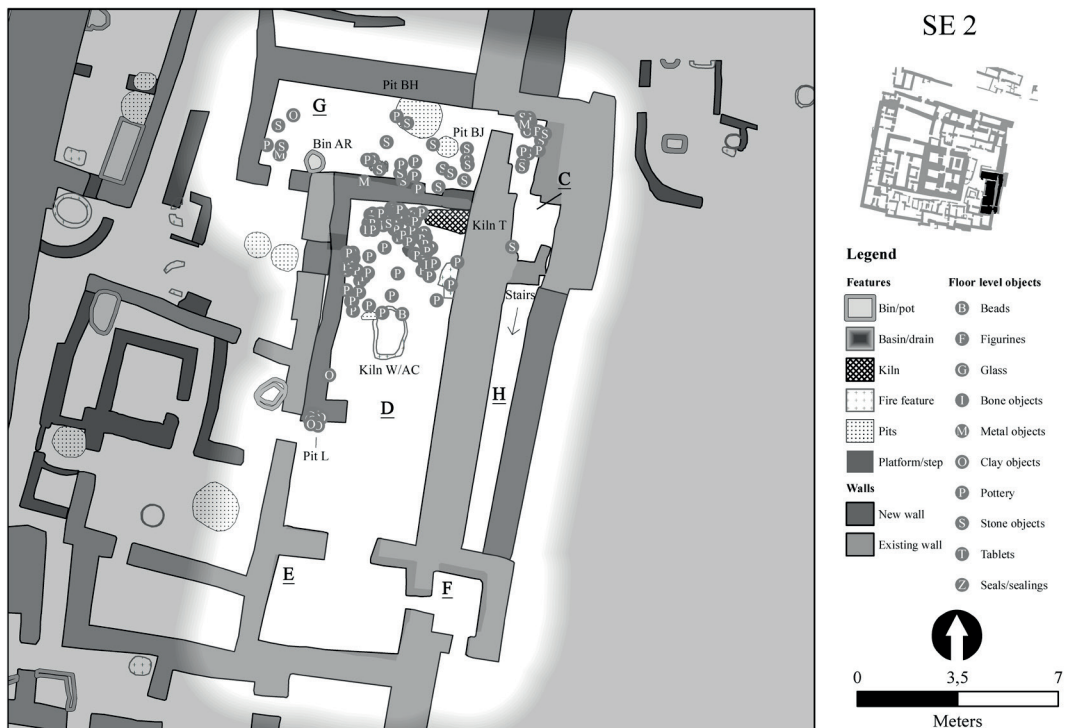


Fig. 3.117: Architecture and floor level finds of area 2 of the south-eastern sector.

of a pottery workshop (Duistermaat 2008: 364) because much pottery production waste was found in these rooms and because of the location of the entrance. Both interpretations may thus be valid.

Unfortunately, erosion in the south has damaged much of the archaeological remains. Consequently, no objects were registered in the south of courtyard D and in rooms E and F. Therefore the discussion below focusses mostly on the northern part of the area.

### 3.7.3.2 Features and finds

The floors in all spaces of the area were made of loam. Eleven features were registered in the area, these were located in spaces G and D. In room G two mudbrick lined pits (BH; BJ), one bin (AR) and four ovens (X; Y; Z; BI) were discovered. The ovens were constructed in sequence and therefore represent renovation phases of one oven. In courtyard D two pottery kilns (T;

