

IMTO – Italian Mission to Oman

University of Pisa

*PRELIMINARY REPORT*

October 2004

(SUM04B)



**PRELIMINARY REPORT (SUM04B)**  
**October 2004**

During the campaign in autumn 2004 (SUM04B), which started on October 2<sup>nd</sup> and finished on October 28<sup>th</sup>, the field activities were focused on the diggings at the ancient town of Sumhuram. The excavations were concentrated in two areas: in the Area A (squares h-i/10-11) to the south of the Gate Complex and outside the fortification wall near the external corner of the monumental building and isolated tower A61 (squares f7/8), and in the Area E (squares d4/5 and e5/6) along the defence wall of the town and tower A62.

The main goal of the present campaign was to continue the clearings of the north-western defence wall of the ancient town in order to expose it for future visitors. In addition, we were able to determine different phases of construction or reconstruction of the defence system of the ancient town. The cleaning of the Building BA6 previously excavated by AFSM expedition was necessary for understanding the layout of separately standing ancient dwellings in Sumhuram (the majority of the excavated so far buildings in Sumhuram were adjoined to the defence structure).

**Area A** (trench supervisors V.Buffa, D.Petrella, S.al-Mashani).

**Building BA6** (V.Buffa). Building BA6 was partially excavated by F.Albright in the 50ies. The aim of the present campaign was to obtain a precise plan of the building and verify the Albright's sketch. His report of the excavations at this area is not clear: it seems that two long rooms (VB22 and VC22) have been excavated, while the room VF21 has been only tested and not excavated completely.

***The top strata.***

US78, the topmost stratum in the Area A consisted of loose loam and sand mixed with small stones, was traced all over the ruins of the building. Few pottery shards and animal bones were recovered. There were several small finds: a fragment of bronze needle (MB317) and two bronze coins (Co.310, Co311).

Underneath US78, the stratum US21, that marked the destruction of the city, was found *in situ* only in one of the rooms of the building (room A56, see below), and in the courtyard next to the main entrance to the building (A58, see below). US21 was made up from reddish brown loam, rather loose on the surface, and more compact underneath. In room A56 it contained limestone blocks and sandstone slabs fell down from the walls of the building. Three complete stone basins and fragment of the fourth one (S793, S794, S795, S788) were found in the deposits. Most probably, they fell down from the upper floor, above the room A56. Several pottery shards, animal bones and marine shells were also presented. In the top part of the stratum a great amount of sea shells *Mytilinae* subfamily were discovered. There were several small finds: a clay bead (C18), a shell bead (Sh188), two oil lamps from *Clamis townsendi* (Sh186, Sh192), a fragment of a soft-stone vessel (S776), a net sinker (S760), and two polishers (S765, S770).

***Building BA6***

The Building BA6 seems to consist of four rooms (A59, A60, A63 and A56), a courtyard (A58), and an outside porch (room A51). The latter was excavated by IMTO during SUM04A campaign (fig. 1).

### *Courtyard A58*

In the courtyard, SW of the staircase leading to the building, underneath US21, another stratum, US29, was excavated. At the time of formation of US29 the building was still in use. US29 consisted of loose dark greyish loam mixed with ashes, and incorporated a very large amount of sea shells of *Ostreidae* and *Mytilinae* families, and very few animal bones. US29 floor was preserved next to the entrance of the building and was reinforced with small sandstone slabs. Probably a pit was dug from the US29 floor; it contained loose greyish loam mixed with ashes. The pit was not excavated.

Several fragments of glazed vessels were recovered in US29 along with other pottery shards. The following small finds were found: a whetstone (S782), three polishers (S775, S780, S781), a fragment of soft-stone vessel (S774), a bone bead (B21), two shell beads (Sh193, Sh194), a stone bead (S779), three steatite beads (S771, S772, S773). Two alabaster objects, one triangular in shape, the others of semicircle shape were also found (S767, S769).

The entrance led from the staircase into long corridor (A60), which was connected with the rooms A59, A63 and A56.

