
ex oriente e.V.


جامعة الرموك
YARMOUK UNIVERSITY

bibliotheca neolithica Asiae meridionalis et occidentalis

Cooperating Institutions for Publishing this Volume:

Faculty of Archaeology and Anthropology, Yarmouk University, Irbid
Institut für Vorderasiatische Altertumskunde, Freie Universität Berlin
Deutsche Forschungsgemeinschaft, Bonn

Financial Support for Printing this Volume:

Deutsche Forschungsgemeinschaft, Bonn
ex oriente e.V., Berlin

BASTA II

THE ARCHITECTURE AND STRATIGRAPHY

by

Hans Georg K. Gebel

Hans J. Nissen

Zaydoon Zaid

and a contribution by

Moritz Kinzel

bibliotheca neolithica Asiae meridionalis et occidentalis
&
Yarmouk University,
Monograph of the Faculty of Archaeology and Anthropology,
Volume 5

ex oriente, Berlin (2006)

address of the bibliotheca neolithica Asiae meridionalis et occidentalis:

Institut für Vorderasiatische Archäologie, Freie Universität Berlin
Hüttenweg 7, 14195 Berlin, Germany

Printed in Germany by dbusiness GmbH, Berlin.

ISSN 1616-9360 (bibliotheca neolithica Asiae meridionalis et occidentalis)
ISBN 3-9807578-4-6

Cover Photo by Yusuf Zu'bi, Yarmouk University.

BASTA JOINT ARCHAEOLOGICAL PROJECT

Joint Enterprise of

the Department of Antiquities
of the Hashemite Kingdom of Jordan,

the Institute of Archaeology and Anthropology
at Yarmouk University at Irbid,

and the Institute für Vorderasiatische Altertumskunde
at Berlin Free University,

supported by

the Deutsche Forschungsgemeinschaft, Bonn
the Yarmouk University, Irbid
and the Department of Antiquities, Amman

Table of Contents

List of Figures

Editors' Introduction

Contribution *Stratigraphy and Locus Data, by Hans Georg K. Gebel*

Contribution *Architecture, by Hans J. Nissen*

Contribution *Architectural Reconstruction, by Moritz Kinzel*

List of Tables

Contribution *Editors' Introduction*

Contribution *Stratigraphy and Locus Data, by Hans Georg K. Gebel*

Contribution *Summary and Conclusions,*
by Hans Georg K. Gebel, Moritz Kinzel, Hans J. Nissen, and Zaydoon Zaid

List of Plates

Editors' Preface

and Acknowledgements

This volume is devoted to the most spectacular results of the Basta excavations. This is not to detract from the importance of objects of artistic expression or from the light thrown on the life of a Late PPNB village by the analysis of flint implements, palaeobotanical or palaeozoological samples. Since the excavations were conducted walls of dressed stones or sub-floor channel-systems have turned up in other Neolithic sites as well, however some features remain unique at Basta, like the evidence for the process involved in the preparation of the building sites.

The editors of the Basta final publication series happen to be the main authors of this volume; thus there is no point in thanking them. However, particular thanks are due to the third author whose contributions become evident only as we carefully studied the architectural plans. In his years as a student of archaeology and architecture Dr. Zaydoon Zaid was our architect in the field from 1987 onwards and was responsible for drafting the plans which then became the top plans of our main areas. As a historian of architecture currently resident in Berlin he now has been extremely helpful in finalizing the general plans of Area A and B, as well as preparing various other illustrations. But more than that, he helped shape our interpretations of the architecture through taking part in long – sometimes seemingly endless – discussions.

We were also fortunate to get a young historian of architecture interested in the problem of how to reconstruct the architecture of Early Neolithic Basta. Moritz Kinzel's contribution is highly welcomed, not only because it remains more in line with the actual findings than other proposals but also because he places his attempts into the context of both other Early Neolithic sites and sub-recent traditional architecture. In particular, he has made use of our documentation of the traditional village of Basta.

This volume is a vivid example of the wide range of possible explanations that can arise from the results of the excavations at Basta. As should be expected the different backgrounds of the authors, including history of architecture, Neolithic and historic archaeology led to long and fruitful discussions, often resulting in unexpected solutions. However, each one of the authors retained areas of fundamental beliefs, even if lacking evidence, which in a number of cases gave the same line of argument a different twist. Rather than attempting to strive for total harmonization we decided to retain this personal touch within the main chapters. The development of a common line was left to the summary.

It is a pleasant duty to thank once more the *Deutsche Forschungsgemeinschaft* for providing the necessary funds for both the preparation and the publication of the present volume; additional financial support for printing this volume came from ex oriente. We also gratefully acknowledge the cooperation with the Jordanian partner of the joint project, the *Faculty of Archaeology and Anthropology* of *Yarmouk University*, in publishing this volume.

With sincere thanks we acknowledge the language editorial help we received from Bill Finlayson (Editors' Preface and Introduction, Architecture, Summary and Conclusions), Deborah Oleszewski (Stratigraphy and Locus Data), and Samantha Dennis (Architectural Reconstruction). We are also indebted to Jana Pokrandt for her help in preparing major parts of the illustrations in this publication. All the levels in Top Plan Area B were re-measured in Spring 2005 by Ali Omari and Nabil Quadi, both from the *Faculty of Archaeology and Anthropology* of *Yarmouk University*; we are deeply grateful to them for these efforts.

Editors' Introduction

As mentioned previously in Basta Volume I, the archaeological investigations at Basta originated with the fact that houses of a modern village were erected almost exactly on the site of a the Early Neolithic settlement dating to the second half of the 8th mill. BCcal. The aim of the investigations was to secure as much information on the Early Neolithic as possible and prevent any further damage.

Until 1956 the traditional village of Basta (Basta Old Village) was situated NE of the present one, on a slope above the main wadi. This wadi, running NE-SW and receiving water from a strong perennial spring, ultimately opens into the eastern flats (Figs. 1-2). The site of Old Basta was close to the point where a road to Udhruh branched off from the main highway between Wadi Musa and Ma'an.

A major change came with the building of a modern paved road between Wadi Musa and Ma'an. At that time a government programme offered subsidies to the local population to build modern houses. The road was accompanied by a main pipeline for fresh water and a power-line. Taking advantage of both the subsidies and the utilities the inhabitants of the traditional village decided to move closer to the road junction and the utilities, and to build new concrete houses instead of the traditional stone ones. Doing so they abandoned the old arrangement where houses had been attached to each other, forming rows like modern townhouses, and instead built an open village where every house or compound would be surrounded by a garden or piece of open land.

Although basements were not built there were enough other reasons to dig into the slopes and thus to disturb the soil beneath the surface. Normally this would be limited to the upper ranges of the top soil for example in creating an even building ground by digging into the slope or opening foundation trenches, but sometimes pits were excavated to a greater depth in search of the well dressed boulders of Neolithic walls. In 1984 one of these operations had attracted the attention of H.G. Gebel during his survey for Neolithic sites in the Petra Area (Nissen, Gebel, and Muheisen 2004), when he also executed a sounding here (Gebel 1988); this was instrumental in leading to our rescue operations in 1986.

In spite of an appeal by the *Department of Antiquities*, Amman to the villagers not to continue destructive actions preparations had begun just prior to our arrival in 1986 for the erection of a large house close to the steep escarpment of the wadi. The projected width of the house required a deep cut into the slope forming a building pit with a rear wall up to 3 m in height, and a ground surface of 25 x 12 m (*cf.* also Top Plan Area A, Plate 2; *cf.* Gebel, this volume, Fig. 2.A-B). About 430 m^3 of soil had been removed by the bulldozer, either carried away, or just pushed over the edge into the wadi. Walls and architectural remains must have accounted for a portion of the soil as the original height of some walls could still be seen in the rear wall of the building lot, some still standing to a height of 2.5 m (*cf.* Gebel, this volume, Fig. 2.A-B).

The initial season in 1986 was intended to be a pilot project to survey the area and take stock of what archaeological remains survived to assess the potential for an archaeological investigation over several years. Being confronted with the recent destruction there was no other choice, however, than to immediately occupy the new building lot and rescue as much archaeological information as possible. As will be shown below, the bulldozing had destroyed the archaeological context to a considerable extent. Despite this, the excavations in Area A (Fig. 3), as we came to call this operation, have yielded as much and as important information as the subsequent operation in undisturbed ground.

The decision regarding the archaeological potential hinged on the question of whether it was possible to find an undisturbed area for excavation in order to avoid any limitations posed by rescue work. Such an area was found almost in the centre of the new village, allowing a possible extension of the excavated area to up to 80 x 60 meters. Although located above the steep escarpment of the wadi, the area nevertheless had a gradient of only 6 m on 50 m towards the NW (Fig. 3). In addition to the favorable situation of the site, collection of surface finds revealed a dense coverage of Neolithic implements (Nissen, Muheisen, and Gebel 2004: 13, Fig. 4 and 14, Table 2), promising rich results below the surface. Designated as Area B this became our second main area of investigation (Fig. 3).

During the survey of the new village and the archaeological survey of the area our attention was drawn to an almost flat area immediately adjacent to the houses towards the N but without buildings. Here we found the highest concentration of Neolithic finds on the surface of the entire area; hence this area was named Area C. However, we did not select this area for excavation because of the very fine texture of the surface soil, suggesting that it was washed-in alluvial and aeolian deposits. This was confirmed later by geomorphological soundings, which revealed a depth of several m of such deposits mixed with cultural layers (*cf.* Kamp 2004; Gebel, this volume). In this case, the dense surface coverage with archaeological implements obviously was not pointing to a habitation area below the surface but to other sorts of Neolithic activities in the fringes of the settlement (*cf.* this volume, Summary and Conclusions).

In spite of these thick alluvial layers we decided in 1988 to put two trial trenches of 2 x 4 m into this area (C 208 and C 217, *cf.* Fig. 3). As anticipated, hardly any architecture except some ephemeral stone settings was found, but we came across several Late PPNB cultural deposits, in two of which we found flint knapping locations, and a burial in another one.

We took great pains to see that the course of our work was not influenced by non-scientific arguments. However, we could not completely escape that danger: The 1986 building lot belonged to the family of one of the local (religious) sheikhs and this caused us much trouble. Public opinion was stirred up against us, leading to strikes attempting to prevent us from continuing. These problems could be resolved to some extent through the good influence of the Jordanian co-director Dr. Mujahed Muheisen who was a member of an important family in Southern Jordan. Furthermore, in order to calm the situation, we promised that this area was going to be kept under excavation for only as long as absolutely necessary to extract the basic information. After that point was reached the area would be returned to its original destiny as building ground. We had hoped to reach this point with the end of the 1987 Season, but in the end enough data turned up to call for a continuation in 1988 and that continuation yielded one of the most important pieces of information. A further continuation would have been desirable, but we returned the area to the owners because the issue had become a matter of credibility.

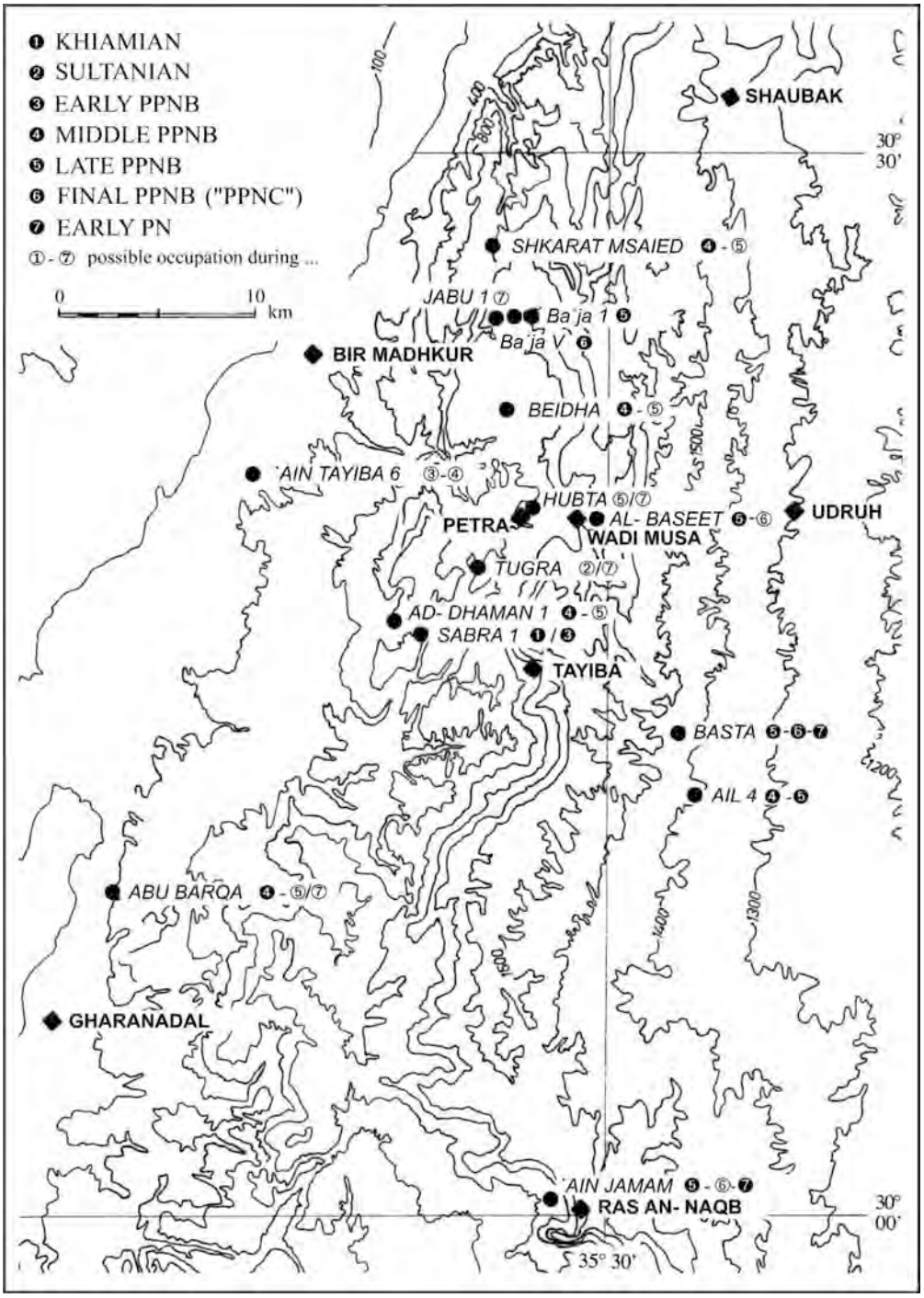


Fig. 1. Basta and other Neolithic sites in Southern Jordan.

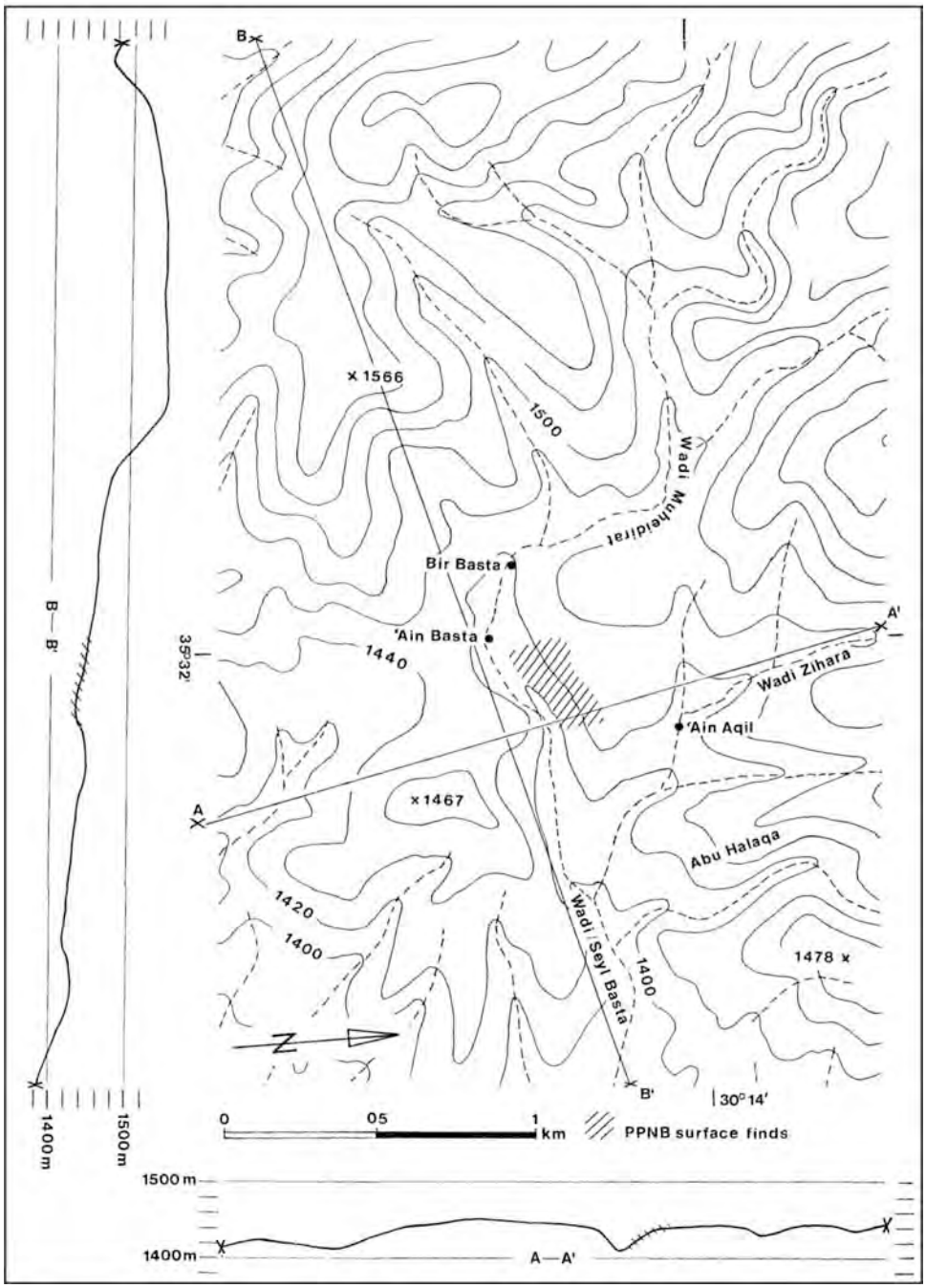


Fig. 2. Basta. Early Neolithic site location in the Wadi/ Seyl Basta area.

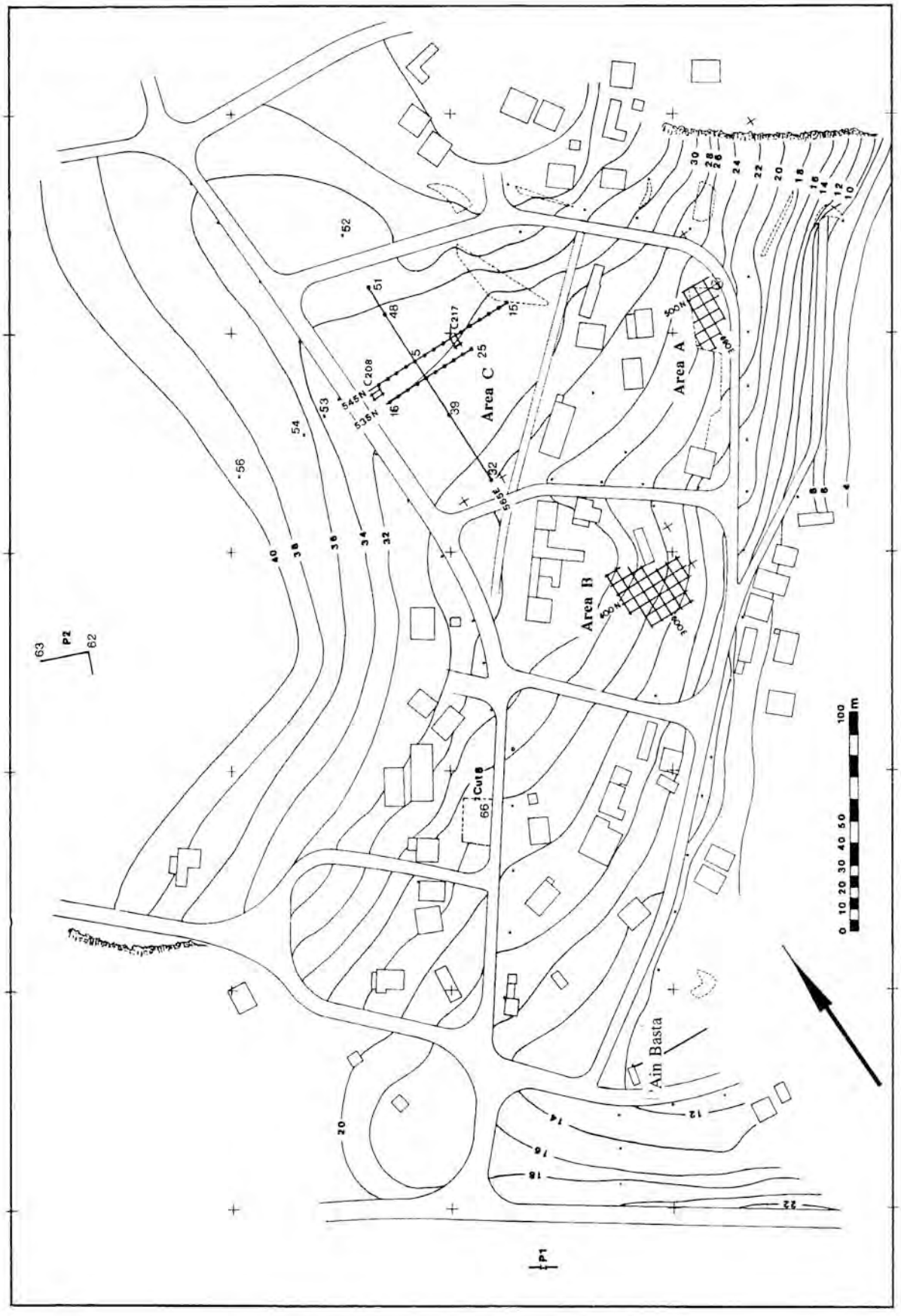


Fig. 3. Basta. Topographical map and areas of investigation (Kamp 2004: Fig. 1).

In Area B the constraints were self-imposed. During the 1987 Season an excellent state of architectural preservation had become evident at the spot where we put in our first sounding. We hoped this would hold true for the entire area set aside for excavation, extending over a large area to give us the context of hopefully larger portions of the settlement, or at least of several compounds. In particular, in light of the discussion of the internal organization of early villages we were interested in any sign of public space, communication routes or the like. We used to say that we were interested as much in areas void of architecture as in built-up areas. The idea was that as much as possible of a contemporary layout should be uncovered. Combined with the good preservation it was intended to create an ensemble which would give a vivid picture of Neolithic architecture and living to the layman. To this end, no walls were supposed to be removed (which also complied with the directives of our Jordanian partner) and no excavation was supposed to go deeper than the uppermost floor.

Finally, we had set ourselves a limit of five years of excavation. In order to force ourselves to keep to that limit we had committed ourselves unmistakably to the sponsoring institutions. Unfortunately – or luckily – we were made to keep this promise by the course of work and the local conditions. By chance, we had started work in Area B in the best preserved section – hence our hope for a large-scale exposure – but as work continued it turned out that this well-preserved piece of architecture was surrounded on three sides (W, S and E) by deep pits, probably of Final PPN and later dates, reaching well into the Early Neolithic levels and destroying all relationships, while towards the northern expansion was prevented by a modern shed.

Working between the houses of a living village had some advantages such as having short distances between the excavation and the lab and office spaces in the expedition house, halfway between areas A and B, and having electricity handy *e.g.* allowing us to operate several vacuum cleaners during the excavation and cleaning processes. But on the other hand, being exactly located between Areas A and B, this very expedition house prevented us from linking, if only tentatively, Areas A and B in stratigraphic terms. Short of actual links we do not have enough evidence for an absolutely secure proposition. However, we feel sure that both parts belong to the same settlement, and that certain levels of both areas were contemporary – or at least were not too far apart. Details are given below (*cf.* 4.1.5, Table 1).

In spite of this uncertainty we have based our reconstruction on one basic assumption. Both the modern situation and the different heights of the Neolithic houses and floors indicates that the ancient settlement was situated on a slope; in that sense Basta is joined by a number of contemporary settlements from the same area like Ba‘ja, es-Sifiyah, ‘Ain Jammam, al-Baseet and others. Occupying slopes almost seems to be a characteristic feature of the Late PPNB settlements.

This necessitated the preparation of even building surfaces, which particularly in sloping territory requires considerable effort. As in the modern building procedure reported above, the most natural way seems to be digging into the slope in order to create an even ground ground. While this was done in other Early Neolithic settlements like Ba‘ja and most likely in ‘Ain Jammam (there is no information available from other sites) a different method was chosen in Neolithic Basta. As will be explained below in greater detail, creating a leveled building ground in Basta was achieved by building terraces extending out from the slope. To this end parallel walls built of stone were erected to the same height with their interstices bridged over by rows of stone slabs, thus creating the even surface. When the end of a terrace came close to touching the original slope, another terrace wall would be inserted serving as the starting point for another

terrace. Though differing considerably in height, the contemporaneity of such terraces is confirmed in one case by a flight of stairs connecting two terraces.

Table 1. List of squares excavated in Areas A, B, and C (1986-92), with reference to their N/E designations (according to their northwestern corners).

Area A	Area B		Area C
A 1 (505N/685E)	B 22 (415N/585E)	B 70 (400N/610E)	C 208 (545N/540E.C+D)
A 2 (505N/690E)	B 23 (415N/590E)	B 83 (395N/585E)	C 217 (550N/585E.A+D)
A 3 (505N/695E.A+D)	B 34 (410N/585E)	B 84 (395N/590E)	
A 5 (500N/685E)	B 35 (410N/590E)	B 85 (395N/595E)	
A 6 (500N/690E)	B 36 (410N/595E)	B 86 (395N/600E)	
A 7 (500N/695E.A+D)	B 48 (405N/585E)	B 87 (395N/605E)	
A 8 (495N/680E.B+C)	B 49 (405N/590E)	B 102 (390N/590E)	
A 9 (495N/685E)	B 50 (405N/595E)	B 103 (390N/595E)	
A 10 (495N/690E)	B 51 (405N/600E)	B 104 (390N/600E)	
A 11 (495N/695E)	B 52 (405N/605E)	B 105 (390N/605E)	
A 12 (490N/680E)	B 53 (405N/610E)		
A 13 (490N/685E)	B 65 (400N/585E)		
A 14 (490N/690E)	B 66 (400N/590E)		
A 17 (485N/680E)	B 67 (400N/595E)		
A 18 (485N/685E)	B 68 (400N/600E)		
A 22 (480N/680E)	B 69 (400N/605E)		

Although evidence for this arrangement came only from the southeastern corner of Area A we assumed that this construction method was normal for the entire settlement. This is supported by another observation. While in the case just mentioned the interstices were of different heights following the slope, the situation was different in the long room in the northwestern edge of Area A (Room 10/16). The construction below the floor matched the arrangement described before, only that the interstices were narrower, and they all were of the same height, around 40 cms. Obviously this array had been built on a surface which was already even. We assume that an arrangement like the one mentioned before, leveling out the natural slope, existed below the excavated network of channels of equal height.

As mentioned before, there is no way to directly link Areas A and B; yet there are a large number of common features. In addition to an identical building and stone-laying technique we also find the system of sub-floor construction to be the same, the floors resting on a grid of walls covered by lines of stone slabs. Although only found in a few places there is every reason to believe that it is true for all the units uncovered in Area B. This means that nowhere in Area B we found remains of the primary building period; we cannot even be sure that what we found represents the second stage. In fact, as a drill sounding suggests, our main building period represented by all buildings in Area B rested on approximately 3 m of occupational debris and may be the third or even fourth building phase.

The publication of this volume on the Late Pre-Pottery Neolithic architecture of Basta shortly after the publication of the architecture of near-by Beidha, covering somewhat older periods (Middle PPNB), creates the unique opportunity of presenting architectural development over a longer period of time within a closely defined region. Although this sequence is still interrupted by serious gaps it nevertheless represents the frame for developing ideas about local continuity or discontinuity.

The Stratigraphy and Locus Data

Hans Georg K. Gebel

1.1 Remarks on the Stratigraphic Evaluation

The evidentiary basis for the stratigraphic reconstruction of the Basta sequences was the on-site stratigraphic records from the individual square diaries, supported by all other types of observations on the specifics of local site formation conditions (Kamp 2004, Gebel 2004b). Neither the insights during excavation of the squares nor isolated understandings from a single excavation season allowed a definitive understanding of the interrelated and complex macro- and microstratigraphical events (or: sedimentary and architectural morphodynamics) which built up the sedimentary environments of the site. Moreover, from the beginning we had no expectation of being able to reconstruct all of the complex macro-stratigraphical contexts. It was clear that such a stratigraphic reconstruction would need to be a final task completed once all available data were in hand. It was the expectation that the final stratigraphic evaluation would link hitherto poorly understood parts of the depositional and building stratigraphy[1] and lead to a comprehensible and plausible reconstruction of an overall Basta stratigraphy. Needless to say, a reconstructed stratigraphy is a "construct," a hoped for "model," which would come close to replicating historical truth. The following introductory remarks are meant to explain how this reconstruction was achieved and which on-site and final decisions led to our results.

The stratigraphic reconstruction at Basta is based on *c.* 410 loci excavated in 10 squares plus three half squares of Area A, and *c.* 980 loci excavated in 23 squares of Area B (*cf.* Table 1). The *c.* 150 loci excavated in the baulk removals in both areas were considered in the locus data lists (App. A and B), but were often of restricted utility for stratigraphic reconstructions. The total excavated area at Basta is *c.* 860 m^2 (Area A: *c.* 309 m^2, Area B: *c.* 533 m^2, Area C: 16 m^2). The general goal of excavation was to reach the first floors in the latest LPPNB architectural occupations in Areas A and B, while the goal for Area C was to reach bedrock in order to understand the depositional history of the site outside its architectural occupations. A deep

[1] By speaking here of architectural and depositional stratigraphy, the use of these terms is meant to separate planned anthropogenic activities establishing building stratigraphy and non-structural depositional processes resulting from various interacting anthropogenic and natural factors and materials. This is done here for the sake of distinction, regardless of the fact that in other respects, of course, architectural remains can be considered deposits as well.

sounding intended for B 102/103 was not achieved before the end of the field project in 1992 (Gebel *et al.* 2004).

1.1.1 Infield Stratigraphic Observation and Record

Excavation systematics at Basta were based on the identification of loci, which could be all types of real or arbitrarily defined archaeological features recognized or addressed as such by a square's excavator, *e.g.*, a wall, a wall opening, a pit, a floor or any sort of surface, a clearly defined deposit, a patch of building material or a fallen wall part, a diffuse layer arbitrarily defined by the borders of a subsquare, an unidentifiable but separated feature, etc. Square supervisors were asked to observe intensively the stratigraphic relations between their loci, and to record these data in the "above/below loci" section of the locus sheets. Experience with these locus system records has shown that it would allow, together with the records, later reconstruction of the stratigraphic sequences of spot localities and the connection of several such local sequences to a coherent area stratigraphy.

The Basta excavation diaries are of differing quality, depending on the excavators' experience and English language competence, their research backgrounds and educational origin, the variable difficulties in stratigraphic complexity, their willingness to engage in peer counseling about findings with other team members or the directors, etc. Defining a locus was directly related to these factors, and it was not an easy task to control the standards of the diary records.

Table 1. Basta Areas A, B, and C. Excavated loci.

Square (Square designation acc. to its NW coordinates)	**Excavated loci (during season ...)**	**Notes on operations other than the ordinary square excavation**
AREA A		
A 1 (505N/685E)	1-19 of 1986 - 1-3 of 1987	
A 2 (505N/690E)	1-25 of 1986 - 1 of 1987	
A 2/6	1-8	baulk removal
A 3a+d (505N/695E.a+d)	1-11 of 1986 - 1-7 of 1987	
A 3/7	1-4	baulk removal
A 4	1 of 1986	bulldozed surface
A 4/8		trimming of bulldozer section
A 5 (500N/685E)	1-7 of 1986	
A 6 (500N/690E)	1-31 of 1986 - 1 of 1987	
A 6/7	1-2	baulk removal
A 7a+d (500N/695E.a+d)	1-4	
A 8b+c (495N/680E.b+c)	1-21	
A 8/9	1-7	baulk removal
A 9 (495N/685E)	1-15 of 1986 - 1-19 of 1987	
A 10 (495N/690E)	1-5 of 1986 - 1-10 of 1987	
A 12 (490N/680E)	1-8 of 1986 - 4-9 of 1987	
A 12/13	4-9	baulk removal
A 13 (490N/685E)	1-17 of 1986 - 18-33 of 1987	
A 14a+d (490N/690E.a+d) A 14b+c (490N/690E.b+c) A 14 (490N/690E)	1-11 of 1986 1-10 of 1987 12-26 of 1988	
A 13/14	1-2,8,12-14	baulk removal

Table 1 cont. Basta Areas A, B, and C. Excavated loci.

Square (Square designation acc. to its NW coordinates)	Excavated loci during season ...	Notes on operations other than the ordinary square excavation
A 16	1	
A 17 (485N/680E)	1-18 of 1986 - 19-20 of 1987 21-24 of 1988	
A 17/22		baulk removal
A 18 (485N/685E)	1-19 of 1986 - 1,4,9-44 of 1987 45-75 of 1988	
A 18/19		baulk removal
A 18/23		baulk removal
A 21	1	
A 22 (480N/680E)	1-44	
AREA B		
B 22 (415N/585E)	1-34	
B 23 (415N/590E)	information missing, diary lost	
B 24 (415N/595E)	information missing, diary lost	
B 34 (410N/585E)	1-21 of 1989	
B 35 (410N/590E)	1-59	
B 35/36	1-15	baulk removal
B 36 (410N/595E)	1-37	
B 48 (405N/585E)	1-31 of 1989 - 30-56 of 1992	
B 49 (405N/590E)	1-41	
B 49/50	1-8	baulk removal
B 50 (405N/595E)	1-38	
B 50/51	1-20	
B 51 (405N/600E)	1-50	
B 52 (405N/605E)	1-52	
B 53 (405N/610E)	1-33	
B 65 (400N/585E)	1-31	
B 66 (400N/590E)	1-32	
B 67 (400N/595E)	1-32	
B 68/69, 86/87	1-26	baulk removals
B 68 (400N/600E)	1-45	
B 68/69, 86/87	1-26	baulk removals
B 69 (400N/605E)	1-36	
B 70 (400N/610E)	1-20	
B 83 (395N/585E)	1-49 - 1992: 1-16	
B 84 (395N/590E)	1-21 of 1989 - 25-39 of 1992	
B 84/102	1-5	baulk removal
B 85 (395N/595E)	1-17	
B 85/86	1-?	baulk removal
B 85/86, 103/104	1-12	baulk removals
B 86 (395N/600E)	1-18	
B 86/87, 104/105	1-14	baulk removals
B 87 (395N/605E)	1-20	
B 102 (390N/590E)	1-19 of 1989	
B 103 (390N/595E)	1-12 of 1992	
B 103	1-10 of 1989	
B 102-103	20-99 of 1992	
B 102/103	1-12	baulk removal
B 103/104	1-5	baulk removal
B 104 (390N/600E)	1-27	
B 105 (390N/605E)	1-22	
B 104/105	1-15	baulk removal
AREA C		
C 208c+d (545N/540E.c+d)		
C 217a+d (550N/585E.a+d)		

Several problems were found with the dig diary records during their evaluation for the stratigraphic reconstruction. There are people-linked problems related to how a locus was defined: some people separated even the smallest features resulting in many loci for a square, without commenting much on depositional interrelations. Others had the tendency to combine several different loci as one locus if they interpreted these as belonging to one stratigraphic event. In many cases the locus interpretation is missing, and often the locus description is not very informative or sometimes not understandable. Quite reliable, on the other hand, is the "below/ above locus" information on the diary sheets, which are listed in App. A and B: they were essential for the reconstruction of the spot stratigraphy (*cf.* the Stratigraphic Charts 1 and 2).

As mentioned above, the stratigraphic records were documented loci-wise on the locus sheets, which made up – together with section drawings, locus sketches, and drawings – a diary for each square. This system was adopted by the Basta Joint Archaeological Project from the standards in use by the excavations of the Institute of Archaeology and Anthropology, Yarmouk University in the 1980s, and is a common system of dig documentation for prehistoric sites in and outside of Jordan. While it was required of the square excavators that a sequential numbering of all loci was to take place square-wise regardless of the season, it happened that square supervisors started numbering again with Locus 1 in a following season. This led to the confusion that a square might have, *e.g.*, two loci called "21". In the Locus Data Lists (App. A and C) this led, *e.g.*, to the entries "Locus 21 of 1988" and "Locus 21 of 1989," and in the Stratigraphic Charts the symbols of the stratigraphic features then carry a footnote making reference to which of the seasons the locus belongs.

1.1.2 Methods of Stratigraphic Reconstruction

The major methodological problem in the stratigraphic reconstruction of Basta is the complexity caused by the building event and depositional sequences. Both sources of stratigraphic information had an influence on each other in the stratigraphic reconstruction. Especially in Area A, where the bulldozer cut horizontally into a slope occupation and destroyed many areas of building sequence evidence, we were forced to sort depositional information according to the building phases. In other words, the cross-area (or cross-room) stratigraphic reconstruction of the non-architectural depositional events at Basta is the result of the insights we obtained from the building sequences, or the identified building phases. While it was mostly possible to reconstruct a spot or local stratigraphy of deposits, they hardly could be connected across the rooms without linking them to a building phase. This certainly is a common problem of stratigraphic reconstruction in densely built habitation sites: the activities and depositional events are clear for a restricted area, *e.g.*, for a room's fill sequence, but they are difficult to correlate to contemporary activities and events in neighboring rooms and houses. It has to be clearly stated that the stratigraphic reconstruction of Basta was more of an "attributive enterprise:" non-architectural loci within the preserved ground plans were assigned to the recognized building phases, while always being used to check and reconfirm the validity of our archaeological phasing of the buildings. In contrast to that, the stratigraphic reconstruction above the ruined wall tops is based on a real correlation of potentially contemporary depositional events. The Rubble Layer stratigraphy in Area B and the bulldozer sections of Area A (Fig. 2.A-B, Gebel 2004b: Fig. 2) provided significant stratigraphic information for a purely depositional layer stratigraphy without architectural intrusions. Since most of these layers developed in the LPPNB open areas of the site in A or contain the post-LPPNB Neolithic occupation in B (*cf.* below), we deal here with these other conditions for stratigraphic reconstruction: a depositional history influenced more by natural impacts than by architectural structures.

When beginning the work on the Basta stratigraphy, the Harris Matrix approach was tested as a tool of stratigraphic reconstruction. Testing this program for a restricted area of four squares, it was clear that the Harris Matrix produced several inconsistent stratigraphic baulks or some unlikely or wrong stratigraphic connections. Our experience with this type of automated stratigraphic reconstruction was thus of limited success in the case of Basta, and it was obvious that it could not meet the needs created by the complexity of a densely built occupation. It may have worked with hand-made corrections for restricted areas only (see, *e.g.*, the example of Beidha Area L4 in Byrd 2005: Fig. 38). After this experience it was most practical and even inevitable to create the Basta stratigraphic reconstruction by traditional means, meaning a correlation of the stratigraphic loci relations with the help of the "building stratigraphic framework."

Needless to say, the alteration of wall openings and passages (their blockings and insertions) are a source of stratigraphic information, as also is the insertion or extension of staircases (Gebel 2006). Therefore the study of the positions and arrangements of wall openings received special attention at Basta, to gather more arguments for the changes in use and in the architectural sequence. Attempts to do this, however, mostly resulted in failures: the "alteration rate" in Basta's LPPNB architecture is so low that meaningful information was not derived from such analysis. In the case of Ba'ja, which is rich in architectural alteration (especially related to the blocking and insertion of wall openings, insertion of stairwells), this aspect is a major source for the interpretation of architectural change. Here, (at Ba'ja) the "alteration rate" is so great that it does not allow identification of architectural phases as could be done at Basta.

1.1.3 Topographic and Geomorphological Conditions of the Stratigraphic Sequences[1]

Fundamental to this study's approach is an interpretation of archaeological layers as anthropogenic interferences in natural depositional and erosional processes. Human occupation modified these natural processes for a certain period, and people had to take these natural processes into account in all planning and maintenance. The resulting layers were altered and preserved by natural forces in post-occupational times. In other words, the Basta stratigraphic site formation and preservation took place in the framework of an Early Holocene sedimentary environment. This environment controlled the conditions of the anthropogenic impacts and other formation agencies by providing the material conditions and resources, which were subject to human impact and reaction to the sedimentary environmental changes during the habitation period. Thus, we see the Basta site formation and preservation as a sequence of specific local processes, which had influential human episodes in the Late Pre-Pottery Neolithic B (LPPNB), the Final Pre-Pottery Neolithic B (FPPNB), and the Pottery Neolithic A (PNA). These occupations were events that modified the local natural sedimentary and erosional events, as well as the habitats of plants and animals in the area. This makes it sometimes impossible to clearly separate anthropogenic and natural causes in the formation and preservation of Early Neolithic stratigraphy.

[1] The geomorphological site setting and its geochemistry was the subject of U. Kamp's contribution in *Basta* I. *The Human Ecology* (Kamp 2004). Basta's topographic features, site formation aspects, and conditions of preservation were discussed by Gebel in the same volume (Gebel 2004a, 2004b). For the sake of a comprehensive presentation in 1.1.3-5, some of the analysis published there is repeated here in the stratigraphic discussion.

The most influential anthropogenic impacts on Basta's natural site conditions and relief are the topographic modifications of the palaeorelief by terracing the NW slopes of Wadi Basta. These terraces created the building grounds for the houses (*cf.* Nissen, 4.2.1.1).

But before these anthropogenic impacts can be discussed (*cf.* Section 1.1.5), Basta's topographic units need to be understood as the influential framework for the cultural sedimentation taking place on them between the LPPNB and PN1 (Early Pottery Neolithic, Lower Rubble Layers). Kamp's (2004) results indicate that the present-day topographical units still suggest some elements of the pre-Neolithic palaeorelief. There is little topographic variability on the NW slopes of Wadi Basta, on which the Neolithic occupations rest. One may identify the following units from the site's topographical map (Kamp 2004: Fig. 1):

Area A is located in a topographic unit which represents the NE parts of the Neolithic village on the slopes between a small gully (a drainage, today the location of a village street?) in the SW and the outcrops/banks of quartzite veins in the N (*cf.* Editors' Introduction, this volume, Fig. 3). The slopes of Area A have a length of about 150 m along the northwestern side of Wadi Basta. The lower parts of the slopes are very steep and border the bottom of Wadi Basta (Plate 1.B). The upper parts of Area A are rather flat and transition at the 30 m contour line into the flatter topography of the former fields in Area C.

Area B is located in the central and steeper part of the Neolithic village[1]. It is on Wadi Basta's NW slopes between the aforementioned small gully (the present-day village street) in the NE and the flat slope areas in W and SW. The length of Area B along the northwestern wadi slopes is about 100 m. In the SE it reaches the bottom of Wadi Basta in a steep incline. In the NW it meets a flat area, which topographically belongs to Area C (*cf.* Editors' Introduction, this volume, Fig. 3).

The flat slopes above the present-day spring, located WNW-NNE of 'Ain Basta did not receive a name during the excavations. Their length is about 180-200 m. Most likely the flat topography was formed by the Wadi Basta drainage which (here named Wadi Muheidirat) shifts its direction near 'Ain Basta from roughly W-E to the E (*cf.* (*cf.* Editors' Introduction, this volume, Fig. 2 and Kamp 2004: Figs. 2 and 3.C). Here the first houses of modern Basta were built. Villagers reported that in this area, especially NNW of 'Ain Basta at depths of *c.* 5 m, they found deep archaeological deposits with tall walls similar to our LPPNB walls.

Area C is a flat triangle extending N of Areas A and B, between the higher summit to the NW and a lower elevation to the NNE of modern Basta; its sides measure approx. 100 m.

The Neolithic stratigraphy in other parts of modern Basta is not well known (*cf.* Kamp 2004 for the various sections presented there, and Section 1.4 of this contribution); the decreasing number of Neolithic surface finds can be recognized from the site survey map (Nissen, Muheisen, and Gebel 2004: Fig. 4). The slopes and summits opposite the Neolithic village of Basta, or the SW side of Wadi Basta, do not contain Neolithic stratigraphy. The summit and its southeastern slopes some 250 m N of Area B have only some concentrations of Neolithic pottery sherds, and

[1] The present-day, slightly spur-like appearance of Area B (cf. (cf. Editors' Introduction, this volume, Fig. 3 and Kamp 2004: Fig. 1) could be the result of the two proposed Early Holocene drainages (Kamp 2004; Gebel 2004b: Fig. 1.A-B) and the LPPNB building activity, supporting a settlement „island" as discussed later in the summary section. However, the evidence for these fossil drainages is not solid (Kamp 1992), and the present-day street between Areas A and B may have been dug into the slope rather than following a pre-existing depression/drainage.

certainly are part of the Pottery Neolithic use of the site's area; structures were not visible on the agricultural surfaces. These site uses are also reflected by the scarce Neolithic pottery finds in the rubble layers of Area B.

Topographically, the LPPNB inhabitants of Basta were not hindered in their potential to expand their village territory. Surveys did not identify outliers to the LPPNB village. An occupation underneath the Old Village of Basta, however, cannot be excluded, where many LPPNB wall stones were recycled. The functional units identified by Neolithic deposits in Basta were domestic areas on artificial terraces. LPPNB dump areas of different character could have existed between the housing areas, or even above the house ruins of deserted living quarters (evidence in the NW Section of Area A: Fig. 2.A-B, App. B). The architectural preservation of Area A underneath the LPPNB deposits in the NW Section suggests that it may be the result of a LPPNB razing of walls in the area. If so, the burials inside some Area A channels may not be related to the inhabitants of "living" houses in Area A, but could be burials by inhabitants of flourishing LPPNB settlement quarters using the protection of a (razed) ruin. The LPPNB flint workshop dumps in the NW Section appear (slightly) redeposited downslope onto decaying settlement parts (Gebel 1996: Plate 1.A). In the site's fringes (soundings and drillings in Area C) various sorts of open-air activities are attested, among which are flaking ateliers, garden work, carcass and garbage disposals, dumped leftovers of building materials, and possibly burials (Gebel 2004b, *cf.* below).

Excavation Areas A and B at Basta are situated in slope settings some 17–24 m higher than the bottom of Wadi Basta; both areas do not have larger drainage catchments which produced much weathered material or fluvial accumulations. Pronounced accumulations (*e.g.*, our Rubble Layers, also containing eroded wall stones of the LPPNB architecture) occur above the ruined top of the LPPNB walls. It seems that the lowest structures in Area A were founded either on the dolomite bedrock, or its weathered surfaces, or on a layer of settlement debris resting on these (lower stratigraphy of Squares A 5–6).

Apart from the main domestic occupation of Area A (Architectural Phases AII-AIII) more architectural remains existed in the upper stratigraphy of Squares A 1–2 (Upper Architectural Phase AI). The latter's stratigraphic link to the main occupation BII-III and to the wall remains (Locus 23) in the NE Section (Gebel 2004b: Fig. 2) is not clear, and its masonry differs from that of the typical LPPNB walls (many cobbles instead of tabular/dressed wall stones were used).

1.1.4 Addressing Deposit Classes and Archaeological Features, Related to the Major Questions of the Site's Stratigraphy

A classification of a site's typical and specific archaeological features and characteristic deposits has to be made to allow a generalized view of site specific stratigraphic processes. Several major questions have to be discussed before such features and deposits can be defined, mostly related to the striking features of Basta's formation and preservation: the tall standing walls, the character or nature of depositional behavior by the inhabitants, questions of occupational duration, the palaeorelief, potential gullies already developing during the LPPNB, the huge Post-PPNB accumulations of natural material carrying cultural debris in Areas B and C, etc. Before we list the deposit classes and archaeological features, we mention the core questions to which this presentation is oriented:

Table 2. Basta. Deposit classes and archaeological features.

Event sources	**Deposit classes**	**Archaeological features**	**Non-Neolithic disturbances**
structural (architecture)		artificial terraces substructures (one case: with entrance) rectangular walls/ rooms curvilinear walls/ rooms buttresses, protruding walls, pillars staircases second floors? entrances to substructures (blocked) wall openings (niches/ passages/ windows) types of floors types of plastering types of structural modifications and maintenance (intentional room fills, wall insertions, blockages, re-plasterings, etc.) all sorts of squatters' activities	
other anthropogenic (primary and secondary depositions)	modified bedrock	types of various surfaces flint workshop dumps dumps of building material (plaster, wall stones, etc.) types of fire places types of pits types of stone and *samagah* installments types of food processing loci types of storage loci types of intra-mural burials types of extra-mural burials installments of unknown function management of surface water all sorts of squatters' activities (*e.g.* stone "quarrying")	stone robbing pits field clearing piles filling depressions
geoarchaeological	Upper Rubble Layers Lower Rubble Layers downslope redepositions over larger and restricted areas of natural and cultural materials/ debris other mud and debris flows	room fills from collapsing walls/ ceilings/ roofs/ floors ruined wall tops	
natural	top soil soil formation (limited) weathering products deflated surfaces gully development colluvial sedimentation waterlaid sedimentation aeolian sedimentation (bedrock, weathered bedrock)		

1) What reliable information gained from the palaeorelief can be used?

2) How did the palaeorelief and slope conditions influence the geoarchaeological and archaeological stratigraphy?

3) How can stratigraphic information help reconstruct the development of the settlement, its intra-site patterns, and fringe areas?

4) What is the explanation for the huge post-LPPNB deposits, represented by the Lower and Upper Rubble Layers in Area B, and the silty environments of Area C?

5) Which building habits and stratigraphic and sedimentary conditions caused the well-preserved village architecture, with walls preserved up to heights of 3.80 m?

6) How do the deposits of settlement debris and natural layers above the ruined wall tops in Area A relate to the settlement in ruin underneath?

7) What type of architectural reconstruction contributes in what way to stratigraphic interpretation (*e.g.*, through the question of split-level housing and optional second stories in the LPPNB architecture of S Jordan)?

1.1.5 Intra-Site Anthropogenic and Natural Processes Influencing the Formations and Preservation of the Basta Stratigraphy

The anthropogenic stratigraphic and other morphological impacts in Basta's sedimentary environments represent a sequence of depositions, re-depositions and "extraction" events which modified the village morphologies and natural reliefs over a period of roughly a millennium. While these sedimentary environments were altered by the human occupation, they also were continuously controlled by natural influences such as rainfall, wind, temperature and other climatic parameters, and by erosion and colluvial events; these all played a role in Basta's site formation and preservation (Gebel 2004b).

There are virtually no problems in distinguishing *in situ* and disturbed Neolithic layers at Basta. The recent disturbances caused by modern occupation can be identified easily, as well as the deep pits of obviously various origin and dates intruding into many parts of the stratigraphy in Area B (*e.g.*, attested in B 53, B 70, B 65, and partly B 83). We did not find any other later non-Neolithic prehistoric or historic disturbances of Basta's Neolithic stratigraphy. While the extensive and deep pits in the aforementioned squares of Area B often remain an enigmatic issue, both stratigraphically and chronologically – they most likely represent re-filled stone robbing pits – we also have to expect disturbances of LPPNB stratigraphy by post-occupational (still Neolithic) stone robbing activities (Hermansen 1997; Hermansen, in: Gebel *et al.* 2004).

The natural processes, the palaeoterrain, and the anthropogenic impacts influencing site formation and preservation have been discussed extensively elsewhere (Kamp 2004, Gebel 2004b). These publications may be consulted for insights into the palaeorelief, climatic influences, physical weathering, water flow slope erosion, other sorts of erosional processes and causes, earthquake probability, and aeolian deposition at Basta. For the sake of an overview, we repeat some of this basic information in the summary (*cf.* 4.1.1-4).