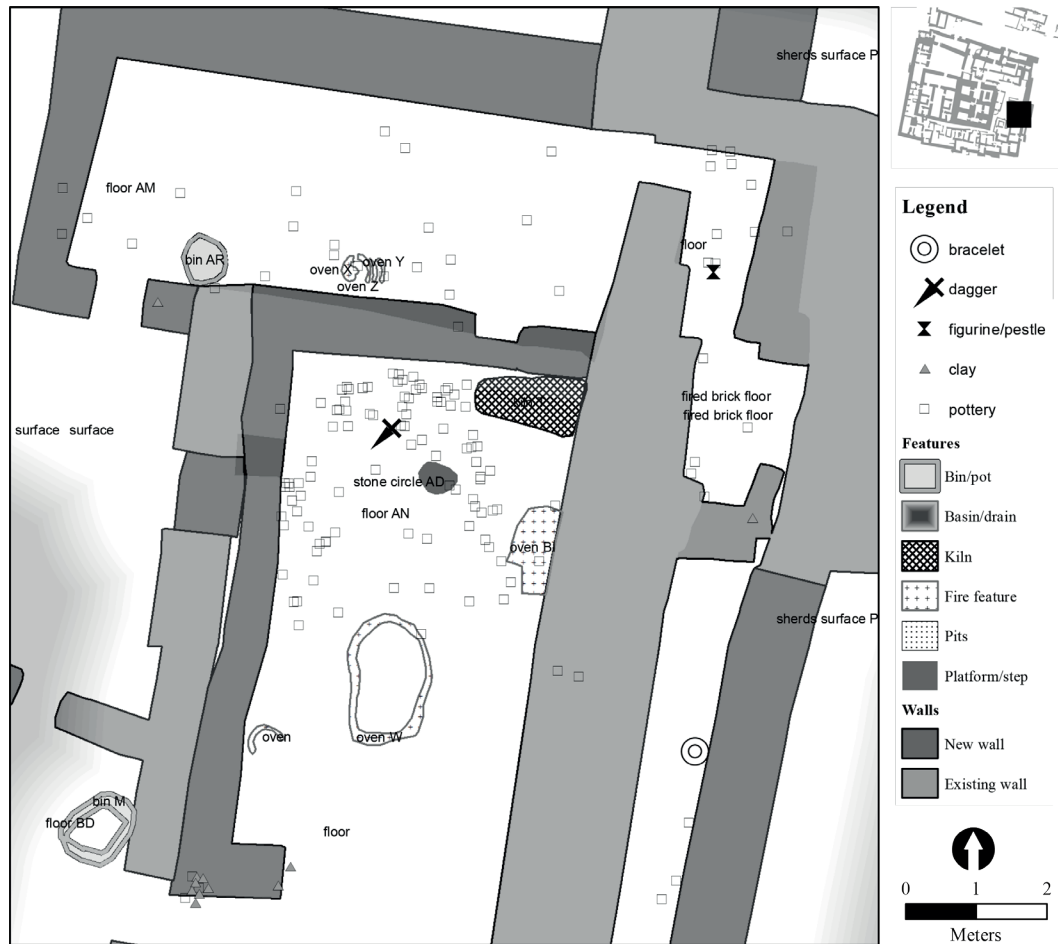


Fig. 3.118: Objects in rooms C, D, G and H.

W/AC) were found as well as a pit (L) and a stone circle (AD). Feature AD was perhaps used to support a large jar or pot. According to the features room G was probably used for food processing. Courtyard D however contains features related to pottery production.

The area was analysed and described before by Kim Duistermaat for her PhD thesis (Duistermaat 2008). To her it seems clear that both courtyard D and room G were used for all steps in the process of pottery production: shaping, baking, repair of broken and misfired ceramics as well as the storage of the finished product. According to her, pottery shaping occurred mainly in room G, while firing of the product happened in courtyard D. Storage took place perhaps in the adjacent house, area 3 (paragraph 3.7.4). The process of pottery shaping is indicated in room G by the presence of the two pits and several stone 'rings' (figure 3.118). The mudbrick lined pits were perhaps used to store clay and to mix clay with temper. The stone rings may have functioned as pivot stones, as part of the pottery wheel. Most stone rings are about 20 cm in outer diameter and have a central hole which measures about three centimetre. One ring, two fragments of which were found, was considerably larger. With an outer diameter of 32 centimetres it may have served a different purpose than pottery wheel pivot. Perhaps it was used as potstand for large vessels when they needed to dry.