### *Room A60*

Room A60 (room VC22 on the Albright's sketch) was 10.20x2.15 m in size. At the entrance, a threshold made from two lines of stone blocks was constructed. The room A60 was separated from the rooms A59 and A63 by the wall M102 to the NE, and from the room A56 by the wall M124 to the SW. Three doors were leading to those rooms from the corridor. Walls M58 and M101 closed the room. At the SE corner of the room there was a staircase, leaning on the wall M101, led probably up to the upper floor of the building.

### *Room A59*

The outer walls of the room A59 (part of the room VB22 on the Albright's sketch) were M58, and M57 running along the street A45. Wall M137 closed the room, which was 4.60x2.30 m in size. Access to the room was from the room A60 through a door in the wall M102. The door had a threshold made from large limestone block and a limestone slab (a reused fragment of a pivot stone of a door). Wall M102 was made from limestone blocks topped by rows of mud-bricks reaching the height of 0.60 m. Wall M137 was made from mud-bricks. A short wall M136 in its NW part creates a sort of niche. Outer walls M58 and M57 were made from roughly dressed limestone blocks. Their inner faces were topped by mud-bricks.

### *Room A63*

The outer walls of the room A63 (part of room VB22 on the Albright's sketch) were M57 and M101. The room was separated from the room A59 by the wall M137. In the wall M102 a door gave access to the room from room A60. Here the wall M102 was made from limestone blocks topped with mud-bricks in its NW part, and from limestone blocks in its SE part.

### *Room A56*

The access to the room (part of the room F21 on the Albright's sketch) was from the corridor A60 through a door in the wall M124 (fig. 2). Walls M58 and M128 closed the room which was 5.10x2.10 in size. Wall M124 was made from sandstone blocks in its NW part, and from limestone blocks in its SE part. The other walls were made from roughly dressed limestone blocks. The corner between wall M58 and wall M126 collapsed and the entire wall M126 was reinforced with a shorter wall M125. Wall M125 was made from one row of roughly dressed limestone blocks, and was filled with small stones against wall M126.

The deposits in the room A56 were disturbed by the AFSM expedition probably only along the wall M124. The layer US21 was still *in situ*, and was excavated down to the badly preserved US21 floor. The floor was made from hard beaten reddish soil. It slopes down from SE to NW from the wall M128.

The deposits inside the rooms A60, A59 and A63 were excavated and refilled by the AFSM expedition. This secondary deposition (US156) contained reddish loam mixed with remains of mud-bricks, very few pottery shards, animal bones and sea shells. So far this filling was partially removed from the room A59. The layer US156 in the room A60 was removed down to the level of US22 floor outside the building.

So far there seems to be no connections between the rooms described above and four small rooms excavated by AFSM in the SE corner of the building (rooms VD24, VE24, VE23 on the Albright's sketch) and with room A57 to the S of room A56 (room VG21 in Albright's sketch).

### ***Building BA5***

Building BA5 was partially excavated during SUM02A and SUM04A campaigns. During the present campaign the layer US21 was excavated in the square i10, next to the SE corner of the monumental building 1, against its wall M16. It consisted of reddish brown loam containing a large quantity of roughly dressed limestone blocks fell down from the wall M16. Several pottery fragments and two bronze coins (Co307, Co308) were discovered in the stratum US21.

### **Trench outside defence wall M134-M135, M24-M25 and around tower A61 (D.Petrella, S.al-Mashani)**

The main goal of the present campaign was to continue the clearing the external façade of the defence wall of the ancient town, which we started already in this area during the SUM03B campaign (fig. 3, 4). For this purpose the dumps from previous excavations accumulated in the area were removed down to the ancient surface. The exposed façade of the defence wall M134-M135 as well as façade of the last repairing of the external corner of the monumental building 1 (M24-M25) was made from nicely cut limestone blocks regularly placed in the masonry. The blocks were fastened with clay and lime mortar.

The top layer of removed deposits consisted of huge amount of stone blocks mixed with brownish loam (dumps from old excavations by AFSM and IMTO in the areas A and F). The ancient surface of the mound, on which the destruction of the defence walls of the ancient town have been started, was reached at the depth of *c.* 3 m from the top of the walls. The surface of the ancient slope was reinforced with hard pavement made from gravel mixed with lime substance (at the base of the wall M24-M25) and with compact or trampled mud. The undisturbed stratum immediately above this surface was denoted as US155. It revealed several small finds: a fragment of bronze plaque with South Arabian inscription (MB337), a fragment of a bronze vessel with spout (MB339), a bronze coin (Co317), bone inlay (B24), fragment of soft-stone vessel (S784), a stone polisher (S783), unidentified bronze fragments (MB341), fragments of pottery, animal bones and sea shells.