Prior to the LPPNB occupation, the palaeorelief of Basta was formed mainly by gullies which transported weathered materials into Wadi Basta (Kamp 2004). Mainly water flow slope erosion shaped the palaeorelief by accumulation of colluvial and alluvial sediments in

depressions and on the wadi banks and floors. Although we have little archaeological evidence, we must expect that the inhabitants reacted to natural drainage impacts, which are very natural occurrences on slopes. Rainfall and snow management, debris flow management, and slope pressure management should all be reflected in the architecture and stratigraphy. But, most likely, protective (terrace) walls, barriers, and ditches were not found within the habitation areas, and are features more to be expected in the fringes of the occupations. At least two major drainages could have affected the settlement area at Basta: one must have started in Area C and passed the domestic area approximately where the present-day street between Areas A and B runs downslope (c. 30 m NE of Area B). The other drainage or wadi must have originated from the slope depression of the hill some 120-160 m NW of Area B, and then passed through the NW side of Area B (*cf.* Kamp 2004: Fig. 1; Gebel 2004b: Fig. 1). Here it could have influenced the preservation of the terraces and their architecture or building planning during the LPPNB. After the LPPNB occupation, in the early to the middle 7th millennium BC, a considerable sediment transportation went through this drainage and eroded the ruins of LPPNB architecture bordering this gully (Area B, Squares B 86, 103–105). These mud and debris flows are a common feature in the preservation of LPPNB sites in Southern and Central Jordan. It is a matter of a current debate (an event named the 8.2 ka BP event, *cf.* Weninger *et al.* 2005) as to where these materials originate, which transport agencies were involved, and what sort of climatic background they have (*cf.* 4.1.1). Most of the drainages appear too restricted for the amount of the transported flow. The Basta evidence suggests that they must have started shortly after the abandonment of the settlement, since the walls of the ruin were still standing tall.

A characteristic intra-site action which had a basic influence on the formation of the Basta slope stratigraphy was the creation of building lots. As pointed out by H.J. Nissen (this volume, 4.2.1.1), horizontal building lots were created by constructing terraces out from the slope ("slope adjusting terrace systems," *cf.* Nissen, this volume, Figs.2-3), at least in the areas we excavated at Basta. These dry-stone masonry substructures seem to be typical for several LPPNB sites in South-Central Jordan (Gebel 2006), and most probably are an invention of that period. From other sites we also have evidence for the opposite way of preparing a horizontal lot on a slope, meaning cutting a terrace into a slope. This is in evidence for the steep slope of Ba'ja Area C, where such a terrace was made to create space for a split-level house. This also seems to have been the way of preparing the building lots for the MPPNB round houses of Shkarat Msaied N of Ba'ja. It may well be that the latter type of action was chosen in areas where soft sediments formed the substrate, while bedrock and a substrate formed by earlier buildings caused the construction of terraces out from the slope.

1.2 Stratigraphy of Area A

1.2.1 Architectural and Stratigraphic Preservation in Area A

If we ignore the fact that parts of the Area A stratigraphy were destroyed in 1986 by a bulldozer creating the building lot for a modern house (Plate 2.A), we may speak of otherwise good preservation of the stratigraphy in Area A. Even the pressure and the movements of the machine seem to have had little impact on the structures it cut through. The bulldozer laid a horizontal section mainly through Main Architectural Phase AII and the cultural debris layers above the bedrock in the NW Corner (Squares A 1, A 2, A 5, and A 6) of the building lot, exposing the LPPNB architecture below the caterpillar's wheels (Plate 2.B-C). Of course, it destroyed all stratigraphic links at this level, and thus makes it impossible to reconstruct a longer stratigraphic sequence for Area A. The NE and NW Section of the building lot are a restricted source of

information on what these connections might have been. However, the sections may indicate that the bulldozing activity in the building plot was halted by the occurrence of denser walls, so that we could expect that the bulldozing did not destroy too much of the upper parts of the architecture preserved in Area A. In 1986, the surface of the building plot Area A was roughly at the level of the street running along its southeastern edge. An identification of the preserved architectural sequence in Area A was still possible (*cf.* Nissen, this volume; Top Plan Area A).

As explained later, and as also argued by Nissen, this volume, the preservation of the LPPNB wall heights in Area A cannot be expected to have been considerably higher than what we found after the bulldozing activities. Several hints, especially from the NW Section, point toward preservation caused by LPPNB activities such as cutting or razing down walls. In addition, there is some evidence – but less than in Area B – of large pits disturbing the Area A architectural and thus stratigraphic preservation, *e.g.*, a pit causing damage in A 22. The causes and dates of these pits are difficult to identify: We assume masonry robbing pits of different times including the post-occupational Neolithic to be the main cause of the disturbance.

1.2.2 Stratigraphic Evidence of the NE- and NW Sections

The base of the NE Section (Gebel 2004b: Fig. 2, App. 1) represents the original bulldozer surface of the building lot; the base of the NW Section (Fig. 2.A-B, App. B) partly reflects the excavation levels reached and partly shows the bulldozed surface meeting the cut. For the individual layer descriptions of both sections *cf.* the aforementioned appendices.

The NW Section exhibits four major stratigraphic event series in Area A following the ruin status of the latest architecture in the building lot (Main Architectural Phase AII), and it even provides some indications of the stratigraphic links to Upper Architectural Phase AI in Squares A 1 and A 2÷. Stratigraphic events include:

1) the LPPNB domestic building events represented by section Loci 53, 56, 62-63, representing Main Architectural Phase AII (Layer 56 is Phase AIII-II)

2) the thick cultural debris and garbage deposits of the northern half of the section (NW dump area, Section Loci 2-44) with embedded architectural remains of Upper Architectural Phase AI (remains above Layer 23; remains between Layers 4 and 15; Locus 31)

3) the almost horizontal sequence of very loose, fine grained to powdery sediment and gravel deposits (Layers 61a-f) in the southern half of the section, with strata containing various proportions of medium (<8 cm) and smaller (<3 cm) sized stones

4) the top soil layer Locus 1

The architectural remains of 1) are contemporary with and earlier than the cultural depositions of 2). During Main Architectural Building Phase AII, and later, a huge dump developed in the area of Squares A 1–2, and A 5, and further to the W of these squares. This dump seems to have been located in the northern edge of the residential space of Area A. Its lower deposits rest in and on pits dug in the weathered bedrock surfaces, and also were a burial area (Burials 2–4). This proves also that the open spaces and dump areas were used at Basta as burial grounds. As the Top Plan of Area A also exhibits, no architectural remains were visible in the NW Section N of section

Layer 56 (= Locus 7 of Squares A 8–9). Accordingly, missing architectural evidence characterizes the NW parts of the NE Section (Gebel 2004: Fig. 2).

The northwestern dump area appears, judged from the inclination of its layers, as somewhat hill-shaped. Its relation to the architecture in Squares A 3 and 5–7 is not well understood; here, much of the stratigraphic information has vanished due to bulldozing. However, the edge of the housing area (Squares A 5–6, Locus 4) met with the weathered bedrock. There is a likelihood that the lowermost NW dump area developed at the same time as the residential occupation S of it.

The upper parts of the NW dump area contain architectural remains, which are at similar levels as those of Upper Architectural Phase AI in upper Squares A 1 and A 2. Judged from the section evidence, this architectural phase must have developed well after the foundation of Main Architectural Phase AII. It appears neither stratigraphically nor in terms of building techniques to be related to AII. Stratigraphically, the NW dump area should be subdivided into at least two phases: the lowermost dump layers and the uppermost dump layers "hosting" the AI architecture. The NW Section indicates that Upper Architectural Phase AI was founded in the dump layers (*cf.* above Event Series 2).

The contact zone between the lowermost section layers (Loci 60 and 54) and the preserved heights of Main Architectural Phase AII (section Wall [62], = Wall [2] in Square A 12) shows that these walls (also Wall [2] in Square A 13, Wall [5] in Square A 17, etc.) were not cut by the bulldozer, but exhibit a Neolithic state of preservation. They apparently were reduced to similar heights by the end of the LPPNB occupation or shortly thereafter. The limestone rubble of section Layer 54 may result from intentional wall stone extraction. The possibility that Layer 60 developed from materials from the upper parts of the NW dump area could indicate that such an extraction of wall stones was executed during the time of Upper Architectural Phase AI.

However, it should be emphasized that this speculation is only one of three possible explanations relating to the depression filled by Layers 61a–f:

a) The depression was created by run-off waters and is part of a gully that eroded the upper parts of AII architecture in Square A 8 and Squares A 12–13. Section Layer 60 would indicate that this was a torrential episode event terminating the residential history of the adjacent area, and was followed by an occupation at an higher elevation (Upper Architectural Phase AI). This fluvial event would be responsible for the preservation of similar wall heights.

b) The depression was created by the intentional extraction of wall stones.

c) The depression is only partly the result of either a) or b) or both, but is mainly caused by the fact that in this area a large room ground plan produced less room fill that thus resulted in a larger depression in the site's surface.

Whatever the scenarios and causes were – natural or human impacts or a combination of both – it may well be that the depression – represented by the Fills 61a-f – was used agriculturally in Post-Neolithic times. As can be seen everywhere in the area today, even the smallest slope depressions and runnels are agriculturally used due to their water capturing capacities. This explanation is fueled by the argument that Layers 61a-f apparently have been cleared of large stones, which otherwise might be expected here due to movement from LPPNB architecture further up the slope.

1.2.3 General Architectural and Stratigraphic Sequence of Area A

Table 3 gives an overview of the stratigraphic units of Area A; all related loci identified in Area A were attributed to these stratigraphic units and are presented in Stratigraphic Chart Area A (for the locus descriptions *cf.* App. A).

Table 3. Area A. Chrono-stratigraphic summary.

Stratigraphic Unit (Period)	**General Reference to Loci**
top soil (recent)	
Deposits above ruined top of uppermost walls of AI (L-FPPNB?)	- predominantly fine-grained colluvial - down-slope transport of thick accumulations of Late PPNB flint debitage (most likely transport of workshop dumps from higher up the slope, accumulated under outwash of fine-grained sediments) - room fills of Upper Architectural Phase AI
Room fills of Upper Architectural Phase AI (FPPNB?)	*cf.* Stratigraphic Chart Area A
Upper Architectural Phase AI (FPPNB?)	sub-surface architecture on the northern most edge of Area A outside the building lot
NW Section, Locus 4-77 (LPPNB)	cultural debris layers of Locus 7-44 (NW section, partly *in situ*, partly washed); building activity in the area not attested/ layers destroyed by bulldozer
Room fills of Main Architectural Phase AII (LPPNB)	including burials, activity loci, floors; *cf.* Stratigraphic Chart Area A
Main Architectural Phase AII (including alterations) (LPPNB)	main architectural phase of the Late PPNB
Substructures of Phase AII (LPPNB)	*cf.* Stratigraphic Chart Area A related?: cultural debris layer and burial ground of the NE corner
Earliest and Main Architecture Phase III-II (LPPNB)	jointly used walls of two building phases
Room Fills of Earliest Architecture Phase AIII (LPPNB)	including burials, activity loci, floors; *cf.* Stratigraphic Chart Area A
Earliest Architecture Phase AIII (LPPNB)	restricted evidence of an earliest architectural phase in Area A
Substructures of Phase AIII (LPPNB)	including burials, activity loci, floors; *cf.* Stratigraphic Chart Area A
bedrock	weathered “yellowish bedrock products” and bedrock

One stratigraphic aspect was difficult to represent visually in Stratigraphic Chart Area A: the building terraces identified by a comparative analysis of levels (*cf.* Nissen, this volume). As mentioned previously in 1.1.5, the creation of horizontal building lots was a major determinant of stratigraphic formation processes and preservation at Basta. Area A illustrates this best. Three terraces were identified (Nissen, this volume, Fig. 1) for Main Architectural Phase AII, separated by *c.* 1 m in height from each other. Stratigraphically these terraces could mean retaining platforms for the depositional bodies they carried. The downslope energy of the deposits, whether resulting from the massive architecture or its associated room fills or its empty spaces, must have been less on such (extensive) platforms and thus helped the *in situ* preservation here of the archaeological sequences. Critical spots of stratigraphic preservation were of course the retaining walls separating the terraces. Here the load of an architectural body on a terrace easily could have

caused downslope pressures that endangered structures and installations through downslope sliding or required their more steady maintenance and observation. Structural strengthening seems not necessarily to have countered potential instabilities, or were not very necessary in Area A: thicker walls do occur, but not in all expected critical situations. Strengthening buttresses like at Ba'ja (Gebel 2006) were not found in Area A. Although we were surprised to notice that the terraces of Area A did not show more difference in heights (upper: + 21,80 m; central: +20,75 m; lower: + 19,75 m), compared with the present-day slope inclination, we should not forget that there is a 2 m height difference attested within a 5 m distance between the upper and lower terrace (Nissen, this volume, Fig. 1). Still this seems not to have caused problems in stratigraphic preservation. There is no significant stratigraphic evidence of collapse layers, wall cracks, etc. in this area (Squares A 17/A 22), and also the related findings from the NW Section (*cf.* below) indicate a "normal" decay of the ruined structures in the area. This all again matches with the impression that we deal in Area A with good stratigraphic (and architectural) preservation when we consider the strata below the bulldozed levels.

The Stratigraphic Chart of Area A collects all the excavated loci and groups them stratigraphically (They are grouped room-wise in their stratigraphic sequence). Almost no loci could be considered, as in Area B, for the stratigraphy above the ruined wall tops. The loci of the NW and NE Sections could not be included in the chart, because their relationship to the excavated stratigraphy would have represented too much guesswork.
Some notes should be given to understand the chart: rooms were defined as any space limited/ bordered by (a) wall; they thus also could mean "space" without referring to a ground plan (a common aspect for the "room" numbering of Area B). All loci numbers aligned in one row represent stratigraphically contemporary deposits/room fills/installments/walls. At the very least such a row means similar stratigraphic positions. In doubtful cases, a loci was related to the youngest plausible context. Loci numbers used by the excavators cross-room-wise re-appear in all the rooms accordingly. The order or arrangement of the wall loci numbers does not express a sequential stratigraphy or other such meaning for a feature, but rather expresses that they belong to that phase. However, those of the substructures carry the sequential meaning. Slabs covering substructures and the rubble fills in between the slabs always received the "square" symbol as they were used for walls, signifying that these are architectural elements just as walls are. Any first floor or surface directly covering these rubble fills between the slabs was mentioned as being in the same stratigraphic position as well.

1.3 Stratigraphy of Area B

1.3.1 Architectural and Stratigraphic Preservation in Area B

Before discussing the architectural and stratigraphic specifics of preservation in Area B, a basic reflection of the relations of architectural and depositional elements that exist here has to be presented, and a comparison with Area A has to be made. While in Area A much of this evidence was destroyed by bulldozing activities, a dilapidated (*cf.* Section 1.2.2) LPPNB architecture – meaning a structure already in ruin during the LPPNB occupation – was covered at least in parts by flint workshop and other garbage dumps deposited and re-deposited during the LPPNB (Gebel 1996, *cf.* Section 1.2.2), and Rubble Layers are missing, so that in Area B all stratigraphic elements and types of relations between architectural and other depositional processes are present. It has to be admitted that often a differentiation between building and depositional stratigraphy is difficult, *e.g.*, in cases of raised floors and raised walls, and that often the architectural phases influence the stratigraphic interpretation of sedimentary deposits more than

Fig. 1. Legend for section and plana drawings, and stratigraphical charts.

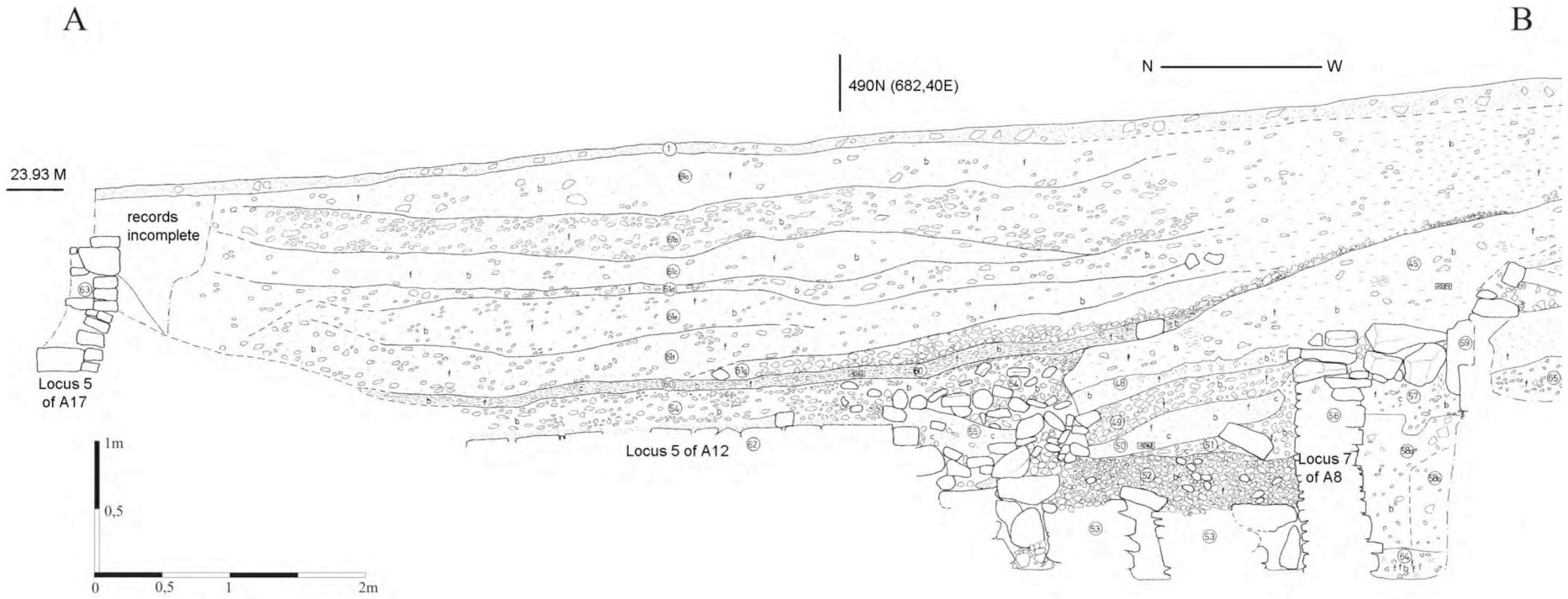


Fig. 2.A. Area A, NW Section, southern parts. 1986. Scale 1:40.

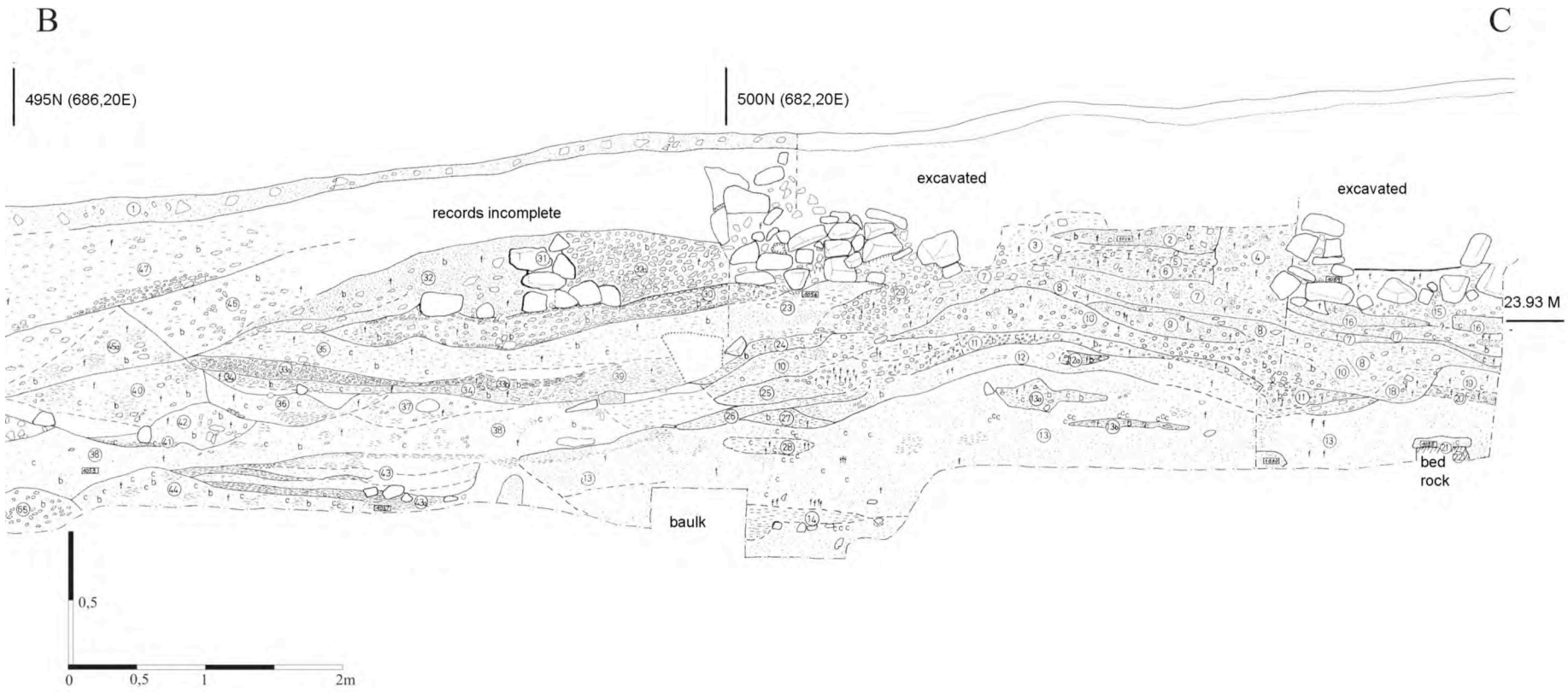
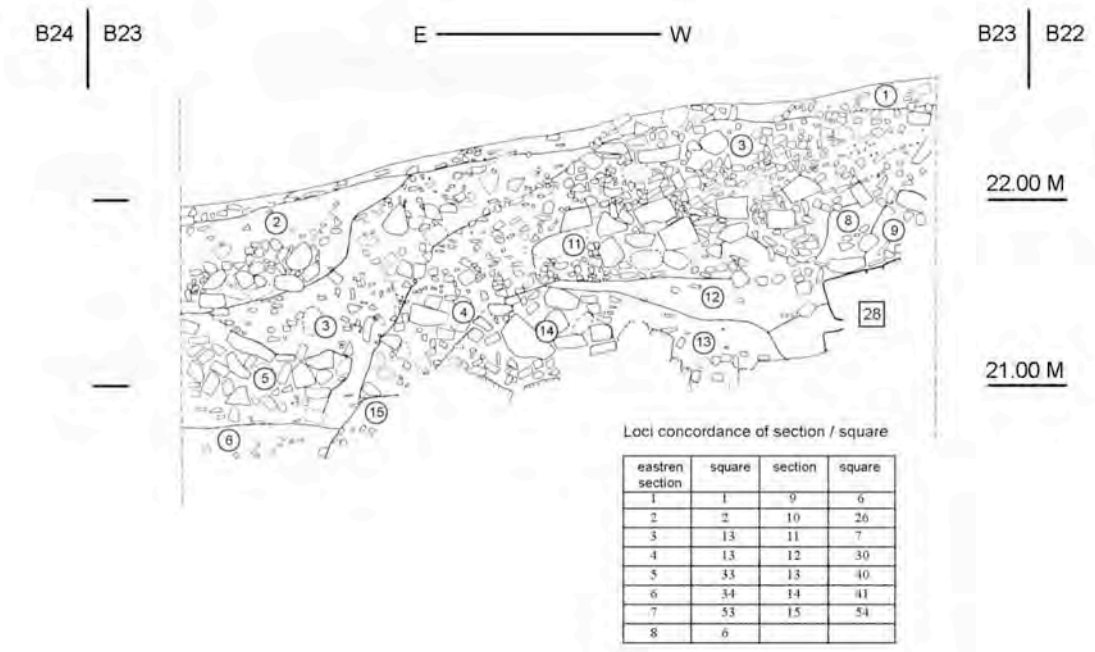


Fig. 2.B. Area A, NW Section. northern parts. 1986. Scale 1:40.



eastren section	square	section	square
1	1	9	6
2	2	10	26
3	13	11	7
4	13	12	30
5	33	13	40
6	34	14	41
7	53	15	54
8	6		

Fig. 3. Area B, Square B 23. Southern baulk section. 1989. Scale 1:40.

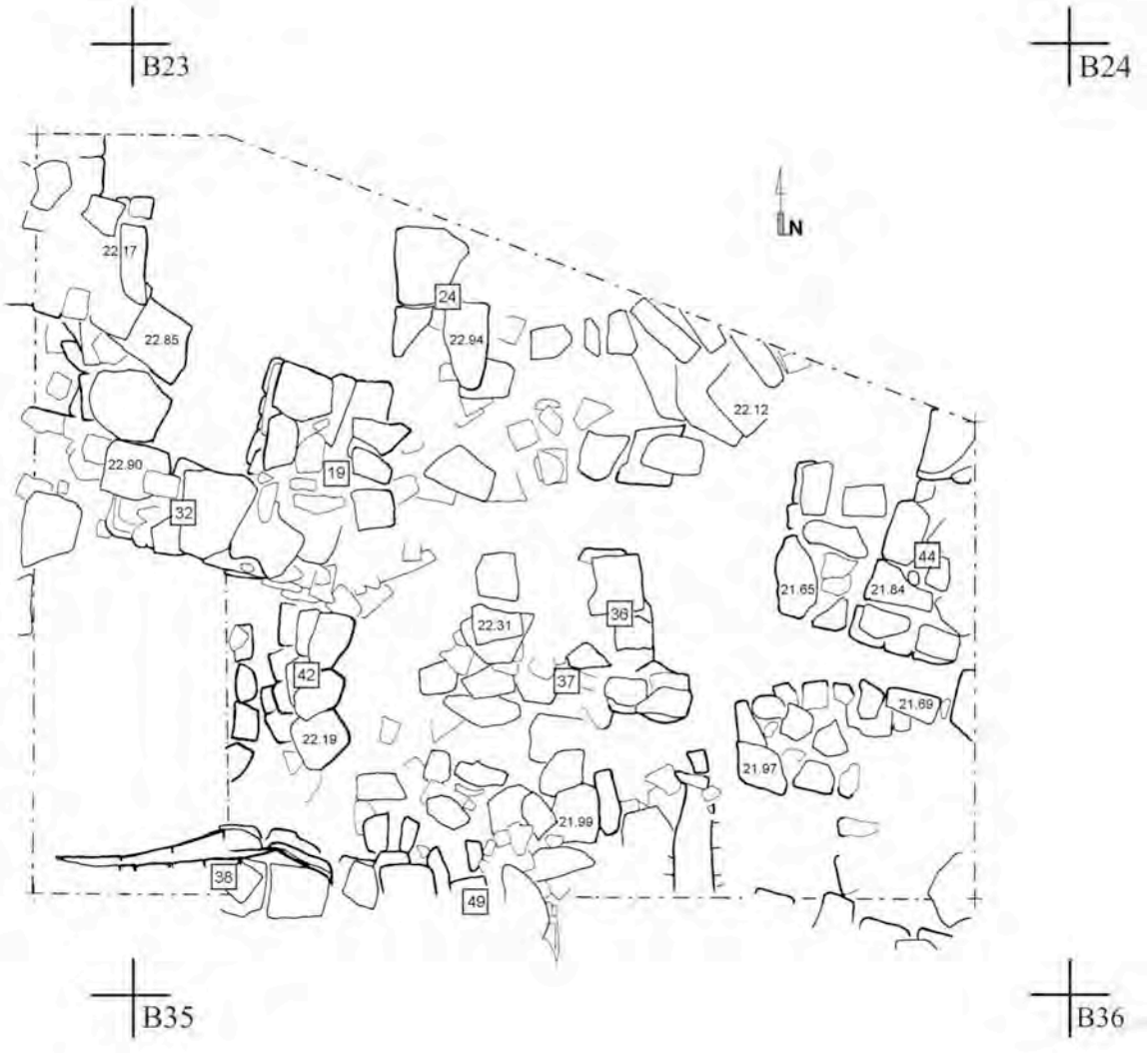


Fig. 4. Area B, Square B 23. Example of a disturbance zone between a recent pit and post-occupational room fills (e.g. collapsed walls fragments Loci 36 and 37). 1989. Scale 1:40.

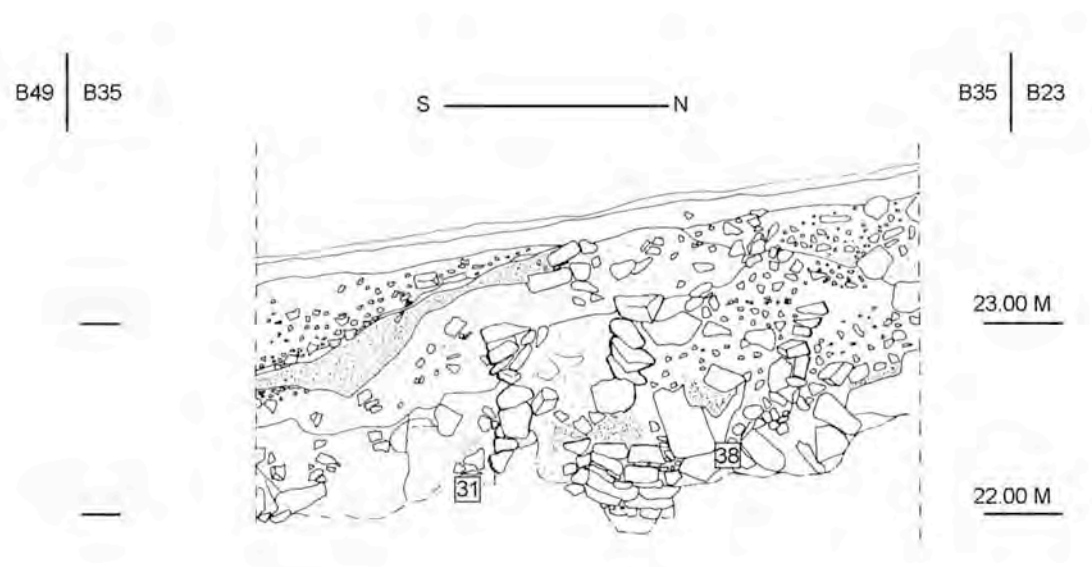


Fig. 5. Area B, Square B 35. Western baulk section. Example of an intact sub-surface evidence of dilapidated wall faces and roof ceilings. 1989. Scale 1:40.

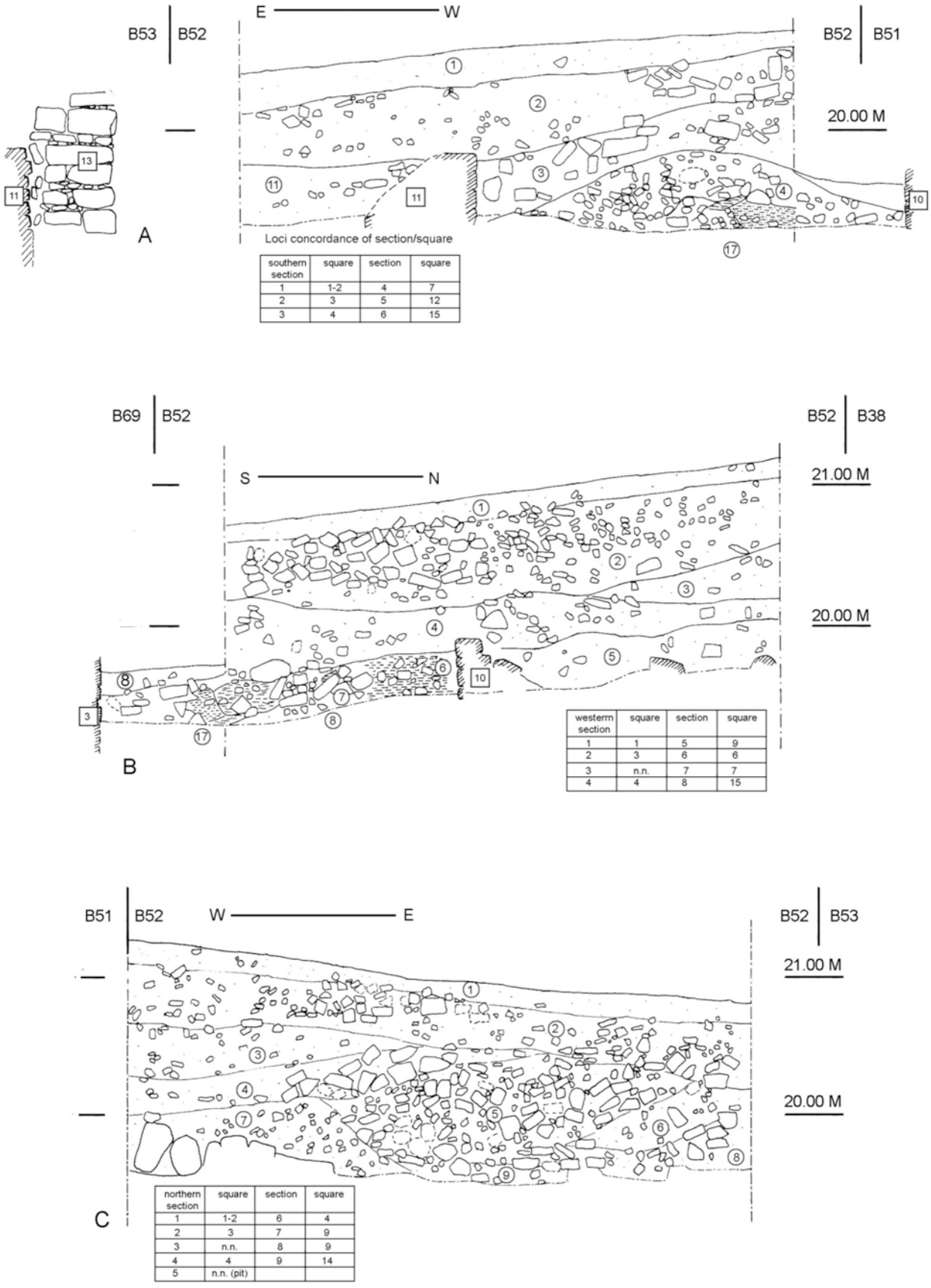


Fig. 6. Area B, Square B 52. Upper section stratigraphies of the southern (A), western (B), and northern (C) baulks; top left: face of buttress Locus 13. 1988. Scale 1:40.

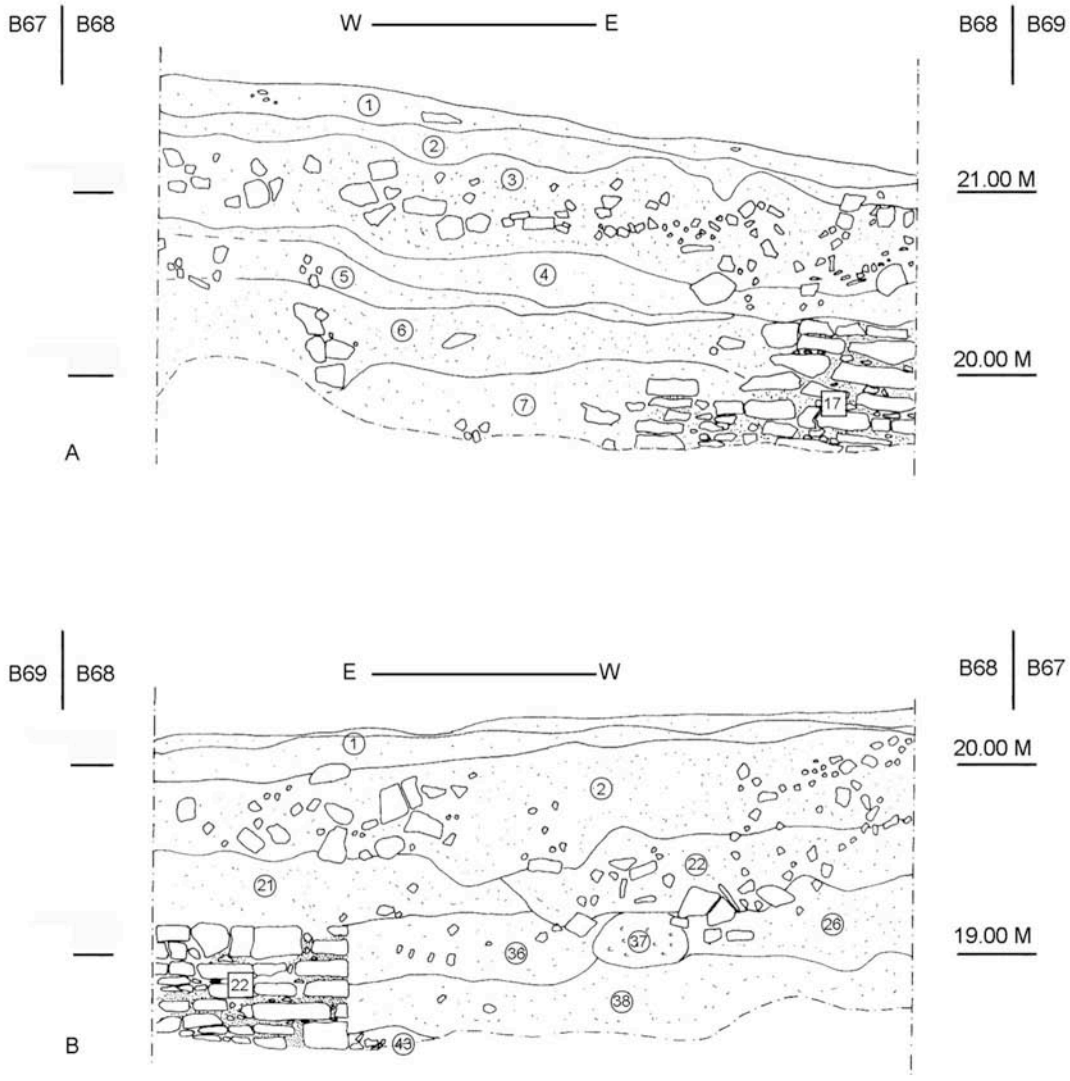


Fig. 7. Area B, Square B 68. Upper section stratigraphies of the northern (A) and southern (B) baulks. 1987. Scale 1:40.

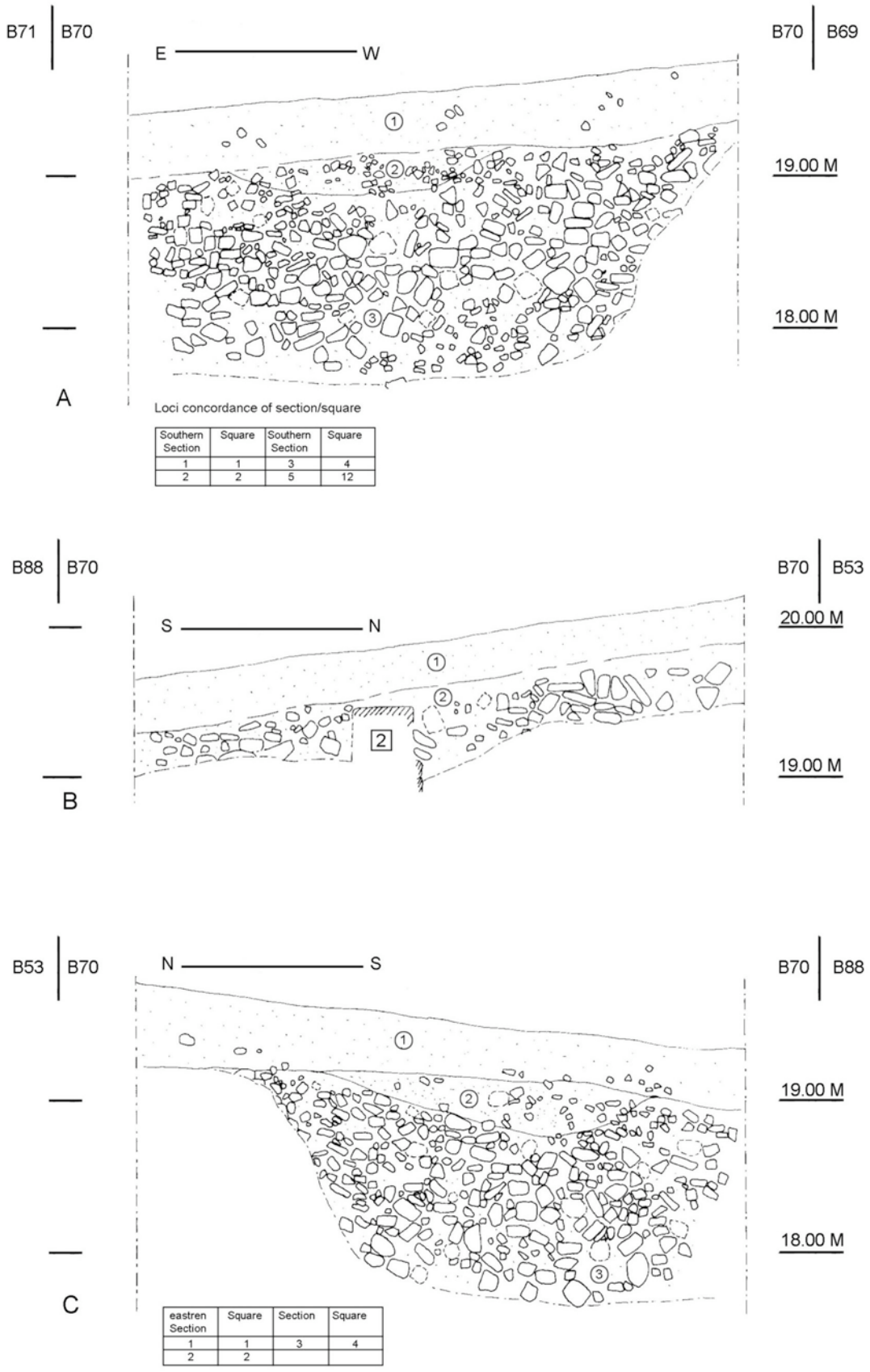


Fig. 8. Area B, Square B 70. Upper section stratigraphies of the southern (A), western (B), and eastern (C) baulks.

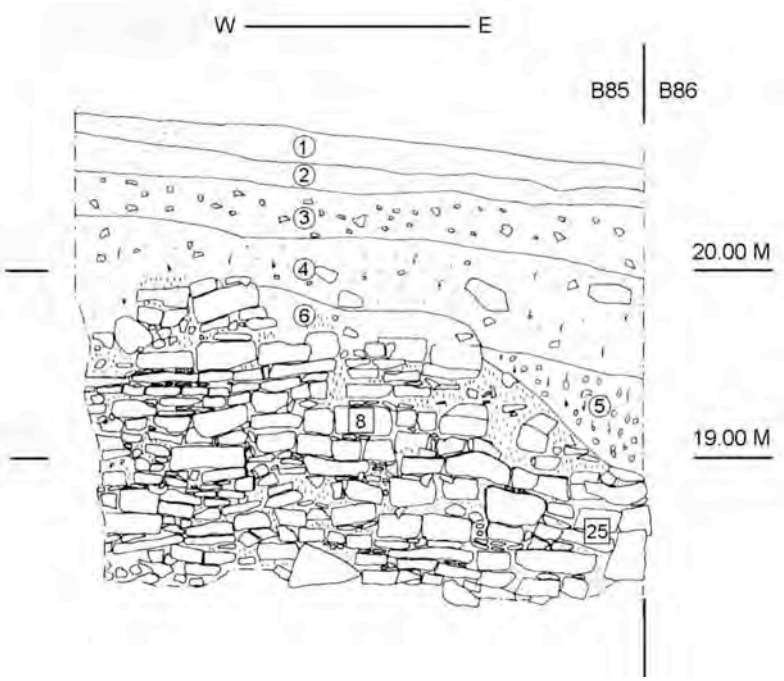


Fig. 9. Area B, Square B 85. View of Phase BII Walls [8] and [25], running out of the northern section of the square. 1989. Scale 1:40.

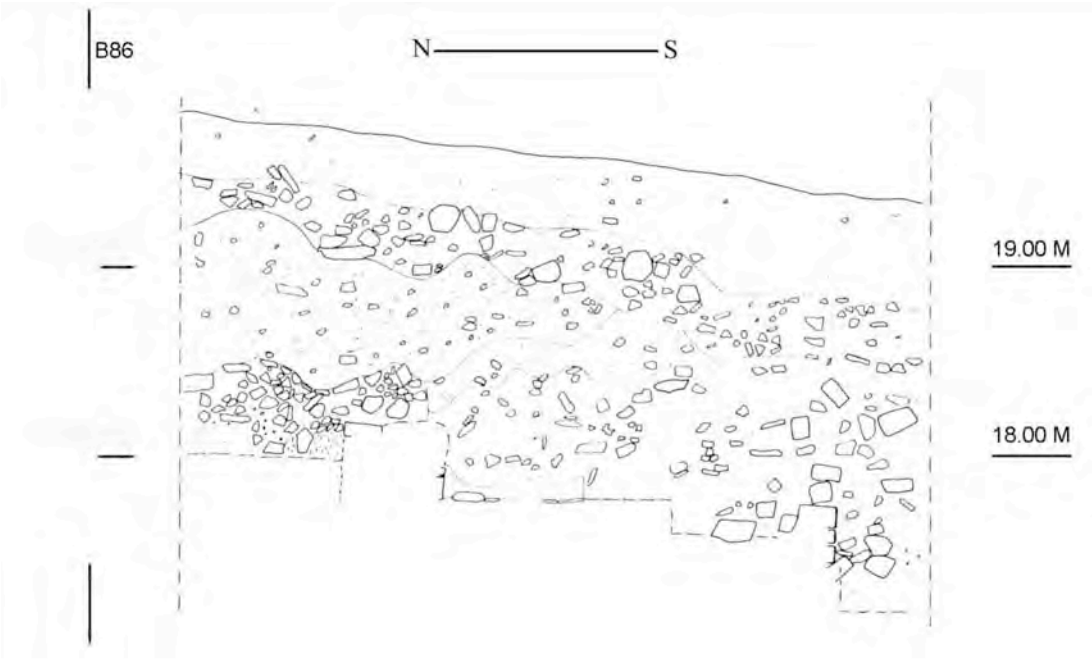


Fig. 10. Area B, Square B 86. Upper section stratigraphy of the eastern baulk (above BII wall remains). 1987. Scale 1:40.

their actual sequence allows (*cf.* Section 1.1.2; about the distinction between building and "depositional" stratigraphy *cf.* Footnote 1).

One of the basic differences between architectural and non-structural/ depositional stratigraphy is that architectural stratigraphy results from planned measures, while depositional stratigraphy results from many "unplanned" combined anthropogenic and natural factors, as well as materials intruding into and adding to an architectural sequence.

The spatially more stable and carefully erected retaining walls inside the slopes at Basta are expected to have had a protecting function for the occupational and post-occupational preservation of the stratigraphy further upslope. Walls helping to "fortify" or stabilize layers and structural elements during the occupation must have helped also to preserve at least the lower parts of the stratigraphy in post-occupational times, until surfaces reached "erosional stability," or an "equilibrium," between erosional, depositional, and deflation impacts resulting in a stable slope.

It is a given of the architectural and stratigraphic preservation at Basta, most obvious by the finds in Area B, that the architecture shows very little deliberate alteration in terms of ground plan and most probably function too (*cf.* Nissen, 4.2.5 and Kinzel, 3.2). Thus we deal at Basta with a different type of architectural and depositional preservation than at other LPPNB sites in Southern Jordan, especially if compared with the steep-slope LPPNB architecture at Ba'ja, Ghwair I, 'Ain Jammam, and possibly es-Sifiiya (Gebel 2006). The low architectural "alteration rate" at Basta seems to be linked to the more stable conditions provided by the slope adjusting measures. In that respect, Basta's LPNNB architecture related stratigraphy is not very complex, and unaltered deposits need to be expected to be more frequent and common than the situation of alteration through later rebuilding and other sorts of anthropogenic events.

The preservation of functional evidence in the layers is as limited in Area B as in Area A. This in most cases is not a matter of post-occupational impacts, but of the disturbances and stone robbing going on in the ruin during the continuing LPPNB occupation. For the potential function of roofs or optional roofings or second stories, it also has to be admitted that our infield observation of the room fills had little chance to follow up on such questions, because direct evidence (stratified decayed roof/ceiling materials) were missing in the room fills.[1] Evidence of activities above ceilings/roofs became a specific goal in examining PPNB room stratigraphy, after the excavators' sensitivities were trained in these questions by the Basta Project (Shkarat Msaied, Ba'ja; *cf.* Hermansen *et al.* 2006, Gebel 2006). Functional evidence we have in the shape of installments, sherds, ash layers, flint middens, etc., are mentioned in the Locus Data Lists (App. A and App. C).

While little can be said about the later pit disturbances of the LPPNB layers in Area A, more observation can be presented for Area B. Deep pits are reported in the western Squares B 48, B 65, and especially B 83; severe and deep damage was also found in the eastern Squares B 53 and B 70; and the depositional and architectural preservation of the southern Squares B 85-86 and B 103-105 seems to be a result of both erosional disturbances by an old wadi affecting the LPPNB settlement (*cf.* above) and later pit digging. In most of the other squares evidence of later pits destroying LPPNB walls and room fills also is attested. The central part of Building Unit B

[1] The argument for evidence of a second story in Building Unit B VIII.2, presented by H.J. Nissen in Section 4.2.5, was more a result of working with the diary information than from infield disccussion.

III in B 50 suffered considerably, as did the ground plans of Later Architectural Phase BI in the northern part of Area B.

The disturbances of Later Architectural Phase BI are complex as elsewhere in the site, and are presented here as an example. The southern section of B 23 (Fig. 3) illustrates how recent pits – probably connected with building the Old Village in these parts of the site – destroyed the Later Architectural Phase, Phase BI. In the higher northern parts of Area B, no Rubble Layers developed and protected the near-surface LPPNB (or FPPNB) architecture. It is therefore easily exploitable as a quarry for wall stones; also because no Fine-Grained Layers were deposited here, this impact must have been very recent, most likely during the building of the Old Village of Basta[1]. Section Layers 2-6 represent the re-filled depression of such a recent wall stone quarrying pit, which reached and destroyed many of the uppermost preserved architectural contexts in Square B 23. Section Loci 8-15 represents eroded cultural debris and post-occupational collapse and decay layers of BI architecture, sealing off the ruin. Such a section situation is also characteristic for many other spots in Squares B 24, B 35, and B 36. These pits are responsible for destruction of potential stratigraphic links between our Architectural Phases BI and BII, namely if such had remained in the baulks between Squares B 35-36 and B 49-50. However, it also needs to be mentioned that the depths of excavations in B 23-24 and B 35-36 did not reach the contact zones of the BI-II architecture.

1.3.2 Stratigraphic Evidence from Area B Sections

This section is meant to illustrate and describe characteristic stratigraphic features of upper Area B by section examples (Figs. 3-10)[2]:

The upper stratigraphy of B 103 (Kamp 2004: Fig. 15; Gebel, this contribution, App. D; *cf.* also Plate 56.A-B for a comparative situation) is presented here as an example for the connection between the Fine-Grained Sediments and the Upper Rubble Layers below. Layer 2 represents the Fine-Grained Sediments between top soil Layer 1 and the uppermost parts of the Upper Rubble Layers (Deposits 3-5b in the northern section, Deposits 5a-6 in the western section). Further illustrations of such locations were published earlier: Plate 2.A (Gebel 2004b) shows the surface of a Fine-Grained Sediment deposit, while Plate 2.B illustrates the upper parts of the Upper Rubble Layers. Plate 2.C nicely shows a section with the Fine-Grained Sediments above the Upper Rubble Layers).