After shaping and drying the unbaked ceramics were brought to a kiln in either courtyard D or to another kiln outside the *dunnu* walls. Some fragments of these unbaked vessels were found near the kilns in courtyard D. Unfortunately not many unbaked pottery fragments were recorded as objects in the field. Drawings produced by Duistermaat however indicate that many of these clay objects were located around the kilns in the courtyard (Duistermaat 2008: fig. V.13). Another concentration of clay objects was found in pit L next to the doorway leading to area 3. This concentration (deposit 259) consists mainly of unfired bases of goblets and bowls. Perhaps this is indicating that in their vicinity also pottery shaping was undertaken.

Many of the recorded objects from spaces G and D were found directly on the floors of the buildings. However, also many objects were recorded in the soil layers covering this floor. Often soil layers on top of floors are refuse deposits, a result of discard in an abandoned area. In this case however, the content of these two separate deposits is very similar. Figure 3.119 illustrates this situation by comparing the two deposits from room G. The floor level deposit (223) and the soil and refuse layer (251) which was deposited on top are very similar to each other. Probably this indicates that during the use of the room, the floor gradually was filled up with refuse. The objects from both deposits may therefore have been used in the space.

In the courtyard many waste products of pottery production were found. Many bowls, goblets and pots were found with cracks in their bodies. In antiquity, an attempt was made to repair these objects by application of layers of lime plaster. It seems like the specimens which were recovered from these rooms were beyond repair, although an effort was taken to fix them, they ended up as refuse on the floor of the workshop. The excavated floor of the workshop is illustrated in figure 3.120. Nearly all ceramics visible in this photograph are discarded cracked objects with lime plaster repair attempts. A small number of ceramics from these contexts were found with such a thick layer of lime plaster it is assumed they were used as containers for the emulsion while carrying out the repair attempts.

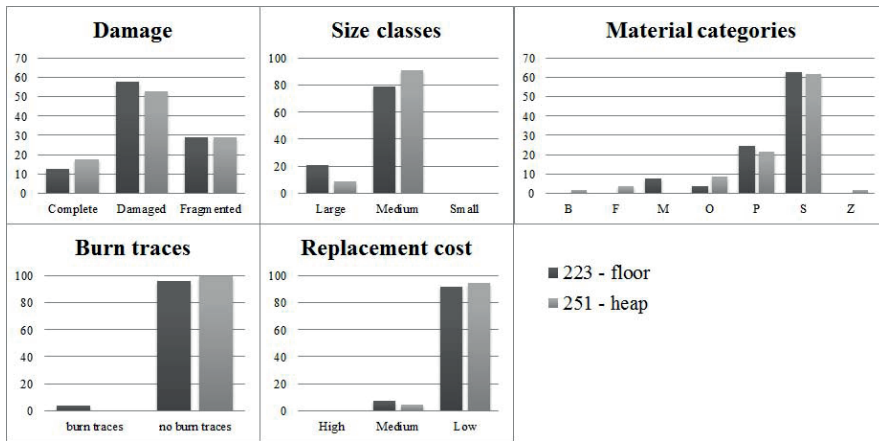


Fig. 3.119: Characteristics of objects from the floor and the higher lying soil heap on top of the floor of room G of area 2 of the south-eastern sector (B beads and pendants; F figurines; M metal objects; O clay objects; P pottery; S stone objects; Z seals and sealings).



Fig. 3.120: Room G, looking north-east. In the background kiln T is visible (photo by P.M.M.G. Akkermans).

Despite the interpretation of room G as a part of the pottery workshop, the find material it yielded is constituted mainly of stone objects such as grinders and pestles. Both the deposits on the floor as the layers which were dubbed ‘roomfill’ by the excavators yielded a large amount of these objects. Perhaps these signify the use of the room for food preparation. The sequence of ovens in the south of the room can also be mentioned in this regard. At least four phases of rebuilding of a round *tanur* oven were constructed here (oven X, Y, Z), most likely for bread baking (Fantone 2016). It is likely that pottery production did not occur on a daily basis. Therefore the room was perhaps also occasionally used for domestic purposes.