A separate standing tower A61 was also cleaned also not down to its foundation. Apparently it was excavated by AFSM expedition in 1960, but later was almost completely covered with dumps. It should be noted, that most probably the tower A61 was very late addition to the fortification system of the ancient town: its foundation stands not on the bedrock like defence walls but on the surface of the ancient accumulation above the bedrock and against the city-walls. This is a good indication,

that the construction of the tower was connected with the last phase of the building activity in Sumhuram, which apparently could be dated close to the Himyarite period (late 3<sup>rd</sup> – 4<sup>th</sup> cent. AD).

**Area E** (trench supervisor A.Pavan).

One of the main goals of the present campaign in this area was the clearing of the external façade of the defence wall of the ancient town, removed dumps accumulated here during the previous campaigns. Excavations were concentrated in the area between the corner tower A62 (squares d4/5 and e5/6) and the outer defence wall M89.

The top layer was denoted as US152. It represented accumulation of dumps from previous excavations and consisted of very loose loam mixed with huge amount of stone blocks (some of these stone blocks were fell down from the upper parts of defence wall M89 and wall M131 of the tower A62). Almost on the surface of modern dumps two fragments of architectural decorations were found – limestone blocks with carvings (S750, S751). Two small finds were discovered in the stratum US152: a bronze finger ring (MB332) and a nice bone awl (B23).

In the US152 a part of very badly preserved wall (M132 eastern side) was discovered. As we understood later, it represented a much wider structure connected with significant reconstruction of the tower A62. This wall M132 eastern side leans on the eastern tower wall M131.

During the clearing of the northern wall M130 of the corner tower A62 the most surprising discovery was made (fig. 5). Already AFSM expedition (ALBRIGHT 1982: 29) noticed the presence of “shell reinforcement” around the tower A62. Our excavations revealed that it was not a simple “reinforcement” but a significant enlargement of the tower, which allowed, in fact, doubled its space. For this purpose, a monumental wall M132 made from huge limestone monoliths was constructed in *c.* 3 m north of the tower’s wall. Apparently, it was set directly on the bedrock, exposing the height of more than 4 m. The bottom rows of huge limestone blocks were fastened with lime mortar, while the upper rows – with clay mortar. In the present campaign we succeeded to clean *circa* 6 m of its northern façade almost on entire preserved height, and to discover the NE and NW corners of the structure. The space between the additional wall M132 and walls M130 and M132 of the tower was filled with roughly dressed stones and mud. The bottom part of the additional wall M132 was leaned to the older walls (M129 and M131) of the tower as could be very clearly seen in the SW part of the trench, while the top rows of the wall M132 were tied with the masonry of the tower (see façade of the wall M129 of the tower A62). Such construction was only possible if the entire tower A62 was completely rebuilt during the erection of the additional wall M132.

The stratum unearthed along the northern façade of the wall M132 was denoted as US154. It consisted of huge amount of limestone blocks fell down from the top rows on the wall M132, and was almost lack of pottery fragments, animal bones and sea shells, but revealed five bronze coins (Co312, Co313, Co315, Co316, Co318). Apparently, coins were occasionally placed in filling of the additional structure and may indicate the *terminus post quem* for its construction.

## **GENERAL CONSIDERATIONS ABOUT CONSERVATION AND RESTORATION OF THE MASONRY WALLS**

**October 2004**

During the archaeological campaign a general monitoring of the architectural structures was made by Mauro Sassu, professor of the Department of Structural Engineering of Pisa University. This kind of monitoring was requested since the masonry walls are, in some points, very badly damaged (fig. 6). Some of them in fact show structural deficiencies which are due, above all, to the lack of protection on the top of the walls and to the lack of plaster on the surface which in antiquity ensured the cohesion to the masonry.