Fig. 3 also illustrates how distinct the fills of recent pits and post-occupational wall collapse are from the Rubble Layer deposits (Plate 56.A-B). Although the recent pits also contain mostly cultural debris, their layer inclinations and concentrations of cultural debris are much higher, contain less fine-grained matrix and materials of colluvial origin, and are by far less extensive than the Rubble Layers covering large slope areas. The example in Fig. 3 shows that a rapid filling of a recent pit took place from its western parts; the bottom of this pit exploited and disturbed the post-occupational BI wall collapse (Loci 36 and 37 in Fig. 4): Fig. 4 is a view of a preservation situation representing both the stone-robbed *in situ* ruined wall tops (of architectural

[1] It is a yet undiscussed question if the Chalcolithic and Nabaetean occupations at Basta (outside the Neolithic occupation areas S of the Wadi Musa – Ail street and on the eastern slopes of Wadi Basta) could have been involved in the stone robbing activities.

[2] Baulk section records of the Basta excavations considered mostly the upper stratigraphy above the architecture. For reading the section drawings Figs. 3 and 5-10 it is important to remember that they mostly were taken from baulk sections, meaning that they represent situations 50 cms inside the square measured from the square's grid line.

Phase BI) and their rubble. The Top Plan of Area B then represents the latest stage of excavations in B 23 when the ground plan became clearer but not yet fully understandable.

The western baulk section of B 35 (Fig. 5) exemplifies an intact sub-surface of dilapidated wall faces and roof ceilings, here also of the uppermost B I architecture. The debris flows of the architectural decay are oriented downslope towards the SE. Such dilapidation stratigraphy is built up by tumbled parts of wall faces and high concentrations of mortar in the section and in the square. The thick flow of mortar-like material in the southern part of the section – between *c.* 22.60 and 23.50 m – may originate from roof material. Its location in the section could prove that it arrived from a higher part of supposedly split-level architecture, resting on the collapsed wall face fragments of rooms located lower in B 35.

The upper section stratigraphy of the baulks of Square B 52 (Fig. 6) documents the stratigraphic situation above Room 1 of Building Unit V, which has shallow substructures laid out on even ground with *samagah* installations inserted (Top Plan Area B; Plates 35.C, 36-37; Gebel *et al.* 2004: 91, Fig. 5,7, Plate. 3.2-3). It is an example of stratigraphy above the ruined LPPNB wall tops, composed of or influenced by several post-occupational depositional, erosional, and digging/ refilling events, and how different these are in sections just 4.5 m apart. While the ash layers in Layers 4 in the southern section and 6-7 in the western section give evidence of the last *in situ* activity above the LPPNB ruin (most likely deposited by squatters in the post-LPPNB Neolithic), all other section finds reflect locally confined events: While in the northern section remains of a Rubble Layer are preserved (Layer 5), it is missing at the same heights in the eastern baulk. Here, Layers 2-7 represent the fills of the large pit between B 52/53, containing almost no larger stones. The western and southern sections, over a more intra-mural position according to the preservation of architecture, show a very variable and purely colluvial stratigraphy with the exception of Layers 2-3 and 11 in the southern section, which seem to represent the aforementioned pit fills. These seem to be mostly anthropogenic refillings. The section and the excavations in Square B 52 show that not much original LPPNB wall and plaster material remained on the spot, filling Room V.1. It is a good example of how the amount of such remaining materials can be an indication that no second story could have existed at the spot.

The northern and southern baulks of Square B 68 contain evidence for the missing Rubble Layers over the preserved central parts of the LPPNB architecture in Area B (Fig. 7). This situation appears to be characteristic for all spaces where a better LPPNB architectural preservation further uphill has diverted or redirected the rubble flows. The long Wall [2] in Square B 67 / Wall [15] in B 50 seems to be responsible for the sedimentation of more fine-grained colluvial sediments between the top soil and the upper room fills. Some of the layers (*e.g.*, Layer 3 of the northern section) show temporary land surfaces with horizontally embedded stone layers. The fine-grained matrix of these layers – which must represent the fine-grained matrix of the Rubble Layers – also forms the upper rooms' stratigraphy. It shows that at the time of the deposition of the rubble layers some wall stumps of the PPNB architecture still were outcropping slightly from the land surfaces. Fig. 9 shows a similar situation, but here it was not possible for thicker colluvials to accumulate (Layer 3). Layer 4 shows cultural debris flowing over the preserved top of the LPPNB walls.

Fig. 8 shows the fill of one of the major large pits that destroyed the LPPNB architecture of Area B (Square 70; Plate 46.C). It represents the intentional filling of a possible masonry robbing pit with material most likely originating from rubble layers. The deposits can be distinguished clearly from the rubble layers. While rubble layers show horizontal/downslope embedding of materials with some tendency to sort, the pit layers represent a "one-action

dumping." It also shows that, at the very least, this (robbing) pit is post- 7th millennium, but the finds from the layers do not provide a secure youngest possible date. The Fine-Grained Sediments in that part of Area B are quite thickly deposited (40-50 cm).

Fig. 10 is an example of the mixing of sedimentary environments above and possibly outside the reach or influence of the Rubble Layer flows. Coarse- and fine-grained colluvial sediments carrying limited amounts of cultural debris built up a diffuse stratigraphy, which is difficult to relate to any of the stratigraphic groups or units identified for Area B (Table 4). Such upper square stratigraphy is common for various spots in B 85-87 and B 102-105.

1.3.3 General Architectural and Stratigraphic Sequence of Area B

As mentioned several times above, a stratigraphic description for Basta has to consider closely the architectural sequence; thus several aspects of the architecture presented in the architecture section of this publication need to be re-discussed here from a stratigraphic perspective.

H.J. Nissen has identified – by re-calculations of floor and excavation levels – seven terraces on which the houses of Main Architectural Phase BII of Area B rest (*cf.* Section 2.3.2). Their heights range between 40 cms and 260 cms, and they are located between +17,90 m and +20,40 m on levels of the occupational terrains of Area B. The analysis suggests that each building unit rests on such a terrace, except for B II and VII which share a terrace at +17.50 m, and B IV and V which share one at +18.85 m; walls in Squares B 65 and 83 and Building Unit B III with walls in Squares B 48 and 49 also each share a terrace level. This identification of terraces offers additional arguments for the ground plan interpretation as suggested in Figs. 23, 25-29, and 32-33. It should be mentioned that the stratigraphic evaluation of Area B had to deal cautiously with arguments derived from these eight ground plan reconstructions. Stratigraphically, there is little support for this layout grouping of walls, but there are no arguments against it either. All are related to Main Architectural Phase BII.[1] The re-calculation of excavation and floor levels, which tried to recapture lost or contradictory information as documented in the dig diaries, appears stratigraphically meaningful, but has to be considered a reconstruction of missing data.

Before we discuss the general stratigraphic features related to the architectural phases, we will describe the stratigraphic units of Area B from the top of the sequence:

Two natural surface features characterize the uppermost slope stratigraphy of Area B: the top soil and surface pavements. The top soil is 0-10 cms thick, and consists of fine-grained sediments with finds from all periods. It covers most of the site and witnesses the limited soil formation attested to in the Basta area. In some areas of Basta, like spots in Area B where no field clearing took place, surface pavements were preserved on the top soil (*e.g.*, Gebel 2004: Plate 6.C). They consist of LPPNB wall rubble and other artifacts and could have protected the layers

[1] If we ignore the different interpretation on Loci Walls 61–62, and 81 by the excavator (B. Dahl Hermansen) in B 103, which places these structures in a later phase than BII: „A set of less well preserved walls, Walls 60, 61, and 81, have been identified in B 103. They were built in a poorer technique than those previously described, and no complete rooms were discovered. These walls are clearly later than the Main Architectural Phase BII. The junction between the Walls 60 and 61is integrated whereas Wall 81 is a later addition, which created a small enclosure, Room 34, within an already existing room. Wall 60 is secondarily connected with both Wall 87 and 98. This indicates that the walls of the main architectural phase must still have been visible when this complex of walls was constructed." (Hermansen, Dig Diary B 102-103, 1992).

underneath if they formed a stable and dense pavement. To some degree, deflation played a role in the sealing of the slope surfaces at Basta, but also erosion may have accumulated materials forming pavements.

The Fine-Grained Sediments are characteristic for Area B; they underlay the top soil and reach thicknesses of up to 50-60 cm. They rest over the Upper Rubble Layers, contain almost no stones over fist-size, and often include no stones at all. Like the Rubble Layers, their thickness increases from NW to SE, which clearly is observable in the long sections of Area B. The origin of these fine-grained and somewhat silty materials is expected to have been further upslope (Area C); field clearing of stones may have added to the character of the deposits containing finds from all periods (LPPNB - classical periods and recent). However, how substantial these occupations were remains a question, for example, the limited number of Pottery Neolithic sherds might speak of a very limited presence of the PN in Basta, this feature appears to be a characteristic of the Southern Jordanian PN (that is, it is predominantly aceramic). Whatever the significance of the PN occupation of Basta, it is well represented by its chipped lithic remains, and to a limited extent by the wall remains of architectural Phase B0 (blue phase in Square B 83, and wall remains in Squares B 65 and B 34-35 are not shown in Top Plan Area B), which had little chance of surviving the morphologically active Lower Rubble Layers.

Two geomorphological event series preceded the deposition of the Fine-Grained Sediments: the Rubble Layers at Basta, distinguished as the Upper and Lower Rubble Layers. Their deposits in Area B rest mainly above the eroded wall tops of Main Architectural Phase BII, but also as a thin layer above Later Architectural Phase BI. The lower parts of the of the Lower Rubble Layers in some parts of Area B even form the upper room fills (rooms of Main Architectural Phase BII). At these spots, their material flows through and over the LPPNB wall stumps still jutting out of the surfaces. Plate 56.C shows the Lower Rubble Layer inside the architecture (foreground), and how the mud flow even went through a wall opening in Wall [7]. At this stage of research we are unable to correlate our Rubble Layers exactly with the alleged Yarmoukian Landslide or the 8.2 ka BP event (Weninger *et al.* 2005). These mud flows carrying fist to head-sized stones seem to be a common feature at many Neolithic sites throughout the Levant and Turkey, and occurred in a restricted period around 8200 cal BP; we observed them in all the Mega-Sites visited in Jordan. At least one of our Rubble Layers must be related to this event.

The Upper and Lower Rubble Layers of Area B were deposited in increasing thicknesses towards the SE. They are either absent or very shallow above Later Architectural Phase BI (except for B 34, where they reach a considerable depth: up to 1 m) in the NW squares, or increase in their thickness up to 1.50-2.00 m in the southern squares. If we assume that the rubble flows and accumulations of the Lower and Upper Rubble Layers were guided by the topographical situation of the eroding LPPNB village and a possible fossil wadi draining from Area C along the southern fringes of Area B (Kamp 1992; 2004: 84), we have to assume that the NW squares of Area B formed the highest parts of the village in the excavated areas and were not reached by the rubble depositions. The excavated lower parts of SE Area B were covered more heavily because they are situated at a lower elevation and because their architecture was eroded to much lower levels through the impact of erosional processes (the aforementioned possible gully or fossil wadi passing along the southern side of Area B).

The Upper Rubble Layers do not contain architectural features, but apparently have remains of field clearing piles as witnesses of human activity. Their predominantly natural character is mixed with PPNB/ FPPNB/ PN cultural debris. The Lower Rubble Layers have

curvilinear wall fragments, fire places, and embedded surfaces belonging to the FPPNB and EPN (dating based on chipped lithics and a few PNA sherds). These structures and loci "interrupted" natural downslope sedimentation, and are poorly preserved due to these colluvial slope processes. Two, or possibly three, Early Pottery Neolithic sherds, the figurine hoard (*cf.* below) of B 102, and PPNC/Yarmoukian- related arrowheads and a chipped stone flake industry were identified from these layers (a similar industry was identified at the site of Ba'ja V). In B 83, B 65, and upper B 34 such finds are associated with curvilinear and straight wall fragments of a "flimsy" type (*e.g.* B 34, wall Locus 6 with associated deposits Loci 13-16). In addition, the debitage of an *in situ* chipped lithics workshop dump and a hoard of Tridacna sp. (for bead production) were found in the Lower Rubble Layers (Gebel *et al.* 2004: 91, Figs. 10-12, Plate V.3).

At some spots it is difficult to distinguish between the two rubble layers; in such places they are mixed, including the finds they contain. But mostly they are separated by the continuous and slightly inclined or horizontal base line of the Upper Rubble Layer. The sedimentation character of both rubble layers appears "rhythmic" and continuously deposited, except for the spots with FPPNB-EPN embeddings. In summary, the rubble layers above the ruined top of Main Architectural Phase BII were deposited in the 7th millennium BC by a landslide type of colluvial process during a restricted period of time (after the abandonment of the BI settlement). This quick and material-rich sedimentation is one of the reasons for the excellent preservation of the LPPNB wall heights in Area B. After the deposition of the Rubble Layers, we expect that surface morphology of the slope in Area B was similar, more or less, to that of the present-day.

For the following we selected, as an example, the sequence in B 102-103 between the Lower Rubble Layer and Main Architectural Phase BII to illustrate that the stratigraphic complexity in Area B is much more intricate than the impression gained from the generalized chrono-stratigraphic summary (Table 4) (*cf.* Hermansen in Gebel *et al.* 2004: 75-81):

In the context of Locus 63 and 70 of Room 34, which stratigraphically possibly belong to a phase somewhat later than BII (*cf.* Page 37, Footnote 1), several fragments of a quite massive construction of burnt clay were encountered. One of these fragments showed the negative imprint of a wooden beam. This indicates that the room may have contained a clay installation built on a wooden frame which was either primarily or secondarily burnt. Unfortunately, most of the room was disturbed by later digging activities, and it was not possible to recover more than a few fragments of this installation.

Particularly puzzling are the huge slabs or boulders, "Wall [99]" (*cf.* Top Plan Area B; Plate 26.D: extreme upper left; Gebel *et al.* 2004: Plate I.2). They are certainly earlier than the Walls [60], [61] and [81]. Their meaning and function remain unclear. However, their orientation is in full accord with the general orientation of the Phase BII architecture and it therefore may be suggested that they formed part of the foundation for a major wall, oriented SW/NE. If so, they may be contemporary with Wall [87] whose foundation is encountered at approximately the same level.

The stratigraphic position of the hoard of figurines and pendants, Locus 53 (Hermansen 2004), is at the bottom of the large robbing pit which cuts Walls [87-89], [91], [93], and the plaster floor Locus 52 in B 102. This pit was excavated prior to the deposition of the Lower Rubble Layer and its Post-LPPNB Neolithic date is based on an EPN sherd in Locus 51, which also belonged to this pit.

To summarize: The excavation of B 102-103 exposed at least four architectural levels of which the ones represented by the Walls [87-94] and Wall [98] belong to Main Architectural Phase BII of Area B. The plaster floor encountered beneath the foundation of Room Building Unit B VIII.7 belongs to an earlier phase (BIII, only encountered at this spot). The complex represented by Walls [60], [61], and [81] represents an interim phase between BII and BI, or a final stage of BII, in which Wall [87] and perhaps [98] were reused. Wall [11] in B 102 (not in the Top Plan Area B) represents a later, poorly understood architectural episode in the square, which also involved the reuse of Wall [87]. It could be related to an activity between the deposition of the Lower Rubble Layers and the locally restricted interim phase between BII and I, or the aforementioned final stage of BII.

In terms of building stratigraphy and time sequence, the Lower Rubble Layers are preceded by Later Architectural Phase BI. The heavy disturbances in the squares N of B 48-50 do not allow reconstruction of general patterns for room fills of this phase as can be done for Phase BII (*cf.* below). In B 34, a collective burial (Locus 46) was associated with a BI room fill (Schulz and Shafiq in Gebel *et al.* 2004: 84-85). The characteristic masonry of Phase BI is of major help in the stratigraphic identification of this building phase. Walls are thin-walled compared with Phase BII, and made of smaller and thinner limestone slabs. (The latter does not really support our idea that by this phase masonry robbing of the earlier LPPNB architecture took place.) Phase BI also dates, based on the associated industry, to the LPNNB, although it alternatively may represent a Final PPNB occupation similar to the one found in the Wadi Fidan area. The quality of architecture is, compared with LPPNB building standards, less solid and more flimsy: At ‘Ain Ghazal, *e.g.*, this shift to less solid wall techniques is attested for the shift from the LPPNB to the PPNC (G.O. Rollefson, pers. comm.; Rollefson 1989: 138, Rollefson and Kafafi 1997: 30).

The room fills of Main Architectural Phase BII underlie Phase BI. Roughly, four types of room fills can be distinguished stratigraphically:

1) The uppermost room fills often represent the earliest depositions of the Lower Rubble Layers, mixed with the later material deriving from collapses and decay of walls/ ceilings/ roofs and mixed with materials from inside and outside the rooms. The Lower Rubble Layers themselves could have transported in FPPNB-EPN or PPNC artifacts, as could have squatters of these periods who may have left flimsy *in situ* traces. Depending on the topographical position of the room and the preserved room height, the central to upper room stratigraphy has these deposits resting intramural against the preserved wall stumps.

2) The central room fills are composed of material from tumbling walls and decaying wall plaster. Eventual plaster material of ceilings/roofs could not be clearly distinguished from eroded wall plaster or mortar; at least we did not find mouldable materials with twig or mat impressions. The latter are rare in all the LPPNB stratigraphy, a situation that cannot be explained easily. Even if this is an issue of preservation in an open ruin, there should have been sedimentary traps preserving at least some of this material. However, a few finds and their room fill position suggest that they could represent inventory of a roof (stone vessels, grinding stones). The fills’ character shows a rapid filling of the room’s interior by the structure’s own debris. Central room fills may contain surfaces or deposits influenced or left by LPPNB ruin squatters, mostly lower parts (temporary floors, fireplaces, wall stone extractions, etc.).

3) According to our stratigraphic reconstruction (*cf.* Stratigraphic Charts A and B, the lowermost room fills above the earliest floors mostly are shallow layers with temporary floors and a high density of cultural debris (artifacts, animal bones, other organic matter, etc.), representing the last

permanent occupation and/or ruin use of the house (mostly food processing and preparation, burials?, animal corrals?. The earliest collapse and decay products overlie – or are mixed with – the evidence of the last permanent room occupations and/or the remains of LPPNB squatters (burials?).

4) The earliest *in situ* deposits in a room are related – if preserved at all – to the original BII room function (reconstructed stratigraphy): food processing and preparation, storage, etc., but mostly are disturbed by 3). It is striking that – in contrast to Area A – almost no intact plastered floors were found in Area B; red-stained plaster floors are completely missing, but may have existed judging from fragments deposited sparsely in the room fills. It may also be that for a few rooms the earliest floors of BII were not reached. The role of plaster recycling is imperfectly understood at Basta, but may be a source of explanation for the missing floor evidence.

The Phase BII planning and building of houses and their altering/maintenance during use represents the next undelying stratigraphic event in Area B. At the same time one may say that Phase BII represents the last main building phase in Area B (Phase BI seems to represent a later living quarter of its own further uphill to the NW.). The BII evidence of architectural alterations is very limited. If they existed they could be represented by insertions of wall parts, buttresses, wall openings, wall repairs, blockage of passages, and/or wall openings, raising of sills, plastering/re-plastering of walls and floors, raising of floor levels by intentional fills, the development of split house levels/second stories?, etc. Later visits to Basta, armed with the knowledge gained at Ba‘ja about LPPNB architectural alteration, proved that we have little such evidence at Basta.

Underlying this stratigraphic unit in Area B is the substructures or so-called channel systems creating the artificial building lots for the houses. Two types of substructures were found at Basta (*cf.* Nissen, this volume): the type of accessible air chambers like those known from Area A underneath B 83-84, and shallow systems resting on even surfaces as in B 51 and B 52 (Building Units B IV.1 and B V.1). The Phase BII substructures rest on unknown earlier LPPNB architectural phases and deposits, with a depth of more than 3 m. It is quite possible that, because of this earlier architectural stratigraphy, slope adjusting systems were not necessary in all places in Area B, so that substructures in Area B mainly had to fulfill only their air chamber purpose.

Possible evidence of Architectural Phase BIII is attested to by a floor reached underneath the substructures in Building Unit B VIII.7.

The general stratigraphic sequence of Area B is summarized in Table 4.

1.3.4 Comments on Locus Grouping and Architectural Units, Functional Evidence, and Room Fills in Area B

As mentioned before, the locus grouping as represented in Stratigraphic Charts A and B followed for the most part the architectural stratigraphy, while in some rare cases or at individual spots the non-structural deposits aided the interpretation of the architectural sequence.

The following general stratigraphic groups were identified, potentially furnishing the architectural, functional, or other depositional features. These general stratigraphic groups then appear as specified stratigraphic units in Stratigraphic Charts A and B, in the Top Plans Area A and B, and the various tables.

Table 4. Area B. Chrono-stratigraphic summary.

Stratigraphic unit	Building evidence	Events	Interpretation/ Period
Top soil (recent) / Surface Pavement	none	top soil, limited soil formation	natural deposits mixed with PPNB/ FPPNB/ PN material incl. later periods
Fine-Grained Sediments	none	natural downslope sedimentation of fine-grained and silty materials	natural deposits mixed with PPNB/ FPPNB/ PN material incl. later periods (Chalcolithic, Bronze, Iron Age and Nabatean periods)
Upper Rubble Layers	none	upper rubble layers with field clearing piles, natural downslope sedimentation (Yarmoukian Landslide?)	natural deposits mixed with PPNB/ FPPNB/ PN cultural debris
Lower Rubble Layers (Architectural Phase B0)	curvilinear wall fragments, fire places and surfaces embedded in the rubble layers	lower rubble layers with downslope sedimentation, interrupted by temporary structures and findings (FPPNB-EPN) (Yarmoukian Landslide?)	natural deposits mixed with PPNB/ FPPNB/ PN cultural debris and having (fragmentary) FPPNB and EPN structures and findings embedded
Room fills of Later Architectural Phase BI	room fills/ stratigraphy (rooms Phase BI)	decaying ruin, abandoned houses	end of permanent occupation in Area B, LPPNB or FPPNB
Later Architectural Phase BI	rectangular and curvilinear walls built of small slabs, characteristic of the Later Architectural Phase BI	building, stone robbing pits in southern Area B	buildings using walls of Phase IIB, LPPNB or FPPNB
Room fills of Main Architectural Phase BII	room fills/ stratigraphy (rooms Phase BII)	decaying ruin, abandoned houses, (natural/ artificial) leveling of surfaces	settlement hiatus in Area B between Architectural Phases BII and BI ?
Main Architectural Phase BII	ground plans of Main Architectural Phase BII	completely new building layouts (Basta house) on new or modified terraces; few alterations like, *e.g.*, raising a shared wall between Building Units B I and III or the razed buttress in B VIII.2 (*cf.* Section 4.2.5)	building of pre-planned houses, LPPNB
Substructures of Main Architectural Phase BII	substructures of Phase II	creation of new or modification/ re-use of terraces/ terrace parts	reorganization of space in Area B, LPPNB
(Architectural Phase BIII)	attested by a floor in Room 7 of Building Unit VIII	?	?, LPPNB
Earlier architectural phases	unknown architectural remains ?	natural and anthropogenic sedimentation (>3m) with culturally influenced layers (Drillings 6 and 6a, *cf.* Kamp 2004)	LPPNB
bedrock/ weathered bedrock	not reached	not reached	-

1.4 Stratigraphy of Area C and of Other Site Localities

For the sedimentary history at Basta, the information from the Neolithic settlement fringes in Area C appears most interesting. It not only provides information on the sources of the fine-grained materials contributing to the build-up of the stratigraphy downslope, it also gives important information on the palaeoterrain. It, *e.g.*, shows how a quite pronounced valley can completely disappear in the Basta area after the Early Holocene (Kamp 2004), through burial under the thick accumulation of fine-grained material containing high proportions of aeolian silt,

reaching heights of 5.90 m in the valley's center in Area C. The lower parts of the stratigraphy (Kamp 2004: Fig. 7-12) in Area C contain LPPNB archaeological *in situ* layers, probably all representing settlement fringe activities (human and animal carcass burial, flaking ateliers, garden areas, fire places, and ash/charcoal/kitchen dumps).[1]

Most information on Area C and other stratigraphically important localities were published by Kamp 2004 and Gebel 2004b. The most relevant Basta sections were discussed, and thus that information is not reproduced here; instead it will be considered in more detail in the summary section. The published information concerns the:

- illustration of Area B, Square B 103, southern section (Kamp 2004). For the geoarchaological layer description *cf.* this contribution, App. F.
- illustration of Area C, Test Unit C 208, western section (Kamp 2004). For the geoarchaological layer description *cf.* this contribution, App. E.
- illustration of Area C, Test Unit C 217, northern and eastern sections (Kamp 2004). For the geoarchaological layer description *cf.* this contribution, App. F.
- illustration and geoarchaeological layer description of P1 (wadi section/road cut southeast of the site). (Kamp 2004)
- illustration and geoarchaeological layer description of P2. (Kamp 2004)
- illustration and geoarchaeological layer description of VP5. (Kamp 2004)
- illustration and geoarchaeological layer description of VP53. (Kamp 2004)
- illustration and geoarchaeological layer description of VP54. (Kamp 2004)
- illustration and geoarchaeological layer description of the NE Section of Area A. (Gebel 2004b)
- illustration and geoarchaeological layer description of Cut 8. (Gebel 2004b)

Two test excavations (C 208 and C 217) were carried out during the 1988 campaign in the northwestern fringes of Area C in order to evaluate the nature of cultural sediments found by motor drillings in the deeper stratigraphy in 1987 and 1988. The drillings reached depths of up to 7 m below the present surface, and yielded evidence of culturally modified sediments (Kamp 2004: 72-78; Pachur in: Nissen, Muheisen and Gebel 1988). Connected with these drilling results, questions about the palaeorelief, on which the Neolithic remains must have developed, arose.

The surface distribution of PPNB artifacts in Area C and observations of the areas near the electric poles dug into the sediments along the present street to Bir Abu Danna hinted at a Late Aceramic Neolithic occupation in Area C. The distribution around the poles conformed to the ploughing direction in the area, and obviously resulted in distributing the material dug out for the pole holes. Another observation – which is not of relevance for the Neolithic stratigraphy – was the recognition of a nondiagnostic Middle Palaeolithic quartzite industry along the western fringes of the Area C, along the contour lines running along the hill to the NW. From the lack of evidence of such finds underneath the LPPNB stratigraphy of C 208 it became obvious that the deposition of this Pleistocene material happened after the PPNB- occupation. The Palaeolithic finds reached the field /Area C from uphill (that is, from the NW), where its concentration (Basta 4) can be found below a minor quartzite resource, *e.g.*, the middle parts the slope, which currently is used as a wine yard with stands of almonds. The higher slope area (Basta 5) yields flint artifacts and pottery scatters without *in situ* cultural layers, most likely of an Early Pottery Neolithic.

[1] In the western part of Area C, Middle Palaeolithic artefacts were deposited from the slopes to the W, resting here above the Early Neolithic layers.

The area chosen for Test Unit C 208 was immediately next to a electricity pole at the western end of a line of drillings carried out in 1988. A depth of 3.20 m below the present-day surface was reached (Kamp 2004: Fig. 9; this contribution, App. E), ending with a 5.5-6.0 m^2 exposure of cultural layers. Cultural layers should continue for at least another 2.3 m, as can be seen from the evidence of neighboring drillings (Kamp 2004). Further excavation was halted by the documentation of a rare find: an intact chipping floor for blade and burin production. It has to be stated that from the beginning it was agreed to destroy the stratigraphic context of possible layers in 545 N / 540 E C-D in order to just examine the nature of the (cultural) sedimentation in this part of Area C and to retrieve information for arguments for or against an extension of excavation activities into Area C at Basta. For the geoarchaeological description of the layers, App. 2 should be consulted, and Kamp 2004.

In summary, the western section and the excavation of C 208 witnesses re-deposited LPPNB artifacts, bones, charcoal, plaster remains etc., in upper Layers 3a-b followed by evidence of unused land (Layer 4). The intact phosphate concentration of Layer 5 indicates the start of LPPNB *in situ* layers, here at some 1.20 m below the present surface. Layers 6-9 mainly represent natural (colluvial) deposition, but contain information that the area was a dumping ground for building materials. In Layer 9a a first structural *in situ* element might be present, a patch of a floor. But this evidence is debatable, since the feature also can represent dumped plaster material torn apart and appearing in a floor shape. However, Layer 9a was an active surface: it hosted the first chipping floor with refitting debitage, *c.* 2 m^2 in area. Before this occupation, most likely representing an open-air activity, three deposits of mostly colluvial origin developed (Layers 10-11a). It is either Layer 10 or Layer 12 in which the limestone mask of Basta (Hermansen 1997: Pl. 1) was found. Layers 12, 13, 14, 15, 16, 20, 20a, 21, 22a, 23, 25 and 27 represent human activity zones (ash layers, temporary surfaces, lenses of materials, and another chipping floor in Layer 27), partly showing a high concentration of phosphate; these layers were interrupted by natural (colluvial) events, some of which were highly influenced by man. Most likely all this stratigraphy represents the shifting intensities in using a site's fringe as dump areas (including organic material) and working grounds including garden activities, interrupted by periods of barren land. It is remarkable how well preserved and thin-layered these events are as represented in C 208.

Test Unit 217 (Kamp 2004: Fig. 11; this contribution, App. F) is located in the central part of Area C, some 40 m to the E of C 208 (Kamp 2004: Fig. 1). Like C 208, it is characterized by horizontal layers, but its stratigraphic nature differs totally from the situation in C 208. The larger part of the stratigraphy (*c.* 2 m below the present surface, Layers 1-5) represents colluvial layers with a very high silt content, each some 50 cms thick and yielding almost no stones; artifacts and some bones are present. The major component of the underlying layers also is silt, having a characteristic dusty, ashy-like appearance. Layer 6 contains the first *in situ* evidence of occupation, a fire place. Over and below a buried soil (Layer 8), high plaster concentrations witness a human use of the area. A strange association of burials is located in Layers 10-12: the *in situ* Layer 10 contains an animal or animal parts (bovid) covered by stones, associated with an inhumation (human burial Locus 11; *cf.* Schultz *et al.*, forthcoming). The burial pit of Locus 11 was dug into the colluvium of Layer 12. Layer 13 with charcoal, ashes, LPPNB artifacts, bones, etc. rests above bedrock.

Test Unit 217 proves also that we deal in these Area C locations with the LPPNB site fringes, here used for trash, burials, and probably carcass disposal.

1.5 Basta's General Stratigraphic Features

The topic of this section is treated and summarized in Table 5. The aim of Table 5 is to provide an overview of the aforementioned stratigraphic inventories as represented in the stratigraphic groups. The table is followed by the discussion of some stratigraphic aspects which did not receive a more detailed discussion in Section 1 of this publication.

Table 5. Areas A, B, and C. General stratigraphic groups and their stratigraphic inventory.

Stratigraphic groups	**Related findings of stratigraphic significance/ meaning** Note: Not all findings are commonly attested in the Basta areas of excavation, and of some, only indications exist (marked with ??). List ordered stratigraphically from bottom to top.
(Recent) Top Soil	mixed finds from all periods including modern
Fine-Grained Sediments	mixed finds from all periods, no structural remains yet in evidence
Upper Rubble Layers	mixed Neolithic finds, remains of field clearing piles, wall fragments, fire places natural mud and debris flows including colluvial material
Lower Rubble Layers	mixed Neolithic finds, wall stone robbing pits ?? curvilinear wall fragments, fire places, "*taboon*" remains, ash layers and surfaces embedded in natural mud and debris flows including colluvial material
Large Pits	large pits disturbing the LPPNB architecture and layers (mainly masonry robbing ??) from various LPPNB, Post-LPPNB Neolithic and later levels, pits difficult to date
Extra-mural secondary deposits of cultural debris	re-deposited disintegrated plaster/ mortar material re-deposited remains of disturbed trash burials
Extra-mural primary deposits of cultural debris	silt layers isolated chipping floors ash layers burial ground in cultural debris layers isolated primary and secondary burials in cultural debris layers deposits of unused building materials (including heaps of recycled/ leftover plaster material or of ingredients of plaster production) huge-minor deposits of naviform/ bi-directional workshop waste (flint dumps)
Room fills	in Area B: Lower Rubble Layers went through and above the upper preserved parts of BII repeating strata of wall rubble, plaster/ mortar and ceiling material masonry robbing pits/ other pits ?? sub-floor and on-floor skull deposits stone-lined/ plastered installments/ pits on-floor *samagah* vessels or sherds of *samagah*/ other mouldable material vessels associated finds indicating food preparation remains of fire places/ ash layers (little or no use/ functional evidence on floors) first floors and renewed floors in a room
Architectural phases	raised (vertical extension of walls)/ cutting back/ razed walls and rooms of a modified ground plan blocked or newly inserted? wall openings (passages, windows, niches) pillars staircase (between Room A 29 and 32) wall openings (passages, windows, niches) pillars, buttresses and protruding walls abutting/ connecting walls retaining/ shared walls ground floor buildings; split-level evidence, possible second story evidence with Room B VIII 2
Substructures (channel systems, air chambers)	(secondary ??) use as burial grounds outside connections of substructures ?? entrance to a substructure (Room B VIII 2) creation of first floors (extending also cross-room-wise) on artificial building terraces creation of artificial building terraces/ lots (slope adjusting terraces), retaining walls
Bedrock	modified bedrock (*e.g.* pitted bedrock/ quarrying activities in Area A: NW Corner) weathered bedrock surfaces

Primary functional evidence is poorly preserved at Basta. This is not only because of the post-occupational morphodynamics from which the stratigraphy suffered: the many events taking place during the functional modification of a house near the end of its use life and its use as a ruin contributed to combine unsealed primary evidence, and then created secondary and tertiary contexts. *E.g.*, it can be observed at Basta that a considerable amount of human bones were found spread in fills outside the burial loci; post-cranial remains of the same individual can be found in loci three squares apart from each other (Schultz, pers. comm.). The same reasons for dislocations must be true for the stratigraphic contexts in which ornaments were found (we should expect that most ornaments' original contexts were burials). Throughout the stratigraphy, with the exception of burial goods, ornament pieces occur as single finds in any type of context or fill.

Symbolic aspects represented by stratigraphic features are a topic not commonly accepted; it should at least be treated here by an example: The stratigraphic position of the substructures (channel systems, air chambers) clearly is defined by the structural needs described by Nissen, this volume. Functionally, one might be tempted to ask whether some of the substructures of LPPNB Basta have to be considered as another "use level" of a house, since some of their interior heights were planned to allow access, and their use as a burial ground is attested. And at least in one case they had a mid-room entrance (Building Unit B VIII: 2; *cf.* Plates 48.C-D, 50.B); this room belongs to a building without the domestic features we defined for Basta and might belong to a special building.

Appendix A. Area A. Locus Data List.

Note: This table contains levels taken during the excavations. It is not guaranteed that these are correct in all cases. The locus data of baulks are to be found at the bottom of the table.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 1, Locus 1 (= top soil) of 1986	/4 or 2	above top of walls/ same as Locus 2 and 4?	no separate description, but said to be like Locus 4 with fewer stones and finds
A 1, Locus 2 of 1986	/4	above top of walls/ same as Locus 1 and 4?	no separate description, but said to be like Locus 4 with fewer stones and finds
A 1, Locus 3 of 1986	/4? or 5?, covers partly walls Loci 16 and 18 (top: 25.33)		soft, grey, ashy fill
A 1, Locus 4 of 1986	/5	Room 1/ same as Locus 1 and 2?	loose, sandy fill with ash patches, as Locus 1 and 2, but with more flints and bones
A 1, Locus 5 of 1986	4/plaster floor Locus ?	Room 1	loose, grey room fill mixed with brown soil
A 1, Locus 6 of 1986	17/	(Room 1)	foundation "pit" for wall Locus 17 filled with loose ashy soil with many flints and bones
A 1, Locus 7 of 1986	(top: 23.03)	NW Corner	area of bedrock exposed by the bulldozer
A 1, Locus 8 of 1986	/bedrock(?) (top: 22.85)	NW Corner	pit with human remains, bottom: hard surface
A 1, Locus 9 of 1986	13/bedrock	NW Corner	no description of the locus except that it is above bedrock, Yellowish Deposit?
A 1, Locus 10 of 1986		NW Corner	fire place, ashy fill with burnt bones and stones
A 1, Locus 11 of 1986	/bedrock (top: 22.48)	NW Corner	pit dug into(?) bedrock contains loose ashy fill with stones and animal bones
A 1, Locus 12 of 1986	(top: 22.65)	NW Corner	hard surface, plaster?, with human remains above in SE corner of square
A 1, Locus 13 of 1986	/9 (top: 22.68, bottom 22.37)	NW Corner	fire place surrounded by stones contains ashy fill, in SW corner of square
A 1, Locus 14 of 1986	/9	NW Corner	burial, not complete, in the center of the bulldozer cut of this square
A 1, Locus 15 of 1986	/bedrock	NW Corner	part of a human skull surrounded by stones
A 1, Locus 16 of 1986	(top: 24.95-25.33, bottom: 24.68)	separating Rooms 1 and 2	wall, latest building phase
A 1, Locus 17 of 1986	4 or 2/6 (bottom: 24.66)	S wall of Room 1	wall, latest building phase?
A 1, Locus 18 of 1986	5/ (bottom: 24.95)	Room 1	wall, latest building phase?
A 1, Locus 19 (Burial 2?) of 1986	S Baulk/9 +bedrock	NW Corner	burial, undisturbed?, placed in a pit probably dug through Locus 9 down to bedrock
A 1, Locus 1 of 1987	surface of last campaign/bedrock (top: 22.68-22.78)	NW Corner / same as Locus 1 of 1987 of Square A 2	1 m wide trench dug along the E Baulk, S end contains pit filled with loose ashy soil containing human remains, bottom of pit contains ash concentration and a heap of stones
A 1, Locus 2 of 1987	/bedrock (top: 22.52, bottom(?): 22.46)	NW Corner	fire place close to S Baulk
A 1, Locus 3 of 1987	/bedrock (top: 22.76)	NW Corner	Yellowish Deposit above bedrock
A 2, Locus "top soil"	/1-3+5		upper part burnt dump, lower part hard crumbly soil
A 2, Locus 1	top soil/4	partly in Room 3	stone rubble with loose, crumbly, grey fill in Subsquares a and d
A 2, Locus 2	/partly over Locus 9 (top: 24.57-24.83)	N wall of Room 3	wall
A 2, Locus 3	/3b (bottom: 24.43)	Room 3a/ same as Locus 4 in Square A 3 (?)	compact, crumbly dark fill with stones, N of wall Locus 2

Appendix A cont. 1.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 2, Locus 3 b	3/ (top: 24.43)	Room 3a/ relates to the wall Locus 9	hard soil surface (very hard, very compact, dark grey coloured surface, contains some bones and some flint)
A 2, Locus 4	1 in Subsquare a/	Room 3	loose, sandy fill with stones and plaster fragments
A 2, Locus 5	top soil/6	Room 3	loose, crumbly grey soil with small stones in Subsquare b and N part of Subsquare c
A 2, Locus 6	5/ (top: 24.22-24.33)	Room 3	fire place?, oval stone construction with loose ashy soil in the middle
A 2, Locus 7	3/ (top: 24.45)	Room 3a/ same as or next to Locus 3b	broken plaster floor, N of wall Locus 2 in Subsquare b
A 2, Locus 8	1/	Room 3	plaster floor E of Locus 4 and W of Locus 5
A 2, Locus 9	3, partly 2/ (top: 24.33-24.44)	N wall of Room 3	wall, lower level of wall Locus 2, continues further E than Locus 2
A 2, Locus 10A	bulldozer surface/10B (top: 22.70)		very dark, very loose dirt; patch of charcoal, very loose, some medium (sized?) fire cracked stones; a lot of bone and flints, small pieces of charcoal among the stones
A 2, Locus 10B	10A/10C		second level of pit as Locus 10A: very loose, crumbly, coarse texture, some fire cracked stones, some charcoal spots, bones and flints
A 2, Locus 10C	10B/10D		third level of pit, as Locus 10A+B: light brown soil, very loose and crumbly (?) it contains some flints and bones
A 2, Locus 10D	10C/bedrock + Locus 1 of 1987? (bottom: 21.91-22.06)		lowest level of pit: brown loose sandy dirt, some fire cracked stones, small pieces of charcoal, a lot of bones and flints
A 2, Locus 11	bulldozer surface/12 (top(?): 22.39-22.43)	NW Corner	loose, ashy fill with small stones
A 2, Locus 12	11/ (top(?): 22.16-22.44)	NW Corner	light, compact, crumbly fill with small stones
A 2, Locus 13	11/16 (bottom(?): 22.15)	NW Corner	brown loose fill with gravels
A 2, Locus 14	13/ (bottom(?): 21.88)		pit filled with soft ashy soil, W of the circular installation
A 2, Locus 16	13/ (bottom(?): 21.87-22.01)	NW Corner / same as Locus 7 in the baulk between Squares A 2 and A 6	N half of the circular installation consisting of fire cracked silicified limestone/ quartzite, loose sandy fill between the stones
A 2, Locus 15	12/ (bottom(?): 22.27)	NW Corner	pit dug into the bedrock, soft ashy fill, used as a fire place?
A 2, Locus 17	12/ (top or bottom: 22.24)	NW Corner / S of Locus 10	small pit, fire place ?, containing soft ashy fill with fire cracked stones
A 2, Locus 18	(top: 24.28-24.40)	Room 3	group of stones W of Locus 8, probably fallen from wall Locus 2
A 2, Locus 19	4/		compact fill with many stones, between the stones of Locus 18
A 2, Locus 20	1/		wall, either W continuation of wall Locus 2 or a wall built partly above the W end of wall Locus 2, form a corner with wall Locus 22
A 2, Locus 21	4?/ (top: 24.43)	Room 3	plaster floor, S of wall Locus 20, W of wall Locus 22, connected to wall Locus 20
A 2, Locus 22	4?/ (top: 24.53)	Room 3	wall, connected to wall Locus 20, relation to wall Locus 2? (either connected to or built partly above wall Locus 2)

Appendix A cont. 2.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 2, Locus 23	3?/ (top: 24.53-24.57)	Room 3a	wall, connected to wall Locus 2, floor Locus 7 connected to this wall
A 2, Locus 24	12?/ (top or bottom: 22.39)	NW Corner	pit, fire place? cut into bedrock, filled with ashes and fire cracked stones, close to bulldozer section in Subsquare d
A 2, Locus 25	12/ (bottom(?): 22.07-22.08)	NW Corner / SE of Locus 15	pit, fire place?, filled with ashes and firecracked stones, cut into bedrock
A 2, Locus 1 of 1987	10 of 1986?/bedrock (level where some of the soil samples were taken: 22.35 (17704) + 22.65 (17703)	NW Corner	pit with human bones, disturbed burial (no.4) dug into the Yellowish Deposit down to bedrock. contains a grey ashy fill in which the burial is placed, and the yellow soil
A 3, Locus 1+2 "top soil" of 1986	bulldozer surface/3-4 (top: 23.06-24.55)		removal of arbitrary subdivision Locus 1 and 2; characterized by loose grey soil (Locus 1) and a lot of chipped artifacts (Locus 2)
A 3, Locus 3 of 1986	1-2/4 (bottom(?): 23.68-23.97)		as Locus 2: loose brown soil but with more stones, later said that Locus 2 and 3 are the same layer
A 3, Locus 4 of 1986 upper part	1+2+3/4, lower part	above top of walls	loose grey material with stones
A 3, Locus 4 of 1986 lower part	4, upper part/7-9 (top after 1 days work: 23.29-23.74, lowest level measured in Room 4a (not bottom): 23.63, lowest level measured in Room 5/5a (bottom?): 23.21)	Room 4+4a and above top of walls in Room 5/5a	same as upper part, grey mortar-like material with many stones, more compact
A 3, Locus 5 of 1986	4/ (top: 23.68-23.89)	/ connected to wall Locus 6	wall
A 3, Locus 6 of 1986	4/	/ connected to wall Locus 5	wall
A 3, Locus 7 of 1986	4/ (top(?): 23.22-23.31)	Room 5a	loose grey fill with stones
A 3, Locus 8 of 1986	4/9 (top(?): 23.58	Room 4a	mixed material of Locus 4 and Locus 9
A 3, Locus 9 of 1986	4(?)+8/ (top: 23.46	Room 4a	temporary floor of fine sandy limestone like material
A 3, Locus 10 of 1986	4(?)/ (top(?): 23.48)	Room 4a	concentration of ashes N of Locus 9, E of N end of wall Locus 5
A 3, Locus 11 of 1986	9/ ((top(?): 23.42, bottom(?): 23.23-23.33)	Room 4a/ wall 5 built on Locus 11?	as Locus 4 but contains more ashes and is less compact
A 3, Locus 1 of 1987		/ bedrock dirt-filling from the last campaign (grey, green ashy filling)/ bedrock (yellowish soil)	same as Locus 3 in baulk Square A 3/A 7
A 3, Locus 2 of 1987	1/3+4 (top: 23.03-23.10, bottom: 22.63-22.64)	Room 5a	fill, combination of erosion and cultural deposits, less disturbed by wash than Locus 1: soft organic dark brown loose soil, less silty than Locus 1, less disturbed with wash, finegrained, very dense artifact distribution, also includes pebbles and gravel, fewer cobbles (than in Locus 1?)
A 3, Locus 3 of 1987	2/ (top: 22.64, bottom: 22.56)	Room 5a	pit or lower part of Locus 2, loose greyish soil with high artifact concentration.
A 3, Locus 4 of 1987	2/6 (top: 22.63, bottom: 22.44)	Room 5a	pit or more probably the lower part of Locus 2 (as Locus 3), same material as Locus 2
A 3, Locus 5 of 1987	1 of 1987/6? (top: 23.10, bottom(?): 22.76)	Room 5a	down wash, hard yellowish material surrounded by stones

Appendix A cont. 3.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 3, Locus 6 of 1987	2+4/ (top(?): 22.60-22.72)	Room 5a	down wash with a high concentration of artifacts, lighter and more compact than Locus 4
A 3, Locus 7 of 1987	/		wall
A 4, Locus 1	"bulldozer surface"		"bulldozer surface"
A 5a+d, Locus 1 of 1986	bulldozed surface/2 (top: 21.83-22.34)		compact fill: mixture of yellow brownish plasterlike compact material, interspersed with charcoal, few stones and a high quantity of ashes; contains a lot of flint and a few bones
A 5d, Locus 2 of 1986	1/6 (top: 22.28, bottom(?): 22.19)		stone rubble layer ?: a few worked stones put in a loose(?) plasterlike brown greyish material interspersed with a lot of stones; contains a lot of chipped artifacts and a few bones
A 5, Locus 3 of 1986	1/4.5.6 (top(?): 22.48-22.55, bottom(?): 22.18-22.30)		compact fill with stones and charcoal, as Locus 1
A 5, Locus 4 of 1986	3/ (top or bottom: 22.39)		burial "Elvira", partly cut by Locus 5
A 5, Locus 5 of 1986	3/ (top: 22.48)		pit or disturbance of loose fill with charcoal and stones, partly destroyed the burial Locus 4
A 5, Locus 6 of 1986	2.3/ (top or bottom: 22.24)		human remains put in Locus 2
A 5, Locus 7 of 1986	1 or 3/3 (top(?): 22.56, bottom(?): 22.30)		concentration of ashes
A 5, Locus 1 of 1987	3-6 of 1986/2.7.29 (top: 22.18-22.31)		fill or garbage?: very heterogeneous soil with a high amount of stones, chipped stone artifacts and bones. Patches of harder, compact soil of light grey colour
A 5, Locus „surface cleaning" of 1987	/30		surface cleaning of Subsquares b and c before work started
A 5, Locus 2 of 1987	1/3 (top: 22.20-22.24)		loosely composed soil with high density of stones, extremely high density of chipped stone, artifacts and bones. It also has charcoal. The soil also contains patches of light grey compact material with fewer artifacts.
A 5, Locus 3 of 1987	2/4 (top: 22.15-22.18)		lower level of "pit" same as Locus 2
A 5, Locus 4 of 1987	3/5 (top: 22.08-22.11)		lower level of "pit" same as Loci 2 and 3 like Locus 2, but included some human remains in tertiary context
A 5, Locus 5 of 1987	4/6 (top: 22.03-22.08)		lower level of "pit" same as Loci 2-4
A 5, Locus 6 of 1987	5/22 (top: 21.90-21.93)		base of "pit" same as Locus 2-5
A 5, Locus 7a of 1987 see the copy of the diary for the subdivision of Locus 7	1/7b (top: 22.16-22.22)		loosely composed soil with many stones, high density of chipped artifacts and bones
A 5, Locus 7b of 1987	7a/22(?) (top:21.85)		hard yellowish or reddish soil with much charcoal, alternating with lenses of ashes, find density much smaller than in Locus 7a
A 5, Locus 8 of 1987	/23 (top: 22.31-22.39)	Room 8/ including baulk between Squares A 5 and A 9	loose room fill with many stones
A 5, Locus 9 of 1987	(top: 22.18-22.28, bottom: 21.89-21.90	N wall of Room 8	wall
A 5, Locus 10 of 1987	(top: 22.22-22.24, bottom: 21.78-21.91	separating Rooms 7 and 8	wall, later than wall Locus 9?