Two other objects from the area appear to be unrelated to the process of pottery production. In corridor C a complete bronze bracelet was found in a sandy layer on top of the floor. Of equal seemingly high replacement cost is a bronze dagger or small sword which was found on top of the pottery concentration in the courtyard (figure 3.121). Neither the bracelet nor the weapon seems in place in a potter’s workshop. The location of the objects indicates that there was no clear intention to retrieve the objects later, neither do they seem to have been deliberately hidden from view as they are part of the soil layer covering the floor. It seems therefore likely that the two bronzes were unintentionally deposited, in turn indicating they were used in this area. It is conceivable that for instance during rapid abandonment the bronze blade was lost here by a guard based on the wall.

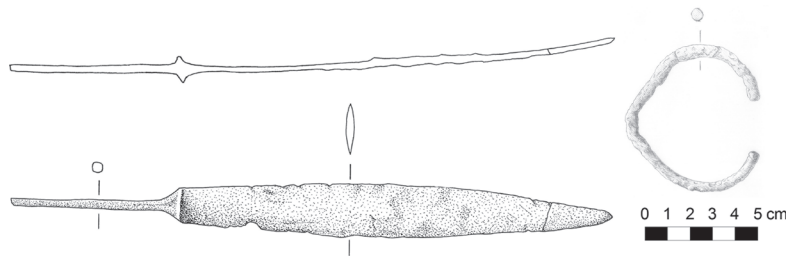


Fig. 3.121: Bronze sword and bracelet from area 2 of the south-eastern sector (from: Tell Sabi Abyad archive).

### 3.7.3.3 Conclusion

In conclusion it is clear that, despite the lack of data for the southern parts of this area, the walls, rooms and doorways were constructed to provide an entrance towards the courtyard and the rest of the *dunnu*. The spaces in the area were mostly used as a pottery workshop (figure 3.122). Because of the constraints the kilns and pottery production waste provided for passage through the courtyard, it seems unlikely that the area was a pivotal point in the circulation of people throughout the *dunnu*. It is however possible that pottery production did not start until the end of the occupation. This could mean that the area perhaps did fulfil a distributive function in earlier times.

The common subdivision of objects from a floor context and a heap or pile, often called a roomfill deposit, seems untenable in the case of area 2. The objects within the floor- and soil layer deposits are largely identical in function and use. The few items which point at distinctively other activities indicate the importance of the higher storeys, which alongside being a subsidiary space for the potters, to dry their ceramics, was a location where guards could overlook the areas east of the *dunnu*.



### 3.7.4 An apartment (area 3)

#### 3.7.4.1 Introduction

A singularly well-ordered building, area 3 of the south-eastern sector is made up of four main rooms (C, B, E and F) and a corridor (D) leading towards a bathroom or toilet (figure 3.123). A small cupboard next to a cesspit was considered a separate space and was labelled with the letter G. The building could be entered and exited through two doorways in room F, both leading to small courtyards within the sector. Earlier interpretations of the area were put forward by Duistermaat (2008: 364) and Wiggermann (Akkermans and Wiggermann 2015: 116), both from their own research perspective. Where ceramist Duistermaat sees in the spaces the working and living quarters of a local potter, philologist Wiggermann has interpreted the area as an office or residence of a scribe. Both base their reading on the architecture and specific finds from the rooms. Whereas the general layout and the presence of a bathroom or toilet reflect a residential nature of the complex, the objects on the floors of room B are the consequence of both nearby pottery production as well as the discard of cuneiform texts.