Two kinds of settlements have been individuated:

- expulsion of the surface due to a transverse pressure of the interior caotic mixture of clay and sand because of washing away;
- expulsion of the external bricks layers according to collapsed surfaces with a “spoon shape”, typical of slides phenomena with a mechanical behaviour similar to soils.

Both the phenomena have macroscopic evidence and show a quickly and irreversible deterioration. In one case it was already necessary to provide the wall (M15) with an emergency steel framework to stop a collapse in progress (fig. 7).

After the monitoring it appears clear that in some cases the structures are so compromised that it should be necessary an accurate dismantling and re-assembly of the masonry since a reinforcement-on-site would change too much the esthetical and architectonical characteristic features. As well in consideration of the next opening of the site to the tourists it's important to provide the site with the right safety measures.

The following interventions are suggested in order to respect the geometry of the masonry and the original features:

- partial calcification of the internal caotic mixture to fix the materials adding lime mortars similar for colour and composition to the original remains;
- protection of the top of the walls with a kind of lime similar to the one above described;
- sealing of the interstice between the blocks.

## **PROPOSALS FOR THE OPENING OF THE SITE TO THE TOURISTS**

Among the activities of this year the mission guested arch. Franco Ceschi, the responsible of the musealization of the site. He re-thought the general layout of the site in order to provide a better functionality of the spaces: creation of a parking, moving of the fence, building of some new entrances to the site and project of new paths. The site will be provided inside by mobile platforms for the rest and didactic panels helping the visitors in the understanding of the structures.