Appendix A cont. 4.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 5, Locus 11 of 1987	/13.14		bulldozed surface of the E Baulk of the square, down to top level of wall Locus 9
A 5, Locus 12 of 1987	30/13 (top: 22.28)		concentration of bones
A 5, Locus 13 of 1987	11.12/14.15 (top: 22.20-22.65)	NW corner	"garbage fill", loose ashy fill with many stones and flints
A 5, Locus 14 of 1987	11.13/16 (top: 22.08-22.32)	NW corner	loose grey fill with many flints and bones
A 5, Locus 15 of 1987	11.13/22 (top: 22.40-22.45)	NW corner	compact fill with a lot of charcoal and few finds
A 5, Locus 16 of 1987	14/22 (top: 21.82-21.96)	NW corner	as Locus 14 but more compact and contains more finds, continues below wall Locus 9
A 5, Locus 17 of 1987	/18.19 (top: 22.40-22.60)	7 E boundary: wall Locus 21	baulk removal
A 5, Locus 18 of 1987	17/ (top(?): 20.29)	NW corner	human remains in baulk between Squares A 5 and A 9
A 5, Locus 19 of 1987	17/ (top(?): 20.17)	NW corner	human remains in baulk between Square A 5 and A 9
A 5, Locus 20 of 1987	/22	NW corner	fill in 50 cms baulk between Square A 5a+d and A 5b+c heterogeneous soil with quite an amount of chipped stone, artifacts and bones
A 5, Locus 21 of 1987	/27 (top: 22.33-22.39, bottom: 22.10-22.19)	N and W wall of Room 7	wall, built later than wall Locus 9, probably founded on surface Locus 27
A 5, Locus 22 of 1987	/6.7.15.16.20.29 (top: 21.16-21.85)	NW corner	bedrock
A 5, Locus 23 of 1987	8/24-25+28 (top: 22.08-22.15)	Room 8/ including baulk between Square A 5 and A 9	fine grained ashy room fill, red burned with many stones
A 5, Locus 24 of 1987	23/	Room 8/ same as Locus 4 in Square A 6?	red painted plaster floor
A 5, Locus 25 of 1987	23/ (top: 21.73-21.78, bottom: 21.68)		burial no.11, placed partly below wall Locus 10
A 5, Locus 26 of 1987	/27	Room 7	fine grained, loose room fill with a lot of charcoal and many grinding stone fragments
A 5, Locus 27 of 1987	26/ (top: 21.69-22.02)	Room 7	yellowish, grey compact surface, wall Locus 10 partially founded on this surface (does it belong to the "Yellowish Deposit"?). Locus 18 in Square A 9 cut into this Locus
A 5, Locus 28 of 1987	10.23/ (top(?): 21.84-21.96)	Room 8	loose fill with large stones, continues under wall Locus 10, burial 11 (Locus 25) is embedded in this fill. The large stones probably destroyed Locus 24
A 5, Locus 29 of 1987	1/22 (top: 22.18-22.27)	/ area between "pit" Locus 2-6 and pit Locus 7	fill between two pits dug in order to see their connection
A 5, Locus 30	/ (top: 22.30-22.63)	/ between Locus 11 and 20	bulldozer surface
A 6, Locus "top soil"/Subsquare a	/1 (top: 22.22-22.29)	/ same as "top soil" in the other 3 subsquares	bulldozer surface
A 6, Locus "top soil"/Subsquare b	/2 (top: 22.20-22.25)	/ same as "top soil" in the other 3 subsquares	bulldozer surface
A 6, Locus "top soil"/Subsquare c	/2 (top: 22.16-22.23)	/ same as "top soil" in the other 3 subsquares	bulldozer surface
A 6, Locus "top soil"/Subsquare d	/2 (top: 22.16-22.25)	/ same as "top soil" in the other 3 subsquares	bulldozer surface
A 6, Locus 1/Subsquare a	"top soil"/ (top: 22.16-22.25)		compact fill with stones and plaster fragments
A 6, Locus 2/Subsquares b-d	/3.4.20 (top: 21.90-22.19)		loose fill with stones

Appendix A cont. 5.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 6, Locus 3/Subsquare d	2/ (top: 22.06-22.21)	/ same as Locus 4, and same as wall Locus 9 of Square A 5	wall, outer row of stones N and E of Room 8
A 6, Locus 4/Subsquare d	2/ (top: 22.11-22.17)	/ same as Locus 3, and same as wall Locus 9 of Square A 5	wall, inner row of stones N and E of Room 8
A 6, Locus 5/Subsquare d	2/6 (top: 21.92-21.95)	Room 8	loose room fill
A 6, Locus 6 /Subsquare d	5/7.8 (top: 21.91-21.94)	Room 8	loose room fill
A 6, Locus 7/Subsquare d	6/8 (top: 21.86)	Room 8	fire place
A 6, Locus 8/Subsquare d	7-6/ (top: 21.72-21.90)	Room 8	plaster floor
A 6, Locus 9/Subsquares c+d	2/10 (top: 21.85)	(Room 9)	fire place
A 6, Locus 10/Subsquares c+d	9+2/17 (top: 21.80-21.88)	(Room 9)	soft fill with stones
A 6, Locus 11/Subsquare c	10/12 (top: 21.80-21.83)	Room 9	grey soft fill with stones
A 6, Locus 12/Subsquare c	11/13.14 (top: 21.75-21.80)	/ same as Locus 10?	grey soft fill with stones, larger than in Locus 11
A 6, Locus 13/Subsquare d	12/ (top: 22.00-22.14)	W wall of Room 9	wall, along or below wall Locus 3/4
A 6, Locus 14/Subsquare c	12/16 (top: 21.72-21.77)	Room 9same as Locus 10?/	brown, soft fill with stones
A 6, Locus 15/Subsquare c	14/ (top: 21.70)	Room 9	fire place
A 6, Locus 16/Subsquare c	14/17 (top: 21.70-21.72)	Room 9/ same as Locus 10?	soft room fill with stones
A 6, Locus 17/Subsquares c+d	10.16/19 (top: 21.65-21.69)	Room 9	soft fill with stones, bigger than in Locus 16
A 6, Locus 18/Subsquare c	17/ (top: 22.02-22.23)	N wall of Room 9	wall
A 6, Locus 19/Subsquares c+d	17/ (top: 21.67)		plaster floor
A 6, Locus 20/Subsquare b	2/21.24 (top: 21.96-22.05)		stone rubble fill
A 6, Locus 21/Subsquare b	20/22 (top: 21.97-22.02)	Room 6	soil surface (later called plaster floor)
A 6, Locus 22/Subsquare b	21/23 (top: 21.95-22.01)	Room 6	soft fill with stones
A 6, Locus 23/Subsquare b	22/ (top: 21.89-22.01)	Room 6	plaster(?) floor
A 6, Locus 24/Subsquare a+b	bulldozer surface/27 (top: 21.92)	NW corner, W of Room 6	ashy fill belonging to the circular installation consisting of firecracked silicified limestone/ quartzite
A 6, Locus 25 /Subsquare b	2/ (top: 22.16-22.19)	SW wall of Room 6/ perpendicular to wall Locus 18	wall
A 6, Locus 26 /Subsquare b	2/ (top: 22.19-22.31)	N of Room 9/ perpendicular to wall Locus 25	wall
A 6, Locus 27/Subsquare b	24/28 (top: 21.85)	NW corner	compact fill, probably bottom of or just below the circular installation, contains stones
A 6, Locus 28 /Subsquare a	27/29-30 (top: 21.75-22.14)	NW corner	grey loose fill below circular installation and S of it
A 6, Locus 29 /Subsquare b	28/ (top: 21.90-21.97)	NW corner / W extension of floor Locus 23	plaster(?) floor, N of wall Locus 26
A 6, Locus 30/Subsquare a,b+d	28/ (top: 21.40-21.87)	NW corner	soil surface or compact fill N of Room 8+9 around wall Locus 26

Appendix A cont. 6.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 6, Locus 31/Subsquare b	30(?)/ (top: 21.16-21.86)	NW corner	loose fill with stones, same area as Locus 30
A 6, Locus 1 of 1987		/ same as Locus 11 in Square A 5	baulk removal between Square A 5 and A 6, from bulldozed surface to top of wall Locus 9 of A 5, same as wall Locus 3/4 of Square A 6
A 7a+d, Locus "surface"	/1-3 (top: 22.07-22.22)		bulldozer surface
A 7a+d, Locus 1	surface/ (top: 21.89-22.06)	outside Room 6	loose fill with stones
A 7a+d, Locus 2	surface/4 (top: 21.98-22.01)	Room 6	compact room fill with stones
A 7a+d, Locus 3	surface/	E wall of Room 6	wall
A 7a+d, Locus 4	2/	Room 6/ same as Locus 23 in Square A 6	floor, plaster?
A 7a+d, Locus 1		Room 6 and E of Room 6	"backdirt" filled in at the end of 1986 Season and trimming of sections
A 8, Locus surface	1+2/ (top: 22.10-22.91)		bulldozed surface
A 8, Locus 1	surface/3 (top: 22.75-22.90, bottom: 22.45)		fill above and S of wall Locus 2
A 8, Locus 2	surface/	/ continuation of wall Locus 4 in Square A 9	wall
A 8, Locus 3	1/6 (top: 22.45, bottom: 22.04-21.97)	above fill of Room 11c	loose ashy fill in level above the level of wall Locus 7
A 8, Locus 4	1/8	deposits above walls/ same as Locus 9	loose fill with stones S of wall Locus 7
A 8, Locus 5	1/7 (top: 22.05-22.45, bottom: 21.90-22.15)		hard limy soil above wall Locus 7
A 8, Locus 6	3/ (top: 22.26-22.34 or 21.97-22.04, both are mentioned in the diary)	Room 11c	loose room fill with stones and plaster fragments
A 8, Locus 7		belonging both to substructure and the main building phase/ called Locus 4 in 1987	wall
A 8, Locus 8	4/17 (top: 22.00-22.50, bottom: 21.60)	probably belonging to the main building phase	loose fil with stones S of wall Locus 7, divided in 8,1 and 8,2. 8,2 contains more stones
A 8, Locus 9	(top: 22.35-22.65, bottom 22.15-22.50)	deposits above walls/ same as Locus 4	loose fill with many stones, S of Locus 4
A 8, Locus 10	/14 (top: 21.92-22.28)		concentration of hard limy soil in S end of square, ca 10 cms thick
A 8, Locus 11	/9 (top: 22.50-22.85, bottom: 22.30-22.65)		mortar/plaster concentration. traces of red stained plaster
A 8, Locus 12	8/17 (top: 21.58-21.86, bottom: 21.50-21.56)	substructure phase	row of stones on top of Locus 17 (channel system), part of covering stones?
A 8, Locus 13	1(?)/10	/ same as Locus 11	loose fill with many stones in baulk between Squares A 8 and A 12 very loose stone layer, S extension cut away in Square A 12
A 8, Locus 14	10/15+16		loose layer of stones
A 8, Locus 15	14/		wall
A 8, Locus 16	14/17(?) (top: 21.80, bottom: 21.50)		loose fill with stones, covering the channel system ?
A 8, Locus 17, channel covering	8+19/17, channel filling (top: 21.60)	substructure of main building phase	channel system in Room 10, does not continue below wall Locus 5 and 7

Appendix A cont. 7.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 8, Locus 17, channel filling	17, channel covering/ (top of 2. layer: 21.09-21.40, channel bottom: 21.01)	as 17, channel covering: Room 10	fill in channels, in 2 layers: 1) loose grey fill, 2) more compact dark brown soil. Bottom of channels covered by plaster floor
A 8, Locus 18	8/19 (top: 21.90-22.00, bottom: 21.70-21.80)	main building phase/ S of wall Locus 7	hard limy soil in Locus 8
A 8, Locus 19	18/17		loose fill with stones
A 8, Locus 20			wall, continuation of wall Locus 2 in Square A 12
A 8, Locus 21	5+9/8	/ continuation of Locus 14?	group of stones, either fallen from wall Locus 20 or continuation of Locus 14
A 9a+d, Locus 1 of 1986 ("top soil")	/2 (top: 22.25)		surface cleaning, bulldozed surface
A 9a+d, Locus 2 of 1986	1/3		top 10 cms of fill
A 9a+d, Locus 3 of 1986	2/	/ same as Locus 8 in Square A 8	stone rubble layer W of wall Locus 5
A 9a+d, Locus 4 of 1986	/ (top: 22.30)		wall
A 9a+d, Locus 5 of 1986	(top: 21.90-22.20)	separating channel area and Rooms 11b +17 belonging both to substructure and main building phase	wall
A 9a+d, Locus 6 of 1986	3/	Room 10/ same as Locus 18 in A 8	hard limy soil S of wall Locus 4 in NW corner of square
A 9a+d, Locus 7	3+6(?)/	/ same as Locus 17 in Square A 8	stone covering of channels
A 9a+d, Locus 8 of 1986	/9+10 (top: 22.20)	Room 11a+ 11b	fill along N side of wall Locus 5, room fill, same as Locus 10
A 9a+d, Locus 9	8/10 (top: 21.90-22.00)	Room 11a+ 11b/ same as Locus 6	hard limy soil in patches
A 9a+d, Locus 10 of 1986	9/ (top: 21.80)	/ same as 3(?) or 14(?)	fill in corner of walls Loci 4 and 5
A 9a+d, Locus 11+12			part of wall Locus 4
A 9, Locus 13 of 1986	/ (top: 21.80)	/ same as 3(?) or 14(?)	fill in corner of walls Loci 4 and 5
A 9a+d, Locus 14 of 1986	3/ (top: 21.63)	Room 11c/ between walls Loci 4 and 15	room fill
A 9a+d, Locus 15		belongs both to substructure and main building phase/ continuation of wall Locus 7 in Square A 8	wall, parallel to wall Locus 4
A 9a+d, Locus 0	/7+10		surface cleaning of area dug in 1986
A 9b+c, Locus 1 of 1987	/2.3.4		bulldozer surface
A 9b+c, Locus 2 of 1987	1/ (top: 23.10-23.15)	separating Rooms 11a + 11b	wall
A 9b+c, Locus 3 of 1987	1/ (top: 23.42-23.80)		wall
A 9b+c, Locus 4 of 1987	1/5.7.18 (top: 23.03-23.16)	Rooms 11a, 11b + 7	upper room fill: soft loose soil, grey in colour and containing small stones and pebbles mixed with the soil. Like Locus 1 but harder
A 9b+c, Locus 5 of 1987	4/9 (top: 21.66-21.97)	Room 11b	hard fill in Locus 4
A 9b+c, Locus 6 of 1987	1/8	Room 7/ between wall Locus 3 and the N Baulk	soft fill

Appendix A cont. 8.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 9b+c, Locus 7 of 1987	4/		group of stones connecting wall Locus 2 and 3, wall ?
A 9b+c, Locus 8 of 1987	6/ (top: 22.07)	Room 7	soil surface including fill above
A 9b+c, Locus 9 of 1987	4.5/12.15	Room 11b	loose room fill
A 9b+c, Locus 10 of 1987	4/14	Room 13/ E of and partly below Locus 7E	clay surface
A 9b+c, Locus 11 of 1987	9/	separating Rooms 11b and 17	wall
A 9b+c, Locus 12 of 1987	9/17 (top: 21.42-21.67)	Room 11b/ same as 13	hard fill or clay surface
A 9b+c, Locus 13 of 1987	9/16	Room 11b/ same as Locus 12	hard fill or clay surface, continuation of Locus 12 to the N and W
A 9b+c, Locus 14 of 1987	7.10/		loose fill with ashes and pebbles, continuing below the stones Locus 7
A 9b+c, Locus 15 of 1987	9/ (top: 21.23-21.39)	separating Rooms 11b and 13	stone pavement
A 9b+c, Locus 16 of 1987	4+13/	Rooms 11a+ 11b/ W of Locus 17	"polished" plaster(?) floor
A 9b+c, Locus 17 of 1987	12.14/	Room 11b/ E of Locus 16, N of pavement Locus 15	soil surface with a sand layer below
A 9b+c, Locus 18 of 1987	4+6/	Room 7	loose room fill ? between wall Locus 3 and the N baulk, called a pit on the drawing 13 and in the diary of Square A 5 p.101 (Locus 27)
A 9b+c, Locus 19 of 1987	/ (top: 21.92, bottom: 21.36-21.38)	separating Rooms 11a and 11c	blocked entrance in N end of wall Locus 5 of 1986
A 10b+c, Locus 1 of 1986	/2.3.5 (top: 21.89-22.09)	/ same as Locus 1 of 1987	bulldozer surface
A 10b+c, Locus 2 of 1986	1/4 (top after 1 days work: 21.77-21.82, bottom: 21.59-21.67)	Room 14	compact soil with many stones (stone rubble layer)
A 10b+c, Locus 3 of 1986	1/ (top: 21.86, bottom: 21.75)		ash concentration in NW corner of Subsquare b, pit(?) cut into Locus 4
A 10b+c, Locus 4 of 1986	1+5/ (top: 21.76)	Room 14	burnished plasterlike floor
=A 10b+c, Locus 5 of 1986	/4	Room 14?	group of stones fallen on floor Locus 4
A 10a+d, Locus 1 of 1987	/2 (top: 22.07, bottom: 21.97)	/ same as Locus 1 of 1986	bulldozed surface, also sampled in 1986, but not mentioned in the diary. „top soil", very hard mixed with small stones, dark brown soil
A 10a+d, Locus 2 of 1987	1/3 (top: 21.97-21.55)		soft fill with stones and clay inclusions: dark greyish soil, very soft and loosely composed. Stones of varying sizes + clay (mud) inclusions are also found
A 10a+d, Locus 3 of 1987	2/ (top: 21.43)	Room 12	plaster floor *c.* 4 cms thick
A 10a+d, Locus 4 of 1987	1/ (top: 22.08)	separating Rooms 12 and 13	wall, including the fill just above part of wall
A 10a+d, Locus 5 of 1987	1/ (top: 22.01, 21.69 (window))	W wall of Room 12	wall with window in S end (including fill just above part of wall)
A 10, Locus 6 of 1987	1?/ (top: 21.88)	separating Rooms 8 and 12	wall (including the fill just above the wall)
A 10a+d, Locus 7 of 1987	1/ (top: 22.00)	separating Rooms 12 and 14	wall (including fill just above part of wall)

Appendix A cont. 9.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 10a+d, Locus 8 of 1987	the baulk and the southern part of area D of the square/ (top: 21.95, bottom: 21.05)	Room 13	room fill
A 10a+d, Locus 9 of 1987	the section N 2 which runs W-E/ (top: 21.05)		plaster floor, S of Room 13
A 10a+d, Locus 10 of 1987 is placed in Square A 9	the section/ (top: 21.28, bottom:20.79)	connects Rooms 11/13 and 19	staircase
A 12, Locus 1	/2+3		section trimming of edge of bulldozer cut in W end of Square and bulldozer surface all over the Square
A 12, Locus 2	1/	W wall of Room 16	wall, continuing below bulldozer section
A 12, Locus 3	1/4	Room 16	fill with many stones *c.* 40-50 cms deep
A 12, Locus 4	3/7 (top in 1987: 21.44-21.53, bottom: 21.39-21.50)	Room 16	compact brown surface covering the channel layer, contains charcoal, plaster fragments and only few finds.
A 12, Locus 5		S wall of Room 16/ same as wall Locus 4 in Square A 17	wall
A 12/A 13, Locus 6	/4		baulk removal, E baulk of Square A 12 from bulldozed surface to top of Locus 4
A 12, Locus 7	4/8 (top: 21.39-21.50)	Room 16/ as Locus 4	stone pavement of small stones, floor bedding, many fragmentary grinders
A 12, Locus 8	7/9	Room 16	5 E-W oriented lines of stone slabs covering the channels, and 1 N-S oriented, below the stone slabs are layers of smaller stones
A 12, Locus 9	8/ (top: 20.76-21.04)	Room 16	channel structure, 5 E-W running channels (no.1-5) and 1 roughly N-S (no.6) this ends in the southernmost channel. Nos. 1-5 stops at wall 2 in Square A 13. Only Channel 1 is excavated to the W end, it continues below wall Locus 2 *c.* 45 cm. All channels contains 2 layers of fill with few finds. The floor of the channels is compact mud with charcoal. Traces of plaster in Channel 3.
A 13, Locus 1 of 1986	bulldozed surface/2-7		bulldozed surface
A 13, Locus 2 of 1986	1 of 1986/	separating Rooms 17 and 18	wall, W end
A 13, Locus 3 of 1986	1 of 1986/5 of 1987		compact fill mixed with stones, S of wall Locus 2
A 13, Locus 4 of 1986	1 of 1986/4 of 1987?		wall
A 13, Locus 5 of 1986	1 of 1986/7 of 1987		soft fill above ruined top of walls, N of wall Locus 4
A 13, Locus 6 of 1986	1 of 1986/4 of 1987	Room 18	dark fill mixed with stones
A 13, Locus 7 of 1986	1 of 1986/9 of 1987	Room 17	soft fill in a test sounding N of wall Locus 2 and E of wall Locus 2
A 13, Locus 1	1 of 1986/2 (top: 21.31, bottom: 21.09)		stone debris in E half of square, contains plaster fragments
A 13, Locus 2	1/10+8	above fills of Rooms 19 and 20	loose fill with many stones and some plaster fragments
A 13, Locus 3	1 of 1986/ (top: 21.48)	separating Rooms 17 and 19 and Rooms 18 and 20	wall, separating Locus 1 and 4
A 13, Locus 4	6 of 1986/ (top: 21.42, bottom: 21.02)	above fill of Room 18	hard soil with small stones and plaster fragments
A 13, Locus 5	3 of 1986/ (top: 21.45, bottom: 21.02)	/ S of wall Locus 2 of 1986	compact stone debris
A 13, Locus 6	4/7 (top: 21.02, bottom: 20.90)	Room 18 or above fill of Room 18	stone debris with plaster fragments and many animal bones
A 13, Locus 7	6/15 (top: 21.90)	Room 18	plaster floor

Appendix A cont. 10.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 13, Locus 8	1 (of 1986?)/10 (top: 21.36, bottom: 20.21)	Room 19	stone debris with many animal bones and flints
A 13, Locus 9	7 of 1986/11 (top: 20.21, bottom: 20.06)	Room 17	soft fill with many stones and patches of compact mud
A 13, Locus 10	8 and 2 of 1987/ (top: 20.16)	Rooms 19+20	dark greyish soil with a lot of lime stone debris and grinding stone fragments
A 13, Locus 11	9/ (top: 21.06, bottom: 19.75)	Room 17	plaster floor, destroyed in parts
A 13, Locus 11a (is belonging to Square A 14, locus no. given according to numbers in Square A 14)	baulk removal between A 13 and A 14/18+19 (top: 21.40, bottom: 20.74)	separating Rooms 19/20 and 21/ parallel to wall Locus 3	wall
A 13, Locus 12	10/14 and 13 (top(?): 20.69-20.71, bottom(?): 19.75)	Room 19+20	compact fill (surface?) eith many charcoal pieces covering the room pavement
A 13, Locus 13	12/ (top: 20.71)	Room 19/ N of Locus 14	pavement of large flat stones covered by plaster in some parts, continues under wall Locus 11a; separated by wall Locus 30, E of wall: mud pavement and gravel layer, W of wall: slab pavement and gravel layer
A 13, Locus 14	12/16 (top: 20.69)	Room 20/ S of Locus 13	plaster floor, not fully preserved
A 13, Locus 15	7/ (top: 20.90)	Room 18	hard soil mixed with small stones below plaster floor
A 13, Locus 15a	15(?)/	Room 18/ parallel to wall Locus 3	wall, from an earlier building phase than wall Locus 3
A 13, Locus 16	14/17 (top: 20.62)	Room 20	2nd plaster layer of floor Locus 14, red painted
A 13, Locus 17	16/	Room 20	? below plaster floor Locus 16
A 13, Locus 18	/19 (channels) (top: 20.63-20.56)	Room 20/ same as Locus 16+17 of 1987	pinkish mud pavement and gravel layer below
A 13, Locus 19	18/24-28 (top: 20.56-20.43, bottom: 20.28)	Room 20	channels with covering slabs
A 13, Locus 20	15/22 (top: 20.80)	Room 18	pavement of stone slabs W of wall Locus 15a
A 13, Locus 21	/22 (top: 20.89, bottom: 20.71)	Room 18	wall
A 13, Locus 22	20/23 (top: 20.70)	Room 18	soft fill below pavement and above a gravel layer
A 13, Locus 23	22/ (top: 20.56)	Room 18	cover stones of the channels
A 13, Locus 24	19/ (top: 20.37, bottom: 19.68)	Room 20 “middle channel line”/ between channel walls Loci 26 and 27	channel E-W direction contains soft fill with plaster fragments, animal bones and charcoal
A 13, Locus 25	19/ (top: 20.37, bottom: 19.76)	Room 20 “northern channel line”/ between channel walls Loci 27 and 28	channel as Locus 24
A 13, Locus 26-28	19/ (top: 20.39)	Room 20	channel walls, 26: S wall of Locus 24, 27: wall between Locus 24 and 25, 28: N wall of Locus 25
A 13, Locus 29-31	(29 top: 20.73, 30 top: 20.68-20.74, 31 top: 20.70-20.81)	Room 19	29: wall separating Rooms 19 and 20, 30: wall oriented N-S in Locus 13, 31: wall oriented E-W, N of Locus 13
A 13, Locus 32	13/33 (top: 20.61, bottom: 20.50-20.58)	Room 19	gravel layer above channels with a thin ashy fill above
A 13, Locus 33	31 and 32/ (top: 20.50-20.75)	Room 19	channels covered with big slabs, main channel line oriented E-W
A 14a+d, Locus 1	/2 (top: 21.81, bottom: 22.55)		bulldozed surface, in W half of square
A 14a+d, Locus 2	1/4 (bottom: 21.32)		stone rubble layer, softer than top soil
A 14a+d, Locus 3	2/6 (bottom: 20.82)	/ N of Locus 4	soft fill with some stones in central and N part of square

Appendix A cont. 11.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 14a+d, Locus 4	2/ (top: 21.22, bottom: 20.68)	/ S of Locus 3	compact reddish fill in S end
A 14a+d, Locus 5	3/ (top: 20.82)	Room 21 N end	plaster floor, badly preserved in NW part of square
A 14a+d, Locus 6	3/8+10 (top: 20.86, bottom(?): 20.72)	Room 22	room fill, compact mixed with plaster fragments
A 14a+d, Locus 7	3/ (top: 21.22)	N wall of Room 21	wall
A 14a+d, Locus 8	6/ (top: 20.71-20.87)	separating Rooms 21 and 22	wall, S end destroyed
A 14a+d, Locus 9	3/ (top: 21.05)	N wall of Room 22/W end of wall Locus 3 of Square A 14b+c	wall, partly built upon N end of wall Locus 8
A 14a+d, Locus 10	6/ (top: 20.72)	Room 22, W half/ same as Locus 7 in Square A 14b+c	red painted plaster floor, S part destroyed
A 14a+d, Locus 11	3(?)/ (top: 20.74)	Room 21/ same as Locus 1 in Square A 14a+d	red painted plaster floor, destroyed in S end
A 14b+c, Locus 1	(top: 21.79, bottom: 21.47)		bulldozed surface
A 14b+c, Locus 2	1/4 (top: 21.47)	/ same as Locus 4 in Square A 14a+d	compact reddish soil in Subsquare c
A 14b+c, Locus 3	1/ (top: 21.47-21.70)	N wall of Room 22/E-end of wall Locus 9 in Square A 14a+d	wall
A 14b+c, Locus 4	2/		soft reddish fill with many stones in S ubsquare c
A 14b+c, Locus 5	1/6+7	above fills of Room 22/ same as Locus 3 in Square A 14a+d	soft fill with many stones in Subsquare b, E part mixed with modern material
A 14b+c, Locus 6	5/ (top: 21.12)	Room 22/ parallel to wall 8 in Square A 14a+d	wall, connected to wall 3, only *c.* 60 cms long
A 14b+c, Locus 7	5/ (top: 20.75)	Room 22/ same as Locus 10 in Square A 14a+d	red painted plaster floor
A 14b+c, Locus 8	5+9/ (top: 21.00)	E wall of Room 22/parallel to wall Locus 8 in Square A 14a+d	wall, S end destroyed
A 14b+c, Locus 9	1/ (bottom: 20.87)	N of wall 3 (Room 14?)	soft fill with many stones, mixed with pieces of hard (fired?) clay
A 14b+c, Locus 10	5/ (top: 21.03)	Room 22	row of stones on the same surface as floor Locus 7, between walls Loci 6 and 8
A 14/A 13, Locus baulk removal	/11a (top: 21.99, bottom: 20.74)		baulk removal, greyish fill
A 14, Locus area cleaning of 1988		Room 21	area cleaning
A 14d, Locus 11b (renamed, former 11a)	11/ (top: 20.77-20.62)	Room 21	soft ashy fill, upper fill of channel structure?
A 14d, Locus 12	11b/ (top: 20.62-20.45, after removal of small stones: top:20.38, bottom: 20.28)	Room 21/ E of wall Locus 11a	channels covered with flat big boulders and small stones
A 14c, Locus 13	4 (1987,A 14c)/15 (top: 20.65, bottom: 20.49)	Room 22	soft and crumbly soil, stone debris covering disturbance
A 14c, Locus 14	7 of 1987/15 (top: 20.65, bottom: 20.60)	Room 22	red painted plaster floor, 2nd layer of Locus 7 of 1987, in between there is a gravel layer with habitation material and signs of burning
A 14c, Locus 15	13+14/16 (top: 20.55, bottom: ca.20.10)	Room 22/ same as Locus 51 in Square A 18	soft soil with many stones and few finds, disturbance, reddish soil
A 14c, Locus 16	15/17 (top: 20.34-20.18, bottom 20.01-19.89)	below Room 22/ same as Locus 51 in Square A 18	disturbance of soft fill, destroyed part of the channels Locus 12

Appendix A cont. 12.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 14, Locus 17	16/	below Room 22/ E and S of channels Locus 12 and E of channel line Locus 19	soft yellowish clayish soil, either bottom layer of great disturbance or channel layer in channels Locus 12. Covers partly bottom of easternmost channel of Locus 12
A 14d, Locus 12	top layer of Loc. 12/	Room 21/ connected to channels Locus 19 in Square A 13c	2nd layer of channels after removal of big flat stones
A 14, Locus 18	wall Loc. 11a/26 (top: 20.59, bottom: 19.86, burial levels: top: 19.96, bottom(?): 19.75)	Room 21	disturbance under wall Loc 11a, debris, B. 37 dug into it, partly covered by flat stones
A 14d, Locus 19	(top: 20.39, bottom: 19.63)	Room 21 "middle channel line"/ extension of Locus 24 in Square A 13c	channel fill, in the lower layer burials of at least 3 individuals were found, not buried at the same time. Lowest layer in the fill is the same as Locus 17
A 14d, Locus 20	(burial top: 19.98, bottom: 19.86)	Room 21 "north channel line"/ extension of Locus 25 in Square A 13c	channel fill, burial
A 14d, Locus 21-24	/	Room 21	21: S wall of Locus 19+ S of disturbance Locus 18, 22: wall separating Loci 19 and 20, 23: N wall of Locus 20, 24, E wall of Locus 20
A 14c, Locus 25	17/ (bedrock: 19.41-19.57, ashpit: top: 19.38-19.57, bottom: 19.26)	Room 22/ E of channel line Locus 19	Yellowish Deposit with ashpit in NE corner, silty soil
A 14d, Locus 26	under Burial 37 (disturbance Loc. 18)/ (top: 19.75, bottom: 19.61)	Room 21	dark, soft soil with stones, charcoal, plaster fragments and finds
A 16, Locus 1	/rubble of 16 c (top: 21.33-21.97)	above fills of Rooms 23/24	"building rubble" with concentration of animal bones in SE corner
A 17, Locus "top soil"	(top: 22.81-21.43)		fill with stone rubble, allready some walls visible on the surface
A 17, Locus 1	top soil/ (top: 21.99)	separating Rooms 23 and 25a/ N extension of wall Locus 2	wall, wall plaster preserved on E side
A 17, Locus 2	top soil/ (top: 21.93-21.15)	separating Rooms 23/24 and 25b/27a/ S extension of wall Locus 1	wall, seems to be built in a later stage than wall Locus 1
A 17, Locus 3	top soil/ (top: 21.76-21.90)	separating Rooms 25a and 25b	wall, traces of wall plaster on both sides
A 17, Locus 4	top soil/ (top:21.61-22.15)	N wall of Room 23(?), 25a and 27b	wall, including the fill around the E end of the wall
A 17, Locus 5	top soil/9 (top: 20.52-20.55)	Room 25a	stone rubble room fill, contains many finds
A 17, Locus 6	top soil/7+15 (top: 21.48-21.65)	Room 25b	stone rubble room fill as Locus 5
A 17, Locus 7	6/8 (top: 21.26-21.30)	Room 25b	red clay surface, pieces of plaster and charcoal
A 17, Locus 8	7/ (top: 20.74-20.85)	Room 25b	red painted plaster floor
A 17, Locus 9	5/10	Room 25a	red clay surface with lime grits
A 17, Locus 10	9/ (top: 20.86-20.92)	Room 25a	dark and red painted plaster floor, and fill above?
A 17, Locus 11	(top: 21.51-21.60)	separating Rooms 25b and 27a	wall, plaster preserved on the N side
A 17, Locus 12	(top: 21.43-21.57)	E wall of Room 25b and 27a/ same wall as 13 and 15	wall, S end of wall Locus 13/15
A 17, Locus 13	(top: 21.60, bottom: 20.74)	separating Rooms 25b and 27b/ same wall as 12 and 15	wall, N end of wall Locus 12/15
A 17, Locus 14	(top: 21.73)	separating Rooms 25a and 27b	threshold/entrance to Room 25a

Appendix A cont. 13.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 17, Locus 15	6/ (top: 21.27)	separating Rooms 25b and 27b/ same wall as 12 and 13	entrance to Room 25b, between walls Loci 12 and 13
A 17, Locus 16	top soil(?)/19 (top: 21.29-21.32)	Room 27b	soil surface and the fill above
A 17, Locus 17	surface/18 (top: 20.85)	Room 27a	stone rubble room fill, as Locus 5 and 6
A 17, Locus 18 of 1986	17/18of 1987 (top: 20.68-20.77)	Room 27a	plaster floor
A 17, Locus 19	16/18 of 1988(?)	Room 27b, NW corner	room fill with plaster fragments
A 17, Locus 18 of 1987	18 of 1986/	Room 27a/ same as Locus 20 in Room 27b?	plaster floor (same as Locus 18 of 1986) and the fill below which is red soil and a stone pavement
A 17, Locus 20 of 1987	/	Room 27b	soil surface with pebbles, must also have been worked in in 1986 since several locus numbers have been given
A 17, Locus 18 (1988)	(top: 20.81-20.84)	Room 27b/ Locus 18 (1988) mud pavement same as Locus 20?	mud pavement and 2 layers of plaster floor, not preserved all over the room
A 17, Locus 21 (1988)	20/18 (1988) ?	Room 27b center	same as Locus 20, clearing area with possible human remains, turned out not to be a burial
A 17, Locus 22	18 (1988)/ (top: 20.69-20.88)	Room 27b	gravel layer bedded on flattish plates
A 17, Locus 23	(top of layer: 19.65-19.91, burial: 19.91-19.98)	Room 28	room fill containing a human burial, had been partly excavated in 1987
A 17, Locus 24	22/ (top: 20.60-20.88)	Room 27b	channel layer
A 18, Locus 1	/2-5		top soil/ stone rubble layer
A 18, Locus 2	1/ (top: 21.38-21.52)	separating Rooms 29 and 31/ connected to walls Loci 7 and 6	wall
A 18, Locus 3	1/	above fills of Room 29	grey fill
A 18, Locus 4	1/14	Room 31	grey room fill
A 18, Locus 5	1/	/ same as Locus 11?	hard fill S of Wall 6 extending to the S Baulk of the square
A 18, Locus 6	4/ (top: 20.84-21.29)	S wall of Room 31/ connected to wall 2	wall (finds and photos from removal of part of the wall in 1988)
A 18, Locus 7	4?/48+55 (top: 21.43)	N wall of Room 31/ connected to wall 2	wall
A 18, Locus 8	1 or 3/ (top: 21.10-21.48)		stone deposit, according to drawing it is the continuation of wall Locus 6, but this is not mentioned in the diary. Continues into Square A 17, removed in 1987.
A 18, Locus 9	1+5/12		continuation of Locus 5
A 18, Locus 10	9/ (top:?, bottom: 20.90)	above fills of Room 32/	fire place /ash pit *c.* 10 cms deep
A 18, Locus 11	1/	/ same as Locus 5?	hard packed soil E of wall Locus 6. Fill contains plaster fragments, many bones and a hand stone placed in allmost upright position.
A 18, Locus 12	9/24,21,22,26	/ pit Locus 10 cut into Locus 12, probably continuation of surface Locus 10 in Square A 17	surface, packed with small stones, few plaster fragments found
A 18, Locus 13	1/75 (top: 20.85)		entrance(?) in NW corner of square, continuation of wall Locus 4 of Square A 17
A 18, Locus 14	4/45 (top: 20.96, bottom: 20.85)	Room 31	pavement
A 18, Locus 15	1/16	/ same as Locus 19 in Square A 17	fill above and on W side of wall Locus 16

Appendix A cont. 14.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 18, Locus 16	1+15/75	divides Rooms 27 and 29/ connected to wall Locus 4 in Square A 17, and entrance Locus 13	wall
A 18, Locus 17	15/20	Room 27/ continuation of Locus 20 in Square A 17	clay surface
A 18, Locus 18	1/75	/ continuation of wall Locus 16	wall
A 18, Locus 19	11-9/21-23	/ E of Locus 12	fill S and E of wall Locus 6
A 18, Locus 20	17/	Room 37/ continuation of floor Locus 21 in Square A 17	red painted plaster floor in two layers, finds *in situ*. Paving of small stones below lowest plaster layer.
A 18, Locus 21	19/ (top: 20.66-20.76)	/ connected to walls Loci 6 and 22	staircase connecting Rooms 29 and 32
A 18, Locus 22	19/	/ parallel to wall Locus 6 and stairs Locus 21	wall, blocked entrance in W end
A 18, Locus 23	19/partly above 6 (top: 22.00-21.61, bottom(?): 21.40-21.44)	above fills of Room 32	fill, covering parts of wall Locus 6 and probably also the continuation of the stairs Locus 21. Locus 23 extends to the E section.
A 18, Locus 24	12/25	Room 29	room fill (light brown dirt, very loose with many different sizes stones, many animal bones and flints)
A 18, Locus 25	12+24/26		concentration of stones S of wall Locus 22, first thought to be a wall, not on large plan.
A 18, Locus 26	12/ (top(?): 21.55)	Room 32 S half	room fill, contains plaster fragments
A 18, Locus 27	1/	E wall of Room 31/ connected to wall Locus 7	wall
A 18, Locus 28	24/	Room 30	room fill containing a burial (B.6a+b), surrounded by stones.
A 18, Locus 29	3/ (top: 20.68-20.72)	Room 29	clay/plaster floor covering a layer of small stones, remains of a skull on the floor.
A 18, Locus 30	23/ (top: 20.43-20.47)	/ continuation of stairs Locus 21	stairs E of Locus 21 and the fill covering them.
A 18, Locus 31	23/34 (top: 20.41-20.43)	Room 32, N end/	soil surface with clay and lime, packed with small stones
A 18, Locus 32	8/	/ W of wall Locus 6	row of stones in line with wall Locus 6, probably not a wall
A 18, Locus 33	29/	/ W of wall Locus 2	row of stones parallel to Locus 32, probably not a wall
A 18, Locus 34	31/ (top: 20.41-20.47, bottom: 20.21-20.39)	Room 32	soil surface packed with stones
A 18, Locus 35	24/	separating Rooms 28 and 30	wall
A 18, Locus 36	34/37	Room 32, N end	soft grey room fill, same as Locus 34 but separated because of change in softness and colour.
A 18, Locus 37	36/42	context of Burials 7 and 12, Room 32	room fill mixed with plaster fragments, multiple burial, contains 12 skulls
A 18, Locus 38	28/	Room 30	soil surface with flat slabs, including the fill above
A 18, Locus 39	s-section/	S wall of Room 30/ connected to walls Loci 35 and 40	
A 18, Locus 40	s-section/	E wall of Room 30/ connected to wall 39	
A 18, Locus 41	38/	/ between walls Loci 22 and 40	flat stone in entrance to Room 30
A 18, Locus 42	37/46	Room 32	surface and the ashy fill above
A 18, Locus 43	36+37/	E wall of Room 32/ connected to wall Locus 6	wall

Appendix A cont. 15.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 18, Locus 44	/35		burial (no. 18) placed on top of wall Locus 35 in depression in the mortar
A 18, Locus "general cleaning" and „total"	/		
A 18, Locus 45	14/48	Room 31	debris filling the space between pavement Locus 14 and pavement Locus 49; soft powdery soil, mixed with fist-sized and larger cobbles, some reddish „granulated" pieces (sign of fire?)
A 18, Locus 46	42/	= Burial 36 (Room 32)	fill below the burials of 1987; ntensive fire traces, probably disturbed by a pit; concentration of animal bones along the E Baulk; Burial 30
A 18, Locus 46	/ (top: 19.87-19.70, bottom: 19.62-19.56)	Room 32	fill containing many finds, shows signs of burning
A 18, Locus 47		/ same as wall Locus 27 of 1987	wall
A 18, Locus 48	45/49 (top: 20.77)	Room 31	pavement under Locus 45
A 18, Locus49	45,47,48,7/53 (top: 20.70)	Room 31/ bordering on Locus 2+6	pavement on both sides of wall Locus 50, stones covered with mudlike soil, from an older phase than Room 31; mud pavement covering flat slabs
A 18, Locus 50	45/ (top: 20.74)	/ Locus49 on both sides	wall, perpendicular to wall Locus 7, but from an older phase
A 18, Locus 51	14/ (top: 20.61)	Room 31/ E of Locus 47 and49	disturbance E of wall Locus 47 and S of 7, covers part of walls Loci 47 and 7, contains plaster pieces
A 18, Locus 52	14 or48/ (top: 20.74)	/ N of Locus49	wall(?) possibly N boundary of pavement Locus 49
A 18, Locus 53	49/54 (top: 20.69)		ashy fill covered by the stone slabs of pavement Locus 49
A 18, Locus 54	53/55 (top: 20.69-20.57)	Room 31	hard reddish surface, covers the channel area
A 18, Locus 55	54+47/ (49 written in the diary) (top: 20.62-20.57)		channel area, main line oriented SE-NW, another line oriented N-S at a lower level
A 18, Locus 56	46/57 (channel) (top: 19.56)	Room 32	fill between Locus 46 and the channels, shows signs of burning, many animal bones, soft reddish soil
A 18, Locus 57	46 disturbance +56/ (top: 19.61-19.47)	Room 32	2 parallel rows of channels with stone covering between them. A third main line under the S Baulk. upper layer of fill between the channels
A 18, Locus 58	/59 (top: 20.64-20.68)	Room 29/ B. 37 is placed on N boundary of the passage	corridor, fallen debris, soft, light reddish brown soil, heavily mixed with different sized stones, animal bones and ground stone fragments
A 18, Locus 59	58/ (top: 20.68, bottom: 20.41)	Room 29	around Burial 33, soft fill; 2 burials dug into this layer: Burials 33 and 34, separated by stone slabs; also Burial 35, which is N of Burial 34, partly underneath the stone slabs
A 18, Locus 47,49,51,55,7	/	Room 31	removing wall Locus 47 and part of wall Locus 7, pavement Locus 49 and the boulders covering channels Locus 55
A 18, Locus 60	/ (top: 20.54-20.26)	below Room 31	possibly fill in channel corridors below the boulders removed (55)

Appendix A cont. 16.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 18, Locus 61	55+7/ (top: 19.58, bottom: 19.40)	N channel/ contains B.38	soft, brown soil mixed with few bits of stones, contains some plaster fragments, animal bones and flints. Along the E profile there is a concentration of human bones
A 18, Locus 62	55/63 (top: 20.54)	S channel 1. layer	intrusive fill from the disturbance
A 18, Locus 63	62/ (top: 20.01, bottom: 19.32)	S channel 2. layer	brown, soft fill mixed with small bits of stones, animal bones, flints and red plaster fragments, human bones recovered along the E profile
A 18, Locus 64	55/ (top:20.41, bottom(?): 20.37)	below Room 31/ between Locus 61 and 63	division wall between S and N channel
A 18, Locus 65	55+51/ (top:20.39, bottom:19.37)	below Room 31/ S of locus 63	S wall of S channel, partly disturbed by Locus 51
A 18, Locus 66	57/ (top:19.44, bottom: 19.12)	S channel, below Room 32	channel fill below Locus 57, hard surface with limestone particles in the bottom
A 18, Locus 67	57/ (top: 19.44, bottom: 19.14)	middle channel, below Room 32	as Locus 66
A 18, Locus 68	57/ (top: 19.44, bottom: 19.14)	N channel, below Room 32	as Locus 66
A 18, Locus 69	57/ (top: 19.44, bottom: 19.22)	S N channel along E Baulk, below Room 32	as Locus 66
A 18, Locus 70	59/ (top:20.41, bottom: 20.11)	Room 29	fill in corridor (Room 29) below burials, corridor fill around/ underneath burials
A 18, Locus 71-73	(top: 19.41, bottom: 19.12-19.14)	below Room 32	channel walls, 71: S wall of Locus 67, 72: wall between Locus 67 and 68, 73: N wall of Locus 68
A 18, Locus 74	/ (top:20.11, bottom:19.75)	Room 29	room fill below boulders, corridorfill under big boulders
A 18, Locus 75	13,16,18/ (top: 20.82-20.70, bottom: 19.93-19.82)	separating Rooms 27 and 29	wall, lower part of wall Locus 13,16,18, but build in a different way.
A 22, Locus "top soil with Locus 1"	/2 (top: 22.92-22.82, bottom: 22.28)		preserved near surface layers outside bulldozer cut in SW corner of square
A 22, Locus 2	1/4 (top:22.20-22.16)	/ =34?	fill/ stone debris below top soil/Locus 1 in SW corner of square
A 22, Locus 3	2+6/ (top (of 7?) 21.61-21.52, bottom 21.40)		circular pit? with ashes (90 cms) dug into Locus 5 in SW corner of square
A 22, Locus 4	2/5 (top: ?, bottom: 20.87-20.89)		fill/ stone debris in SW corner of square
A 22, Locus 5	4/6		fill below stones, disturbed by Locus 3/7 in SW corner of square
A 22, Locus 6	5/7		fill with many flints and animal bones: hard brown crumbly soil with many small and medium sized stones, contains many chipped stone artifacts and animal bones
A 22, Locus 7 with 3	2+6/ (top (of 7?) 21.61-21.52, bottom 21.40)		circular pit? with ashes (90 cms) dug into Locus 5 in SW corner of square
A 22, Locus 8	7 and bulldozed surface/ 11+ 18? (top: 21.17-21.52)		stone rubble layer of whole square below bulldozed surface
A 22, Locus 9	8/ (top: 21.21)	between Rooms 28 and 35	wall
A 22, Locus 10	8/ (top: 21.17)	separating Rooms 34 and 35	wall, connects walls Loci 9 and 14
A 22, Locus 11	8+13/ 18 (top: 21.16-21.26, bottom(?):20.88-20.92)	Room 35/ belongs to Locus 8	stone rubble layer of Locus 8 E of Wall 10 with animal bone concentration in NE corner of square
A 22, Locus 12	8/23	Room 34/ belongs to Locus 8	stone rubble layer of Locus 8 in Room 34

Appendix A cont. 17.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 22, Locus 13	8/16 (top: 21.15, bottom: 21.03)	above ruined top of Wall 10/ possibly Locus 16	ashy deposit (pit?) (diam. 78 cm) possibly destroying upper part of Wall 10
A 22, Locus 14	8/ (top: 21.14-21.00)		wall
A 22, Locus 15	11/ 18 (top: 20.89-20.96)	above ruined tops of walls	hard fill in SE corner of square
A 22, Locus 16	13+11?/14+22 (top: 20.92-20.94, bottom(?): 20.66)	partly above ruined top of Wall 14	ashy deposit possibly connected with Locus 13
A 22, Locus 17	11/ 37+38 (top: 21.26, bottom: 20.87)	/ between Wall 9 and N section	fill with stones
A 22, Locus 18	15,11/ 21+26/ (top: 20.81)		stone rubble layer covering most of Subsquares b-d of the square, except for part in the center which is disturbed by Locus 16.
A 22, Locus 19	18/	/ connected to Wall 14	wall
A 22, Locus 20	18/	above fills of Room 37/ W of Wall 19, S of Wall 14	Has not been excavated, because it is to narrow.
A 22, Locus 21	18/ 25,27,28		stone rubble layer as Locus 18, but more grey, covering Subsquare b of square from Wall 10 to the E section.
A 22, Locus 22	18/	above fills of Room 38	fill with many stones, the locus is disturbed by a pit? with soft soil.
A 22, Locus 23	12/32	Room 34	fill mixed with lime, maybe a destroyed floor, contains a lot of charcoal.
A 22, Locus 24	18/	E wall of Room 38/ connected to Wall 14	wall
A 22, Locus 25	21/	E wall of Room 35	wall
A 22, Locus 26	18/33	above fills of Room 39	fill with many small stones
A 22, Locus 27	21/	Room 36	room fill
A 22, Locus 28	21/30	Room 35	room fill, soft fill with different stone sizes mixed in
A 22, Locus 29	27(?)/	Room 28	room fill, not fully excavated because it was too narrow
A 22, Locus 30	28/36	Room 35	soil surface with flat slabs in some parts and charcoal
A 22, Locus 31	22/	Room 38	soil surface mixed with mortar, some flat slabs covering it
A 22, Locus 32	23/	Room 34	soil surface with some flat slabs
A 22, Locus 33	26/41	Room 39	soft room fill
A 22, Locus 34	top soil/35, 9?	/ =2?	soft fill with many finds in W half of N Baulk, partly covering W extension of Wall 9?
A 22, Locus 35	34/ 39		stone rubble layer in NW corner of square extending into Squares A 16 and A 21
A 22, Locus 36	30/	Room 35	soil surface with limegrits and charcoal, burials in NE corner of room
A 22, Locus 37	17/	Room 28/ E of Locus 38	soft fill with stones and remains of human skulls
A 22, Locus 38	17/	Burial 16, Room 28/ W of Locus 37	loose fill with charcoal and large stone slabs, perhaps a threshold for an entrance, remains of burials
A 22, Locus 39	35/	/ W of Wall 40	stone fill in NW corner of square extending into Squares A 16 and A 21. According to drawing page 75 it is N of Wall 9
A 22, Locus 40		/ continuation of Wall 2 in Square A 17	wall, entrance between Walls 9 and 40

Appendix A cont. 18.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 22, Locus 41	33/43+44	Room 39	room fill dark greyish brown dirt with many small stones, much flint and bones, few ground stone implements and bracelet fragments
A 22, Locus 42		S wall of Rooms 38 and 39	wall, half hidden in the S Baulk
A 22, Locus 43	41/	E wall of Room 39	wall, half hidden in the E Baulk
A 22, Locus 44	41/	Room 39	hard soil surface with charcoal and lime grits, plaster floor preserved in some places
A 3/7, Locus 2 of 1987	top of ashy cultural layer with dense artefacts/surface		
A 3/7, Locus 3 of 1987	/		
A 3/7, Locus 1 (top soil)	/2	Room 5a/ baulk removal	surface of site, no information about finds etc. because the pages are missing in the diary
A 3/7, Locus 2	1/3 (bottom: 23.30-23.48)	Room 5a/ baulk removal	disturbed area from just below top soil and *c.* 60 cms below (outside bulldozer cut)
A 3/7, Locus	2/ (top: 23.30-23.48, bottom: 23.33-23.43)	Room 5a/ same as Locus 1 of 1987 of Square A 3, baulk removal	loose silty wash from downslope erosin mixed with cultural deposit
N/ E (=A 4/8), "trimming of bulldozer section"	"trimming of bulldozer section"		
A 6, Locus "top soil" /N Baulk (Square A 2/A 6)	/1 (top: 22.38-22.42)	/ same as "top soil" in Square A 6	bulldozer surface
A 6, Locus 1 /N Baulk (Square A 2/A 6)	"top soil"/2-4 (top: 22.35-22.39)	/ same as Locus 1 in Square A 6/Subsquare a	compact fill with stones
A 6, Locus 2 /N Baulk (Square A 2/A 6)	1/4 (top: 22.30)	/ does not exist in Square A 6	area of loose fill with small atones (pit?)
A 6, Locus 3 /N Baulk (Square A 2/A 6)	1/"bedrock"? (top: 22.33)	NW corner	ashy fill (pit?)
A 6, Locus 4 /N Baulk (Square A 2/A 6)	1.2/5.6 (top: 22.26-22.31)	NW corner	compact fill next to Locus 3
A 6, Locus 5 /N Baulk (Square A 2/A 6)	4/ (top: 22.29)	NW corner	red compact fill below and next to Locus 4
A 6, Locus 6 /N Baulk (Square A 2/A 6)	4/circ. inst. (top: 21.86-22.22)		loose sandy fill with stones
A 6, Locus 7 /N Baulk (Square A 2/A 6)	/4 (top: 22.21-22.25, bottom: 22.01-22.03)	NW corner	circular installation consisting of firecracked silicified limestone/ quartzite
A 6, Locus 8 /N Baulk (Square A 2/A 6)	"top soil"/ (top: 22.22)	NW wall of Room 6	wall
A 6, Locus 1 /E Baulk (Square A 6/A 7)	/2 (top: 22.07-22.22)		bulldozer surface
A 6, Locus 2 /E Baulk (Square A 6/A 7)	floor 1/23 (top: 21.93-22.01)		loose fill with stones
A 8/A 9, Locus 1	(top: 22.62-23.21)	/ same as Locus 2 of 1986 in Square A 8	wall, bottom level not as deep as wall Locus 4 of 1987
A 8/A 9, Locus 2	(top: 22.47-23.24, bottom: 21.62-21.78)	/ same as Locus 4 of 1986 in Square A 9	wall, bottom not as deep as wall 4 of 1987
A 8/A 9, Locus 3	/7 (top or bottom: 22.38)	Room 11c/ below or the same as Locus 6 of 1986 in Square A 8	stone rubble layer
A 8/A 9, Locus 4	(top: 21.51-22.46, bottom: 21.07-21.04)	belongs both to substructure and main building phase/ same as Locus 7 of 1986 in Square A 8 and Locus 15 of 1986 in Square A 9	wall
A 8/A 4, Locus 5	/6 (bottom: 22.22)		baulk removal

Appendix A cont. 19.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
A 8/4, Locus 6	5/		no reference in the diary except that it is said to be below Locus 5
A 8/9, Locus 7	3/ (top: 21.02-21.05)	Room 11c	yellow compact surface, on which wall Locus 4 is founded
A 9,10,13,14, Locus baulk removal between A 9c, A 10d, A 13b and A 14a	/8-10 (top: 21.95, bottom: 20.79)	/ same as Locus 1 + 2(?)	baulk removal

Appendix B. Area A. Geoarchaeological Layer Description of the NW Section.