#### 3.7.4.2 The architectural layout

At the start of the sequence described here several walls were constructed. This resulted in the layout of the area which resembles an apartment. Two doorways into the building were present in room F, which served as entrance hall. From there one would enter room B which in turn

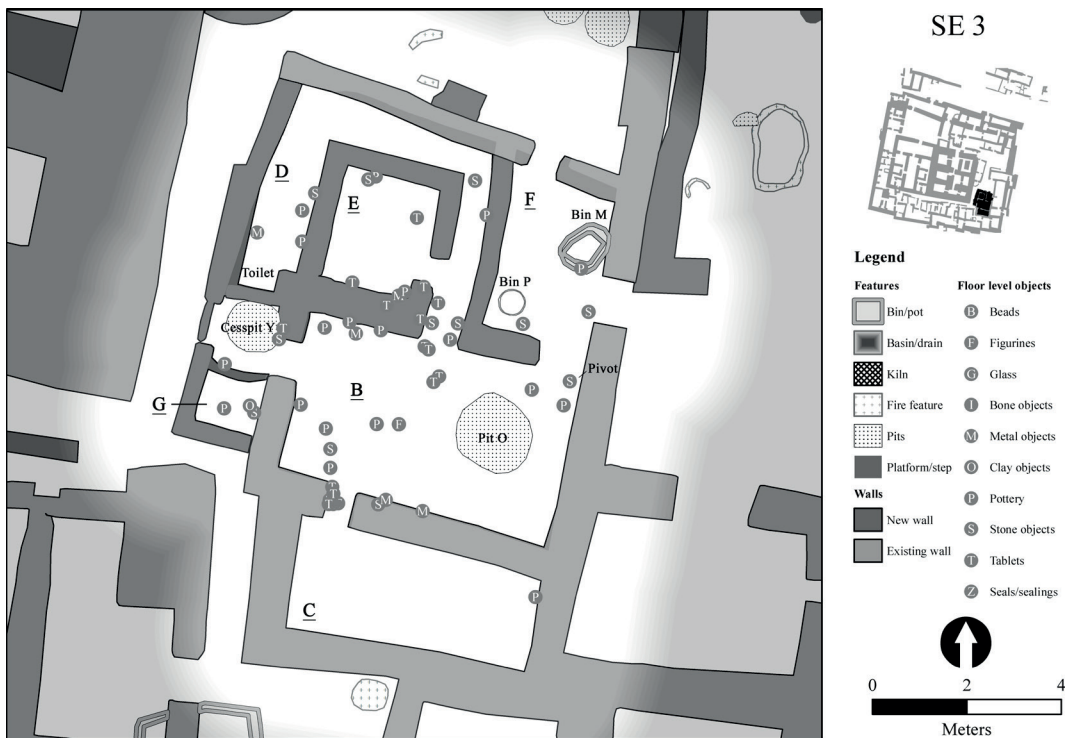


Fig. 3.123: Architecture and floor level finds from area 3 of the south-eastern sector.

gave access to a smaller room in the south (C) and a smaller room yet (E) and bathroom (D) to the north. The bathroom was reached through a narrow corridor, possibly created to provide more privacy. Interestingly, the elongated entrance is a feature frequently occurring in bathrooms and toilets in the *dunnu*. The floor of the bathroom was constructed with baked bricks, as were two raised platforms, which functioned as footrests. A ceramic pipe was placed through the wall, leading to a cesspit (Y) at the other side. This cesspit was placed in a space enclosed by walls on three sides and a doorway leading to room B. South of the cesspit, separated by a thin wall, was another, equal sized space with unknown function (G).

Apart from the actual bathroom, which was fitted with a baked brick floor, the corridor leading towards the bathroom as well as the other rooms were fitted with loam floors. Additional architectural features include a large shard-lined pit (O) in the middle of room B, and two bin constructions (M; P) in room F. These features may indicate that both the entrance hall and the central room or courtyard were used for domestic activities such as food preparation.

A pivot next to the entrance into room B reveals that the building could be closed off. All in all the architecture seems particularly suitable to have functioned as the residence of an important *dunnu* official and his family. Perhaps the northern part of the apartment was used to eat and bathe, the central room was used for general household activities while the southern annex could be used as bedroom or for official, administrative activities.