Fig. 1 Sumhuran, Area A, Building BA6



Fig. 2 Sumhuran, Area A, Building BA6, room A56



Fig. 3 Area A, tower A61



Fig. 4 Area A, M23 and M24





Fig. 5, Area E, tower A62

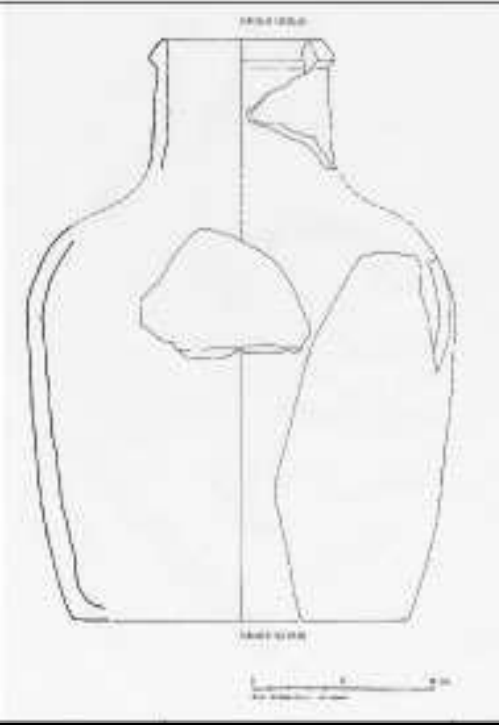


Fig. 6, Area A, wall M8




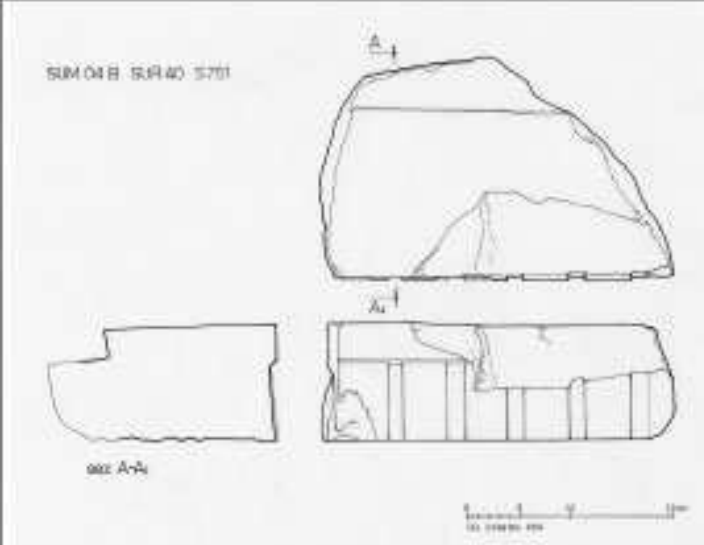
Fig.7 Area A, wall M15

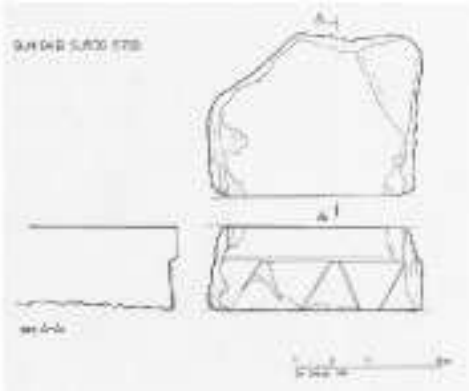
## Khor Rori pottery Index Card

<b>Index Nr</b> SUM04B US29,49 and 59			
<b>Provenance</b> Area A, i 11, BA6, A58			
<b>Photo</b>			
<b>Drawing code Nr.</b>			
<b>Category</b> Table vessel			
<b>Shape</b> Closed vessel	<b>Type</b> Jug	<b>Preserved part</b> Fragment of rim, neck, walls and base probably belonging to the same jug	<b>Measures</b> Diam. rim 11 Diam. base 17 th. 1
<b>Paste colour</b> pale brown	<b>Color inter. Surface</b> goldish green glaze	<b>Color ext. surface</b> greenish glaze	<b>Color section</b> pale brown
<b>Characteristic of paste</b> very compact	<b>Inclusions</b> Small black inclusions		<b>Method manufacture</b> Wheel made
<b>Surface treatment (ext.)</b>	<b>Surface type (ext.)</b> Glazed		<b>Decoration (ext.)</b>
<b>Surface treatment (int.)</b>	<b>Surface type (int.)</b>		<b>Decoration (int.)</b>

## Object Index Card

<b>Registration Nr.</b> SUM04B US155,1 MB337				
<b>Provenance</b> Area A, f7-8				
<b>Definition</b> Inscribed plaque	<b>State of preservation</b> fair	<b>Measures</b> l. 5.8 w. 5 h. th. 0.7 diam.		<b>Shape</b>
<b>Material</b> bronze	<b>Preserved part</b> fragmentary			<b>Section</b>
<b>Description</b> Fragment of molded bronze plaque with inscription. The preserved part is almost trapezoidal and the section slightly convex. It's not easily readable since there are many encrustations on the surface. The right margin is constituted by a flat frame. The plate is an offering object in which compares the expression "in the land of Sakalan". The style of the letters seems to date the object to the III century A.D.				
<b>Responsible</b> A. Pavan			<b>Date</b> 20/10/2004	

<b>Registration Nr.</b> SUM04B Sur40 S751			
<b>Provenance</b> Area E, e5			
<b>Definition</b> Architectural element	<b>State of preservation</b> fair	<b>Measures</b> l. 32 w. 16 h. 11	<b>Shape</b>
<b>Material</b> limestone	<b>Preserved part</b> fragmentary	th. diam.	<b>Section</b>
<b>Description</b> Bad preserved fragment of architectural element. The frontal part, whose right upper corner is missed, is decorated with a motif which recalls strictly the “false window” decoration. In detail it’s constituted by a series of five dentils with a variable width (from 4 to 4.5 cm) and with a preserved height of 5.2, slightly raised from the back. Above the dentils there is an outer raised margin (h. 3.5). The top surface is crudely smoothed and indicated that this part was the upper part of the block. In the back the stone was carved according to a right corner, maybe to lodge a wood bean or something similar.			
<b>Responsible</b> A. Pavan			<b>Date</b> 21/10/2004

<b>Registration Nr.</b> SUM04B Sur39 S750			
<b>Provenance</b> Area E, e5			
<b>Drawing code Nr.</b>			
<b>Definition</b> Architectural element	<b>State of preservation</b> fair	<b>Measures</b> l. 26 w. 20	<b>Shape</b> irregular
<b>Material</b> Lime-stone	<b>Preserved part</b> fragmentary	h. th. 10.5 diam.	<b>Section</b> composite
<b>Description</b> Fragment of limestone architectural element. One of the sides, the frontal one, shows a decoration constituted by a row of triangles in alternate position (base of triangle 8 cm). Above the triangles there is an outer raised margin (h. 4; th.0.8). The top of the block is crudely smoothed while the margins, the lower part and the back are broken. It's possible to argue that the piece was part of the decoration of a lintel or of a pillar.			
<b>Responsible</b> A. Pavan		<b>Date</b> 21/10/2004	