Layer (LocusNo.)	Matrix (With Ash/Charcoal Components) and Munsell Color Notation of Matrix <Field No. of Sample>	Cultural Deposits and Larger Mineral Inclusions (Without Artefacts)/ Orientation/ Characterization of Layer	Associated Artefacts
1	same as Layer 1b in the NW Section		
2	10YR 8/2-3 “white - very pale brown” <1058>	solid, hard limy soil (plaster floor?); limestones (<6 cm); charcoal; bones	flint artefacts
3	10YR 4-5/1 “grey- dark grey”	powdery ash layer; small lime particles; sharp-edged dark limestones(<5 cm); firm consistency	flint artefacts
4	10YR 4-5/1 “grey- dark grey”	pit; same as Layer 3, but with hard limy soil concentrations	flint artefacts (horizontally embedded)
5	10YR 5/1-8/2 “grey- white”	powdery ash layer with high density of hard limy soil; limestone particles; shell particles (horizontally embedded); limestones (<4 cms); charcoal; firm consistency	flint artefacts
6	10YR 5/1 “grey”	same as Layer 5, but without hard limy soil concentrations	flint artefacts
7	10YR 5/1- 8/2 “grey- white”	same as Layer 5, but larger charcoal particles	flint artefacts
8	10YR 4-6/1 “grey- dark grey”	same as Locus 3, but more lime particles; little charcoal	occasional flint artefacts
9	10YR 5/1 “grey”	same as Layer 5, but more charcoal particles; stones (<5 cms)	flint artefacts
10	10YR 5/1 “grey”	same as Layer 3, but occasional hard limy soil concentrations; lime particles; stones (<4 cms); bones	flint artefacts
11	10YR 8/2-3 “white- very pale brown”	hard limy soil; charcoal; lime particles; concentrations of stones (<10mm); bones	
12	10YR 6-7/1 “grey”	hard limy soil; ash lenses; higher density of ashes than in Layer 11; lime particles; stones (<2 cms)	flint artefacts
12a	10YR 3-4/1 “very dark grey - dark grey”	ash lens of powdery very loose consistency; charcoal; sharp-edged stones (<3 cms); bones	flint artefacts
13	10YR 8/1-3 “white - very pale brown” <1060>	hard lime soil layers, difficult to differentiate: various layers of different colors, consistency and contents: partly solid, partly less solid, contains stones, lime particles, chipped artefacts and charcoal	
13a	10YR 5-7/1 “grey - light grey”	ash lens, very fine and powdery; small stones <10 cms; charcoal and lime particles; bones	flint artefacts
13b	10YR 2-3/1 “black - very dark grey”	ash lens, very loose material; stones <1,5mm; occasional sharp-edged stones <3 cms; lime particles; charcoal concentrations; bones	flint artefacts
14	7.5YR 8/0 “white”	very fine- grained ash layer or lens, very loose; lime particles; small stones <10mm, larger stones <8 cms	
15	10YR 2/1-6/1 “black- grey” <1059>	ash layer of fine powdery material; very little lime particles; sharp- edged burnt limestones <7 cms; charcoal	
16	10YR 8/2-3 “white - very pale brown”; middle part: 10YR 7/1 “light grey”	very hard limy soil, similar to Layer 2; lime particles; charcoal; large stones <6 cms, smaller stones <2 cms; consists of 3 sub-layers: the middle part has a higher density of ashes	
17	10YR 3/1-4/1 “very dark grey - dark grey”	ash layer with hard limy soil concentrations, burnt bone fragments, sharp-edged limestones <4 cms and charcoal	
18		disturbance, same as Layer 8/10	disturbance, same as Layer 8 / 10
19	10YR 6-7/1 “light grey”	hard limy soil with a high density of ashes and densely packed stones in loose sediment; lime particles; small stones <2 cms; charcoal	
20	10YR 5-7/1	ash lens with high density of lime particles; burnt limestones <5 cms; charcoal; bones	flint artefacts
21	upper part: 5YR 8/3 “pink”; lower part: 7.5YR 8/2 “pinkish white” : change of color in the transition from Locus 13 to Locus 21 <1055>	hard limy soil similar to Layer 13, but with traces of burning/ burnt and charcoal particles	

Layer (LocusNo.)	Matrix (With Ash/Charcoal Components) and Munsell Color Notation of Matrix <Field No. of Sample>	Cultural Deposits and Larger Mineral Inclusions (Without Artefacts)/ Orientation/ Characterization of Layer	Associated Artefacts
22		("bedrock")	
23	<1056>	same as Layer 16	
24	10YR 3-4/1 "very dark grey - dark grey"	ash lens of rather firm consistency; lime particles; sharp- edged burnt limestones; few bones; charcoal particles	flint artefacts
25	10YR 8/3 "very pale brown" to 10YR 3/1 "very dark grey"	mixture of ashes and hard limy soil concentrations; high density of lime particles; burnt limestones; small bone fragments	flint artefacts
26	10YR 7-8/1 "light grey - white"	ash layer of rather firm consistency; lime particles	
27	10YR 4-6/1 "dark grey - grey"	fine- grained "pearling" sediment; lime particles; occasional concentrations of hard limy soil; small charcoal particles; bones	flint artefacts
28	10YR 5-6/1 "grey"	fine- grained pearling sediment ash lens: ash concentrations with charcoal and lime particles	
29	10YR 5-6/2 "greyish brown - light brownish grey"	fine- grained pearling matrix with high density of ashes; lime particles; mortar concentration; sharp- edged stones <5 cms; charcoal particles; bones	flint artefacts; situated below stones: belonging to a wall foundation?
30	10YR 5-6/1 "grey"	mixed soil of ashes and hard limy concentrations; rather solid consistency; burnt sharp- edged limestones <6 cms; disintegrated plaster/mortar; occasional bones; charcoal	flint artefacts
31	limestone wall	limestone wall	limestone wall
32	10YR 5-6/2 "greyish brown - light brownish grey"	rather solid consistency; high density of lime particles; limestones <12 cms; occasional bone fragments and charcoal particles	flint artefacts
32a		concentration of sharp- edged limestones <8 cms	stone concentration above Layer 31
33a	10YR 8/3-6 "very pale brown - yellow"	hard limy soil with embedded ashes; solid consistency; accumulation of sharp-edged limestones <10mm and <5 cms	
33b	10YR 6/1 "grey" and 10YR 8/3-6 "very pale brown - yellow"	similar to Layer 33a, but with higher density of ashes and a less hard limy soil; concentrations mark former surface with Layer 33a; bones	flint artefacts
34	10YR 5-6/1 "grey"	"pearling" ash layer; lime particles; burnt sharp- edged limestones <8 cms; charcoal; bones	flint artefacts
35	10YR 4-5/1 "dark grey - grey"	rather firm ash layer; lime particles; sharp-edged limestones <5 cms; smaller hard limy soil concentrations; charcoal particles; bones	flint artefacts
36	10YR 4-6/1 "dark grey - grey" - 10YR 8/1 "white" - 10YR 8/6 "yellow"	area of different materials; different ash troughs with hard limy soil concentrations and ashes of different "pearling" to solid consistency; limestones <10 cms; lime and charcoal particles	flint artefacts
37	10YR 6-7/1 "light grey" - 10YR 8/1 "white"	ash trough (fine- grained, "pearling") sediment with ash and occasional hard limy soil concentrations; small limestones <10mm; larger stones <20 cms	flint artefacts
38	10YR 8/1 "white"; 10YR 8/3 "very pale brown"; 10YR 6-7/1 "light grey" <1053>	rather solid, mixed layer of hard limy soil with ashes, charcoal particles, small limestones <10mm; occasional sharp-edged burnt limestones <5 cms; few bones	few flint artfeacts
39	10YR 6-7/1 "light grey - grey"	ashy layer with powdery to fine- grained matrix, rather firm; lime particles; small sharp- edged limestones; occasional charcoal particles	occasional flint artefacts
40	10YR 6/1 "grey"	ashy layer of rather firm consistency; different densitys of ash concentration; lime particles; burnt sharp-edged limestones <8 cms; occasional concentrations of charcoal; bones	flint artefacts
41	10YR 2/1 and 3/1 "very dark grey - black"	ash lens of powdery consistency; lime particles; small burnt limestone and charcoal particles <10mm	
42	10YR 6/1-2 "grey - light brownish grey"	fine- grained "pearling" sediment; sharp- edged burnt limestones; large stones <20 cms; lime particles; bones	flint artefacts
43	10YR 6/1-2, 7/1-2, and 8/3 "light grey - grey, light brownish grey - very pale brown"	area of hard limy soil deposits and ash/ ashy layers; not differentiated in detail	
43a	10YR 3/1 and 2/1 "very dark grey - black" <1057>	burnt sharp- edged stones <15 cms	fireplace ?
44	10YR 7/2-4 "light grey - very pale brown"	hard limy soil of solid consistency; ash concentrations with dense charcoal distributions; bones	flint artefacts

Layer (LocusNo.)	Matrix (With Ash/Charcoal Components) and Munsell Color Notation of Matrix <Field No. of Sample>	Cultural Deposits and Larger Mineral Inclusions (Without Artefacts)/ Orientation/ Characterization of Layer	Associated Artefacts
45	10YR 7/1 - 8/1 "light grey - white" <1054>	fine- grained sediment of solid consistency; occasional hard limy soil concentrations; stones <8 cms; lime particles; bones	flint artefacts
45a	10YR 7/1-3 "light grey - very pale brown"	same as Layer 45, but with higher density of ashes	flint artefacts
46	10YR 6/2 "light brownish grey"	same as Layer 45, with denser distribution of stones: smaller stones <8 cms, larger stones <15 cms	flint artefacts
47	10YR 6/1 "grey"	coarse- grained sediment, rather firm; stones <5 cms; lime particles; higher density of ashes than Layer 45; bones	occasional chipped artefacts
48	*	fine-grained material	
49	*	fist-sized, densely packed limestone gravel	
50	* <1063>	similar to Layer 48	
51	*	similar to 49, but less densely packed gravels, possibly related to the same erosional event as Layer 49	
52		*in situ* gravel fill above the cover slabs of substructure walls	
53		dry stone masonary of substructure walls	
54	*	limestone rubble	
55	*	fine-grained material with limestone gravel	
56		limestone wall of a room or a terrace	
57	*	fine-coarse - grained material	
58a-b	*	fine-coarse - grained material, separated by to colours	
59	*	<no record>	
58a	2.5Y 5/2 "greyish brown"	very loose and fine grained; many stones 2-13 cms; minor patches like material in Layer 57; few bones	some flint artefacts
58b	see Layer 58a	see Layer 58a, but with very large patches of materials as described for Layer 57	some flint artefacts
60	10YR 8/1-2 "white" <1062>	rather solid ashy layer; lime particles; stones <5 cms; larger stones <15 cms; charcoal; bones	flint artefacts
61		very loose, fine grained to powdery sediment gravel deposit of larger (<15 cms), medium-sized (<8 cms) and smaller (<3 cms) stones between Locus/Layer 56 and 63; lime particles; sudivision of layer (a-g) can be differentiated by stone sizes	large gravel accumulation
62			limestone wall (up-per edge covered with mortar; wall runs iinto section)- limestone wall (runs E-W)
63			limestone walll
64	10YR 5/2 "greyish brown"	more compact than Layer 58; middle/fine-grained high concentration of stones (2-5 cms); limestone particles; some bones	many flint artefacts
65	10YR 5/1 "grey"	fine- grained; many stones (3-7 cms); few bones	some flint artefacts

* field data not complete; *cf.* Square A 8.

Appendix C. Area B. Locus Data List.

Note: This locus list does not consider all squares. It contains the loci of those squares which needed to be re-evaluated for their infield stratigraphical information and description. For the stratigraphical information of all loci *cf.* the Stratigraphic Chart Area B, this volume.

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 22, top soil	/1-2-5	top soil above Phase BI/	compact fine-grained layer mixed with flint artifacts, bones and ash/ top soil
B 22, Locus 1	top soil/3	none, above Phase BI/	downslope re-deposited cultural debris with high content of mortar-like material and colluvial depositions/ upper part of Upper Rubble Layers?
B 22, Locus 2	top soil/4	none, above Phase BI/	partly in situ, partly re-deposited cultural debris/ upper part of Upper Rubble Layers?
B 22, Locus 3	1/	none, above Phase BI/	partly in situ, partly re-deposited cultural debris of a pit-like feature (like in B 23 an B 35)/ upper part of Upper Rubble Layers?
B 22, Locus 4	2/11-12+19	none, above Phase BI/	downslope re-deposited cultural debris/ upper part of Upper Rubble Layers?
B 22, Locus 5	top soil/10	related to upper part of room fill of Phase BI/	downslope re-deposited cultural debris/ upper part of Upper Rubble Layers or re-deposited room fill of Phase BI
B 22, Locus 6	2/4	none, above Phase BI/	"pocket" of top soil? in the SE corner of B 22
B 22, Locus 7	1+5/	Phase BI/ context to ground plan not clear	/ wall
B 22, Locus 8	3/13	ruin of Phase BI/	compact fill of charcoal, ashes, bones and flint artifacts/ room fill
B 22, Locus 9	3+5/13	ruin of Phase BI/	child burial within stone rubble/ burial
B 22, Locus 10	5/23	none, above Phase BI/	downslope re-deposited cultural debris with high content of mortar-like material and colluvial depositions/ upper part of Upper Rubble Layers?
B 22, Locus 11	4/16	none, above Phase BI/	downslope re-deposited cultural debris/ upper part of Upper Rubble Layers?
B 22, Locus 12	4/26+33-34	none, above Phase BI/	downslope re-deposited cultural debris/ upper part of Upper Rubble Layers?
B 22, Locus 13	8/9+23	ruin of Phase BI/ next to burial Locus 9	/ cultural debris mixed with disturbed fireplace
B 22, Locus 14	8-9/13	ruin of Phase BI/	plaster materials on stone bed/ disturbed floor in a room fill?
B 22, Locus 15	11/17-18+28	ruin of Phase BI/	clayish soil mixed with stones, flint artifacts and bones/ re-deposited? room fill
B 22, Locus 16	11/	none, above Phase BI	downslope re-deposited cultural debris/ upper part of Upper Rubble Layers?
B 22, Locus 17	15-16/20-22	ruin of Phase BI/	compact clayish soil mixed with stones, pebbles, flint artifacts and bones/ room fill
B 22, Locus 18	11-12+15-16/	Phase BI/ linked to collapsed wall Locus 28 and floor Locus 30	double-faced wall running c. 2 m WNW-ESE, slightly bended/ wall
B 22, Locus 19	4+13/	Phase BI/ linked to wall Locus 23	curvilinear double-faced wall running c. 2,5 m NW-E, 50 cm in width/ wall
B 22, Locus 20	17/28-29	ruin of Phase BI or Phase I/	compact soil of probably temporary surface mixed with ashes and charcoal/ passage? or surface between room fills
B 22, Locus 21	17/	Phase BI/ linked to wall Locus 19	wall in Baulk B 21/22, preserved > 7 courses/ wall
B 22, Locus 22	17/	Phase BI/ linked to wall Locus 18 in Room 2 (!)	wall in Baulk B 21/22/ wall

Appendix C cont. 1

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 22, Locus 23	10+13/24	ruin of Phase BI/	compact clayish soil mixed with stones, pebbles, flint artifacts and bones/ room fill
B 22, Loci 24 – 27	information missing	information missing	information missing
B 22, Locus 27	26/	ruin of Phase BI or Phase BI/	fragment of a plastered floor E of walls Loci 28 and 34
B 22, Locus 28	20/	Phase BI/	/ collapsed wall Locus 28
B 22, Locus 29	20/30	ruin of Phase BI or Phase BI/	/ room fill
B 22, Locus 30	29/	Phase BI?/	floor prepared by mortar-like material/ temporary floor in Room 2?
B 22, Locus 31	26/	ruin of Phase BI/	cultural debris layer E of walls Loci 28 and 34
B 22, Locus 32	24+26//	ruin of Phase BI/	cultural debris layer E of walls Loci 28 and 34
B 22, Locus 33	12/	Phase BI/	double-faced wall running N-S, 25 cm in width, connecting with wall Locus 33/ wall
B 22, Locus 34	12/	Phase BI/	small wall running E-W, 80 cm in width, connecting walls Loci 7/34 and 28 (incorrectly designed as Locus 23 in the Top Plan Area B)/ wall
B 34, top soil of 1989	/1	none, top soil above Phase BI/	compact fine-grained layer mixed with bones and ash/ top soil
B 34, Locus 1 of 1989	top soil/ 2, 3	none, above Phase BI/ top soil	compact fine-grained layer mixed with bones and flint artifacts/ top soil
B 34, Locus 2 of 1989	1/	above Phase BI/ Upper Rubble Layers, without stratigraphical connection to wall Locus 18 underneath, founded on layer Locus 10?	1,25 m long double-faced wall/ wall most probably belonging to Phase B0, together with Layers 13-16 (1989)
B 34, Locus 3 of 1989	1/4+9+13	above Phase BI/	downslope re-deposited cultural debris and colluvial material, including wall stones/ upper part of Upper Rubble Layers
B 34, Locus 4 of 1989	3/5+13	above Phase BI/	downslope re-deposited cultural debris and colluvial material, including wall stones/ central part of Upper Rubble Layers
B 34, Locus 5 of 1989	4/6-8+11	above Phase BI/	downslope re-deposited cultural debris and colluvial material, including wall stones/ lower part of Upper Rubble Layers
B 34, Locus 6 of 1989	5/	above Phase BI, stratigraphically related to wall Locus 2?/	/ wall remains?
B 34, Locus 7 of 1989	5/	above Phase BI/	/ pit with stone floor
B 34, Locus 8 of 1989	5/	above Phase BI/ stratigraphical link between wall Locus 6 and pit Locus 7	/ unspecific layer of loose soil with flint artifacts
B 34, Locus 9 of 1989	3/16	above Phase BI, walls Loci 35 and 40/ in the SE corner of square	/ unspecific layer of loose soil mixed with flint artifacts and bones
B 34, Locus 10 of 1989	3+5/	above Phase BI, central part of square/ records missing	no records missing/ upper part of Lower Rubble Layer
B 34, Locus 11 of 1989	5/	above Phase BI/ possibly linked to the wall Locus 2	/ remains of a fallen wall?
B 34, Locus 12 of 1989	10/	Phase BI/	/ wall
B 34, Locus 13 of 1989	3+4/21	above Phase BI/ Lower Rubble Layers	sandy layer with ash, flint artifacts and bones/
B 34, Locus 14 of 1989	10/17+18	above Phase BI/ Lower Rubble Layers	compact layer with sandy patches and wall stones/
B 34, Locus 15 of 1989	9+13/	above Phase BI/ Lower Rubble Layers	U-shaped single-row stone circle filled with flint artifacts and bones/ pit

Appendix C cont. 2

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 34, Locus 16 of 1989	9/	above Phase BI/ Lower Rubble Layers	earth floor or surface/ floor
B 34, Locus 17 of 1989	14/	above Phase BI/ Lower Rubble Layers	layer of loose soil/
B 34, Locus 18 of 1989	14/	Phase BI/ linked with walls Loci 19 and 26	/ wall
B 34, Locus 19 of 1989	14/	Phase BI/ linked with walls Loci 18, 24 and 12	/ wall
B 34, Locus 20 of 1989	7+10/	Phase BI/	layer of very soft soil/ room fill BI
B 34, Locus 21 of 1989	13/	above Phase BI/ Lower Rubble Layers	layer of very compact soil/ lower part of Lower Rubble Layers in B 34c-d
B 34, Locus 1 - 5 of 1992	information missing	information missing	information missing
B 34, Locus 6 of 1992	5/28-29	Phase BI/	collapsed upper wall parts of Loci 19 and 29/ collapsed wall material
B 34, Locus 7 of 1992	information missing	information missing	information missing
B 34, Locus 8 of 1992	5/	above Phase BI/ Lower Rubble Layers	layer of loose soil carrying cultural debris/ lower part of Lower Rubble Layers in B 34b
B 34, Locus 9 – 15 of 1992	information missing	information missing	information missing
B 34, Locus 16 of 1992	9/32	above Phase BI/ Lower Rubble Layers	clayish compact surface/ temporary floor
B 34, Locus 17 of 1992	14/23-24	above Phase BI/ Lower Rubble Layers	sandy layer mixed with cultural debris/
B 34, Locus 18 of 1992	14/	Phase BI/ linked with walls Loci 26 and 19	double-faced wall of small room running roughly E-W, preserved by at least 20 courses, width c. 36 cm/ wall
B 34, Locus 19 of 1992	14/	Phase BI/ linked with walls Loci 12, 24 and 18	double-faced wall of bordering Rooms 5 and 6 to the E, running NNE-SSW, preserved by at least 11 courses, width c. 36 cm/ wall
B 34, Locus 20 of 1992	7+10/30+44	above Phase BI/ Lower Rubble Layers	sandy layer mixed with cultural debris/
B 34, Locus 21 of 1992	13/31	above Phase BI/ Lower Rubble Layers	clayish and compact layer mixed with cultural debris/
B 34, Locus 22 of 1992	14+17/23+26-27	Phase BI/	stone rubble/ collapsed wall material of Phase BI
B 34, Locus 23 of 1992	17/48	above Phase BI/ Lower Rubble Layers	sandy layer mixed with cultural debris/
B 34, Locus 24 of 1992	17/25	Phase BI/ linking walls Loci 19 and 26	double-faced wall of separating Rooms 5 and 6, running NW-SE, 25 cm in width, preserved by at least 10 courses/ wall
B 34, Locus 25 of 1992	22/49	above Phase BI/ Lower Rubble Layers or room fill of Phase BI	sandy layer mixed with cultural debris/ room fill?
B 34, Locus 26 of 1992	22/	Phase BI/ linked with walls Loci 12, 24 and 18	double-faced wall of bordering Rooms 5 and 6 to the EW, running NNE-SSW, preserved by at least 17 courses, width c. 36 cm/ wall
B 34, Locus 27 of 1992	22/	above Phase BI/ Lower Rubble Layers or room fill of Phase BI	sandy compact layer mixed with cultural debris W of wall Locuss 26/ room fill?
B 34, Locus 28 of 1992	6/	Phase BI or a wall part related to a modification in the ruin during the basal Lower Rubble Layer period (Phase B0)/	double-faced wall running E-W between Room 7 and Room/ Space 9, preserved by at least 5 courses/ wall
B 34, Locus 29 of 1992	6/	Phase BI/ wall joining wall Locus 28	double-faced wall running SE-NW, preserved by at least 7 courses, 90 cm in width/ wall
B 34, Locus 30 of 1992	20/	room fill of Phase BI/	sandy loose layer with cultural debris

Appendix C cont. 3

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 34, Locus 31 of 1992	15+21/34+36-37	room fill of Phase BI/	sandy loose layer with cultural debris and high share of disintegrated mortar eroding from wall Locus 28/ temporary surface in ruin
B 34, Locus 32 of 1992	16/	above Phase BI/ Lower Rubble Layers or room fill of Phase BI	compact clayish layer with stones S of wall Locus 35/
B 34, Locus 33 of 1992	16/	room fill of Phase BI/	compact – loose layer mixed with cultural debris (similar to Locus 16)/ temporary surface in ruin
B 34, Locus 34 of 1992	31/	room fill of Phase BI/	sandy – loose layer mixed with cultural debris/
B 34, Locus 35 of 1992	16/	Phase BI/ linked with wall Locus 40	double-faced wall running E-W with a length of c. 2,4 m and a width of 38 cm, preserved by at least 7 courses/ wall
B 34, Locus 36 of 1992	31/39+41+47	room fill of Phase BI/	compact – loose layer mixed with cultural debris/
B 34, Locus 37 of 1992	31/	Phase BI/ wall running in right angle into the S Baulk from wall Locus 35	visible length of wall is 35 cm, width 50 cm, preserved by at least 5 courses, remains of a floor connected to the wall in the S Baulk/ wall
B 34, Locus 38 of 1992	36/47	Phase BI/	red-stained plastered floor W of wall Locus 37/ floor
B 34, Locus 39 of 1992	36/42	Phase BI/ floor joining walls Loci 35, 40 and 41	cream and red-stained plastered floor fragments in Room/ Space 9/ floor
B 34, Locus 40 of 1992	16/	Phase BI/ joining with wall Locus 35	leaning/ bended double-faced wall of 1,4 m in length and 60 cm in width, preserved by at least 30 (!) courses/ wall
B 34, Locus 41 of 1992	33/	Phase BI or later wall inserted in the ruin of Phase BI/ wall connects to walls Loci 35 an 28	wall preserved in 4 courses running curved from E to S in Room/ Space 9/ wall (not in Top Plan Area B)
B 34, Locus 42 of 1992	39/43+52	room fill of Phase BI "going over and under floor Locus 43"/	compact – clayish layer with cultural debris/ room fill
B 34, Locus 43 of 1992	42/	floor in a room fill of Phase BI/	ill-preserved plaster floor between walls Loci 35, 40 and 41/ floor
B 34, Locus 44 of 1992	20+30/45-46	room fill of Phase BI/	compact – loose sandy layer with cultural debris/ room fill
B 34, Locus 45 of 1992	44/	surface or floor in the room fills of Phase BI/	surface or floor covered with ashes/ temporary surface or floor
B 34, Locus 46 of 1992	45/	room fill of Phase BI/	*cf.* Gebel *et al.* 2004: 84-85/ burial in the fills of Room 7
B 34, Locus 47 of 1992	36-38/	room fill of Phase BI/ similar to Locus 42	sandy – clayish layer with cultural debris/ room fill
B 34, Locus 48 of 1992	23/51	room fill of Phase BI/	loose – compact sandy layer with cultural debris/ room fill
B 34, Locus 49 of 1992	25/50	room fill of Phase BI/	loose – compact clayish layer with cultural debris/ room fill
B 34, Locus 50 of 1992	49/	room fill of Phase BI/	compact layer with cultural debris/ room fill
B 34, Locus 51 of 1992	48/	Phase BI/	offset/ step in wall course of wall Locus 12, northern side/ another phase of Locus 12 or support of for a ceiling (?)
B 34, Locus 52 of 1992	42/53	room fill of Phase BI/	compact – clayish layer with cultural debris/ room fill
B 34, Locus 53 of 1992	52/	room fill or surface in the room fills of Phase BI/	very compact surface containing ashes and charcoal/ room fill or a temporary surface
B 35, top soil	/1	none, top soil above Phase BI/	3-12 cm of loose grayish topsoil, mixed with pebbles and artifacts from Neolithic to modern/ top soil
B 35, Locus 1	top soil/	none, above Phase BI/	compact fine-grained layer mixed with ashes, flint artifacts, bones, small finds/ Fine-Grained Deposits

Appendix C cont. 4

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 35, Locus 2	1/	none, above Phase BI/	concentration of "fallen" stones in B 35a/ stone concentration in the Fine-Grained Deposits
B 35, Locus 3	1/	none, above Phase BI/	compact fine-grained deposits mixed with many pebbles, bones and flint artifacts in B 35a-b+d/ Fine-Grained Deposits
B 35, Locus 4	1/	none, above Phase BI/ continuation of Locus 1 in B 35c	compact fine-grained layer mixed with few pebbles, flint artifacts, bones, small finds in B 35c/ Fine-Grained Deposits
B 35, Locus 5	3/	none, above Phase BI/	compact "surface" layer in B 35a/ surface in Fine-Grained Deposits
B 35, Locus 6	3/	none, above Phase BI/	surface of a large pit extending from B 35a into B 35d and into B 23d, pit contains many bones/ pit is either a feature of the Fine-Grained Deposits or of the rubble layers
B 35, Locus 7	3/12	none, above Phase BI/ continuation of Locus 3 in B 3a-b+d	"hard grayish soil" mixed with small pebbles/ stones in B 35b/ Fine-Grained Deposits
B 35, Locus 8	4/	none, above Phase BI/	/ modern pit for the foundation of an upright standing stone in B 35c
B 35, Locus 9		none, above Phase BI/	/ modern pit for the foundation of an upright standing wooden post in B 35d
B 35, Locus 10	7/	none, above Phase BI/	/ (modern?) pit? in in B 35b
B 35, Locus 11	7/14	none, above Phase BI/	layer of small pebbles mixed with many flint artifacts/ deposit of Neolithic cultural debris of unknown origin
B 35, Locus 12	7/	none, above Phase BI/	surface and layers of pebbles and fist-sized stones in hard matrix in all B 35/ upper part of Rubble Layers
B 35, Locus 13	6/	none, above Phase BI/	circular setting of stones in the pit Locus 6 in B 35a/ wall feature of the Upper? Rubble Layers?
B 35, Locus 14	7+11-12/	none, above Phase BI/	compact lime-rich surface/ layer in B 35d/ re-deposited mortar material of the BI ruin? in the Upper? Rubble Layers
B 35, Locus 15	11/	none, above Phase BI/	/ (modern?) pit dug into Locus 14
B 35, Locus 16	6+13/	none, above Phase BI/	mortar concentration/ Upper? Rubble Layers
B 35, Locus 17	6/	none, above Phase BI/	layer of fallen stones in pit Locus 6/ feature of the Upper? Rubble Layers?
B 35, Locus 18	12/35	none, above Phase BI/ continuation of Locus 12	layers of pebbles and fist-sized stones in hard matrix in all B 35b-c/ part of Rubble Layers
B 35, Locus 19	14+12+18/	none, above Phase BI/	"hard surface" in B 35c-d/ re-deposited mortar material of the BI ruin? in the rubble layers
B 35, Locus 20	16/	Phase BI/	wall running N-S in B 35a/ wall
B 35, Locus 21	16/	Phase BI/	wall running parallel and W to wall Locus 20/ wall
B 35, Locus 22	16/	Phase BI/	wall running parallel and W to wall Locus 21/ wall
B 35, Locus 23	6+14/	room fills Phase BI/	collapsed wall remains of wall Locus 31 in Room 11/ ruin layer BI
B 35, Locus 24	14/	room fills Phase BI?/	water-laid deposit of small stones and pebbles cut by pit Locus 9/ surface of a lower rubble Layer or inside a room of he ruin
B 35, Locus 25	19/	none, above Phase BI/	"hard surface/ layer similar to Loci 14 and 19", two deposits of mortar remains/ re-deposited mortar material of the BI ruin? in the rubble layers
B 35, Locus 26	18-19+24-25/36	none, above Phase BI/	soft - loose soil with small stones and pebbles mixed with cultural debris/ finds/ re-deposited material of the BI ruin mixed in a rubble layer deposit

Appendix C cont. 5

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 35, Locus 27	23/	Phase BI/	double-faced E wall of Room 11/ wall
B 35, Locus 28	6/	none, above Phase BI/ a continuation of Locus 6	soft loose soil with large quantity of pebbles between B 35 and b/ either a feature of the Fine-Grained Deposits or of the rubble layers
B 35, Locus 29	25/37	none, above Phase BI/	"hard surface/ layer similar to Loci 14, 19 and 25" in B 35d/ re-deposited mortar material of the BI ruin? in the rubble layers
B 35, Locus 30	24/	room fills Phase BI?/	layer of (re-deposited?) mortar and fallen stones/ lower rubble Layer or inside a room of he ruin
B 35, Locus 31		Phase BI/	E-W double-faced wall, possibly with a wall opening connecting Rooms 11 and 12 (other side isn't preserved)/ wall
B 35, Locus 32	24/48	Phase BI/	disturbed upper parts of wall Locus 48 underneath of Room 12/ wall remains
B 35, Locus 33	23/	room fills Phase BI/	/ mortar deposit E of wall Locus 15 in B 35a
B 35, Locus 34		room fills of BI/	isolated sequence of plaster floors and plaster beds not found related to walls in the utmost NE corner of B 35/
B 35, Locus 35	18/40-44+47	above Phase BI or room fills of BI/	hard soil with small stones and pebbles and cultural debris in B 35b-c/ possibly a layer in the contact zones between room fills and the Lower Rubble Layers
B 35, Locus 36	26/52	above Phase BI/	two superimposed "hard surfaces/ layers similar to Loci 14,19 and 25"/ re-deposited mortar material of the BI ruin? in the rubble layers
B 35, Locus 37	25+29+36/	above Phase BI/	"hard surface/ layer similar to Loci 14,19, 25 and 36"/ re-deposited mortar material of the BI ruin? in the rubble layers
B 35, Locus 38	33/	Phase BI/	badly preserved northern wall of Room 11/ wall
B 35, Locus 39	23+33/	room fills Phase BI/	soft loose layer with small and medium-sized stones in Room 11/ room fill
B 35, Locus 40	34-35/	room fills of BI/ possibly related to wall Locus 45	floor-like layer of mortar or plaster, in parts paved with stone slabs in B 35a-b/ paved floor
B 35, Locus 41	28+35/	room fills of BI/ possibly related to wall Locus 45	stone pavement in B 35a related to Locus 40/ paved floor
B 35, Locus 42	35/	above Phase BI or room fills of Phase BI/ same as Locus 43	"hard soil with surface mixed with medium to small-sized stones/ pebbles at the border between B 35 b and c/ re-deposited mortar material of the BI ruin? in the rubble layers or in situ room fill
B 35, Locus 43	35/	above Phase BI or room fills of Phase BI/ same as Locus 42	*cf.* Locus 43, but more soft soil
B 35, Locus 44	28+35/	room fills of BI/	rubble deposit E of wall Locus 45 used to level the area to the same level as Locus 41
B 35, Locus 45	28/	Phase BI/	wall part running N-S/ wall (wall named by mistake Locus 15 in the Top Plan of Area B)
B 35, Locus 46	28/40	room fills of Phase BI/	mortar layer resting against walls Loci 20, 38 and 45 in the E/ deposited or eroded building material or used to level the ground
B 35, Locus 47	35/	?	two large stones above each other, partly in the E Baulk of B 35b/ ?
B 35, Locus 48		Phase BI/	double-faced wall under remains Locus 32 in Room 12/ wall
B 35, Locus 49	23/	Phase BI/	wall inside the W Baulk at Room 11, probably its W border/ wall

Appendix C cont. 6

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 35, Locus 50	39/	room fills of Phase BI/	remains of a plaster floor in the northern part of Room 12, stained in red in parts/ painted plaster floor
B 35, Locus 51		room fills of Phase BI/	no information available, south of Locus 50/ ?
B 35, Locus 52	36/	room fills of Phase BI/	hard, mortar containing surface/ layer similar to Locus 36 above/ re-deposited mortar material of the BI ruin? in the rubble layers or deposited mortar material of collapsed room walls of Space 13
B 35, Locus 53	42/	room fills of Phase BI/	in the central part of B 35 an isolated spot with superimposed plaster floors/ floor remains
B 35, Locus 54	42/	Phase BI/	double-faced wall running NNE-SSW in B 35c/ isolated wall part
B 35, Locus 55	52/	room fills of Phase BI/	"loose soil mixed with small stones" in Space 13/ room fill
B 35, Locus 56		room fills of Phase BI/	probably water-laid loose silty soil in the SE part of Space 13/ naturally deposited room fill?
B 35, Locus 57	42/	room fills of Phase BI/ said to be a continuation of Locus 42	soft loose soil on both sides of wall Locus 54/ room fills?
B 35, Locus 58		room fills of Phase BI/	soft loose soil mixed with pebbles in a pit N of wall Locus 54/ representing squatters activities?
B 35, Locus 59	34-35/	Phase BI/	wall part in B 35b of wall Locus 28 of B 23 extending towards N/ isolated wall part
B 35/36 (baulk), Locus 1 (incl. top soil)	/3	above Phase BI/ Locus 1 = B 35, Locus 1	/ hillwash with PPNB artifacts
B 35/36 (baulk), Locus 2	1/	above Phase BI/ = B 35, Locus 7	*cf.* B 35, Locus 7
B 35/36 (baulk), Locus 3	2/9	above Phase BI/ above „floor" Locus 9 in the N end of baulk	?
B 35/36 (baulk), Locus 4	3/3,7	above Phase BI	/ thick layer belonging to the Upper Rubble Layers
B 35/36 (baulk), Locus 5	4/6	above Phase BI/ S end of baulk, = B 35, Locus 26	/ restricted hillwash location? in Upper Rubble Layers
B 35/36 (baulk), Locus 6	5/7	above Phase BI/ S end of baulk, = B 35, Locus 35-36	/ restricted hillwash location? in Upper Rubble Layers
B 35/36 (baulk), Locus 7	4,7/8,15	above Phase BI/ S end of baulk	?
B 35/36 (baulk), Locus 8	7/10 (partly)	above Phase BI/ central baulk	/ deposit of mortar-like material
B 35/36 (baulk), Locus 9	?	stratigraphical relation to Wall Locus 10 unclear/ extension of floor in B 35, Locus 34 and B 23a, Locus 10	/ whitish plaster floor, surface partly destroyed
B 35/36 (baulk), Locus 10	?	Phase BI	/ wall
B 35/36 (baulk), Locus 11	?	Phase BI/ = continuation of Wall Locus 9 in B 36	/ wall
B 35/36 (baulk), Locus 12	?	Phase BI/ connects to Wall Locus 9 in B 36 with Wall Locus 10	/ wall
B 35/36 (baulk), Locus 13	?	Phase BI/ baulk part of Wall Locus 22 in B 36	/ wall
B 35/36 (baulk), Locus 14	?	Phase BI/ = B 36, Locus 21	/ room fill (Room 14) formed by wall debris of the decaying ruin
B 35/36 (baulk), Locus 15	?	/ = B 35, Locus 35	*cf.* B 35, Locus 35

Appendix C cont. 7

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 36, top soil	/1	none, above Phase BI architecture/	top soil mixed with smaller and dressed stones, flint artifacts and grinders/ topsoil
B 36, Locus 1	top soil/2	none, above Phase BI architecture/	compact – loose matrix mixed with smaller and dressed stones, flint artifacts and grinders/ rubble layer or old slope surface
B 36, Locus 2	1/3-7+10	none, above Phase BI architecture/	compact matrix mixed with smaller and dressed stones, flint artifacts, bones and grinders/ rubble layer or old slope surface
B 36, Locus 3	2/	Phase BI/	double-faced wall bordering Room 14 to the E/ interior house wall
B 36, Locus 4	2/12	room fills of Phase BI/	loose deposit containing bones and flint artifacts, pebbles and small stones N of wall Locus 3/ room fill
B 36, Locus 5	2/8-9	room fills of Phase BI/	compact room fill with flint artifacts, bones and fallen wall stones in Room 14/ room fill
B 36, Locus 6	2/	Phase BI/	remains of a double-faced wall bordering Room 14 to the N/ interior house wall
B 36, Locus 7	2/	room fills of Phase BI/	fallen wall stones E of wall Locus 3/ collapsed wall material
B 36, Locus 8	5/11	room fills of Phase BI/	wall rubble inside Room 14/ collapsed wall material
B 36, Locus 9	5/	Phase BI/	remains of a single-row wall bordering Room 14 to the W/ interior house wall
B 36, Locus 10	2/14-15	none, above Phase BI architecture/	in B 36c-d: sandy deposit with small and dressed stones and cultural debris/ lower part f rubble layers or old slope surface
B 36, Locus 11	8/	room fills of Phase BI/	remains of a plaster floor (bed?)/ floor remains
B 36, Locus 12	4/13	disturbed (?) room fill of Phase BI/	area E of wall Locus 3: loose – compact sandy soil mixed with small and dressed stones, pebbles and cultural debris/ disturbed (?) room fill
B 36, Locus 13	12/24	room fills of Phase BI/	area E of wall Locus 3: compact sandy soil mixed with small and dressed stones, pebbles and cultural debris/ room fill
B 36, Locus 14	10/	room fills of Phase BI/	fallen wall stones in Space 16/ room fill with collapsed (and re-deposited?) wall material
B 36, Locus 15	10/	room fills of Phase BI/	fallen wall stones in B 36c mixed with cultural debris/ room fill with collapsed (and re-deposited?) wall material
B 36, Locus 16	10/	Phase BI-II/	described as a single-row channel wall of 2,6 m length running N-S, width 27 cm/ probably resting on a double-faced BII wall, running parallel to channel wall Locus 25
B 36, Locus 17	14/19+23	room fills of Phase BI/	N part of Space 16 in B 35d: small and big stones mixed with cultural debris/ room fill
B 36, Locus 18	14/34-35	room fills of Phase BI/	S part of Space 16 in B 35d: small and big stones mixed with cultural debris and pebbles/ room fill
B 36, Locus 19	?/21	room fills of Phase BI/	in Room 15, south of wall Locus 9: fallen stones mixed with cultural debris/ room fill with fallen wall rubble
B 36, Locus 20	14/	Phase BI/	double-faced wall running N-S, E wall of Room 15/ interior house wall
B 36, Locus 21	19/	room fills of Phase BI/	in Room 15: wall rubble mixed with cultural debris in sandy matrix/ room fill
B 36, Locus 22	19+21/	Phase BI/	double-faced wall running W-E, separating Room 15 and Space 16/ interior house wall

Appendix C cont. 8

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 36, Locus 23	17/33	room fills of Phase BI/	area E of wall Locus 20: compact layer with wall rubble and pebbles/ room fill
B 36, Locus 24	15/26-28	room fills of Phase BI/	"floor", charcoal, small and big stones, pebbles, compact matrix" E of wall Locus 16/ room fill
B 36, Locus 25	17/	substructure of Phase BI/	channel wall running N-S, parallel to wall Locus 16 in Space 16/ substructure (with upper part of Wall Locus 16)
B 36, Locus 26	24/36	Phase BI/	possible wall running NW-SE between walls Loci 29 and 30/ possible wall part
B 36, Locus 27	24/36	room fills of Phase BI/	in N Room 17: compact – loose soil with small stones, pebbles and cultural debris/ room fill
B 36, Locus 28	24/	room fills of Phase BI/	floor remains in the S part of Room 17, over wall Locus 31/ floor remains
B 36, Locus 29	24/	Phase BI/	possible wall running N-S between in Room 17/ possible wall part
B 36, Locus 30	24/	Phase BI/	possible wall running E-W at the N end of Room 17, possibly joining with wall Locus 26 in the E/ disturbed upper wall part or stone pile
B 36, Locus 31	24/	(room fills of?) Phase BI/	slightly curvilinear single-row wall in? Room 17/ ground plan ?
B 36, Locus 32	28/	room fills of Phase BI/	loose layer mixed with stones and cultural debris in the S part of Room 17/ room fill
B 36, Locus 33	23/34-35	room fills? of Phase BI/	between wall Loci 20 and 25: compact – loose soil mixed with small stones and pebbles, charcoal and cultural debris/ room fill or deposit on exposed channels
B 36, Locus 34	18/	room fills of Phase BI/	loose matrix with stone rubble and cultural debris in Room 16/ room fill
B 36, Locus 35	18+34/	room fills of BI/	pit-like depression filled with blackened plaster/mortar material and charcoal in Room 16/ fill from squatters' activity?
B 36, Locus 36	27/37	room fills of Phase BI/	loose matrix with small stones and pebbles and cultural debris in the N part of Room 17/ room fill
B 36, Locus 37	36/	room fills of Phase BI/	plaster floor earlier than floor Locus 28 in the N part of Room 17/ room fill
B 48, Locus top soil	/1	none, above Phase BII architecture/	soft top soil mixed with modern and Neolithic artifacts/ top soil (garden zone)
B 48, Locus 1	top soil/2-3	none, above Phase BII architecture/	compact layer with stones and cultural debris/ top of Fine-Grained Deposits
B 48, Locus 2	1/4-6	none, above Phase BII architecture/	compact layer with stones of all sizes and cultural debris/ top of Fine-Grained Deposits
B 48, Locus 3	1/	none, above Phase BII architecture/	in the SE corner of B 48a: wall oriented NE-SW, preserved in with courses (length c. 80 cm)/ subrecent wall fragment?
B 48, Locus 4	2/8	none, above Phase BII architecture/	in B 48b: compact – hard matrix containing many pebbles, flint artifacts and bones/ re-deposited cultural debris embedded in the Fine-Grained Deposits
B 48, Locus 5	2/7	none, above Phase BII architecture/	in B 48a+d: hard matrix containing many medium to large-sized stones, flint artifacts and bones/ re-deposited wall rubble and cultural debris embedded in the Fine-Grained Deposits
B 48, Locus 6	2/24	none, above Phase BII architecture/	in B 48c: depression filled with flint artifacts, bones and small stones/ pebbles/ fluvially deposited cultural debris and stones in the Fine-Grained Deposits

Appendix C cont. 9

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 48, Locus 7	5/9-10	none, above Phase BII architecture/	in B 48c-d: hard matrix with larger stones and cultural debris/ old slope surface?
B 48, Locus 8	4/9	none, above Phase BII architecture/	in B 48b: medium - hard matrix with many pebbles, some fist-sized stones and cultural debris/ old slope surface?
B 48, Locus 9	7+8/11-12+15-16+20	none, above Phase BII architecture/	in B 48b, W B 48c and E B 48a+d: very hard matrix with many stones of different sizes and cultural debris/ surface of Upper Rubble Layers
B 48, Locus 10	7/13-14+18	none, above Phase BII architecture/	NE corner of B 48b: loose matrix mixed with few large stones and many small and cultural debris/ ?
B 48, Locus 11	9/	above Phase BII architecture/	along W Section: top of wall rubble announcing wall Locus 13/ wall rubble of wall Locus 13 embedded in the rubble layers
B 48, Locus 12	9/	none, above Phase BII architecture/	between B 48c and d: depression filled with wall rubble/ wall rubble embedded in rubble layers
B 48, Locus 13	10+17/	Phase BII/	broad double-faced wall bordering Room 22 to the W/ house wall
B 48, Locus 14	10/19-20	none, above Phase BII architecture/	B 48a: medium loose matrix with disintegrated mortar and some wall rubble/ re-deposited ruin material in the rubble layers
B 48, Locus 15	9/	Phase BII/	double-faced wall running W-E along the N Baulk, destroyed by a stone robbing pit for its E part/ house wall
B 48, Locus 16	9/21-23	none, above Phase BII architecture/	in B 48b+c: medium hard deposit with pockets of a looser matrix, stone rubble and cultural debris/ re-deposited ruin material in the rubble layers
B 48, Locus 17	10/13+25	above Phase BII architecture/ continuation of Locus 9	W B 48d: wall rubble with wall plaster fragments and cultural debris over wall Locus 13/ wall rubble of wall Locus 13 embedded in the rubble layers
B 48, Locus 18	10/	above Phase BII architecture/	W end of S Section: pit filled with stone rubble and much bones, flint artifacts etc., extending into S Baulk/ pit in the Lower Rubble Layers
B 48, Locus 19	14/	?	in B 48a: no information available
B 48, Locus 20	9+14/	Phase BII/	short double-faced wall running NE-SW, "exten-ding" into Room 20/ strengthening? house wall
B 48, Locus 21	16-17/28	Phase B0 or BI/	stone row running W-E from wall Locus 20 (E side), wall rubble of this wall S of it? (stone row was removed during excavation of Locus 28)/ wall remains of unknown function, most probably belonging to a later occupation (B0 or BI): forming a S-shaped structure with stone rows Loci 22 and 23
B 48, Locus 22	16-17/27-28	Phase B0 or BI/	stone row oriented N-S, connected with Locus 21 "forming a corner towards the W" (stone row was removed during excavation of Locus 28)/ wall remains of unknown function (ground plan), most probably belonging to a later occupation (B0 or BI): forming a S-shaped structure with stone rows Loci 21 and 23
B 48, Locus 23	16-17/28	Phase B0 or BI/	stone row with mortar oriented N-S, connected with Locus 22 in the W (stone row was removed)/ wall remains of unknown function (ground plan), most probably belonging to a later occupation (B0 or BI): forming a S-Shaped structure with stone rows Loci 21 and 22

Appendix C cont. 10

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 48, Locus 24	6/	above Phase BII/	in B 48c: very hard layer mixed with many bones and flint artifacts and a few stones/ concentration of cultural debris and disintegrated mortar, re-deposited in the Lower Rubble Layers
B 48, Locus 25	17/	room fill of Phase B0 or BI/	between wall (remains) Loci 13, 21 and 22 and along Locus 18: medium hard layer with stone rubble/
B 48, Locus 26	6+24/	room fill of Phase B0 or BI/	layer of mortar remains mixed with ashes/ charcoal above Room 23/ room fill of Phase B0 or BI
B 48, Locus 27	22+28/29	room fill of Phase B0 or BI/	soft layer with stones of different sizes mixed with flint artifacts, bones and ashes above Room 23/ room fill of Phase B0 or BI
B 48, Locus 28	25-26/29	room fill of Phase B0 or BI/	in B 48d and NW B 48c: walll rubble probably from wall remains Locus 21-23 in soft matrix/ room fill of Phase B0 or BI
B 48, Locus 29	27-28/	upper room fills of Phase BII/	all of Subsquares B 48b+c and parts of d: collapsed and re-deposited wall stones with attached mortar and "large pockets" of loose ashy material mixed with bones and other cultural debris/ re-deposited and in situ upper room fills of Phase BII
B 48, Locus 30 of 1989	29/	upper room fills of Phase BII/	all of Subsquares B 48b-d: collapsed and re-deposited wall stones with attached mortar (concentrating more at the bottom of layer) and "large pockets" of loose ashy material mixed with bones and other cultural debris/ re-deposited and in situ upper room fills of Phase BII
B 48, Locus 31	29/38	Phase BII/ resting partly on wall Locus 38 of the earlier BII phase in the square	double-faced wall running roughly N-S between Rooms 20 and 21, a stone slab possibly representing the treshold of an entrance is recorded/ interior? house wall
B 48, Locus 32	30/ 4+15+33	upper room fills of BII/	in B 48b: layer with fallen stones from walls Loci 15 and 31 and "ashy pockets" with many bones, flint artifacts and small finds/ room fill
B 48, Locus 33	32/38+39	room fills of BII/	in Room 21: very loose layer with fallen stones with attached mortar from walls Loci 15 and 31 and "ashy pockets" with many bones, flint artifacts, small finds, plaster fragments, and mortar remains/ room fill
B 48, Locus 34	15/	earlier Phase of BII/ connected with wall Locus 35	in Room 21: leaning double-faced wall fragment cut by wall Locus 15, running NNE-SSW/ representing an earlier phase of BII in the square
B 48, Locus 35	30/	earlier Phase of BII/ connected with wall Locus 35	in Room 21: short single-row wall fragment connected with wall Locus 34, running NNW-SSE, "this wall is forming an entrance of an earlier room formed by walls Loci 15, 31, 34 and 35"/ representing an earlier phase of BII in the square
B 48, Locus 36	19/41	Phase BII/ built over the top of wall Locus 41 probably belonging to the earlier phase of BII attested in the square	wall (corner) in the NW corner of B 48/ house wall
B 48, Locus 37	19/	room fills of Phase BII/	in Rooms 20 and 21: wall rubble mixed with cultural debris and ashy? pockets with bones and flint artifacts, incl. burnt or baked clay/ samagah fragments/ room fills