#### 3.7.4.3 *The finds*

As mentioned above, its location as well as some finds from the area led Duistermaat (2008: 363) to suggest that the house related to the potter's workshop in area 2 (see paragraph 3.7.3). Some kiln waisters were apparently found on the floor and a large feature in the middle of room B was interpreted as a bin which would have held a large water vat. Room C was suggested to function as a storage place for vessels. Reviewing the objects retrieved from the floor of the central room, however, does not support this proposition. 27 objects were found on the floor of the room, thirteen of which were ceramics. Six objects were stone tools, including the pivot stone, five were tablets and three were small corroded bronze fragments. Among the thirteen ceramics only one overfired potstand was discovered. The assemblage is mostly composed of (both complete and fragmentary) carinated bowls. Also in other rooms no evidence for pottery production activities was found. Although the location of the house adjacent to the potter's workshop implies a strong relationship between the areas, the lack of related objects indicates that the activities did not correspond in the past. A second interpretation was suggested based on the tablets which were found in the area. As indicated by Wiggermann (Akkermans and Wiggermann 2015: 116) the tablets belong to the scribe Belu-eris, and consequently the house is interpreted as his residence.

The depositional history of the tablets however suggests that the objects were not all deposited where they were once used. The cuneiform tablets from this area were found in two separate deposits. Eight tablets were found among other find material in and around room B (figure 3.124). As they have ended up in a wide but thin scatter it is unlikely they were deposited as primary refuse. The objects are part of a larger deposit of much broken pottery and possibly other waste, which indicates that also the tablets were perhaps deposited as secondary



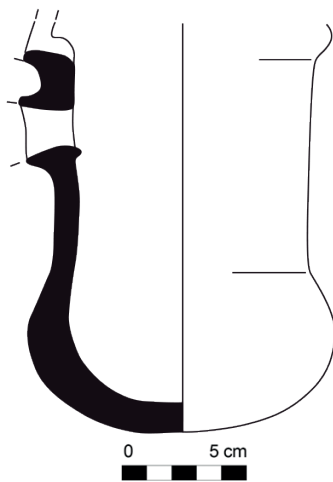


Fig. 3.125: Double spouted jug from courtyard B of area 3 of the south-eastern sector (from: Duistermaat 2008: Fig. IV.95i).

The distribution of the main tablet concentration suggests that the objects were not left behind at the location of use, but were discarded in an attempt to dispose of them indefinitely. Despite this secondary nature of the deposit, the concentration of tablets in the building does indicate a relation between the objects and the house. In other words, it is likely that the secondary discard occurred in or near the location of use. A conceivable scenario is that the tablets were originally discarded as provisional refuse until the area was no longer in use by their owner and they were transferred to a secondary deposit among the rubble on the floors of the area, possibly as part of a levelling layer.

There are several notable finds among the deposits which will be shortly discussed here. Firstly, a bronze arrowhead was found on the baked brick floor of the bathroom in the northern part of the area. Clearly this is not an object one would expect in this space. Other bronze objects include a small ring in the rubble in room E and numerous small bronze fragments in the soil layer in room B. As the latter include production waste they may indicate bronze production nearby. The overall pottery assemblage from the area is characterized by a large number of jars and carinated bowls. One vessel stands out in this regard, P93-176 is a small double spouted jug, possibly used for pouring drinks (figure 3.125). It was found on the bottom of a large jar in the eastern side of room B.

Apart from several large storage vessels most pottery therefore was used in food consumption. It could be argued that the larger vessels were left behind during abandonment of the building as *de facto* refuse while the smaller items should be considered either primary refuse, discarded at the place of use, or secondary refuse.

Based on the layout of the building and the overall character of the finds, the activities in the area were primarily domestic in nature (figure 3.126). The house was used to live, eat and sleep while also food preparation took place here. This household was at least at some point perhaps headed by one of the administrators or scribes of the *dunnu* who, after cleaning out his tablet archive, discarded a number of his documents amongst the rubble which had accumulated during the last phases of occupation of the house. Although also some overfired ceramics were found among the floor level assemblages, there is no strong indication that the inhabitants of the house were directly involved in the pottery production next door. Also, apart from the few bronze lumps in the rubble layer in the central room, no other evidence for bronze casting was found in this area. In the north-western corner of the central room, on the walls near the cesspit, some fire damage was encountered but there is no evidence this was part of such a production process. The majority of objects with burn marks occur along the northern wall of the central room. Excavation diaries also describe a burn layer in this general area. Perhaps this fire damage denotes a final use of the space during which a fire was constructed in its corner.