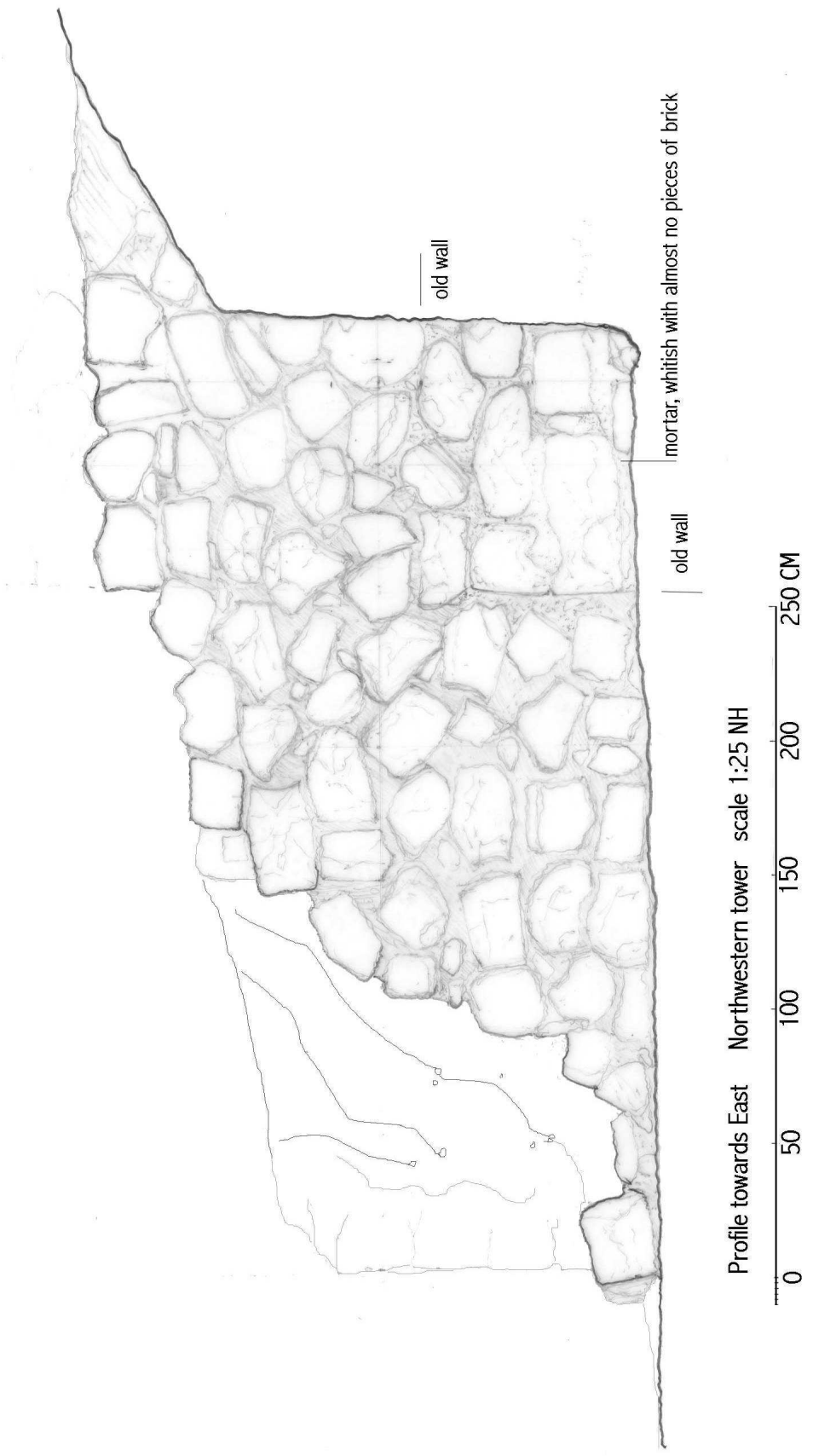


Plate 1: Section of wall M132.