Appendix C cont. 11

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 48, Locus 38	33/	earlier Phase of BII/ cut by the later BII wall Locus 15, related to Locus 42?	in Room 21: double-faced wall running under wall Locus 15, roughly NNE-SSW and parallel with wall Locus 31/ representing an earlier ground plan of BII in the square
B 48, Locus 39	33/	room fills of earlier phase of BII/	in Room 21 between Loci 38, 34 and 15: "unexcavated" (?) layer/ from intentional room filling of the earlier room under Room 21
B 48, Locus 40	30/	room fills of Phase BII/	in Room 22: collapsed wall stones with attached mortar incl. " stone pockets" mixed with bones and other cultural debris/ in situ upper room fill of Phase BII
B 48, Locus 41	36/	earlier phase of Phase BII/ resting under/ cut by? wall Locus 36	in Room 20: wall probably cut by wall Locus 36 on top/ earlier Phase of BII in the square
B 48, Locus 42	33+35/38	earlier Phase of BII/	in B 21: raw of stones under wall Locus 35, covering part of wall Locus 38/ foundation of wall Locus 35
B 48, Locus 43	40/	room fills of earlier phase of BII/ possibly an extension of Locus 40	in Room 21: layer of wall rubble and mortar remains probably from walls Loci 34 and 35, with "pockets" with flint artifacts and bones and other cultural debris, in the lower parts deposits which remind of decayed ceiling material/ natural and possibly intentional room filling of the earlier Room under Room 21
B 48, Locus 44	39/	room fills of BII/ continuation of Locus 33	NE corner of Room 21: groved stone was found here, otherwise not described/ room fill
B 48, Locus 45	40/	room fills of Phase BII/	in Room 22: wall rubble deriving from walls Loci 13 and 31, mixed with many bones and mortar remains/ room fill
B 48, Locus 46	40/31	room fills of Phase BII/	in Room 22: layer representing a fallen part of wall 31/ wall collapse
B 48, Locus 47	20+46/	earlier phase of Phase BII/ resting under/ cut by? wall Locus 20	E of wall Locus 20 and S of wall Locus 31: collapsed (towards E) wall part "coming out from under wall Locus 20"/ house wall of the earlier phase of BII in the square
B 48, Locus 48	43+45/	room fills of Phase BII/	in Room 22: "surface" of wall stones with "pockets" of much cultural debris in between, fallen stones probably from walls Loci 31 and 20
B 48, Locus 49	31+20+48+53-55/	earlier phase of Phase BII/ extension of walls Loci 47 and 50, linking also with wall Locus 51: with wall Locus 52 "it is forming a kind of corridor"	between Rooms 21 and 22: double-faced wall running roughly WNW-ESE/ extension of wall Locus 47
B 48, Locus 50		earlier phase of Phase BII/ part of wall Locus 49, linked with wall Locus 51	between Rooms 21 and 23: wall not clearly running N-S/ no proper ground plan recorded
B 48, Locus 51	53/	earlier phase of Phase BII/ linked with wall Locus 49, forming a corner with it at its W end	between Rooms 21, 22 and 23: wall running roughly W-E/ no proper ground plan recorded
B 48, Locus 52	48+53-55/	earlier phase of Phase BII/ wall "forms a corridor with wall Locus 49"	3 m long wall partly inside the S Section, preserved in "three parts" between which wall openings are visible/ house wall (recorded in the Top Plan of Area B)
B 48, Locus 53	48/	earlier phase of Phase BII/	in Room 23: fallen stones of wall Locus 51, wall rubble and decayed mortar layers/ room fill

Appendix C cont. 12

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 48, Locus 54	53/55	room fills of the earlier phase of BII/	in B 48d and W B 48c: much flint artifacts, bones and "painted wall" plaster fragments/ room fill
B 48, Locus 55		room fills of the earlier phase of BII/	S of Wall Locus 31: fallen stones, disintegrated mortar deposits and "pockets" with cultural debris/ room fill
B 48, Locus 56	54/	room fills of the earlier phase of BII/	between walls Loci 49 and 52: room fill not excavated
B 51, top soil	/1	none, above Phase BII architecture/	sandy top soil mixed with flint artifacts/ top soil
B 51, Locus 1	Top soil/2	none, above Phase BII architecture/	sandy layer in matrix similar to top soil mixed with large and small stones, flint artifacts, bones and grinders/ belonging to the Fine-Grained Deposits
B 51, Locus 2	1/3	none, above Phase BII architecture/	sandy layer in matrix similar to top soil mixed with large and small stones, flint artifacts, bones and grinders/ belonging to the Fine-Grained Deposits
B 51, Locus 3	2/ 4-9+11	none, above Phase BII architecture/	compact layer in matrix with the first fallen large stones, flint artifacts and bones/ contact zone between fine-grained layers and preserved wall tops of Phase BII
B 51, Locus 4	3/ ?43	Phase BII/	double-faced wall between B IV,1 and B I,V2-3/ interior house wall
B 51, Locus 5	3/	Phase BII/	double-faced wall between B IV,2 and B IV,3/ interior house wall
B 51, Locus 6	3/ 14	upper room fills of Phase BII/	layer with fallen stones, flint artifacts and bones in B IV,3/ near preserved wall tops of Phase BII
B 51, Locus 7	3/	Phase BII/	E wall of B IV,3/ unclear wall or structure
B 51, Locus 8	3/ 11	upper room fills of Phase BII/	wall rubble mixed with "*taboon*" sherds and flint artifacts, bones in B IV,1/ room fill
B 51, Locus 9	3/	upper room fills of Phase BII/	wall rubble mixed flint artifacts and bones in B IV,4/ room fill
B 51, Locus 10	3/ 43	Phase BII/	double-faced wall between B IV,1 and B IV,4 with wall opening/ interior house wall
B 51, Locus 11	8/20	room fills of Phase BII/	wall rubble mixed flint artifacts and bones in B IV,1/ room fill
B 51, Locus 12	11/13	room fills of Phase BII/	remains of a fire place (1,4 x 1,1 m) in B VI,1/ fire place remain in room fill
B 51, Locus 13	11+12/18-19	room fills of Phase BII/ next floor below is Locus 23, stratigraphically related to floor Locus 21	plaster floor found together with "remains of mortar", bones, and "small stones"/ upper part of a floor sequence in the room fills of B IV,1
B 51, Locus 14	6/	room fills of Phase BII/ related to the base of walls Loci 4-5,7 and 15	/ compact floor-like surface
B 51, Locus 15	6/	Phase BII/	wall/ wall structure between B IV,3 and B I,14/ wall joins into the exterior house wall of Building I
B 51, Locus 16	6/	Phase BII/	double-faced wall/ wall corner between B IV,3 and B I,14/ exterior house wall of Building I
B 51, Locus 17	9/	Phase BII/	double-faced? wall running roughly E-W into the baulk N and W Baulk, limits Room B IV,4 to the N/ interior house wall
B 51, Locus 18	13/23+36+40	room fills of Phase BII/	wall rubble mixed with flint artifacts and bones in B IV,1/ room fill
B 51, Locus 19	13/43	Phase BII/	double-faced wall between B IV,1 and B V,3-4/ exterior house wall of Building IV
B 51, Locus 20	11/21	room fills of Phase BII/	wall rubble mixed with flint artifacts and bones in B IV,2/ room fill

Appendix C cont. 13

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 51, Locus 21	20/	room fills of Phase BII/ related to the base of walls Loci 4 and 5	floor build on a bed of smaller stones in B IV,3/ floor
B 51, Locus 22	/35-36+38	above? the room fills of BII/	remains of a fire place mixed with flint artifacts and bones extending inside the E Baulk above B V,4/ fire place remains above preserved wall tops of BII
B 51, Locus 23	18/ 35+43	room fills of Phase BII/	floor build on a bed of smaller stones in B IV,1/ floor
B 51, Locus 24	14/28	room fills of Phase BII/	wall rubble mixed with flint artifacts and bones in B I,14/ room fill
B 51, Locus 25	21/	Phase BII/	double-faced house wall between B IV,2 and B V,5 and B I,13(-14?)/ exterior house wall of Building I
B 51, Locus 26	21/30+32	room fills of Phase BII/	in B I,13: fallen wall rubble with flint artifacts and bones/ room fill
B 51, Locus 27	21/	Phase BII/	double-faced house wall between B I,13 and B I,14/ interior house wall of Building I
B 51, Locus 28	24/33	room fills of Phase BII/	floor build on a bed of smaller stones in B I,14/ floor
B 51, Locus 29	24/	Phase BII/	double-faced wall between B I,14 and B I,18/ interior house wall of Building I
B 51, Locus 30	26/ 31	room fills of Phase BII/	floor build on a bed of smaller stones in B I,13/ floor
B 51, Locus 31	30/33	room fills of Phase BII/	in B I,13: fallen wall rubble with flint artifacts and bones/ ?
B 51, Locus 32	26/	Phase BII/ = wall Locus 39 of B 68	double-faced wall between B I,12 and B I,13/ interior house wall of Building I
B 51, Locus 33	30-31/	room fills of Phase BII/	floor build on a bed of smaller stones in B I,13/ floor
B 51, Locus 34	28/	room fills of Phase BII/	floor build on a bed of smaller stones in B I,14/ floor
B 51, Locus 35	22-23/37	room fills of Phase BII/	fallen wall stones in a compact layer in B V,4/ room fill
B 51, Locus 36	3+18+22/	room fills of Phase BII/	fallen wall stones mixed with flint artifacts and bones in a compact layer in B V,3/ room fill
B 51, Locus 37	35/	room fills of Phase BII/	floor build on a bed of smaller stones in B V,4/ floor
B 51, Locus 38	22/	Phase BII/	double-faced wall between B V,3 and B V,4/ interior house wall of Building V
B 51, Locus 39	22/	Phase BII/	double-faced wall between B V,4 and B V,5/ interior house wall of Building V
B 51, Locus 40	18?/	room fills of Phase BII/	fallen wall stones mixed with flint artifacts and bones in B V,5/ room fill
B 51, Locus 41	18?/	Phase BII/	double-faced wall between B V,1 and B V,5/ interior house wall of Building V
B 51, Locus 42	40/	room fills of Phase BII/	floor build on a bed of smaller stones in B V,5/ floor
B 51, Locus 43	23/44	earliest room fills of Phase BII above channel substructures Locus 44/	fallen wall rubble mixed with flint artifacts and bones on a destroyed or removed floor in B IV,1/ room fill on floor
B 51, Locus 44	43/	Phase BII/ foundation for walls Loci 4, 10 and 19	N-S oriented dry-stone masonry of channel substructures under B IV,1/
B 51, Locus 45	21/46	room fills of Phase BII/	fallen wall rubble in B IV,2/ room fill
B 51, Locus 46	45/	room fills of Phase BII/	floor (no description) in B IV,2/ floor

Appendix C cont. 14

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 51, Locus 47	18?+36/49	room fills of Phase BII/	wall rubble mixed with flint artifacts and bones in B V,3/ room fill
B 51, Locus 48	18/	Phase BII/	double-faced house wall between B V,1 and B IV,3/ interior house wall of Building V
B 51, Locus 49	47/	Phase BII/ relates to bases of walls Loci 9, 38, 48 and 50	floor (no description) in B V,3/ floor
B 51, Locus 50	49/	Phase BII/ wall base related to Locus 49 (= wall Locus 26 of B 52)	double-faced? N wall of Room B V,3/ wall
B 67, top soil	/1	none, above rubble layers and Phase BII architecture/	"hard" soil with many small stones, grinders and flint artifacts/ top soil
B 67, Locus 1	top soil/2-4	none, above rubble layers and Phase BII architecture/	"hard" soil with small stones, grinders and flint artifacts/ top soil
B 67, Locus 2	1+3/32	Phase BII/	wall running NNE-SSW through all the square, separating Building Units and III, incl. fallen rubble of this wall/ exterior house wall of Building I
B 67, Locus 3	1/5+7	uppermost rubble layers and above Phase BII architecture/	layer of crumbly soil with sliding wall stones E of wall Locus 2, flint artifacts, a "taboon" sherd, ashy pocket etc. in B 67b-c/ contact zone rubble layers – preserved wall tops Phase BII
B 67, Locus 4	1/6+9-13	uppermost rubble layers? and above Phase BII architecture/	layer of soil with stones of all sizes W of wall Locus 2, flint artifacts, bones etc. in B 67a+d/ contact zone rubble layers – preserved wall tops Phase BII
B 67, Locus 5	3+7/8	uppermost rubble layers and above Phase BII architecture/	extensive hard layer with sliding wall stones E of wall Locus 2 in B 67b-c, ceiling material?/ collapsed walls of Phase BII, ceiling evidence?
B 67, Locus 6	4/	Phase BII/	double-faced wall separating Rooms B III,5 and B VIII,3/ exterior house wall of Building Unit III
B 67, Locus 7	3/5	uppermost rubble layers? and above Phase BII architecture/ lower continuation of Locus 3	layer of crumbly soil with fallen wall stones of wall Locus 2 in B 67c/ contact zone rubble layers – preserved wall tops Phase BII ?
B 67, Locus 8	5/19	uppermost rubble layers and above Phase BII architecture/	compact layer with fallen stones "moving" downslope in B 67b+d
B 67, Locus 9	4/20	upper room fills of Phase BII/	in Room B III,5: stone accumulation against N side of wall Locus 6, containing also ceiling material?/ room fill
B 67, Locus 10	4/	Phase BII/	double-faced wall with wall opening separating Rooms B III,4 and B III,5/ interior house wall of Building Unit III
B 67, Locus 11	4/16	upper room fills of Phase BII/	in Room B III,4: compact material mixed with few stones, in the lower part probably an old surface/ temporary surface?
B 67, Locus 12	4/	Phase BII/	double-faced wall separating Rooms B III,3 and B III,4/ interior house wall of Building Unit III
B 67, Locus 13	4/15	contact zone rubble layers – preserved wall tops Phase BII ?/	area of Room B VIII,3: "very hard" stony layer with small and medium sized stones/ rubble layer or room fill?
B 67, Locus 14	4/27	upper rubble layers?/	above NE parts of Room B VIII,3: matrix with fist-sized stones/ rubble layer
B 67, Locus 15	13/17	contact zone rubble layers – preserved wall tops Phase BII ?/	area of Room B VIII,3: compact stony layer with high concentration of small stones/ rubble layer or room fill?
B 67, Locus 16	11/21	room fills of Phase BII/	in Room B III,4: compact material mixed with fist-sized stones, in the lower part probably an old surface/ temporary surface?

Appendix C cont. 15

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 67, Locus 17	15/	contact zone rubble layers – preserved wall tops Phase BII ?/ same as Locus 15?	area of Room B VIII,3: compact stony layer with high concentration of small stones and wall rubble/ rubble layer or room fill?
B 67, Locus 18	9+17/	Phase BII/	W double-faced wall with wall opening of Room B III,4/ interior house wall of Building Unit III
B 67, Locus 19	8/29	lower rubble layers and above Phase BII architecture/	area of Rooms B III,16-17,19: 10-40 cm wide strip of loose silty matrix along wall Locus 2/ ?
B 67, Locus 20	9/22	room fills of Phase BII/	in Room B III,5: silty matrix with mortar remains and fallen stones oriented downhill, bones frequent/ room fill from decaying ruin
B 67, Locus 21	16/	room fills of Phase BII/	in Room B III,4: fine-coarse matrix mixed with fist-sized stones, in the lower part probably an old surface with charcoal/ temporary surface?
B 67, Locus 22	20/	room fills of Phase BII/	in Room B III,5: crumbly matrix with mortar remains and fallen stones oriented downhill/ room fill from decaying ruin
B 67, Locus 23	8/26	lower rubble layers and above Phase BII architecture/	area of Room B I,16: silty matrix with high content of small – medium sized stones/ stone rubble from decaying ruin?
B 67, Locus 24	8/25	lower rubble layers and above Phase BII architecture/	in B 67b-c: fine-coarse and ashy matrix with high content of sharp-edged stones and "burnt clay fragments"/ wall rubble mainly deriving from collapsed upper wall parts/ rooms, extracted wall stones?
B 67, Locus 25	23-24/26	lower rubble layers and above Phase BII architecture/	in B 67b-c: compact/ soft silty matrix mixed with ashes, ash lenses embedded/ fill representing a squatters horizon?
B 67, Locus 26	25/28-29	lower rubble layers and above Phase BII architecture/	in B 67b-c: fine-coarse loose matrix with high content of sharp-edged fist-sized stones, mortar remains?/ re-deposited wall rubble mainly deriving from collapsed upper wall parts/ rooms, extracted wall stones?
B 67, Locus 27	14/2+32	rubble layers above Phase BII architecture/	above southern end of wall Locus 22: clayish compact matrix with angular fist-sized stones/ rubble layer
B 67, Locus 28	26/34	rubble layers above Phase BII architecture/	above NW corner of Room B I,20: loose fine-coarse matrix with angular fist-sized stones/ rubble layer composed also re-deposited decayed wall material form higher up the site, extracted wall stones?, squatters' in situ activities?
B 67, Locus 29	19+26/34-35+40-41	lower rubble layer above Phase BII architecture/ contact layer with preserverd Phase BII wall tops E of wall Locus 2	in B 67b+c, except under Locus 28: fist-sized stone rubble with pockets of "burnt soil" and "*taboon*" sherds/ lower rubble layer with re-deposited cultural debris, in situ activities of squatters?,
B 67, Locus 30	26+29/	Phase BII/	double-faced wall separating Rooms B I,17-18 and B I,19-20/ interior house wall of Building Unit I
B 67, Locus 31	26+29/	Phase BII/ wall base related to Locus 52	double-faced wall possibly (not identified with security from diary) forming the northern wall of Room B I,16/ wall (with wall opening?)
B 67, Locus 32	2/	Phase BII/ wall base related to Loci 55-54 and 30	in Room B I,19: (double-faced) wall underneath wall Locus 2, representing an earlier or modified ground plan of Phase BII (visible in the top plan as a wall offset = W wall of B I,19)

Appendix C cont. 16

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 67, Locus 33	26+29/	Phase BII/ Note: By mistake this wall appears as Locus 23 in the Top Plan Area B.	double-faced wall separating Rooms B I,19 and B I,20 with wall opening/ interior house wall of Building Unit I/ wall
B 67, Locus 34	29/37	lower rubble layer above Phase BII architecture/ contact layer with preserved Phase BII wall tops	in Room B I,18: loose coarse-grained matrix with fist-sized stones/ rubble layer
B 67, Locus 35	29/38-39	lower rubble layer above Phase BII architecture/ contact layer with preserved Phase BII wall tops	above area of Rooms B I,16-17: silty matrix with many fist-sized stones and wall stones, ash lenses embedded/ rubble layer with in situ? activities
B 67, Locus 36	26+29/	Phase BII/	double-faced wall separating Rooms B I,16-17 and B I,18, with wall opening in central part/ interior house wall of Building Unit I/ wall
B 67, Locus 37	34/43	lower rubble layer above Phase BII architecture or first room fill of Phase BII/	in Room B I,18: loose fine - coarse-grained matrix with stones of all sizes, incl. fallen stones, "fallen *taboon*" sherds, and a concentration of burnt bones/ contact zone of lowest rubble layer, wall/ room decay, and squatters' activities
B 67, Locus 38	35/	lower rubble layer above Phase BII architecture or first room fill of Phase BII/	upper stratigraphy of Rooms B I,16-17: coarse-fine-grained matrix with low density of small stones and concentrations of burnt bones/ contact zone of lowest rubble layer? and squatters' activities
B 67, Locus 39	35/53	lower rubble layer above Phase BII architecture or first room fill of Phase BII/	in Room B I,17: loose silty matrix with heavy content of fist-sized stones/ rubble layer
B 67, Locus 40	29/42	lower rubble layer above Phase BII architecture or first room fill of Phase BII/	in Room B I,19: coarse- fine-grained matrix with high density of fist-sized stones and concentrations of clay materials/ contact zone of lowest rubble layer? and squatters' activities
B 67, Locus 41	29/45	upper room fills of Phase BII/	in Room B I,20: wall rubble with disintegrated mortar (hard crumbly matrix)/ dressed wall stones extracted?
B 67, Locus 42	40/48	upper room fills of Phase BII/	in Room B I,19: compact clayish matrix with high lime content and fist-sized stones/ wall decay with dressed wall stones extracted?
B 67, Locus 43	37/47	upper room fills of Phase BII/	in Room B I,18: compact matrix with high lime content, fist-sized stones and wall stones/ wall decay
B 67, Locus 44		Phase BII/ Note: This wall is the N extension of wall Locus 18 in B 68.	double-faced E wall of Room B I,18 with wall opening/ interior house wall of Building Unit I/ wall
B 67, Locus 45	41/46	upper room fills of Phase BII/	in Room B I,20: stone rubble in coarse matrix/ wall decay with dressed wall stones extracted?
B 67, Locus 46	45/58	upper room fills of Phase BII/	in Room B I,20: mainly fist-sized stone rubble in compact fine - coarse matrix/ wall decay with dressed wall stones extracted?
B 67, Locus 47	43/49	upper room fills of Phase BII/	in Room B I,18: medium loose silty matrix with fist-sized stones and wall stones/ wall decay
B 67, Locus 48	42/56	room fills of Phase BII/	in Room B I,19: medium loose silty matrix with fist-sized stones and wall stones/ wall decay

Appendix C cont. 17

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 67, Locus 49	47/50	room fills of Phase BII/	in Room B I,18: compact matrix with much charcoal and fist-sized stones as well as many grinders/ wall decay, material from upper floor rooms?
B 67, Locus 50	49/51	room fills of Phase BII/	in Room B I,18: compact matrix with much charcoal and fist-sized stones as well as many grinders/ wall decay, material from upper floor rooms?
B 67, Locus 51	50/52	room fills of Phase BII/	in Room B I,18: coarse – fine-grained matrix with much charcoal and fewer fist-sized stones/ wall decay, material from upper floor rooms?
B 67, Locus 52	51/	room fills of Phase BII?/	in Room B I,18: floor installed by a layer of lime plaster, carried by a bed of fist-sized stones/ floor
B 67, Locus 53	39/	room fills of Phase BII ?/ at the locus' base a plaster floor was found	in Room B I,17: loose fine matrix with fist-sized stones/ ?
B 67, Locus 54	?	Phase BII/	"wall not double-faced runs W-E through the center of the E section of B 67b"/ wall between Rooms B I,16 and 17?
B 67, Locus 55	?	Phase BII/ wall base related to Locus 55	"stone wall emerging from the S Baulk and intersecting with wall Locus 32 2,6 m from the W edge of the open square"/ wall (related to Room B I,19?)
B 67, Locus 56	48/57	room fills of Phase BII/	in Room B I,19: compact fine-grained matrix with a high content of lime, stones of fist-size, many stone slabs of 9 cm thickness, bones and plaster fragments/ wall rubble, dressed stones extracted?
B 67, Locus 57	56/	room fills of Phase BII/	in Room B I,19: coarse - fine-grained matrix with a high content of lime, fist-sized stones of fist-size, some stone slabs, and charcoal/ wall rubble, dressed stones extracted?
B 67, Locus 58	46/	room fills of Phase BII/	in Room B I,20: stone rubble (incl. wall stones) in a compact coarse silty matrix/ wall decay
B 68, top soil	/1	none, above rubble layers and Phase BII architecture/	soft soil with stone rubble, flint artifacts, and grinder fragments/ top soil
B 68, Locus 1	top soil/2	none, above rubble layers and Phase BII architecture/	higher concentration of mainly fist-sized stones/ contact zone between top soil and upper parts of rubble layers
B 68, Locus 2	/1	none, Upper Rubble Layers above Phase BII architecture/	concentration of mainly fist-sized stones mixed with flint artifacts and bones/ upper parts of rubble layers in B 68a+b+d
B 68, Locus 3	2/5	none, Upper Rubble Layers above Phase BII architecture/	concentration of mainly fist-sized stones mixed with flint artifacts and bones/ upper parts of rubble layers in B 68a
B 68, Locus 4	2/5	none, Upper Rubble Layers above Phase BII architecture/	concentration of mainly fist-sized stones mixed with flint artifacts and bones/ upper parts of rubble layers in B 68b
B 68, Locus 5	2-4/6	none, Upper Rubble Layers above Phase BII architecture/	concentration of mainly fist-sized stones mixed with flint artifacts, grinder fragments and bones/ upper parts of rubble layers in B 68a-d
B 68, Locus 6	5/7+9-10	none, Upper Rubble Layers above Phase BII architecture/	concentration of fist-sized and dressed stones mixed with flint artifacts, grinder fragments and bones/ upper parts of rubble layers in B 68a-d
B 68, Locus 7	5/	none, Rubble Layers above Phase BII architecture/	/ fire place at the W edge of B 68a in the Rubble Layers

Appendix C cont. 18

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 68, Locus 8	7/6 (!)	none, Rubble Layers above Phase BII architecture/	concentration of pebbles and small stones in B 68a in the Rubble Layers/
B 68, Locus 9	6-8/11	none, Rubble Layers above Phase BII architecture/	layer of pebbles, small stones, flint artifacts and grinder fragments in B 68a in the Rubble Layers/
B 68, Locus 10	6/11	none, Rubble Layers above Phase BII architecture/	layer of pebbles, small stones, flint artifacts and grinder fragments in B 68a in the Rubble Layers/
B 68, Locus 11	9-10/13-16	eroded upper parts of Phase BII architecture	higher concentration of dressed stones, some suggesting an order of collapse/ preserved Phase BII wall tops underneath
B 68, Locus 12	10/	Phase BII/	/ buttress attached to wall Locus 31
B 68, Locus 13	11/21	room fill Phase BII/	layer of pebbles, small stones, flint artifacts and bones S of wall Locus 12 in B 68c/ room fill or re-deposited room fills
B 68, Locus 14	11/29	room fill Phase BII/	wall rubble, cultural debris incl. ornaments mixed with ashes/ remains of fire place?
B 68, Locus 15	11/20+30	room fill Phase BII/	wall rubble, pebbles, small stones, flint artifacts and bones in B 68b/ room fill
B 68, Locus 16	14/22	room fill Phase BII/	wall rubble, pebbles, small stones, flint artifacts and bones in B 68d/ room fill
B 68, Locus 17	11/	Phase BII/	NE wall of Room B I,12, double-faced, wall foundation is Locus 41/ wall
B 68, Locus 18	11/	Phase BII/	double-faced wall incl. buttress and wall-opening NNE of wall Locus 25/ wall, buttress and wall-opening
B 68, Locus 19	11/	Phase BII/	double-faced wall connecting walls Loci 27 and 31 with wall-opening/ wall and wall-opening
B 68, Locus 20	14/23	room fills Phase BII/	cultural debris incl. ornaments mixed with charcoal/ room fill
B 68, Locus 21	13/24+26-27	room fills Phase BII/	wall rubble mixed with cultural debris in B 68c-d/ room fill or re-deposited room fills
B 68, Locus 22	16+20/23-24	room fills Phase BII/	wall rubble mixed with cultural debris in B 68d/ room fill or re-deposited room fills
B 68, Locus 23	20/24	room fills of Phase BII/	patch of red-stained plaster floor E of buttress Locus 18/ plastered floor destroyed by fallen wall rubble
B 68, Locus 24	21+23/25	room fills of Phase BII/	layer of cultural debris and floor fragments (Locus 23)/ related to disturbance of floor Locus 23
B 68, Locus 25	24/	Phase BII/	double-faced wall SW of wall/ buttress Locus 18/ wall
B 68, Locus 26	21/	room fills of Phase BII/	layer of pebbles and small stones in B 68c-d/ room fill
B 68, Locus 27	21/	Phase BII/ NW extension of wall Locus 10 of B 87	double-faced wall separating Rooms B I,2 and B I,3 of Building I/ wall
B 68, Locus 28	15/30+32+34	room fills of Phase BII/	layer of cultural debris mixed with much decayed mortar/ room fill
B 68, Locus 29	22/	room fills of Phase BII/	layer of cultural debris and some ornaments mixed with much decayed mortar in the NW corner of central Room B I,1/ room fill
B 68, Locus 30	22/33-36	room fills of Phase BII/	layer of cultural debris in the NW corner of central Room B I,1/ room fill
B 68, Locus 31		Phase BII/ wall base relates to Loci 33 (fireplace) and 38 (floor)	45 cm double-faced wall with wall-opening connecting wall Locus 19 and wall Locus 5 of B 69/ wall

Appendix C cont. 19

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 68, Locus 32	28/	room fills of Phase BII/	layer of cultural debris/ room fill
B 68, Locus 33	30/	lower room fills of Phase BII/ at the base of wall Locus 31	layer of ashes and charcoal S of wall Locus 31/ fire place in room fills
B 68, Locus 34	26/36	room fills of Phase BII/	layer of cultural debris in B 68d between walls Loci 12 and 27/ room fill
B 68, Locus 35	30/36	lower room fills of Phase BII/ related to Locus 37	layer of ashes and charcoal in the center of Room B I,1, located above floor Locus 38/ fire place in room fills
B 68, Locus 36	30+34/38	lower room fills of Phase BII/ related to red-stained plaster floor Locus 23?	indistinctive floor layer (above Locus 38) in the center of Room B I,1/ floor
B 68, Locus 37	30/43	lower room fills of Phase BII/ related to Locus 35	remains of ashes mixed with cultural debris above floor Locus 43 in B 68d/ disturbed fire place
B 68, Locus 38	36/	lower room fills of Phase BII/ related to Loci 36 above and nearby 43?, related to the wall bases of Loci 18, 31, 12, and 25	floor in the central parts of Room I,1 carrying several fire places and wall rubble/ floor
B 68, Locus 39	28/	Phase BII/ related to Locus 41 at wall's base	double-faced wall separating Rooms B I,12 and B I,13 of Building I (called Locus 32 in the baulks' excavation!)/ wall
B 68, Locus 40	36/	lower room fills of Phase BII/ related to the wall bases of Loci 18 and 19, possibly a part of fire places horizon on floor Locus 38	fire place (s) and ash layers along walls Loci 18/ 19 mixed with many finds and cultural debris/ fire places
B 68, Locus 41	32/	lower room fills of Phase BII/ related to the wall bases Loci 17 and 31	floor of Room B I,12 "made of small pebbles and stones" with cultural debris on the floor/ floor
B 68, Locus 42	28/	lower room fills of Phase BII/ related to the wall bases of Locus 39	floor of Room 13 "like Locus 41", with cultural debris on the floor/ floor
B 68, Locus 43	38/	lower room fills of Phase BII/ related to Loci 35 and 37	floor and deposit with articulated "taboon" sherds (oven-type of installation supported by the shoulder blades of large mammals), ashes, charcoal, bones etc./ oven installation
B 68, Locus 44	38/	lower room fills of Phase BII/ related to Locus 43, extension of Locus 29 in B 69	large samagah jar, large stone with grooves, grinder fragments, bones and flint artifacts in sandy layer/ together with Locus 43 in situ finding of activities related to food preparation and artifact manufacturing between Loci 27 and 12 (Locus 44) and W of Locus 27 (Locus 43)
B 68, Locus 45		Phase BII/ wall base related to floor Locus 41	double-faced wall between Rooms B I,11 and B I,12 with wall opening (called Locus 6 in B 69)/ wall
B 69, top soil	/1	none, above rubble layers and Phase BII architecture/	soft soil with stone rubble, flint artifacts, and grinder fragments/ top soil
B 69, Locus 1	top soil/2	none, above rubble layers and Phase BII architecture/	higher concentration of mainly fist-sized stones/ contact zone between top soil and upper parts of rubble layers
B 69, Locus 2	1/3-7+12	none, Upper Rubble Layers above Phase BII architecture/	*cf.* B 68/ upper parts of rubble layers

Appendix C cont. 20

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 69, Locus 3	2/	Phase BII/ SE continuation of wall Locus 17 in B 68	double-faced wall running NW-WE through the square, 70-80 cm in thickness/ outer house wall Building I
B 69, Locus 4	2/	Phase BII/	double-faced wall separating Rooms B I,10 and B I,11 NW-WE through, 50-60 cm in thickness/ interior house wall
B 69, Locus 5	2/	Phase BII/	double-faced wall separating Rooms B I,11 and B I,2, c. 40 cm in thickness, with wall opening/ interior house wall
B 69, Locus 6	2/	Phase BII/	double-faced wall separating Rooms B,11 and B I,12, c. 60 cm in thickness, with wall opening (called Locus 45 in B 68)/ interior house wall
B 69, Locus 7	2/	Phase BII/	double-faced wall separating Rooms B I,11 and B I,12, c. 60 cm in thickness, with wall opening (called Locus 45 in B 68)/ interior house wall
B 69, Locus 8	2/	rubble layers above Phase BII/	sandy layers in southern B V,1 with fist-sized stones, flint artifacts and bones/ rubble layer
B 69, Locus 9	1/16	rubble layers above Phase BII/	compact layers above B I,2 with fist-sized stones and flint artifacts/ rubble layer
B 69, Locus 10	1/	Phase BII/	double-faced wall separating Rooms B I,2 and B I,10, 50-60 cm in thickness, with wall opening/ interior house wall
B 69, Locus 11	1/	Phase BII/	double-faced wall separating Rooms B I,2 and B I,9, c. 60 cm in thickness, with wall opening/ interior house wall
B 69, Locus 12	2/15	lower part of rubble layers above Phase BII/	compact layers above B I,11 with fist-sized stones/ lowermost rubble layers
B 69, Locus 13	1/17-18	lower part of rubble layers above Phase BII/	sandy layer above B I,10 with fist-sized stones/ lowermost rubble layers
B 69, Locus 14	2/30	lower part of rubble layers above Phase BII/	compact layer above B I,9 and B V,9 with large and fist-sized stones, flint artifacts, bones and ornaments/ lowermost rubble layers
B 69, Locus 15	12/21	lower part of rubble layers above Phase BII/	sandy layer above B I,11 with large and fist-sized stones, flint artifacts and bones/ lowermost rubble layers
B 69, Locus 16	9/19	lower part of rubble layers above Phase BII/	"loose" layer above B I,2 with large and fist-sized stones, flint artifacts and bones/ lowermost rubble layers
B 69, Locus 17	13/24	lower part of rubble layers above Phase BII/	compact layer above B I,10 with fist-sized stones, flint artifacts, grinders and bones/ lowermost rubble layers
B 69, Locus 18	13/17	lower part of rubble layers above Phase BII/	fire place in Locus 17 above B I,10/ disturbed fire place in the lowermost rubble layers inside walls of Room B I,10
B 69, Locus 19	16/20	lower part of rubble layers above Phase BII or upper room fills of BII/	floor or compact surface in the upper room stratigraphy of B I,2/ floor or compact surface (squatters' use)
B 69, Locus 20	19/23	upper room fills of BII/	stone rubble in loose matrix mixed with flint artifacts and bones in B I,2/ stone rubble of collapsed BII walls
B 69, Locus 21	15/	upper room fills of BII/	compact surface or floor rubble in loose matrix mixed with flint artifacts, bones and a small jar in B I,11/ floor or compact surface (squatters' use)
B 69, Locus 22	2/	Phase BII/	double-faced wall separating Rooms B I,8 and B I,9, c. 60 cm in thickness/ interior house wall

Appendix C cont. 21

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 69, Locus 23	20/26	room fills of BII/	stone rubble of wall collapse in loose matrix mixed with flint artifacts, grinders, ornaments and bones in B I,2/ stone rubble of collapsed BII walls mixed with finds from "further up"
B 69, Locus 24	17/28	room fills of BII/	stone rubble of wall collapse in loose matrix mixed with flint artifacts, grinders and bones in B I,11/ stone rubble of collapsed BII walls
B 69, Locus 25	23+26/29	room fills of BII/	compact surface or floor with wall rubble, flint artifacts, bones and other artifacts in B I,2/ disturbed (fallen stones) floor or compact surface (squatters' use)
B 69, Locus 26	23/25	room fills of BII/	loose matrix mixed with wall rubble, flint artifacts, and bones in the S part of B I,2/ fallen wall (rubble)
B 69, Locus 27	9/	Phase BII/	buttress extending into Room BI,2 between walls Loci 5 and 10/ buttress
B 69, Locus 28	24/	room fills of BII/	compact surface or floor rubble in B I,10, similar to Locus 21/ floor or compact surface (squatters' use)
B 69, Locus 29	25/	room fills of BII/ extension of Locus 44 in B 68	compact surface or floor in B I,2 with samagah sherd and ornaments/ together with Loci 43 and 44 of B 68 an in situ finding of activities related to food preparation and artifact manufacturing
B 69, Locus 30	14/	room fills of BII/	loose matrix mixed with stone rubble deriving of fallen walls (especially wall Locus 31), flint artifacts and grinders in B I,9/ layer mainly composed of collapsed walls
B 69, Locus 31	30/	Phase BII/	double-faced wall separating Rooms B I,9 and B V,9, thickness 70-80 cm/ exterior house wall of Building I
B 69, Locus 32	30/	Phase BII/	double-faced E wall of Room B I,9, thickness c. 50 cm/ exterior house wall of Building I
B 69, Locus 33	14/	Phase BII	double-faced wall separating Rooms B V,6 and B V,9, thickness c. 50 cm/ interior house wall of Building V
B 69, Locus 34	14/	room fills of BII/	
B 69, Locus 35	14/	room fills of BII/	compact layer mixed with stone rubble, flint artifacts and bones in the southern part of B V,1/ layer mainly composed of collapsed walls
B 69, Locus 36	14/	Phase BII	double-faced wall separating Rooms B V,9 and B V,10/ interior house wall of Building V
B 85, top soil	/ 1	none/	/ top soil
B 85, Locus 1	top soil/	above Phase BII/	/ uppermost part of Upper Rubble Layers ?
B 85, Locus 2	1/	above Phase BII/	/ rubble layers remains
B 85, Locus 3	2/	Phase BII/	/ wall
B 85, Locus 4	2/	between wall stumps of BII/	/ lower rubble layers remains
B 85, Locus 5	4/	between wall stumps of BII/	/ lower rubble layers remains
B 85, Locus 6	5/	between wall stumps of BII/	hard soil with few big stones/ deposit origin unclear
B 85, Locus 7		Phase BII/ wall Locus 3, but over wall Locus 8?	/ wall fragment or tumbled wall face
B 85, Locus 8		Phase BII/ wall Locus 3	/ terrace wall
B 85, Locus 9		Phase BII/ identical with wall Locus 3?	/ wall

Appendix C cont. 22

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 85, Locus 10	6/	Phase BII/	/ wall rubble of walls Loci 8 and 9?
B 85, Locus 11	10/	Phase BII/	/ wall rubble between walls Loci 8 and 9?
B 85, Locus 12		Phase BII/ connects to wall Locus 25 in B 67/68	/ wall
B 85, Locus 13	5 (N Baulk)/	Phase BII west end of room 3 in building unit 8	/ collapsed wall
B 85, Locus 14	11/	between wall stumps of Phase BII/	/ wall rubble and ash lances
B 85, Locus 15	14/	between wall stumps of Phase BII/	/ squatter activities with *taboon* remains and ashes
B 85, Locus 16		Phase BII/	/ wall
B 85, Locus 17	14 – 15/	Phase BII/	/ wall rubble of fallen walls
B 86, Locus 1	/2	none, above rubble layers/	very fine-grained compact matrix with cultural debris (flint and ground stone artifacts, bones, occasional small finds, stone rubble, charcoal, and post-Neolithic finds)/ top soil
B 86, Locus 2	1/3-10	none/	rubble layers (sharp-edged fist-sized stones, mixed with dressed LPPNB wall stones)/ rubble layers unspec.
B 86, Locus 3	2/	Phase BII/	double-faced wall running NW-SE/ wall
B 86, Locus 4	2/	contact zone between rubble layers and room fills Phase BII/	fine-grained very loose layer with charcoal and burnt limestone/ room fill
B 86, Locus 5	2/	Phase BII/	double-faced wall running NE-SW, preserved in 4 courses/ wall
B 86, Locus 6	2/15	contact zone between rubble layers and room fills Phase BII/	fine-grained very loose layer with charcoal and burnt limestone, fire place (?)/ preserved = non-eroded lower room fill
B 86, Locus 7	2/10	contact zone between rubble layers and room fills Phase BII/	compact matrix mixed with stone rubble and red plaster fragments/ preserved = non-eroded lower room fill
B 86, Locus 8	2/	contact zone between rubble layers and room fills Phase BII/	compact matrix mixed with stone rubble and red plaster fragments/ preserved = non-eroded lower room fill
B 86, Locus 9	7/	Phase BII/	eroded double-faced wall/ wall above substructures
B 86, Locus 10	8/	Phase BII/	“stone pavement” covered with mortar-like material/ early floor in Room B I,5
B 86, Locus 11	7/	Phase BII/	dry-stone masonry, stone fill and covering stones of a substructure/ remains of eroded substructures of Phase BII under Room B I,4
B 86, Locus 12	2/	Phase BII/	wall remains on a rubble foundation, preserved of up to 3 courses/ eroded remains of a double-faced wall (exterior house wall of Building Unit I)
B 86, Locus 13	2/	Phase BII/	“ditch” filled with stone rubble under the southern face of wall Locus 12 (Room/ Space 9)/ layer related to the substructure underneath wall Locus 12
B 86, Locus 14	2/	none, part of the rubble and ersosion layers sequence Locus 2 in B86d	/ rubble layer unspec. and deposits of erosional origin
B 86, Locus 15	6/	contact zone between rubble layers and room fills Phase BII/	fill of sharp-edged stones/ base of a fire place
B 86, Locus 16	2/	room fills of Phase BII ?/	accumulation of sharp-edged stones/ ?

Appendix C cont. 23

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 86, Locus 17	8/	Phase BII/	dry-stone masonry, stone fill and covering stones of a substructure/ remains of eroded substructures of Phase BII under Rooms B I,4 and B I,5
B 86, Locus 18	2/	none, part of the rubble and erosion layers sequence Locus 2 in B86a	/ rubble layer unspec. and deposits of erosional origin
B 87, Locus 1	/2-20	none, above rubble layers and Phase BII architecture/	top soil and following compact homogeneous layer of fine-grained deposits containing many flint artifacts/ top soil and Fine-Grained Deposits
B 87, Locus 2	1/4-15	rubble layers above Phase BII architecture/	undistinguished rubble layers with high concentration of sharp-edged, mainly fist-sized stones, but also wall stones up to 30 cm in size, all sort of cultural debris incl. grinders, flint and other artifacts, and bones/ rubble layers
B 87, Locus 3	2/2	above Phase BII architecture in B 87a/	spot of "burnt soil" with disintegrated mortar/ *samagah*/ ? in contact zone between rubble layers and upper room fills
B 87, Locus 4	2/	upper part of room fills of Phase BII	in Room B I,8: fill of sharp-edged wall rubble with compact lenses between, large amount of "*taboon*" sherds/ room fill
B 87, Locus 5	2/	Phase BII/	double-faced wall running NNE-SSW, thickness up to 70 cm/ exterior house wall for Rooms B I,6-8
B 87, Locus 6	6/	Phase BII/	double-faced wall separating Rooms B I,7 and B I,8, thickness 40-50 cm/ interior house wall
B 87, Locus 7	2/9 (part of Locus 11)	room fills of BII/	very compact yellowish fine-grained lens in Room B I,7 with charcoal and lime/ samagah inclusions, contains a stone with cupmarks/ room fill
B 87, Locus 8	2/17-19	room fills of BII	stone rubble in loose matrix E of wall Locus 5 (Spaces 36-37)/ layers of collapsed wall material
B 87, Locus 9	7/11 (part of Locus 11)	room fills of BII	"layer of stones and earth"/ ?, room fill
B 87, Locus 10	2/	Phase BII/	double-faced wall separating Rooms B I,2 and B I,3, thickness 50-60 cm/ interior house wall
B 87, Locus 11	2/	room fills of BII/	in Room B I,7: compact yellowish soil mixed with sharp-edged stones up to 30 cm in size/ layer of collapsed wall material
B 87, Locus 12	27	Phase BII/	double-faced wall separating Rooms B I,6 and B I,7, thickness 35-45 cm/ interior house wall
B 87, Locus 13	2/16 (contains Locus 16)	room fills Phase BII/	in Room B I,6: fill of soil containing sharp-edged stone rubble with remains of a burial (= Locus 16)/ layer of collapsed wall material
B 87, Locus 14a-b	2/	Phase BII/	double-faced wall bordering Rooms B I,6 (Locus 14b) and B I,7 (Locus 14a) to the E, thickness 40-50 cm/ interior house wall
B 87, Locus 15	2/	lower rubble layers and upper room fills of Phase BII/ continuation of Locus 4 in Room B I,3	in B 87a: ashy fill with sharp-edged stone rubble up to 30 cm/ layer of collapsed wall material and re-deposited fire places?
B 87, Locus 16	13/13 (is part of Locus 13)	room fills Phase BII/	in Room B I,6: displaced bones of one individual (lower jaw, skull and rib, few vertebrae, part of tibia, etc./ disturbed burial in wall rubble
B 87, Locus 17	8/	room fill of Phase BII/	fill(s) in Space 36 (not described)/ ?

Appendix C cont. 24

Square, Locus	Below/ Above Loci	Architectural Contexts/ Relation to Other Loci	Locus Description, Interpretation
B 87, Locus 18	8/	Phase BII/	double-faced wall separating Spaces 36 and 37 B I,7 and B I,8, thickness c. 40-50/ interior house wall?
B 87, Locus 19	8/	room fill of Phase BII/	layer with ash lenses and a great density of animal bones and burnt flint artifacts in Space 37/ room fill
B 87, Locus 20	2/	Phase BII/	"two rows laid stones wall" S of Room B I,6, dimension (width): up to 90 cm/ disturbed or ill-preserved exterior house wall of Building I

Appendix D. B 103. Geoarchaeological Layer Description.

Layer (Locus No.)	Matrix (With Ash/Charcoal Components) and Munsell Colour Notation of Matrix	Mineral Inclusions and Cultural Deposits (Without Artefacts)/ Orientation / Characterization of Layer / Notes	Associated Artefacts	Interpretation of Layer
1	fine; 10 YR 6/3 "pale brown"	medium density of stones 2-6 cms; high density of stones < 1.5 cms		colluvium, top soil, agricultural land
2	very fine to medium fine; very compact; dense roots; porous; high density of lime particles; 10 YR 6/4 "light yellowish-brown"	stones up to 2 cms are characteristic; stones 2-10 cms	many chipped stone tools and other flint artefacts	colluvium
3	fine to medium grained; dense roots; relatively compact, but less than Layer 2; high density of lime particles; 10 YR &/4 "light yellowish-brown"	very high density of angular stones 5-15 cms; high density of lime gravels 0.2-2 cms, but less regular than in Layer 2; stone proportion *c.* 75 %; few bones	few chipped stones	colluvium; "rubble-layer"; phase of intensive sedimentation
4	*cf.* Layer 2; 10 YR 2.5/3.5	*cf.* Layer 2, but higher density of lime gravels < 2 cms and 2-6 cms		colluvium
5a	medium grained; less compact than Layer 2; 10 YR 6/4 "light yellowish-brown"	high density of angular stones 10-25 cms; pieces of limestone < 1.5 cms, but fewer than in Layer 2; few bones	few chipped stones	colluvium; "rubble-layer"; phase of intensive sedimentation
5b+c	*cf.* Layer 5a	higher content of limestones and lower content of bigger stones than in Layer 5a; boundaries between a, b and c very diffuse	*cf.* Layer 5a	*cf.* Layer 5a
6	fine to medium grained; very compact; 2.5 Y 6/4 "light yellowish-brown"	*cf.* Layer 5, but lower density of inclusions; higher proportion of lime gravels < 2 cms and 2-6 cms		colluvium
7	fine grained; very compact; dense roots; high density of lime particles < 2mm; 10 YR 6/4 "light yellowish-brown"	high density of lime gravels < 2 cms; very high density of angular limestones 10-35 cms; varying density within the layer	few chipped stones	colluvium; "rubble-layer"; phase of intensive sedimentation
8	*cf.* Layer 7	*cf.* Layer 7, but only very few stones of bigger size		colluvium
9	fine grained; very compact; dense roots; porous; high density of lime particles 0.2-2mm; 10 YR 6/4 "light yellowish-brown"	*cf.* Layer 2; very low density of stones 2-6 and 10-40 cms; lying on top of a destroyed wall; pieces of charcoal < 0.5 cms, regularly dispersed		colluvium; eventual collectiion of psephites to field clearence piles
10				lime pavement
11	very compact	medium density of ash and charcoal, on top two concentrations can be found		old surface

Appendix E. Area C, Test Unit C 208, Western Section: Geoarchaeological Layer Description.