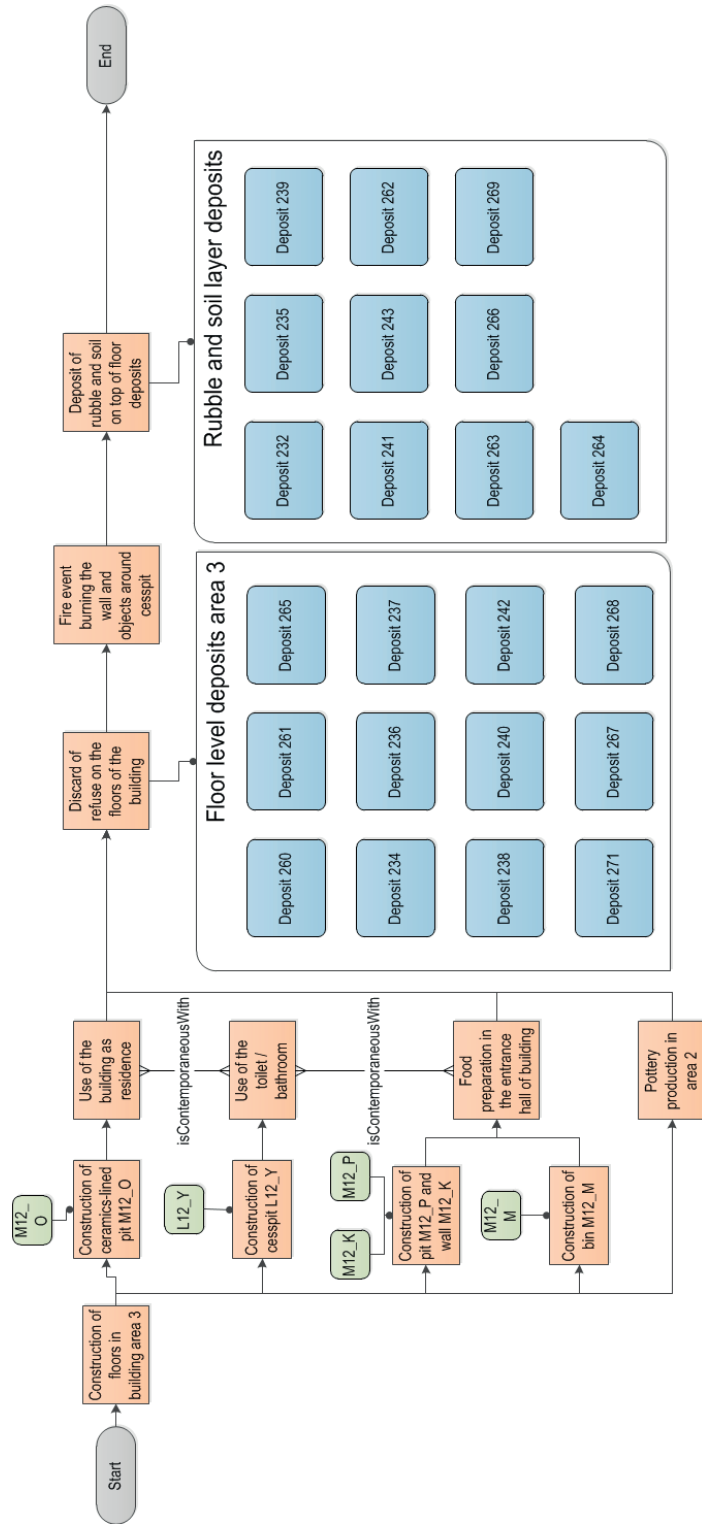


Fig. 3.126: Sequence of Events of area 3 of the south-eastern sector.