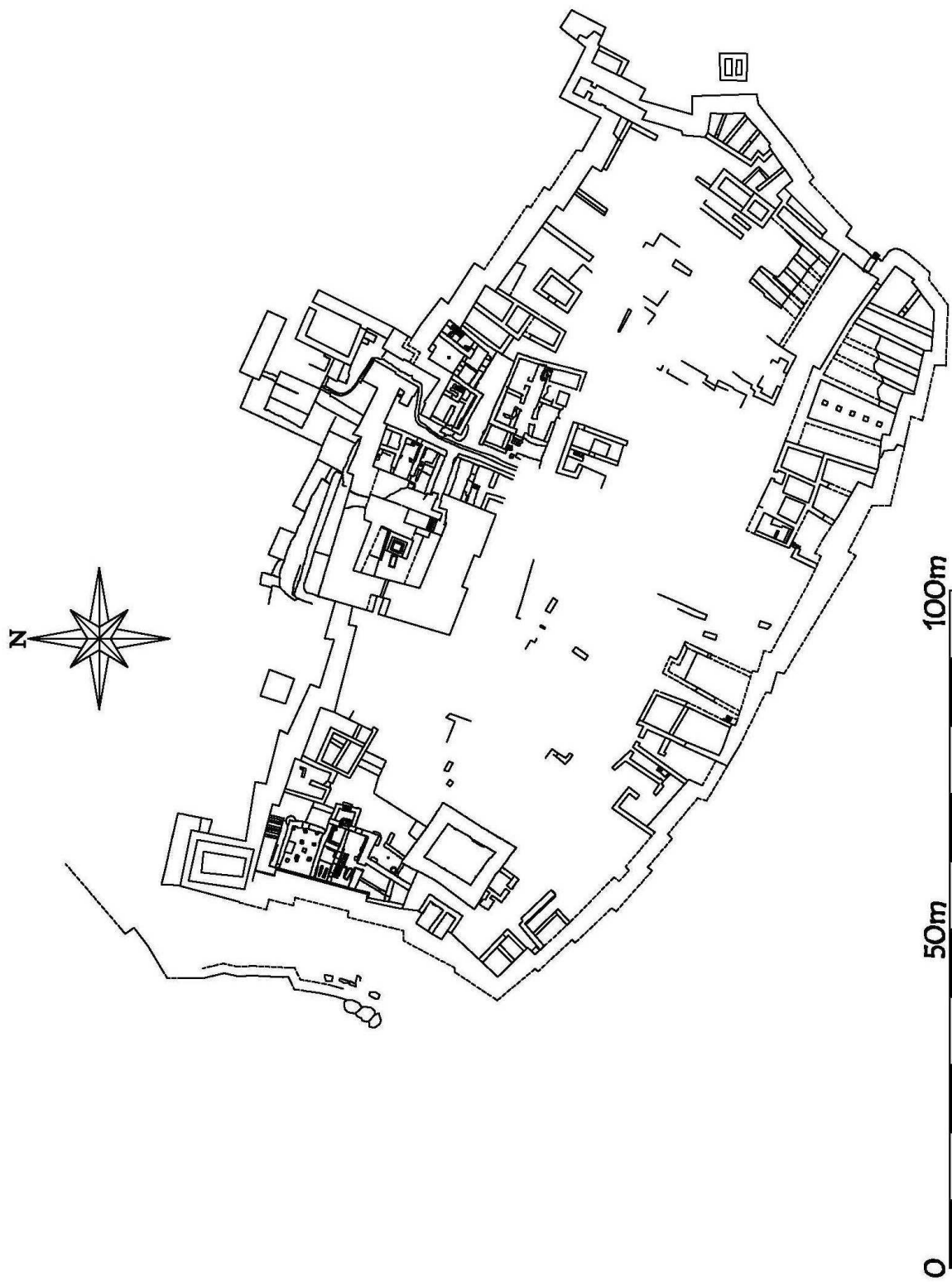


Plate 2: General plan of the city, SUM04B.