Layer (Locus No.)	Depth (cm) Sample No. (cm)	Matrix (With Ash/Charcoal Components) and Munsell Colour Notation of Matrix	Minerals Inclusions and Cultural Deposits (Without Artefacts) / Orientation / Characterization of Layer / Notes	Associated Artefacts	Interpretation of Layer
1	000-025 27740 (015)	fine - coarse grained sandy matrix / few granular lime particles of 3-8mm; 2.5 YR 7/2-4 "light grey to pale yellow"	few stones / roots	one handstone fragment / PPNB flint artefacts / heavy duty quartzite tools (Palaeolthic artefacts of the surface mainly deposited by ploughing)	top soil / ploughing horizon of the present-day field
2	025-045 27742 (035)	fine grained sandy matrix / granu-lar lime particles and/or *samagah*-like material < 3mm / compact / hard; 2.5 Y 6/4 & 5/4 "light yel-lowish brown - light olive brown"	angular chert and rolled limestones 5-10 cms without orientation / granular limestones < 10mm / few animal bones / roots penetrating from 1	horizontally embedded PPNB flint artefacts	colluvium
3	045-090 27743 (060)	very fine - fine matrix / granular lime particles / less compact than 2, but densely packed; 10 YR 6/1 "light grey - grey", 10 YR 6/2*f*3 "light brownish grey - pale brown", 10 YR 5/1 "grey"	horizontally embedded angular limestone debris in higher density than in 2 / concentrations of horizontally embedded animal and human? bones / very few bits of charcoal / high concentration of equally distributed ashes / plenty of root negatives	horizontally embedded PPNB flint artefacts infrequently attested	colluvium / latest layer of sequence with locally embedded cultural remains
3a		like 3, but different in colour / concentrations of disintegrated *samagah*; 10 YR 8/3-4 "very pale brown" - 10 YR 8/6 "yellow"	like 3, but less animal bones	like 3 / PPNB flint artefacts infrequently attested	*cf.* 3 / build up with final deposit of 3
3b		like 3, but different in colour and higher proportions of granular llimestone and *samagah* particles; 10 YR 5/1-2 "grey - greyish brown"	like 3, but more animal bones		*cf.* 3 / representing short-termed deposit during final deposition of 3
4	90-105 27749.4 (090)	fine grained / granular lime particles < 1mm / dense / less consolidated than 3 / porous / roots; 7.5 YR 6/0-2 "light grey - grey - pinkish grey"	very few, mostly horizontally embedded smaller and larger limestones / animal bones infrequently attested / occasional bits of charcoal < 2mm / many fragments of burnished plaster stained in creamy colour	few horizontally embedded PPNB flint artefacts (mainly at the base of the layer) / sun-dried? amorphous lumps of clay / fragments of marine? mollusc	colluvium
5	105-115 27749.3 (upper part, 110), 27749.5 (lower part, 117)	fine - medium grained granular / lime particles < 2mm / less consolidated than 4 / porous / roots; base of layer: 10 YR 4/1 "dark grey" - 10 YR 6/2 "light brownish grey" / upper part: 10 YR 7/2 "light grey"	fire-affected and horizontally embedded limestones 5-8 cms in the northern part / horizontally embedded animal bones / few larger pieces of charcoal / central basal parts with high ash proportions / isolated red stained plaster fragments from upper part	occasional horizontally embedded PPNB flint artefacts	upper part: horizon of human occupation (high phosphate concentration) / colluvium, high influence by man

Layer (Locus No.)	Depth (cm) Sample No. (cm)	Matrix (With Ash/Charcoal Components) and Munsell Colour Notation of Matrix	Minerals Inclusions and Cultural Deposits (Without Artefacts) / Orientation / Characterization of Layer / Notes	Associated Artefacts	Interpretation of Layer
6	115-125 27749.6 (123)	similar to 5; 10 YR 4/1 "dark grey" - 10 YR 6/2 "light brownish grey"	matrix considerably mixed with whitish - creamy (10 YR 8/3-4 "very pale brown" - 10 YR 8/6-8 "yellow") lumps of mortar containing charcoal and flint as well as plaster fragments stained in red and creamy colours (most likely from mortar beds with a burnished and stained plaster surface) / occasional animal bones	very few PPNB flint artefacts	layer mainly consisting of material from destroyed mortar beds of floors with plaster stained in red and creamy colours / building debris layer
7	125-150 27749.7 (northern part, 145), 27749.2 (southern part, 140)	fine dusty - coarse grained / granular lime particles 0.5-2mm and *c.* 5mm / loose consistency; 2.5 Y /2 "greyish brown"	horizontally embedded angular and rounded limestones 3-10 cms / frequent animal bones / infrequently represented charcoal < 2mm / concentrations of plaster fragments with creamy burnish in the southern part, isolated fragments in the northern part	occasional horizontally embeded PPNB flint artefacts	colluvium, high influenced by man (southern part) / colluvium (northern part)
8	150-172 27749.8 (162)	fine - medium grained / loose consistency; 2 Y 5/2 "greyish brown" - 2 Y 4/2 "dark greyish brown"	angular and rounded limestones, more frequent than in 7 / larger inclusions and lenses of yellowish mortar-like material / large isolated pieces of charcoal / frequent horizontally embedded animal bones	horizontally embedded PPNB flint artefacts	colluvium, high influenced by man
9	172-180 27749.9 (175)	fine - coarse grained / dense / granular lime particles < 2mm / humid; 5 Y 3/1 "very dark grey"	fire-cracked limestones / high proportions of charcoal and ashes above a floor? (*cf.* 9a) / horizontally embedded animal bones	partly on the floor? (*cf.* 9a) and within the sediment of 9: flaking ground with refitting debitage (extension observed *c.* 2 m^2)	colluvium, high influenced by man
9a	180-183 27749.31 (180)		lensf off mortar material	partly on the lens of mortar material /floor? and within the sediment of 9: fchipping floor with refitting debitage (extension observed *c.* 2 m^2)	patch-preserved *in situ* floor without burnished plaster surface or a dump area of mortar material
10	180-193	fine - medium grained / granular lime particles < 2mm	few horizontally embedded limestones / animal bones infrequently attested / occasional fragments of charcoal and plaster / ash concentration at the southern base	few flint artefacts, 10 or 12 origin of the human face carved into a soft limestone	colluvium
11	193-196	fine - medium grained	mortar particles mixed with charcoal	none	colluvium without or with very few cultural deposits / phase of sedimentation / *in situ* temporary surface
11a	193-196 27749.10 (190)	fine - medium grained / plenty granular lime particles < 1mm and *c.* 5mm / medium - high consolidation by desintegrated lime; 10 YR 7/6 "yellow"	infrequent limestones < 5 cms	none	colluvium without or with very few cultural deposits / phase of sedimentation / *in situ* temporary surface

Layer (Locus No.)	Depth (cm) Sample No. (cm)	Matrix (With Ash/Charcoal Components) and Munsell Colour Notation of Matrix	Minerals Inclusions and Cultural Deposits (Without Artefacts) / Orientation / Characterization of Layer / Notes	Associated Artefacts	Interpretation of Layer
12	196-205 27749.12 (196)	similar to 11 / consistency more loose than 11 / greasy appearence when cut; 10 YR 6/2 "light brownish grey"	large charcoal pieces > 1 cms, especially concentrating below 11 / ashes	10 or 12 origin of the human face carved into a soft limestone	horizon of human occupation (high phosphate concentration)
13	200-205		exclusively ashes	none	ash lens
13a	205-210 27749.13 (206)	similar to 12, but different in colour and more crumbly; 2.5 YR 6/2-7/2 "light brownish grey - light grey"	ash concentration at the base, similar to 13 / isolated bits of charcoal / few plaster fragments stained in creamy colour	few fire-cracked flint pieces	colluvium, high influenced by man
13b	210-212 27749.14 (210)	fine - coarse grained / granular lime particles < 2mm; 7.7 YR 5/2-6/2 "brown - pinkish grey"	plenty of charcoal and lumps of brownish yellowish chalky loam? / horizontally embedded animal bones	horizontally embedded PPNB flint artefacts	colluvium, high influenced by man
13c	212-219	fine grained / granular lime particles; 10 YR 6/4 "light yellowish brown"	concentration of yellowish-brown material in the lower part	none	colluvium
14	205-207 27749.16 (206)	fine - very fine grained / more compact than 13c due to a higher proportion of disintegrated lime/*samagah*; 10 YR 7/3 "very pale brown"	frequent charcoal / red stained plaster fragments and mortar particles	none	*in situ* surface of building debris / temporary surface / horizon of human occupation (high phosphate concentration)
15	207-216 27749.17 (210)	dusty fine grained / granular lime particles; 10 YR 5/2-4/2 "greyish brown - dark greyish brown"	heavy concentration of charcoal (2-8mm) / dusty material partly ashes (*cf.* 16)	none	horizon of human occupation (high phosphate-concentration)
16	219-225 27749.19 (221)	none	almost exclusively ash with few bits of char-coal / small flint, bone and plaster fragments	none	ash lens
17	216-221 27749.20 (218)	fine - coarse grained / consolidated only in some spots / major parts of layer very loosly composed / granular lime particles < 3mm; 10 YR 7/2-3 "light grey - very pale brown"	few bits of charcoal / bones	occasional PPNB flint artefacts	colluvium
18	221-235	fine - medium grained; 10 YR 4/1 "dark grey" - 10 YR 6/2 "light brownish grey"	very few lumps of mortar containing charcoal and few plaster fragments stained in red and creamy colours / occasional animal bones	very few PPNB flint artefacts	colluvium
19	225-230 27749.22 (225)	almost sterile sandy material; 7.5 YR 7/6 "reddish yellow"	very little charcoal	none	lens of decomposed sandstone/sandy limestone / prepared raw material?
20	235-237	only ashes; 2.5 Y 6/2 "light brownish grey"		none	ash layer of varying thickness (4-1 cms)
20a	237-245 27749.23 (240)	fine - coarse grained / granular lime particles / very humid; 10 YR 4/1-3/1 "dark grey - very dark grey"	plenty of charcoal in larger pieces / yellowish sundried material with charcoal inclusions / few fragments of brownish-reddish stained plaster / bone splinters	PPNB flint artefacts	horizon of human occupation (high phosphate concentration)
21	242-246	similar to 14, but less compact and greasy; 2.5 Y 8/4-6 and 7/4-6 "pale yellow - yellow"	none	none	*in situ* temporary surface

Layer (Locus No.)	Depth (cm) Sample No. (cm)	Matrix (With Ash/Charcoal Components) and Munsell Colour Notation of Matrix	Minerals Inclusions and Cultural Deposits (Without Artefacts) / Orientation / Characterization of Layer / Notes	Associated Artefacts	Interpretation of Layer
22	245-265	fine grained / granular lime particles < 1mm; 2.5 Y 6/2 - 5/2 "light brownish - greyish brown"	few limestones > 5 cms in the upper central part / less charcoal than 22a / ashes / horizontally embedded, infrequent flint and bone fragments	horizontally embedded, infrequent PPNB flint artefacts	colluvium
22a	261-265 27749.26 (263)	similar to 22; 2.5 Y 5/4 "light olive brown"	charcoal frequently attested	PPNB flint artefacts	lens of charcoal at the northern base of 22
23	265-267 27749.27 (266)	whitish sandy material	none	none	lens of whitish sand between 22/22a and 24
24	267-275 27749.28 (270)	similar to 22, but fewer lime particles; 2.5 Y 4/4 "olive brown"	few larger limestones > 5 cms / less charcoal than 22 / fragments of red-stained plaster	few flint artefacts	colluvium
25	275-277 27749.29 (276)	none	ash like 16	none	ash lens
26	277-310	*cf.* 24; 2.5 Y 4/4 "olive brown"	*cf.* 24	*cf.* 24	colluvium
27	290-300	almost none, matrix penetrated into deposit from surrounding 26; 2.5 Y 4/4 "olive brown"	bed of smaller limestones	PPNB debitage and tools of a chipping floor	deposit of (removed) waste of a chipping floor

Appendix F. Area C, Test Unit C 217, Northern and Eastern Sections. Geoarchaeological Layer Description

Note: The same layer designations are used for both the sections; evidence from the southern and western sections was consulted.

Layer (Locus No.)	Depth Below Surface (cm) Sample No. (Depth of Sample in cm)	Matrix (With Ash/Charcoal Components) and Munsell Colour Notation of Matrix	Mineral Inclusions and Cultural Deposits (Without Artefacts)/ Orientation / Characterization of Layer / Notes	Associated Artefacts	Interpretation of Layer
1	N: 000-020 E: 000-025 37701.1 (010)	silty sand of loose crumbly consistency (remains stable after blow with trowel); 10 YR 6/4 "light yellowish brown"	edge-rounded limestones 1-2 cms; few limestones 3-5 cms	frequent PPNB flint artefacts	colluvium; top soil; ploughing zone
2	N: 020-070 E: 025-070 37701.2a (030) 37701.2b (060)	silty sand of crumbly consistency; silty sand proportion less than in Layer 4; porous; 10 YR 6/4 "light yellowish brown"	very few larger stones 3-5 cms	PPNB flint artefacts; occasional animal bones	colluvium
3	N: 070-135 E: 070-130 37701.3a (100) 37701.3b (112)	similar to Layer 2, but less densely packed; porous, roots; 10 YR 5/3 "brown"	undressed limestone boulder (40-50 cms) in the northern sec-tion, characterized by higher concentration of irregularly distributed, horizontally embed-ded stones (compared with Layer 2); concentration of stones in the upper part of the layer in form of discontinous horizontal concentrations (in all 4 sections)	occasional PPNB flint artefacts; bones	colluvium; old surface ?
4	N: 135-175 E: 135-165 37701.4 (150)	densely packed silty sand; occasional - frequently rounded and non-rounded lime particles 2-6mm (=major difference from Layer 5); less crumbly than layers above; crumbles not consolidated; remains rather stable against blow by trowel; powdery appearence if rubbed between fingers; still porous; few roots; 10 YR 5/2-3 "greyish brown - brown"	few irregularly distributed stones without predominant orientation	infrequent distribution of artefacts (almost exclusively chip sizes); some bones	colluvium; layer is mainly represented in the northern section and thins out in the western section, it can hardly be traced in the eastern section; possibly the layer is built up by a sediment mixture of Layers 5 and 3 material; in the E section it does not have the sterile silty appearance as in the northern section
5	N: 175-225 E: 165-205 37701.5a (180) 37701.5b (215)	densely packed silty sand; similar or higher proportion of 2-4mm lime particles; crumbles not consolidated;"drizzling" dusty if hit by a trowel; less porous than Layer 4; 10 YR 5/2-3 "greyish brown - brown"	discontinous layer of horizontally embedded, edge-rounded limestones (c. 5-7 cms) between Layers 4 and 5; irregular distribution of few stones	less chipped artefacts than in Layer 4; ashes; some bones	colluvium; discontinous layer of horizontally embedded limestones (c. 5-7 cms) between Layers 4 and 5 can be followed at the same elevation all four sections (old surface ?)

Layer (Locus No.)	Depth Below Surface (cm) Sample No. (Depth of Sample in cm)	Matrix (With Ash/Charcoal Components) and Munsell Colour Notation of Matrix	Mineral Inclusions and Cultural Deposits (Without Artefacts)/ Orientation / Characterization of Layer / Notes	Associated Artefacts	Interpretation of Layer
6	E: 200-230 37701.6 (210)	silty sand; slightly crumbly; porous like Layer 5; 10 YR 5/2-3 "greyish brown - brown"	concentration of ash with larger stones and stony layer in the northern half of the eastern section (traced also within the test unit area)	horizontally embedded PPNB-flint artefacts; charcoal	considered as an anthropogenic episode between Layers 5 and 7 (fireplace, stony layer); buildup of a matrix mixture of Layers 5 and 7
7	N: 225-245 E: 230-240 37701.7 (237)	densely packed sandy silt; not crumbly; powdery; almost not porous; 10 YR 7/3 "very pale brown"	sterile fof stones larger than 1 cms		horizon of human occupation (high phosphate concentration)
8	N: 245-290 E: 235-255 37701.8 (265)	same sandy silt l as in Layer 7, but slightly crumbly; 2-4mm edge-rounded lime particles; 10 YR 7/3-4 "very pale brown"	irregular ly distributed stones < 10 cms	few PPNB flint artefacts	buried soil
9	N: 290-310 37701.9 (300)	densely packed sterile sandy silt (harder than Layer 7); "drizzling" if hit by trowel; dusty powdery; 10 YR 7/3-4 "very pale brown"			horizon of human occupation (high phosphate concentration)
10	N: 280-310 E. 255-290 37701.10a (275) 37701.10b (275)	silty sand; 2-4mm edge-rounded lime particles; 10 YR 6/3 "pale brown"	northern part of stony layer (eastern section): obliquely embedded stones of 5 cms; southern part of stony layer (eastern section): densely horizontally packed stones of 10 cms almost without matrix	human bones; PPNB-chipped flint artefacts	cultural deposit, probably marginal to housing area; stone coverage of animal parts
11					burial
12	N: 310-325 37701.12 (315)	hard layer of silty sand; crumbly (crumbles partly consolidated); 10 YR 7/4-6 "very pale brown - yellow"		infrequently attested bones and PPNB flint artefacts	colluvium; the burial was dug into this layer
13	N: 325-370 37701.13 (340)	silty sand; 2-4mm lime particles; almost not porous; 10 YR 6/3-4 "pale brown - light yellowish brown" and 5 Y 6/4 "pale olive" (ashes)		charcoal; few PPNB-flint artefacts and bones	layer with interbedded ashy lenses/ashy deposite

Stratigraphic Chart Area A

The list of locus data (Appendix A) and the stratigraphic chart need to be used together; the specific location of a stratigraphic feature in a square can de identified from the room number in the chart above which or inside which the feature is attested. The "below/ above loci" column information is based on the stratigraphic information provided by the excavator of the square, and was corrected when not plausible at all. The language of the locus description often had directly to be based on the diary information, since a critical understanding of the records was not possible.

For the symbols used in the chart *cf.* Fig. 1. Stratigraphic information taken from other squares is marked by footnotes related to the locus numbers. The subsquare designations a, b, c, and d subdivide squares clockwise into quarter squares, from NW to NE to SE to SW.

Footnotes in the Stratigraphic Chart Area A:

1) Locus designation of the 1986 operation in the square.

2) Locus designation of the 1987 operation in the square.

3) Locus designation of the 1988 operation in the square.

4) Locus designation distributed in the sequence of serial locus numbers of Square A 22.

5) Locus designation distributed in the sequence of serial locus numbers of Square A 17.

6) This "layer" represents the bulldozed surface, often referred as "top soil" in the diaries and not always receiving a locus number.

7) Locus designation distributed in the sequence of serial locus numbers of Square A 18.

8) Locus designation of the 1987 operation in Square A 14b-c (eastern half of square).

9) Locus designation of the 1987 operation in Square A 14a-d (western half of square).

10) Locus designation distributed in the sequence of serial locus numbers of Square A 13.

11) Locus designation distributed in the sequence of serial locus numbers of Square A 12

12) Locus designation of baulk removal between Squares A 12 and A 13.

13) Locus designation of baulk removal between Squares A 8-9 and A 4.

14) Locus designation distributed in the sequence of serial locus numbers of Square A 8.

15) Locus designation distributed in the sequence of serial locus numbers of Square A 9a-d (western half) in 1986.

16) Locus designation distributed in the sequence of serial locus numbers of Square A 9b-c (eastern half) in 1987.

17) Presentation of wall locus numbers in this row does not follow any order or imply stratigraphic meaning.

18) Locus designation distributed in the sequence of serial locus numbers of Square A 10a-d (western half) in 1987.

19) Locus designation distributed in the sequence of serial locus numbers of Square A 10b-c (eastern half) in 1987.

20) Locus designation distributed in the sequence of serial locus numbers of Square A 6.

21) Locus designation distributed in the sequence of serial locus numbers of Square A 5 in 1987.

22) Locus designation of baulk removal between Squares A 6 and A 2.

23) Locus designation of baulk removal between Squares A 6 and A 7.

24) Locus designation of baulk removal between Squares A 5 and A 6 for only the part belonging to Square A 6. The part belonging to Square A 5 was numbered in the sequence of serial locus numbers of Square A 5.

25) Locus designation distributed in the sequence of serial locus numbers of Square A 7.

26) Locus designation distributed in the sequence of serial locus numbers of Square A 5 in 1986.

27) Locus designation of baulk removal between Square A 3 and A 7.

28) The walls of Rooms 6-9, 11a and 12 are recorded in this stratigraphic chart and in Top Plan Area A as belonging to Architectural Phase AII, although their stratigraphical relationship to this phase is not clear: they are stratigraphically linked to the bedrock and the cultural debris layers above it which elsewhere in Area A would make them Phase AIII. It was discussed whether Rooms 11b and 13 are the northern margin of Phase AII in the area.

Stratigraphic Chart Area A

Squares Area A Room No. of Main Phase II, Upper Area A, and "NW- Corner"	16/ 21 Rooms 24/33	22 Room 34	22 Room 35	22 Room 36	22 Room 37	22 Room 38	22 Room 39	22/ 17 Room 28	17 Room 23
Top Soil	34				01 02	01 02			
Deposits above ruined top of uppermost walls		08 6 12	08 6 11 18 21	08 6 11 18 21	04 03 05 03 07 06 07 08 11 18 20	04 03 05 03 07 06 07 08 13 18 16 22	08 6 11 15 18 26	x 4 11 4 17 4	x 6
Room fills / stratigraphy of Upper Architectural Phase AI									
Walls of Upper Architectural Phase AI									
Substructures of Upper Architectural Phase AI									
Room fills / stratigraphy of Main Architectural Phase AII	35 39	23 32	28 30 36	27	20	22 31	26 33 41 44	29 4 23 5 38 37 4 23 5	
Walls of Main Architectural Phase AII	02 5 09 40 4	09 10 14	09 10 14 25	09 25	19	12 14 19 24	42 14 24 43	45 4 09 40 4	05 11 04 01
Substructures of Main Architectural Phase AII									
Room fills / stratigraphy of Earliest Architectural Phase AIII									
Walls of the Earliest Architectural Phase AIII									
Substructures of Earliest Architectural Phase AIII									
Cultural deposits below earliest architectural foundations									
"Yellowish" Deposit									
Bedrock									

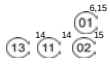
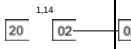
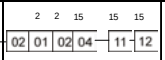
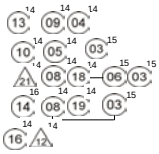
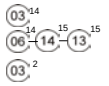
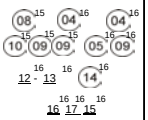
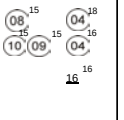
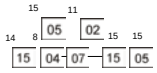
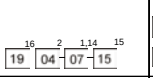
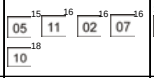
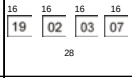
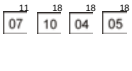
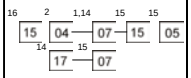
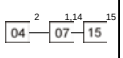
Stratigraphic Chart Area A cont. 1

Squares Area A Room No. of Main Phase II, Upper Area A, and "NW- Corner"	17 Room 25a	17 Room 25b	17 Room 27a	17 Room 27b	18 Room 29	18 Room 30	18 Room 32	18 Room 31
Top Soil								
Deposits above ruined top of uppermost walls	x 6	x 6	x 6	x 6 15 7	01 6 03 12 24 08	01 6 09 12 24 44 *8	01 6 11 05 19 23 26	01 6 04
Room fills / stratigraphy of Upper Architectural Phase AI								
Walls of Upper Architectural Phase AI								
Substructures of Upper Architectural Phase AI								
Room fills / stratigraphy of Main Architectural Phase AII	05 9 10	06 7 8	17 18 1 18 2 18 2	16 16 19 17 7 - 20 2 - 21 2	24 29 32 33 58 58 *32 59 *33-39 70 *33-35 74	24 25 28 *60/b 38 *60/b	25 26 23 31 34 7/17 37 36 7/12 42 46	04 14 45 51
Walls of Main Architectural Phase AII	04 11 05 14 03 01	13 15 12 11 03 02	11 12 02	13 15 12 14 04 75 7 45 4 13 7 16 7 18 7	13 16 18 02 75 ?	44 ? 35 22 39 41 46	41 40 43 22 31 21 06	07 06 02 47 3 27 2
Substructures of Main Architectural Phase AII				18? 3 - 20? 7 21 ? 75 ? 24 ?	75 ?		56 56 57 57 57 71 67 72 68 73 69	
Room fills / stratigraphy of Earliest Architectural Phase AIII				18? 3 - 20? 7				48 49 53 51
Walls of the Earliest Architectural Phase AIII				24 ? 75 7 ?	75 ?			50 52
Substructures of Earliest Architectural Phase AIII								54 54 54 54 55 60 55 60 65 62 64 61 38 63 51
Cultural deposits below earliest architectural foundations								
"Yellowish" Deposit								
Bedrock								

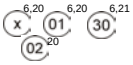
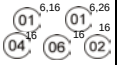
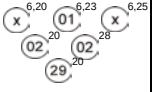
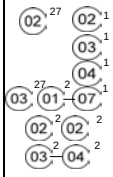
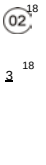
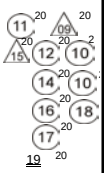
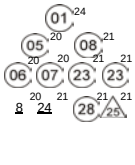
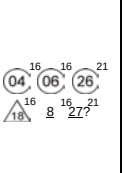
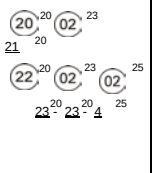
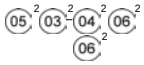
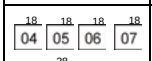
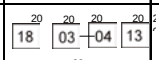
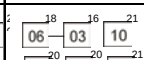
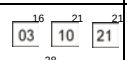
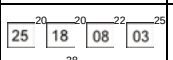
Stratigraphic Chart Area A cont. 2

14 Room 21	14 Room 22	13 Room 20	13 Room 19	13 Room 17	13 Room 18	12 Room 15	12 Room 16
01 6,9 02 9 04 9 03 9	01 6,9 01 6,8 02 9 04 9 02 3 03 9 05 8 04 8	01 1,6	01 1,6	01 1,6	01 1,6	01 1,6	01 6 — 06 12
				04 1	04 1		
		01 02	01 02 08		06 03		
	10 8 06 9 13 8 7 - 10?	10 12 14 16 17	10 12 13	07 09 11	04 05 06 7 15		03 — 06 12
11a 08 9 07 9	09 9 — 03 8 08 7 08 8 06 8	03	03 11a 10 18	02 03 21 ? 11 11 16	02 03 21 ? 11	05 — 04 5 02	02 10 05 — 04 5 02
		18 18 18 18 18 18 18 19 18 19 16 19 18 19 29 28 25 27 24 26	13 13 13 13 13 13 13 13 32 29 30 31 33		20 22 23		4 07 08 09
11 9 5 11b	7 8 - 13 10 14						
11a 08 9 07 9	09 9 03 8 08 9 08 8	29	29 30 31		15a 21		
12 *37 12 12 18 26 26 21 19 22 20 23 24	15						
	15 16						
	17 ? 25						

Stratigraphic Chart Area A cont. 3

Squares Area A Room No. of Main Phase II, Upper Area A, and "NW- Corner"	12/ 8/ 9 Room 10	8/ 9 Room 11c	9 Room 11b	9 Room 11a	10 Room 13	10 Room 14b	10 Room 14a
Top Soil						Eintragungen mit Locuslist	
Deposits above ruined top of uppermost walls							
Room fills / stratigraphy of Upper Architectural Phase AI							
Walls of Upper Architectural Phase AI							
Substructures of Upper Architectural Phase AI							
Room fills / stratigraphy of Main Architectural Phase AII							
Walls of Main Architectural Phase AII							
Substructures of Main Architectural Phase AII							
Room fills / stratigraphy of Earliest Architectural Phase AIII							
Walls of the Earliest Architectural Phase AIII							
Substructures of Earliest Architectural Phase AIII							
Cultural deposits below earliest architectural foundations							
"Yellowish" Deposit							
Bedrock							

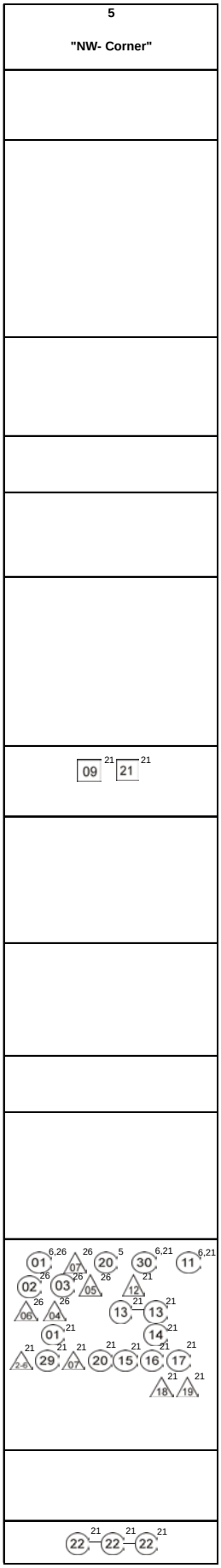
Stratigraphic Chart Area A cont. 4

10 Room 12	6 Room 9	5/ 6/ 9/ 10 Room 8	5/ 9 Room 7	6 Room 6a	6 Room 6b	3 Room 5b	3 Room 5a	3 Room 4a
								
								
								
								
								
28	28	28	28	28	28			
								
								

Stratigraphic Chart Area A cont. 5

Squares Area A Room No. of Main Phase II, Upper Area A, and "NW- Corner"	3 Room 4b	2 Room 3a	2 Room 3b	1 Room 2	1 Room 1	1 "NW- Corner"	2 "NW- Corner"	6 "NW- Corner"
Top Soil	01	x	x	01 ?	01 ?			
Deposits above ruined top of uppermost walls	02 03 04	01		01 02 ?	01 ?2 02 ? 04 03 ?			
Room fills / stratigraphy of Upper Architectural Phase AI		01 1 04 8 05 1 18 19 06 21	03 1 3b 1 7 1		04 1 05 1			
Walls of Upper Architectural Phase AI		02 ?1 20 22 09	02 ? 20 22 09	16 1	16 1 17 18			
Substructures of Upper Architectural Phase AI					06 1			
Room fills / stratigraphy of Main Architectural Phase AII	04 1 08 1 9 8 10 11							
Walls of the Main Architectural Phase AII	05							03 20 04 20 26 20 25 20 08 22 18 20
Substructures of Main Architectural Phase AII								
Room fills / stratigraphy of Earliest Architectural Phase AIII								
Walls of the Earliest Architectural Phase AIII								
Substructures of Earliest Architectural Phase AIII								
Cultural deposits below earliest architectural foundations						10 12 13 14 19 08 11 15 09 02 01	11 6,1 11 6,1 11 3,1 10 02 12 13 13 01 2 25 1 15 17 24 15 10 14	01 6,24 x 6,20 x 6,22 01 24 02 01 20 01 22 02 22 20 0 05 22 04 22 03 2 24 20 06 22 27 20 07 22 28 20 30 20 29 20 31 20
"Yellowish" Deposit						09 ?1 03 2 08 11 15 10 ? 02 01	01 1 25 1 15 15	
Bedrock						07		

Stratigraphic Chart Area A cont. 6



Stratigraphic Chart Area B

The list of locus data (Appendix C) and the stratigraphic chart need to be used together, whenever the locus data are recorded in the appendix. The location of a stratigraphic feature in a square can be identified by the room (room numbers represented by the chart columns), above which or inside which the feature is attested. With a few exceptions, the stratigraphic information from the baulks was not entered in the stratigraphic chart, in order to keep the chart clear for use; however, the baulks' stratigraphic information was consulted in cases of uncertainity. The "below/ above loci" column information is based on the stratigraphic information provided by the excavator of the square, and was corrected in the Stratigraphic Chart when not plausible at all. This is the reason for some inconsistencies, which remained to explain the debated stratigraphy. The language of the locus description (Appendix C) often had to be based directly on the diary information, since a critical understanding of the records was not possible.

Please, consult the errata note for Top Plan Area B at the bottom of next page.

For the symbols used in the chart *cf.* Fig. 1. Underlined square numbers in the upper row of the Stratigraphic Chart Area B indicate the square from which the stratigraphic information was taken from (in case of rooms are covered by 2 or even 3 squares: locus numbers refer to the underlined square). Stratigraphic information taken from other squares is marked by footnotes related to the locus numbers.

Footnotes in the Stratigraphic Chart Area B:

1) Locus designation refers to the removal of Baulk B 35/36.

2) Locus designation of the 1992 operation in the square.

3) Locus designation of the 1989 operation in the square.

4) Locus designation of the 1988 operation in the square.

5) Locus designation of the 1987 operation in the square.

6) No information available for this square.

7) Locus designation of Square B 68.

8) Locus designation of Square B 67.

9) Locus designation of Square B 51.

10) The entries for the room fills and walls of the "earlier BII phase" attested in Square 48 are recorded in the BII rows of the chart, since it is not clear if these remains can be understood as a Phase BIII.

11) Locus designation of Square B 69.

12) Locus designation of Square B 52.

13) All the area in B under the top soil E of wall Locus [14] represents a large pit, filled with much stone rubble, some Neolithic cultural debris, and later pottery. Like for the pit in B 53, we have no idea about the origin and date of these pits.

14) Locus designation of Square B 85.

15) Locus designation of the 1992 operation in the square.

"Spaces" are defined as areas without clear room boundaries. Loci located in spaces not having received a desination are not considered in the Stratigraphic Chart Area B; however, these loci are to be found described in Appendix C.

The subsquare designations a, b, c, and d subdivide squares clockwise into quarter squares, from NW to NE to SE to SW.

The stratigraphic information on Squares B 23 and 24 is missing in the Stratigraphic Chart Area B and in Appendix C since the diaries are lost.

Errata Top Plan Area B

"Wall" locus numbers set inside the rooms of B 34 and B 48 have to be erased (are not referring to walls).

B 35: wall Locus [15] correctly is Locus 45.
B 49: wall Locus [38] correctly is Locus 41.
B 83: curvilinear wall Locus [10] correctly is Locus 5.
B 105: wall Locus [21] correctly is Locus 20.

Note on Top Plan Area B: Levels inside spaces and rooms represent the latest reach surfaces in the squares.

Stratigraphic Chart Area B

Squares Area B **Structure No., Room No. or Space No.**	86/ 68 Room I 1	68/ 69 Room I 2	86 Room I 3	86 Room I 4	86 Room I 5	87 Room I 6
Top Soil and Fine-Grained Deposits	TS	TS 01	01	01	01	01
Upper Rubble Layers	01 02 05 06	01 02 09	02	02	02	02
Lower Rubble Layers (with architectural remains of Phase B0)		09 16 19?	02	02	02	02
Room fills/ stratigraphy of Later Architectural Phase BI						
Walls of Later Architectural Phase BI						
Substructures of Later Architectural Phase BI						
Room fills/ stratigraphy of Main Architectural Phase BII	11 13 21 22 26 30 29 23 24 44 43 37 35 31 36 34 43 38 40	19? 20 23 25 29 26	04	08 06 07 15	10?	13
Walls of the Main Architectural Phase BII	25 31 19 18 27 10	05 10 07	03 10 07	05 03 09	03 12 09	20 05 12 14
Substructures of Main Architectural Phase BII				11 17	17	
Walls of an earlier architectural Phase BIII/ substructures of a Phase BIII						

Stratigraphic Chart Area B cont. 1

Squares Area B **Structure No., Room No. or Space No.**	87 Room I 7	87 Room I 8	69 Room I 9	69 Room I 10	69 Room I 11
Top Soil and Fine-Grained Deposits	01	01	TS 01	TS 01	TS 01
Upper Rubble Layers	02	02	01 02	01 02	01 02
Lower Rubble Layers (with architectural remains of Phase B0)		02 – 03	14	13 17 – 18	12 15
Room fills/ stratigraphy of Later Architectural Phase BI					
Walls of Later Architectural Phase BI					
Substructures of Later Architectural Phase BI					
Room fills/ stratigraphy of Main Architectural Phase BII	07 – 11 – 08 – 15	03 04	30	24 28	21
Walls of the Main Architectural Phase BII	12 – 05 – 06 – 14	06 – 05 – 22 – 07	22 – 32 – 31 – 11	10 – 07 – 03 – 04	05 – 04 – 03 – 06
Substructures of Main Architectural Phase BII					
Walls of an earlier architectural Phase BIII/ substructures of a Phase BIII					

Stratigraphic Chart Area B cont. 2

68 Room I 12	51/68 Room I 13	51/68 Room I 14	50 Room I 15	67 Room I 16	67 Room I 17	67/ 68 Room I 18
TS	TS 01 02 03	TS 01 02 03	TS — 01	TS 01	TS 01	TS
01 02 04 05 06			02 — 05	03 05 08	03 05 08	01 02 03 05 06
			04 08	19 23 25 26 29 35 38	19 24 25 26 29 35 38 37	07 — 08 09 — 10
11 15 28 32 41	42[7] 26 30 31 33	24 28	08 16		53	11 14 16 20
31 - 17 - 39 - 06	19[7] — 39[7] — 25 — 27	16 - 27 - 29 - 25	15 - 17 - 16	17 - 36 - 02 - 15	15 - 30 - 36 - 02[8]	36 - 29 - 18 - 30

Stratigraphic Chart Area B cont. 3

Squares Area B **Structure No., Room No. or Space No.**	67 Room I 19	67/85 Room I 20	104/105 Room II 1	105 Room II 2	105 Room II 3	104/105 Room II 4
Top Soil and Fine-Grained Deposits	TS, 01	TS, 01	TS, 01, 02	TS, 01, 02	TS, 01, 02	TS, 01, 02
Upper Rubble Layers	03, 05, 08	03, 05	03, 07, 10?, 09?	03, 08?, 04?, 06?	03, 07?, 08?, 09?	03, 04
Lower Rubble Layers (with architectural remains of Phase B0)	19, 24, 25, 26, 29, 40	25, 26, 28, 29	07, 10?, 09?, 11, 17, 14, 16	08, 04?, 06?	07?, 08?, 09?	05, 07
Room fills/ stratigraphy of Later Architectural Phase BI						
Walls of Later Architectural Phase BI						
Substructures of Later Architectural Phase BI						
Room fills/ stratigraphy of Main Architectural Phase BII	42, 48, 56, 57	41, 45, 46, 58	13, 15, 22, 23	18, 19	18, 19	16, 26?, 25?, 23, 24
Walls of the Main Architectural Phase BII	32 - 02 - 33 - 30	25 - 30 - 33	12 20 13	12 - 21 - 20	20	11 25? 26?
Substructures of Main Architectural Phase BII						
Walls of an earlier architectural Phase BIII/ substructures of a Phase BIII						

Stratigraphic Chart Area B cont. 4

103/104 Room II 5	104 Room II 6	104 Room II 7	104 Room II 8	86/104 Space II 9	49/50/66/67 Room III 1	50 Room III 2	67 Room III 3
TS 01 02	TS 01 02	TS 01 02	TS 01 02	01	TS-01	TS-01	TS 01
03 04	03	03	03	02	02-05	02-05	04? 13? 15? 17?
05 07 12	05 07	05 06 07	05 06 08	02 14	04 08	04 08	
15	14			16	08 16 23 24 26 27 28 30 29 32	08 16 31	13? 15? 17?
11-19	11-13-18-19		13-18	12	11 22 25	11-22-25-12-15-13-14	02 12
				13			

Stratigraphic Chart Area B cont. 5

Squares Area B **Structure No., Room No. or Space No.**	67 Room III 4	67 Room III 5	66 Room III 6	66 Room III 7	66 Room III 8	49 Room III 9
Top Soil and Fine-Grained Deposits	TS 01	TS 01	01	01	01	01 02
Upper Rubble Layers	04?	04? 07?	04	05 11?	05 11?	03? 06? 07?
Lower Rubble Layers (with architectural remains of Phase B0)		27?		11?	11?	03? 06? 07? 10
Room fills/ stratigraphy of Later Architectural Phase BI						
Walls of Later Architectural Phase BI						
Substructures of Later Architectural Phase BI						
Room fills/ stratigraphy of Main Architectural Phase BII	11 – 11 16 – 16 21 – 21	08 09 20 22	23 30	12 15 24	16 25 31	25 27 28 29 32 31 35
Walls of the Main Architectural Phase BII	10 - 18 - 12 - 02	02 - 10 - 06	17 - 06 - 02	14 - 06 - 08 - 09	17 - 08 - 10 - 26?	26 - 13 - 30
Substructures of Main Architectural Phase BII						
Walls of an earlier architectural Phase BIII/ substructures of a Phase BIII						

Stratigraphic Chart Area B cont. 6

49 Room III 10	51 Room IV 1	51 Room IV 2	51 Room IV 3	51 Room IV 4	52/69 Room V 1	52 Room V 2
01 02	TS 01 02 03	TS 01 02 03	TS 01 02 03	TS 01 02 03	01 02	01
03? 06? 07?					03	03
05 03? 08 06? 07? 10					04 — 05	04
25 27 28 29 32 33	08 11 12 — 13 18 23	20 21 45 46 44	14	09	15 07 06 8 17 28 20 21 37 46 38 43 48 49	09
11 — 13 — 30	19 — 04 — 10	04 — 19 — 25 — 05	15 — 04 — 05 — 07	15 9 — 10 — 17	11 — 13 — 07 — 17 — 10 — 27 — 48	26 — 27
34	44				30 — 31 — 32 — 33 — 41 45 47	

Stratigraphic Chart Area B cont. 7

Squares Area B **Structure No., Room No. or Space No.**	51/ 52 Room V 3	51 Room V 4	51 Room V 5	69 Room V 6	52/ 69 Room V 7
Top Soil and Fine-Grained Deposits	TS 01 02 03	TS 01 02 03 22?	TS 01 02 03	TS 01	TS[11] 01[11]
Upper Rubble Layers				01 02	01[11] 02[11]
Lower Rubble Layers (with architectural remains of Phase B0)					
Room fills/ stratigraphy of Later Architectural Phase BI					
Walls of Later Architectural Phase BI					
Substructures of Later Architectural Phase BI					
Room fills/ stratigraphy of Main Architectural Phase BII	06 36 47 50	22? 23 35 37	40 42	24[12]	12[12] 16[12] 19[12] 23[12]
Walls of the Main Architectural Phase BII	19 - 50 - 48 - 38	19 - 39 - 41 - 38	19 - 39 - 41 - 25	03 - 33 - 25[12] - 07	25[12] - 11[12] - 22[12]
Substructures of Main Architectural Phase BII					
Walls of an earlier architectural Phase BIII/ substructures of a Phase BIII					

Stratigraphic Chart Area B cont. 8

52 Room V 8	69 Room V 9	70 Room V 10	53 Room V 11	53 Room V 12	70 Room VI 1	70 Room VI 2	53 Room VI 3
(01) (02)	(TS) (01)	(01)	(TS)	(TS)	(01) (04)[13]	(01)	(TS)
(03)	(01) (02)	(03) (05)	(01) (02) (03)	(01) (02) (03)		(03) (05)	(01) (02) (03)
(04)	(14)	(06)		[12] [13]	(15)[?]	(06)	(07)
(09) (12) (16) (19)	(34)	(12)	(10) (27)	(10) (26)		(11) (16) (18) 19	(14) (19)
[11] [22]	[33] [36] [31] [09]	[17] [09]	[06] [33] [30] [06]	[05] [30] [06]	[14] [02]	[02] [14] [10] [09]	[23] [04] [05] [20]

Stratigraphic Chart Area B cont. 9

Squares Area B	53	85/86	85	85	103	103	84/102
Structure No., Room No. or Space No.	Room VI 4	Room VII 1	Room VII 2	Room VII 3	Room VII 4	Room VII 5	Room VIII 1
Top Soil and Fine-Grained Deposits	TS	TS	TS	TS	01 02	01 02	01 02
Upper Rubble Layers	01 02	01 02?	01 02?	01 02?	05	06 03	03
Lower Rubble Layers (with architectural remains of Phase B0)	07 11?	02? 04? 05?	02? 04? 05?	02? 04? 05?	07 23? 28?	07 08? 23? 28? 40? 42?	04 07 09 10 14
Room fills/ stratigraphy of Later Architectural Phase BI							
Walls of Later Architectural Phase BI							
Substructures of Later Architectural Phase BI							
Room fills/ stratigraphy of Main Architectural Phase BII	14 18 21	06? 14 15 17	06? 10 11 14 17	06? 14 17	23? 28?	08? 09 20? 23? 28? 40? 42? 48 57 67 83 84	
Walls of the Main Architectural Phase BII	05 - 20 - 16	60	09 - 03 - 08 - 16 - 07	16 - 07	87 60	60 99	87 17 - 21
Substructures of Main Architectural Phase BII							
Walls of an earlier architectural Phase BIII/ substructures of a Phase BIII							

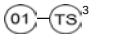
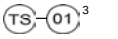
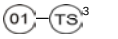
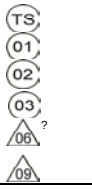
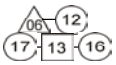
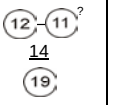
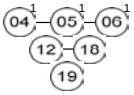
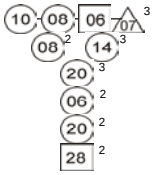
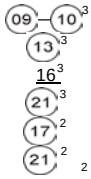
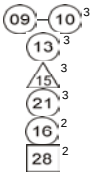
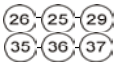
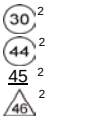
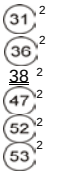
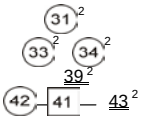
Stratigraphic Chart Area B cont. 10

84/85 Room VIII 2	66/67/84/85 Room VIII 3	83 Room VIII 4	83 Room VIII 5	102 Room VIII 6	102 Room VIII 7	22 Room 1
01	01	01	01	01 02	01 02	TS
03	05	02 03	02 03	03 04	03 04	01 02 03 05 10
05 11 13 12 15		11	11	06 18?	06 08? 16? 22? 27?	
						08 09 13 14 23
						07 - 19 - 28
05 13 08 12 16 19 20 25 27 26 29 28 34 30 31 32 33 35	13 19 21 22 28 26			14 18? 29 30 41 43 49 44 47	16? 08? 22? 27? 53 51 64 69 77 74 76	
17 - 07 - 06 - 30 - 18 - 20	07 - 14 - 20	06 - 16		12 3 13 3 96 15 91 15 94 15	93 - 94 - 91 - 87	
38 - 37 - 36						

Stratigraphic Chart Area B cont. 11

Squares Area B **Structure No., Room No. or Space No.**	22 Room 2	23 Room 3	24 Room 4	34 Room 5	34 Room 6
Top Soil and Fine-Grained Deposits	TS	6	6	TS – 01	01 – TS
Upper Rubble Layers	02 04 11 – 12 – 19 16	6	6	03 04 05 02	03 04 05
Lower Rubble Layers (with architectural remains of Phase B0)		6	6	10 14 17 17 22	10 14 17 17 23
Room fills/ stratigraphy of Later Architectural Phase BI	09 15 17 20 29	6	6	25 49 50	48
Walls of Later Architectural Phase BI	19 – 18 – 28 – 22 – 21 – 30	6	6	19 – 18 – 24 – 26	51 – 24 – 19 – 12 – 26
Substructures of Later Architectural Phase BI					
Room fills/ stratigraphy of Main Architectural Phase BII					
Walls of the Main Architectural Phase BII					
Substructures of Main Architectural Phase BII					
Walls of an earlier architectural Phase BIII/ substructures of a Phase BIII					

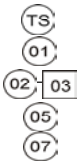
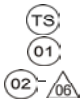
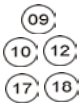
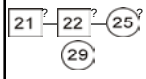
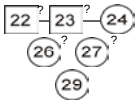
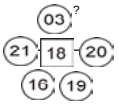
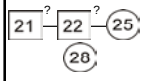
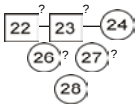
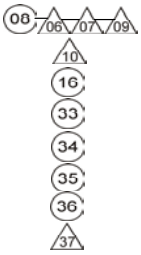
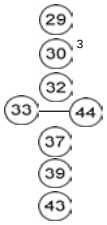
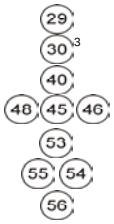
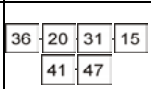
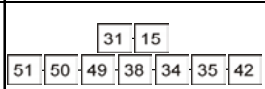
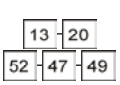
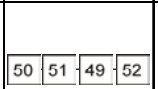
Stratigraphic Chart Area B cont. 12

34 Room 7	34 Space 8	34 Room 9	35 Room 10	35 Room 11	35 Room 12	35 Space 13
						
						
						
						

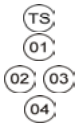
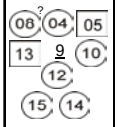
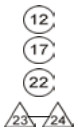
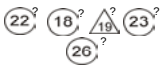
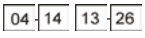
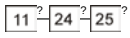
Stratigraphic Chart Area B cont. 13

Squares Area B **Structure No., Room No. or Space No.**	36 Room 14	36 Room 15	36 Space 16	36 Room 17	50 Room 18
Top Soil and Fine-Grained Deposits	TS	01[1] TS	01[1] TS	TS	TS 01
Upper Rubble Layers	01	04[1] 05[1] 06[1] 01	04[1] 05[1] 06[1] 01[1]	01	02 04
Lower Rubble Layers (with architectural remains of Phase B0)	02	02	02 10	02	04 08
Room fills/ stratigraphy of Later Architectural Phase BI	05 08 11	19 21	14 17 18 34 35	24 27 28 36 32 37	
Walls of Later Architectural Phase BI	09 06 20 03	20[1] 10[1] 12 22 19	22 20 25 16		
Substructures of Later Architectural Phase BI			16 25	16	
Room fills/ stratigraphy of Main Architectural Phase BII					08 06 16 21 33 35 36 38
Walls of the Main Architectural Phase BII				16 22	22
Substructures of Main Architectural Phase BII					
Walls of an earlier architectural Phase BIII/ substructures of a Phase BIII					

Stratigraphic Chart Area B cont. 14

50 Room 19	48 Room 20	48 Room 21	48 Room 22	48 Room 23	49 Room 24	49 Room 25
						
						
						
						
						
						
	10	10	10	10		

Stratigraphic Chart Area B cont. 15

Squares Area B **Structure No., Room No. or Space No.**	49 Room 26	65 Room 27	65 Room 28	65 Room 29	83 Room 30	83 Room 31
Top Soil and Fine-Grained Deposits						
Upper Rubble Layers						
Lower Rubble Layers (with architectural remains of Phase B0)						
Room fills/ stratigraphy of Later Architectural Phase BI						
Walls of Later Architectural Phase BI						
Substructures of Later Architectural Phase BI						
Room fills/ stratigraphy of Main Architectural Phase BII						
Walls of the Main Architectural Phase BII						
Substructures of Main Architectural Phase BII						
Walls of an earlier architectural Phase BIII/ substructures of a Phase BIII						

Stratigraphic Chart Area B cont. 16

102 Room 32	102 Room 33	102/103 Space 34	103 Room 35	87 Space 36	87 Space 37
01 02	01 02	01 02	01 02 04	01	01
03 04 05	03 04 05	05		02	02
11 07? 17?	09 10 22? 15? 16? 27? 32?	07 10? 21? 24? 26? 32? 36? 37?	07 21? 25 26? 31? 36? 37?	02	02
17? 33 34 35 38 39 50 66 72 95	22? 15? 16? 27? 32? 56 68 97	10? 21? 24? 26? 32? 36? 37? 62 65 71 73 72 82 86	21? 25 26? 31? 36? 37? 58 54 55 59 63 70 85	08 17	08 19
19 3 12 3 07? 90 15 92 15 91 15 89 15	91 88 90 89	91 81 88 87 60 61	61 60 98	05 18	05 18

The Architecture

Hans J. Nissen

As a matter of course, our ability to reconstruct architectural units and contexts depends largely on the state of preservation. Though in parts, walls were found still standing to a height of 2 m and more this should not hide the fact that the remains of the LPPNB settlement were in ruins and had dilapidated to the extent that they had lain open for an extended period of time; this is described in detail by Gebel, this volume.

The most detrimentous events were deep pits – presumably the work of stone robbers – which in particular in our Area B reached down to levels much beyond the main LPPNB occupation.

In Area A we were faced with the fact, that just prior to our arrival in 1986 a large building lot had been cut into the slope by means of a bulldozer. Initially, we were under the impression that the clearing activities had affected major parts of the existing LPPNB architecture, cutting the walls down to what was supposed to become the bottom of the building lot. This was intimated by the existence of a wall of 2 m height in the left part of the long NW Section of Area A which obviously was what remained of a high wall extending into the building lot. This seemed to be conformed by the finding that – where preserved to that height – the walls all had been razed to the same level.

Second thoughts, however, were introduced by the interpretation of the remaining parts of the same section as in its central and right hand parts no such walls could be found. This led to the assumption that the architecture may have suffered less from the clearing activities than anticipated, and even to the speculation (Gebel, this volume) that the level of the building lot may be nothing but reproducing a level to which the LPPNB architecture had been razed already in ancient times. In that case, the bulldozer would not have removed any walls but would have stopped its activities when it started hitting the first stones.

Though the latter sounds highly unlikely, there is no doubt that the architectural context was far from well preserved as is witnessed by the large pit in A 18 denuding parts of the walls to a level much below the bulldozer floor. The fact remains that the architecture of Area A in the

state we found it was disturbed to an extent – it must remain open to what extent the ancient destructions were enlarged by the modern activities – that it proves difficult to restore its context.

2.1 Introduction: Common Features of the Architecture at Basta

With few exceptions, the same building technique, the same material and the same kind of ground preparation is shared by all architectural remains in Basta, in both Areas A and B. The differences that are present are found in the layout of the individual buildings, both within each excavation area and between Areas A and B. However, this requires a big caveat because the bulldozer activities in Area A prior to our arrival had affected the walls and other remains to such an extent that sometimes only one or two courses remained of a wall, making it impossible in places to follow the context. This certainly contributed to our problems in reconstructing meaningful building units in Area A.

The most frequent pattern is the so called “Basta House”, although this still shows a wide range of possibilities in respect to the arrangement of rooms. The basic pattern consists of a large space – it remains unclear whether covered or open – with a row of small rooms attached to at least one side. One complete example in Area A and several complete or partially excavated building units in Area B show that this basic scheme could be altered in a number of ways, varying in size, number of rooms and internal additions. Another fixed scheme may have included two large elongated rooms parallel to each other as shown by two examples each in Areas A and B. As both examples, however, were situated on the margins of our excavation areas it remains uncertain whether they represented a building unit in themselves or were part of a larger unit as suggested by Building Unit VIII in Area B.

Although in detail there will have been differences in the actual building process from one building to the next, there still is a common pattern visible. Once the building lot was decided the next step in each case consisted of a careful planning procedure. As will be shown presently, in all probability this did not only concern the ground for the individual building but involve an entire living quarter. Because of the complex system of substructures consisting of adjoining terraces nothing could be altered anymore after this system had been devised and executed. Since as far as we can see the size of a terrace predetermined the size of the house to be erected on top, the idea of how many houses were intended to be built and how big they are supposed to be had to be entered into the planing process right from the beginning.

While the building technique applied was the same throughout the various stages except the very latest stage of B level I, it apparently was up to every builder to decide on the internal layout, and such details as whether to place the interior dividing walls directly on the slabs of the substructures, or put them on after the entire area received its pavement.

While there are almost no patches of plaster still on the walls *in situ*, we are nevertheless convinced that plaster and even colorful decoration was a common feature for all buildings.

More information can be found under the individual building units as well as in the summary.

2.1.1 Building Techniques and Materials

For all building activities limestone was used. It occurs locally in great quantities and normally comes in clearly separated bands; see for instance the parallel ridges cropping out to the left of the Old Village of Basta on Plate 63.A. Stones gained from these sources, therefore, possess two flat surfaces opposed to each other. They also frequently have a flat side on one of the other faces. In many cases the other sides are trimmed, producing square or rectangular ashlars with right angles (for instance Plate 44.B). Such dressed stones are used not only for lintels of doors and "passages" (Plate 48.D) but also for the frames of these openings (Plate 27.B) or for statically sensitive parts of walls like the butts of protruding walls (Plate 42.C). Sometimes they can even be found inside walls, but the even surface of walls is mainly produced by turning the one flat side outwards while placing the undressed sides in the interior of walls.

Stones were only rarely used as headers spanning the entire width of walls (Plate 59.C). Normally, a double faced technique was used, paying attention, however, to let stones extend well into the wall to form a solid stone construction. Only in rare cases was a wider space left between the faces to be filled with rubble and mortar (Plate 59.D).

Using this building technique combined with the parallel upper and lower faces of the stones results in the walls having an exceptional stability. Though only 40 to 60 cms thick on average, walls are preserved to a height of 2 m in places, and may even have reached 2.5 or 3 m up to the roof. The stability is further enhanced by small wedge stones being driven into the joints (for example see Plate 59.B or 62.C).

With one exception which will be mentioned later, the stones are set in a mortar, consisting of a mixture of mud and lime.

We often encountered as part of the fill of the rooms, in greater or lesser quantities, remains of a material reminiscent of plaster (see L. R. Kaliszan, Plaster Materials in Basta IV,2, forthcoming), suggesting that walls had once been plastered. Yet neither in Area A, nor during the first years of excavation in Area B, did we encounter anything but bare stone walls. In a few cases in Area A we came across remains of red-stained plaster floors (Plate 17.C), with traces of these terminating in a round moulding close to the walls suggesting a continuation up the walls, but we never found anything *in situ*. This observation is supported by one of the cuts in the area of the modern village (Cut 8; described in Nissen, Muheisen and Gebel 2004: 16) where remains of a red plaster floor ended in a round moulding leading into a vertical line of plaster which may have been part of a wall plaster. Only during the 1989 Season were we fortunate in being presented with larger plaques of painted wall plaster (Plate 50.C) in Room 2 of Building Unit B VIII – again in the fill – and finally with two rather small patches in Space 19 in Square B 50 with remains of painted plaster still adhering to the wall (Plates 34.C and 35.A; Fig. 24). For details see 2.3.3. There is little doubt that originally all walls would have been plastered and painted.

2.1.2 Terraces and Terrace Walls

It has been mentioned several times that like most contemporary sites the Neolithic settlement of Basta was situated on a slope (see for instance Kamp 2004 or Gebel 2004a-b). Some effort was therefore obviously required to produce even building ground. In the only case where we were

able to reach the natural surface, in Area A Squares 13, 14 and 18, it became clear that this had been achieved by building artificial terraces out from the slope instead of digging into the slope. These terraces rested on a number of parallel stone walls (for a reconstruction see Fig. 2).

Following an overall plan, massive walls were erected on specific parts of the slope which then served as retaining walls for the constructions further up the slope. In the one case in Area A, Square 18, this retaining wall (Wall [6], see Fig. 3) reached a height of 140 cms up to the floor of the terrace. But the height of retaining walls had to be adjusted to local conditions. These depended on the incline of the slope and on the intended depth of the terrace, i.e. the horizontal distance before the terrace would meet the natural slope.

Unfortunately, much too little of this slope adjusting construction was exposed to allow us to be more specific (for more details see 2.2.2). What intrigued us most is that contrary to our expectations the terrace walls seemed not to run parallel to the contour lines of the slope (nicely exemplified by the alignment of houses of the Old Village of Basta, shown in Plate 63.A), but at 45° – at least if we assume that in the larger area surrounding Area A the slope did not drop towards the S but rather towards the SE. This is not only suggested by the modern surface topography but also from the investigations of our geomorphologists (Kamp 2004). Oddly enough, everything suggests that terraces pointed with one corner down-slope, instead of a long side. However, this does not seem to be consistent over the entire settlement as the alignment of the Area B terrace walls apparently follows a different direction.

Serving as building ground for the various buildings and houses these terraces immediately adjoined each other, as can be observed in Area B (Fig. 23). This indicates the pre-existence of some plan for the positioning and extension of the terraces and that in turn suggests that the terraces were built with specific ideas as to how many and how large the houses were going to be. Furthermore, the system of adjoining terraces prevented any future changes in the layout of parts of the system – unless the entire system was to be altered. This means that later changes in the layout of houses were possible only within the limits of the terraces in their original extension.

There was a remarkable difference in the technique used for the walls supporting the terraces, the retaining walls, and those of the buildings on top of the terraces. The double-skinned technique employed with house walls has been described above; a careful selection of the stones produced straight surfaces on both sides. The same technique was used for the retaining walls resulting in a straight outer face; again, stones were set in mortar, and the use of small stones driven into the joints provided an extra measure of stability. In contrast, the construction was entirely different for the supporting walls as they consisted of piled-up undressed stones without mortar, without wedge stones, and without any intention to produce even wall faces (see Plates 12.A, 59.A, 59.C).

In the example uncovered in the southeastern part of Area A, such walls were erected parallel to the terrace wall with interstices of 30 to 45 cms up to the height of the intended terrace. Then these interstices were covered with stone slabs of up to 70 cms in length (for instance Plate 21.B). The gaps left between the undressed slabs were eventually closed by smaller stones which were part of a layer of rubble stones poured onto the slabs and surroundings in order to level off the surface (Plate 20.C; see also the sequence of Figs. 8-10). This measure was also designed to bring the surface to a common level in those cases where the coping of walls was only marginally covered by the slabs. The layer of small stones in turn served as the basis for a layer of still smaller rubble and then a sequence of earth and plaster layers forming the

context of the floor (Plate 59.A). This resulted in a tight cover which, even after 9000 years, in some cases had kept part of the hollow spaces – or "channels" as we came to call them – open.

Though grid-like because of their arrangement in parallel lines, the supporting walls were interrupted at one point to form a "spine" connecting the parallel channels with a perpendicular one (see Fig. 12). Wherever we were able to reach the end of such channels they always abutted the terrace or enclosing walls. Obviously, they represent closed systems which had no connection to the outside. Thus they could neither serve for ventilation nor for drainage. But what else?

A hint as to their use turned up when we found human skeletons in three of the channels of the system described above. In two cases, the skeletons were fully articulated with the feet pointing to the central channel, while in the third the long bones of several individuals were neatly stacked in the rear part of the channel in front of which three skulls were arranged to form a triangle (Fig. 4); for a section of this sub-floor system see Fig. 3. This clearly shows that this underground system had been consistently used as a burial ground, and that from time to time room had to be made for new burials. There is a strong impression that this was going on during the life time of the buildings on top. Where preserved – note the limited exposure -, the entire sequence of layers on top of the burials was intact, showing no trace of a secondary opening and we therefore assume that such channel systems were accessible at one point through an opening in the floor. In the case of the slope adjusting system in Area A, there was a place in the cover of the highest channel (Plate 21.A, in the upper left part) that hinted at the possibility of an entrance. By removing one or two slabs it would have been possible to enter a sub-floor channel of 100 cms in height and 40 cms in width. Because of the transverse or "spine" channel it would have been possible to move within the entire system, or at least in those parts which because of the sloping ground offered a reasonable internal height. An example of such an entrance was found in the floor of Room 2 of Building Unit VIII in Area B (Plates 48.C; 50.B, and see below).

This is the only concrete indication for the use of these systems; yet, it is unlikely that this was the original purpose. In particular, this could not be the explanation for those channels of consistent low internal height which will be discussed presently. Instead we assume that a situation originally answering to different needs was advantageously used for the purpose of disposing of the dead.

An explanation has to take into account two facts: the closed system prevents easy explanation in terms of drainage or ventilation, and it cannot be pure chance that unlike in the house walls no mortar was used in the supporting walls. Both observations would make sense if the basic purpose was to guarantee dry floors. The omission of mortar would have hindered moisture from moving upwards through capillary action and – air being one of the best substances for insulation – the air chambers would have provided excellent insulation. The local climate with rain and snow during the winter season would have been reason enough to necessitate such protective measures.

In discussing the system of terraces, so far attention has only been given to the initial measures used to create appropriate building ground. Since the terraces served to even out the slope, the sub-floor systems each consisted of a sequence of parallel channels of different heights. However, this is not the only kind of sub-floor construction. In a number of cases in both Areas A and B we find systems of supporting walls and channels all of the same height, which obviously rest on an already even surface. The best example of systems resting on even ground with all parallel channels being only 20 to 30 cms wide is found underneath the floor of Room 10/16 in Area A (Plates 10.C, 11.A-B, and Figs. 11-14). On the entire 7.5m length of the room the

supporting walls – and therefore the channels – had the same height of 40 cms. Again, these channels were connected by a central spine, and were covered by rows of stone slabs. As in the case of the slope adjusting system the floor sequence consisted of a number of layers of rubble stones, mud and – where preserved- of plaster resting on top of the lines of stone slabs. Obviously, the construction of this sub-floor system followed the same principle as the slope adjusting systems despite being founded on even ground.

As will be seen later, apparently all sub-floor systems encountered in Area B were of this latter kind.

2.1.3 Houses

With the exception of some structures belonging to the last and badly preserved occupation in Area B which displayed curved walls, all buildings and houses in both Areas A and B had right angles, or at least this seemed to be what had been intended.

The substantial destruction of architectural remains in Area A, both in antiquity and by modern clearance of a building lot, in addition to the limited extent of the excavation area prevents us from recognizing larger contexts or planned units in Area A. Yet, we can discern a basic ground plan, occurring several times in Area B, and once in Area A. The other rooms or complexes do not follow recognizably standardized plans.

This basic plan, or "Basta House" (prototype is Building Unit I in Area B, *cf.* Fig. 25) consisted of a larger space – since we have no evidence for roofing we cannot decide whether to call this space a room or a courtyard – bordered by a sequence of small rooms at least on one side. It can vary as to size, number of rooms and their arrangement. The most basic example is the one from Area A where 3 very little rooms are attached to a larger space on one side (Area A Rooms 25a+b, 27a+b); the most extended one is Building Unit B I mentioned above where we find rows of little rooms attached to all four sides of a larger space, even augmented by a second row on one side. Since the little rooms hardly cover more floor space than one m^2 they should be regarded as store rooms in most cases (Plates 48.A; 53.A). Where preserved they, or their contents, were accessible through window-like openings – called "passages" for want of a better term – with their thresholds *c.* 60 cms above the floor (Plate 27.A).

In their upper parts, the terrace walls – whether of slope adjusting terraces or the ones on even ground – also served as the exterior walls of houses. Where observed the interior walls of houses rested in most cases on the layer of rubble stones used to even out the uneven surface produced by the covering slabs and the tops of the supporting walls (Plate 23.B). However, in rare cases walls may have been founded directly on the covering slabs (Plate 7.D), or even upon the mud floor (Fig. 30). Except in the latter cases, each room received the other part of the floor sequence, which we assume to have normally ended in the application of a layer of plaster that would finally be smoothed and stained red in places.

Though walls were preserved up to a height of 2 m, and more in some places of Area B, there is no evidence of how roofs were constructed. We are most probably dealing with flat roofs constructed like the ones still found in modern traditional houses: on top of a grid of wooden beams we find a layer of brushes and twigs serving as the basis for a thick layer of mud (see the chapter by Moritz Kinzel, this volume, and his examples from the Old Village of Basta). Condensing and smoothing the surface would render this coating relatively impermeable for rain

and snow. The condensing and smoothing had to be repeated every year before the beginning of the wet season.

Our biggest problem was the question of access into the houses as we never came across openings in the exterior walls, which could have served as entrances. To be sure, in most cases this is due to the bad state of preservation, but houses in Area B are built so closely to each other, even sharing their exterior walls, that no space is left for an entrance or an access way. This evokes a similar conclusion to that already reached by James Mellaart on Çatal Hüyük, following the model of North American *pueblos*. There the entrance is gained through an opening in the roof. Roofs thus would have been part of the main communication ways with ladders used to get from one roof to the other. At the same time, roofs would have served as additional space for living, sleeping and working (see again the contribution of Moritz Kinzel).

However, this cannot be the full answer. In Area A we encountered an example of a staircase constructed of large stone slabs (Plate 23.C), connecting the lower and the central terrace. The staircase leans against the terrace Wall [6], and starts on the floor of Room 32 (Plates 23.B and Fig. 3). Unfortunately, the situation is unclear around its upper end because of massive destruction (Plate 5.B)

2.2 Area A

As explained in the section on stratigraphy we can differentiate four phases in Area A:

- the oldest one (“Phase AIII”) when the building ground was created by constructing the slope adjusting terraces (red in the Top Plan A)

- the second one (“Phase AII”) which while re-using the terraces of A III, in some places created new platforms by superimposing new floors with their own substructure, and re-arranged the buildings on the old terraces (green on the Top Plan A = our main phase)

- a third one (“Phase AI”) surviving only in scatters directly below the modern surface on the slopes outside the building pit (blue in the Top Plan A)

- a last one without architectural features consisting of alluvial layers of material washed down from deposits up slope and beyond the confines of the settlement area.

It is difficult to assess the quantity of material and information that may have been lost through the bulldozing activities in what became our Area A. In places, such as one part of the long NW Section of the bulldozer pit, walls were still standing to a height of 2 m (Plate 3.C; Gebel, this volume Fig 2), in other places the ancient architecture had already been denuded in antiquity to such an extent that in the northern part of Area A only two courses remained of a wall which had been flooded over by the so called rubble layer of Late Neolithic times (Plate 8.B).

2.2.1 Reconstructing the Slope

It has already been mentioned that we assume the Neolithic settlement of Basta to have been established on a slope. This was realized to begin with because of the modern situation. We can now be more specific, because we have two ways to reconstruct the gradient of the ancient slope.

As will be discussed below, reaching the original surface of the slope at various points in Area A enables us to reconstruct the gradient of the original slope before the start of the earliest building activities. Measurements were taken at the bottom of a sequence of channels of a sub-floor system of the slope adjusting type described above. As these channels follow an E-W direction the measuring points are lined up N-S (Plate 22.B; Figs. 2 and 3), thus giving evidence for the gradient of the N-S slope. Since the modern slope runs NW – SE (*cf.* Kamp 2004: Fig. 3.A on p. 58 with Fig. 2 on p. 56) there is a chance that our N-S gradient deviates somewhat from that of an original NW-SE one. As will be shown in greater detail below we determined that the original surface rose by 54 cms in a distance of 3 m from S to N, or 18 cms in 1 m.

The other method for reconstructing the slope derives from the observation that the various buildings, rooms and walls in Area A rested on three different terraces (Fig. 1), and from our assumption that with the exception of some low-lying walls these buildings date from the same period, our Phase AII. The contemporaneity of remains on different terraces is proven beyond any doubt in one case because the lower and the central terraces are connected by a staircase (Plates 22.C or 23.B and Fig 3). The contemporaneity of the central and the upper terraces is not proven but very likely.

The extent of the three terraces is shown in Fig. 1. The uppermost is delineated by Wall [2] in Squares A 9/13/18 and Wall [5] in Squares A 17/18. Walls [45] and [6] in Squares A 17-19 are the retaining walls of the middle or central terrace. The extent of the lower terrace is unknown; its surface, however, is indicated by the floor of Room 32 and it serves as the building surface for all walls excavated in Squares A 22/23.

The differences in height between the terraces can be calculated by comparing the levels of the floors of Room 10/16 for the upper terrace, Room 27b for the central terrace, and Room 32 for the lower terrace.

Lower Terrace floor level +19.75 (upper side of slabs ± 19.50)
Central Terrace floor level +20.75 (upper side of slabs ± 20.65)
Upper Terrace floor level +21.80 (upper side of slabs ± 21.60)

The difference between the lower and the central terrace is 100 cms, between the central and upper terraces is 105 cms. Taking a distance of 7 m NW-SE between Rooms 16 and 32 as a baseline we find over this distance three steps with a total difference of 205 cms during Phase AII, or a gradient of 29.2 cms in 1 meter. To be sure, this is almost twice as steep as the gradient found at the bottom of the slope adjusting system in Squares A 13/18, but there is an easy and unsurprising explanation. It would be unusual to assume that the entire built-up area of an ancient settlement would be re-built at the same time, and thus rise at the same pace. Rather we have to assume that new buildings were erected in some places while in other places the old ones would continue to be inhabited. This is the case here, since the lower terrace without any doubt rests on a slope adjusting system, and therefore belongs to the earliest building phase of AIII. As far as we

Fig. 1. Area A. Extension and elevation of the terraces of Phase AII.

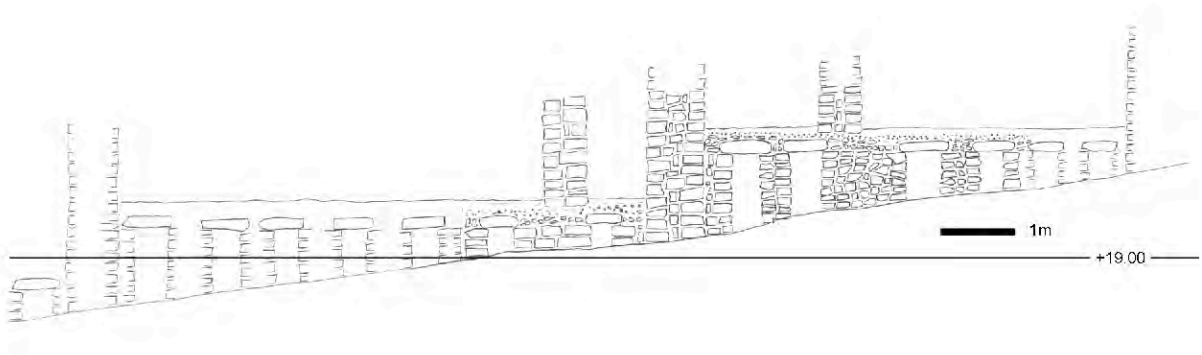


Fig. 2. Area A. Proposal for the reconstruction of a slope adjusting terrace system.

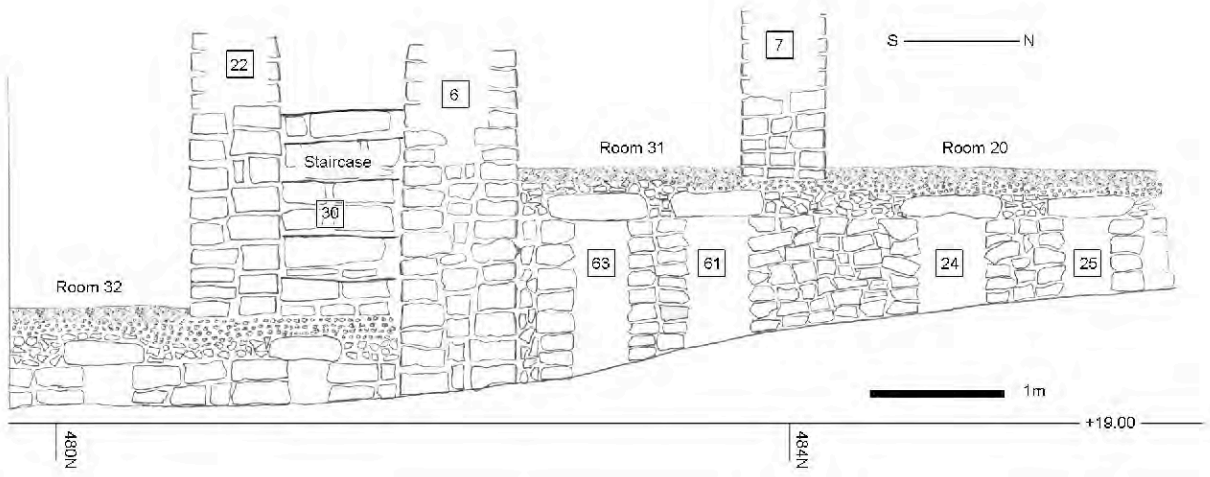


Fig. 3. Area A. Area A. Extension and elevation of the terraces on Phase AIII.

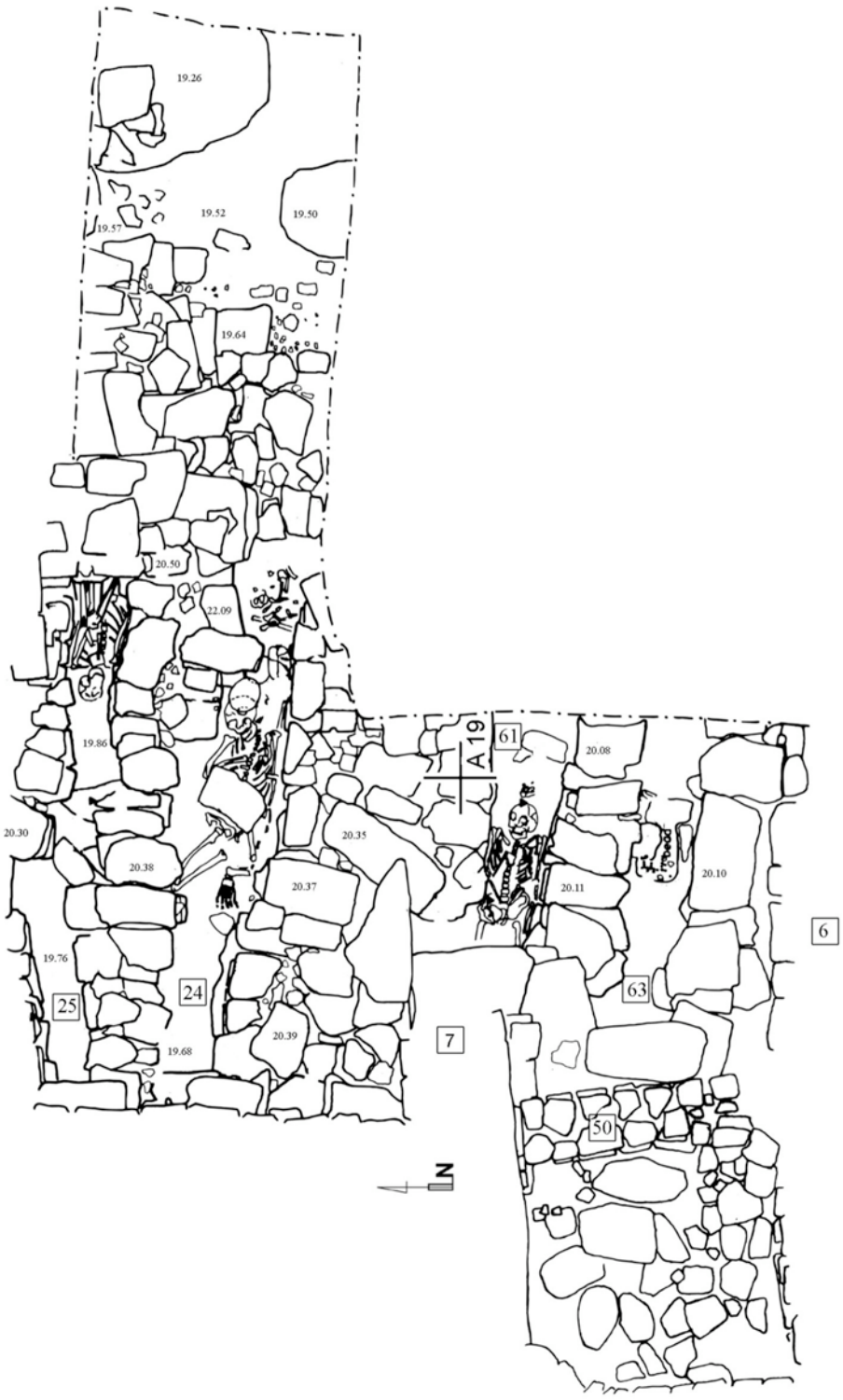


Fig. 4. Area A. Sub-floor channel system beneath Rooms 20 and 21,
covering slabs partly removed exposing the channels containing human burials. Scale 1:40.

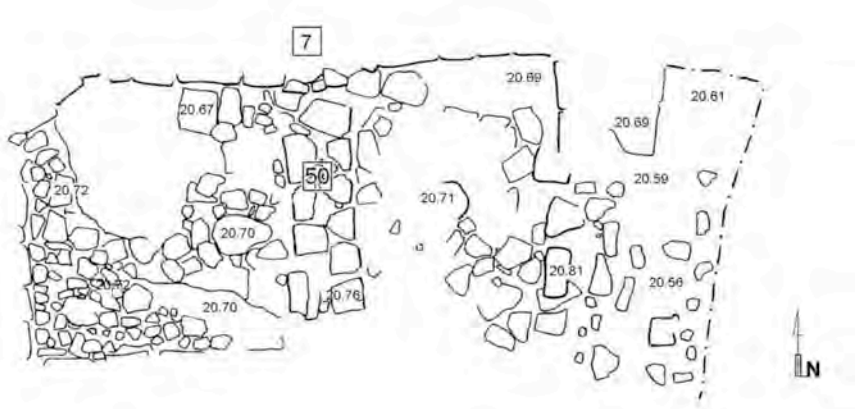


Fig. 5. Area A. Sub-floor channel system beneath Room 31, mud floor removed showing the leveling layer of small rubble stones. Scale 1:40.

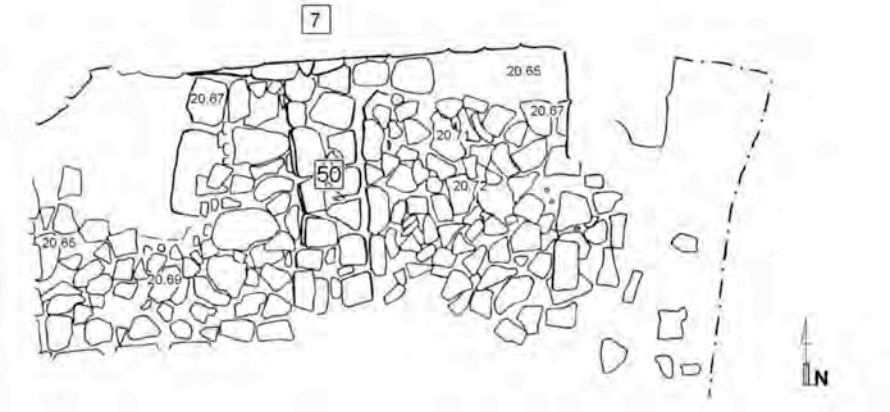


Fig. 6. Area A. Sub-floor channel system beneath Room 31, layer of medium sized rubble stones exposed. Scale 1:40.

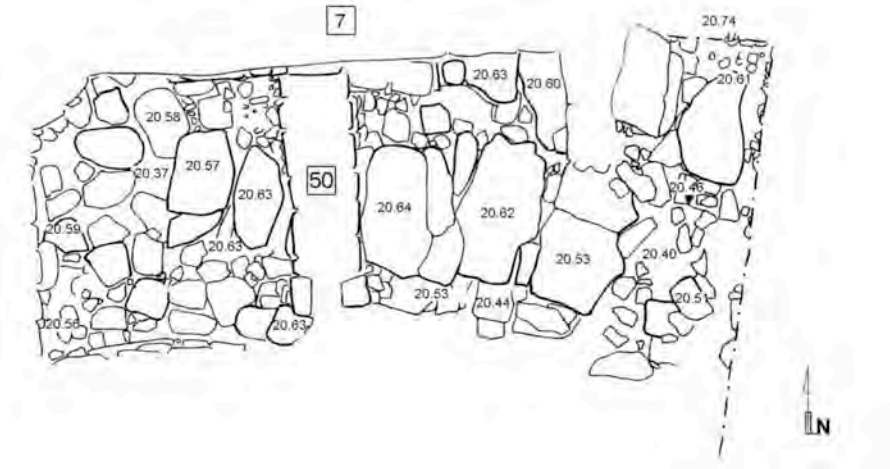


Fig. 7. Area A. Sub-floor channel system beneath Room 31, covering slabs exposed. Scale 1:40.

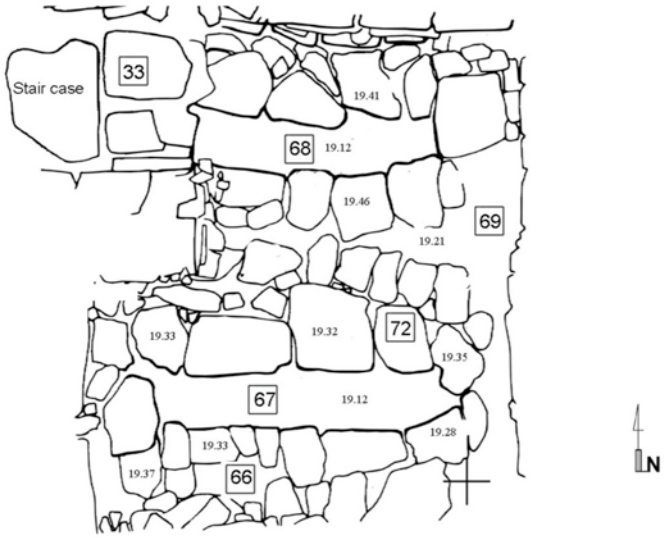


Fig. 8. Area A. Sub-floor channel system beneath Room 32, mud floor removed, but leveling small rubble stones still *in situ*. Scale 1:40.

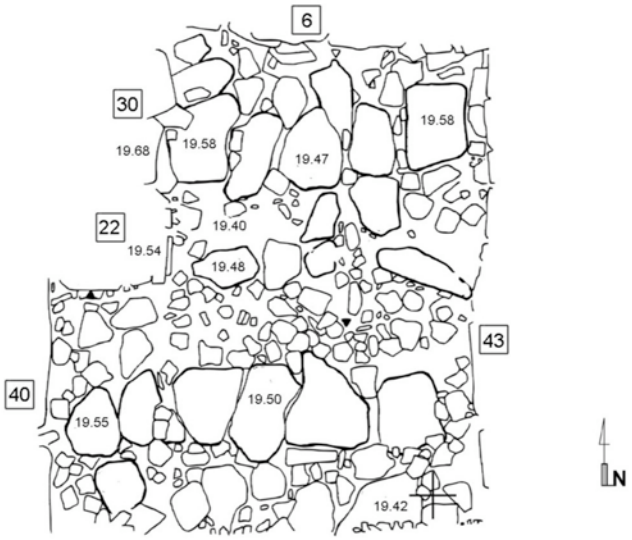


Fig. 9. Area A. Sub-floor channel system beneath Room 32, small rubble stones around the covering slabs removed. Scale 1:40.

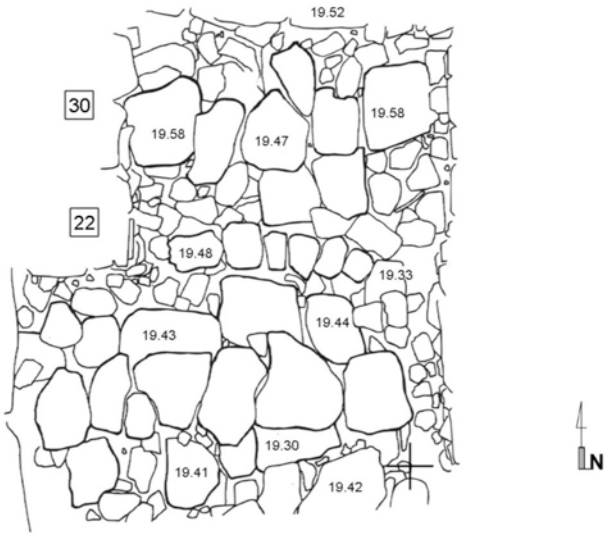


Fig. 10. Area A. Sub-floor channel system beneath Room 32, covering slabs removed, exposing the channels. Scale 1:40.

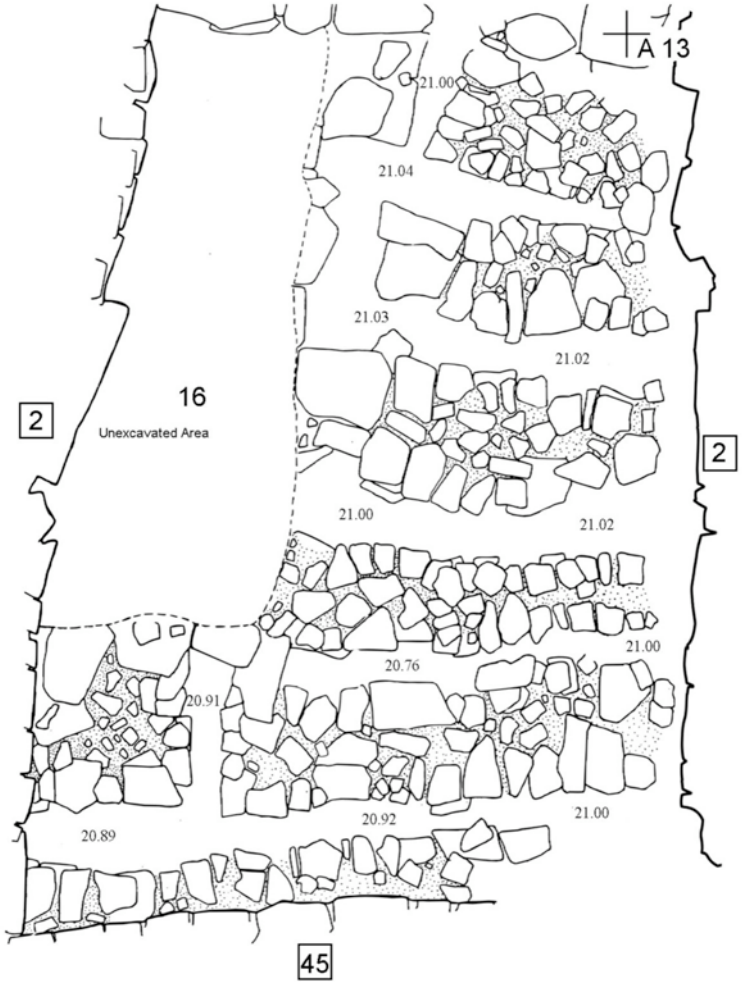


Fig. 11. Area A. Sub-floor channel system beneath Room 16, covering slabs removed, exposing the channels. Scale 1:40.

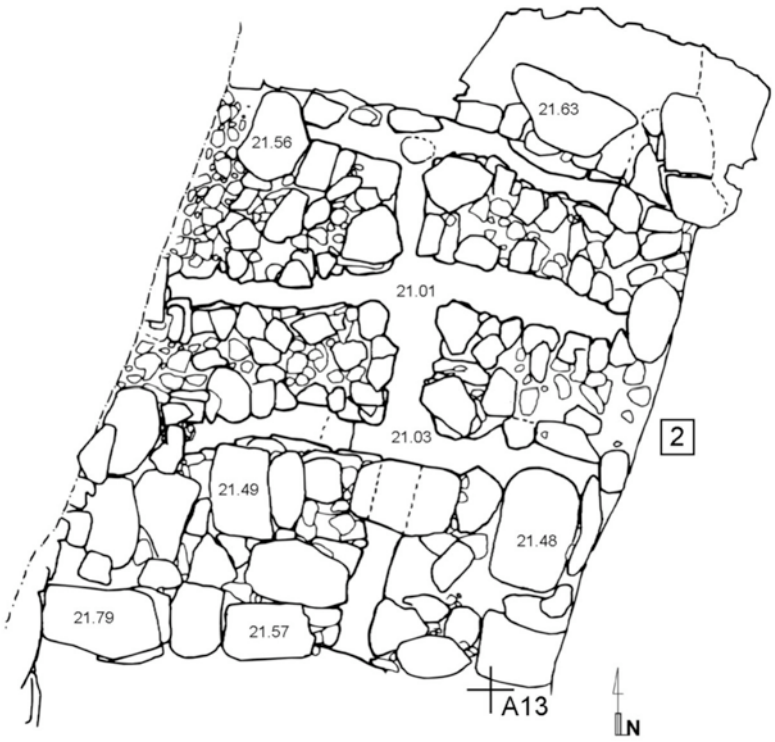


Fig. 12. Area A. Sub-floor channel system beneath Room 10, covering slabs removed, exposing the channels. Scale 1:40.

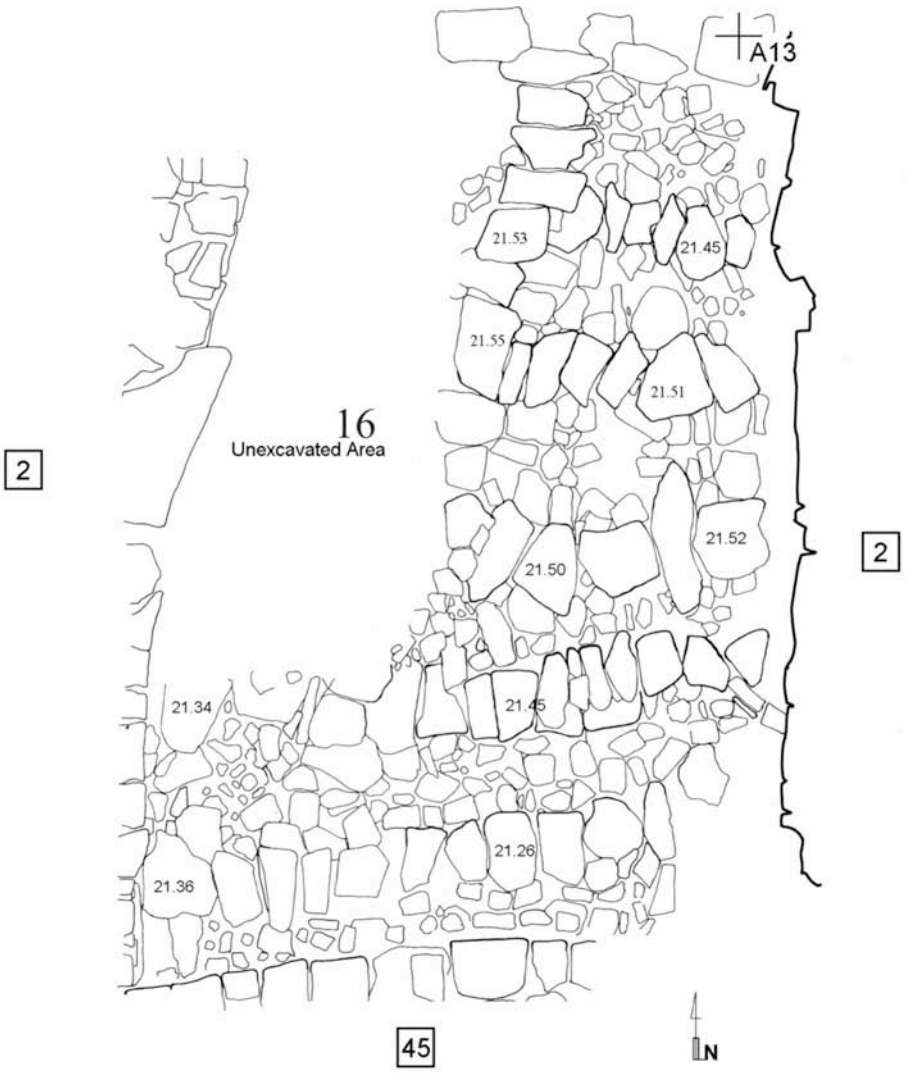


Fig. 13. Area A. Sub-floor channel system beneath Room 16, covering slabs still *in situ.* Scale 1:40.

Fig. 14. Area A. Sub-floor channel system beneath Room 10, covering slabs still *in situ*. cale 1:40.

can tell this is true also for the central terrace where the walls of Phase AII apparently sit on the substructures of Phase AIII. The upper terrace, however, has a sub-floor system with channels of equal height, i.e. the upper terrace must rest on a slope adjusting system plus terrace, most probably on one built in the earliest Phase, AIII. The gradient along the line between Rooms 16 and 32 then should not be mistaken as corresponding to the original inclination of the slope, but as an interim situation at one point during the life of the settlement.

2.2.2 Terraces and their Substructures

The most interesting terrace system is the one that serves as the substructure of the central terrace below Rooms 31, 20 and 21 (Figs. 3 and 4). This system starts with retaining Wall [6] in A 18 sitting on the original slope at +19.30. Unfortunately, the destruction of the upper part of this wall prevents us from reconstructing its original height (see Plates 5.B, 22.A). The better preservation of its western end, however, proves that the wall had once been higher than the adjoining floor of Room 31 at +20.77, telling us that this retaining wall also functioned at the same time as the southern outer wall of the building resting on that terrace.

Wall [6] served as the starting point for a terrace extending in a northern direction, resting on a number of supporting walls and rows of stone slabs covering the interstices between them (*cf.* Fig. 3). As a support for the first row of slabs, the northern side of Wall [6] was augmented by another Wall [65] of 30-40 cms width (Plate 16.D), ending at +20.40 (Plate 16.D). Interstices in this section were 30-45 cms wide (Plate 21.C and Fig. 4), slabs 60-70 cms long (Plate 21.B). The supporting walls were of different widths, from 40 cms ([64]: Plate 59.C) to 140 cms for the wall between channels (61) and (24). The perpendicular one (55) again has an average width of 40 cms. All supporting walls rested on the original slope, rising from +19.33 for Wall [65], to +19.83 for Wall [22] and +19.86 for Wall [23]. This tells us that with a difference of 54 cms on the distance of 3 m the original slope was of moderate inclination (18 cms in 1 m).

In three of these channels, (61), (24) and (20) human burials were found, while in channel (63) only scattered human bones and a hoard of beads testifies to the fact that it had once also served the same purpose. While the disposal of corpses was no problem in the first channels (63) and (61) with an internal height of up to 100 cms, it must have been quite difficult further N because the last one of these channels (20) had an internal height of only 54 cms (Plate 18.B). The remaining parts of the system in the area of Room 21 could not be followed.

Though this northernmost part of the system was not followed, we came across a situation S of Wall [6], below Room 32, which was obviously the final part of a lower system (Plate 22.C; 23.A with slabs and Figs. 3; 8-10). Attached to the southern face of Wall [6] we found another supporting wall, this time reaching to a height of 30 cms, again only serving the purpose of supporting one end of a row of covering slabs (Plate 16.D). With parallel supporting walls separated by interstices of an average width of 25 cms this system followed the same principle as described above. The initial channel measured 29 cms in height. We did not observe a significant decrease in height over the 2.5 m to the southern excavation limit.

Combining the evidence from N and S of Wall [6] helps us to suggest a possible reconstruction of the system we have been looking at (*cf.* Fig. 2; based on the section along a line from Room 32 to 21 presented in Fig. 3). Extending the gradient of the slope in a northerly direction and assuming the final channel to have had a height comparable to the channels beneath Room 32, we arrive at an extension of approximately another two m between where the

northernmost channel was found and the presumed end. This end of the system therefore could have been located in the vicinity of Wall [7] in A 14; in fact this very wall may have marked the end. The entire length of the terrace would thus have measured 5.5 m in a N-S direction.

The lateral extension of the system towards the E could be established only below Room 21, in particular in the northernmost channel (20) (Figs. 4 and 3; Plate 18.B), because the long bones stacked up in the rear part of that channel clearly were leaning against a closing wall. Wall [8] in A 14 may mark the eastern end.

Though we assume the system below Room 32 to be just the final part of a terrace which had started lower down the slope with a retaining wall similar to Wall [6] we can not make any estimate of the extent of this lower terrace.

It is interesting to note some differences in the width of the interstices between the higher and the lower part of such a system: while the high interstices are 35-45 cms wide (Fig. 3), the low ones at the end measure hardly more than 25 cms (Plate 22.A). This means that the idea of using the higher channels as a burial ground had probably been thought of already at the time of the construction of the terraces. The more time-consuming work of erecting higher and more stable walls and of providing exceptionally long slabs of 60-70 cms was apparently restricted to those parts where inside movements were intended, while less effort was put in the construction of the other parts. This observation should still not be taken to indicate that the use for burials was the primary purpose of the channel systems; but it tells us that this use was probably thought of at the time of the initial planning.

The best example of the type of system built on even ground was discovered beneath Room A 10/16. It was exposed to its total N-S length of 7.5 m and found to consist of parallel walls of 40 cms in height which left channels of 15-30 cms in width between them (Plate 3.B upper left; 11.B for the northern part, 14.A-C, 15.A for the Sern part). The parallel channels are connected by a central “spine” (Figs. 11 and 12). The system is bordered by Walls [2] in 13 and [5] to the E and S, while Wall [2] in 12 between Rooms 15 and 16 rests on the slabs covering the channels (Plate 12.A and 15.A). A 2-meter rod stuck into one of these channel openings to the W told us that the system continues below Wall [2] in 12, suggesting that it also continued below the unexcavated Space 15.

2.2.3 Floors and Wall Plaster

Wherever encountered in undisturbed conditions floors rested on terraces as described above. The thickness of the sequence between the slabs and the floor finish may vary but it always follows the principle described above. It consists of layers of pebbles of diminishing size intended to level the surface. Various layers of soil were poured on, of increasing fineness, before finally a layer of mud was put on; this sequence can be followed on Plates 14.A to 15.A, where one layer is peeled off after another. In some cases a layer of plaster was recognized, this was eventually condensed, polished and stained red. Unfortunately, due to the weathering conditions prevailing throughout the site only patches remained of these polished floors in a limited number of rooms (Plate 17.C). Since floors smoothed and stained red are a feature known to be common at contemporary sites it may well be that this feature was much more widespread in Basta than revealed by the evidence.

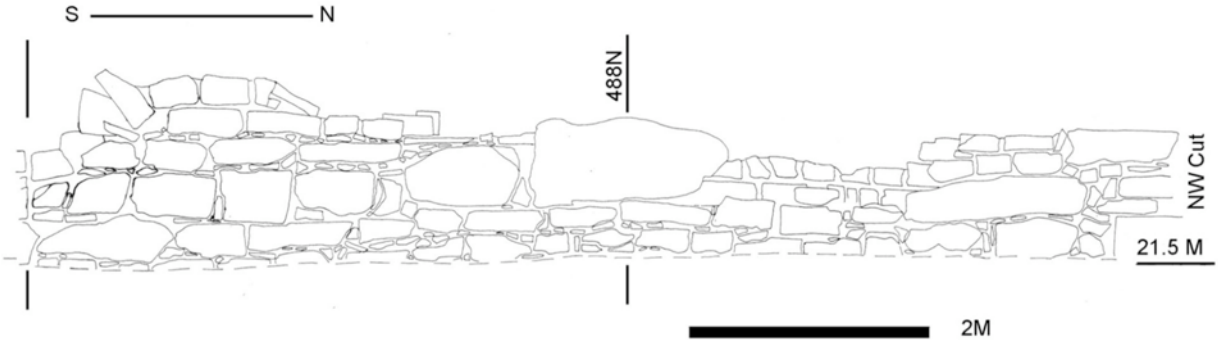


Fig. 15. Area A, Square A 12. Elevation of the eastern face of Wall [2].

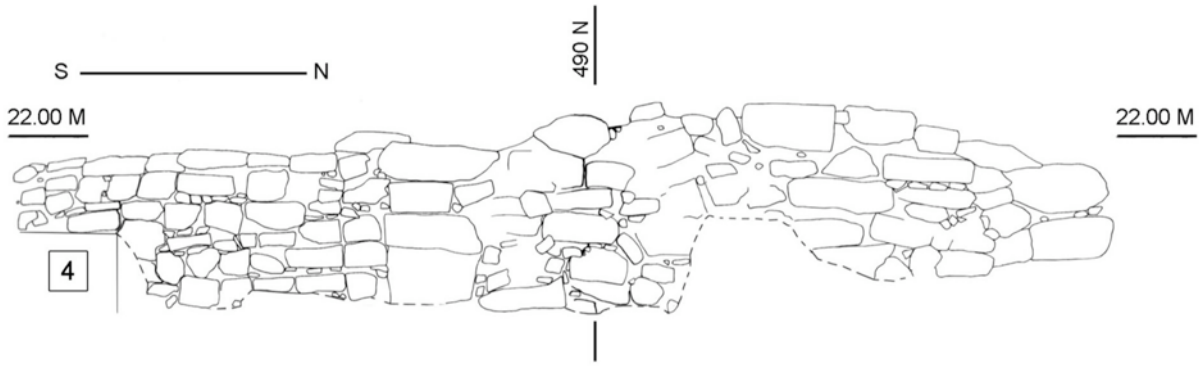


Fig. 16. Area A, Square A 13. Elevation of the eastern face of Wall [2]. Scale 1:40.

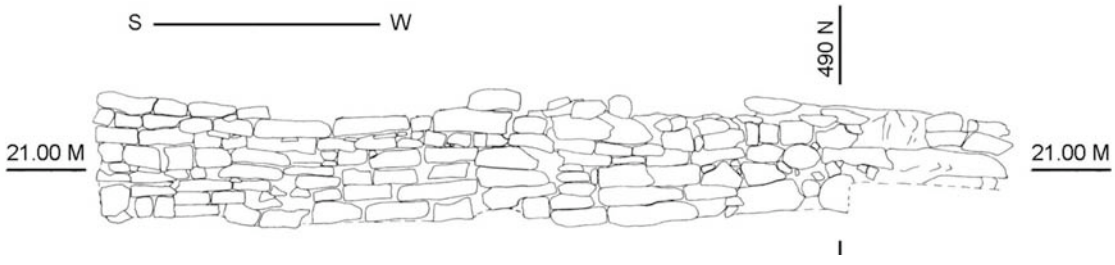


Fig. 17. Area A, Square A 9/13. Elevation of the eastern face of Wall [2]. Scale 1:40.

Fig. 18. Area A. Tentative reconstruction of a Phase AIII Building Unit. Scale 1:100.

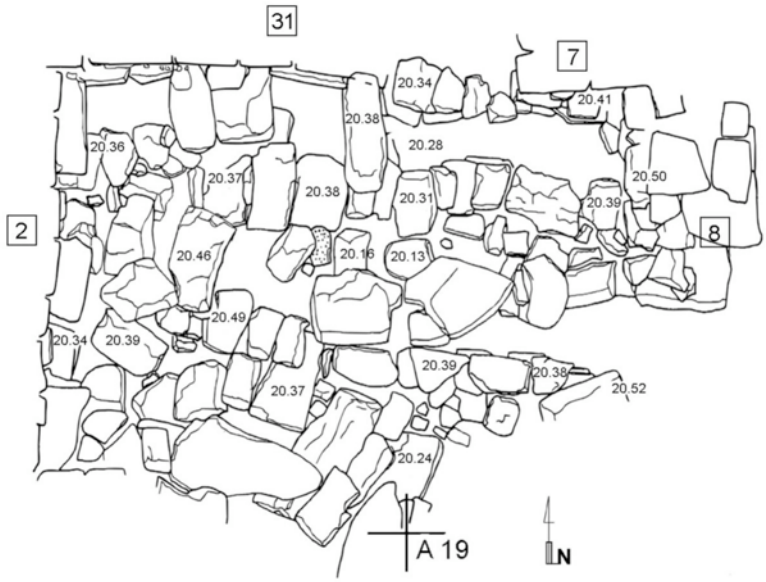


Fig. 19. Area A, Square A 13-14. Sub-floor channel system beneath Rooms 19 and 21, covering slabs partly removed, exposing the channels. Scale 1:40.

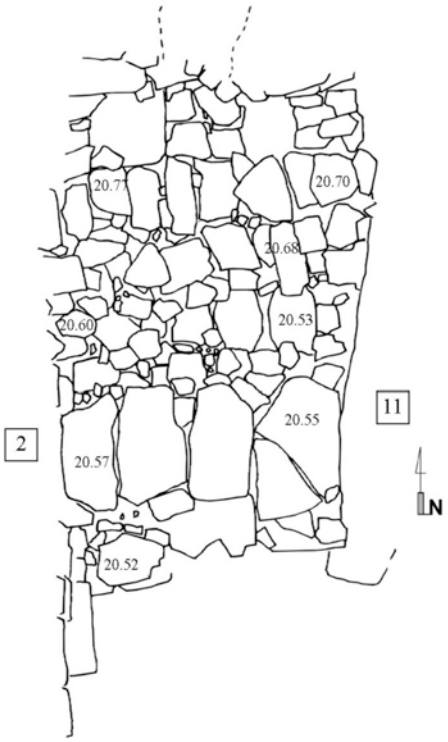


Fig. 20. Area A, Square 13. Sub-floor channel system of Phase AIII (Locus 33) beneath central part of Room 19, covering slabs still in situ. Scale 1:40.

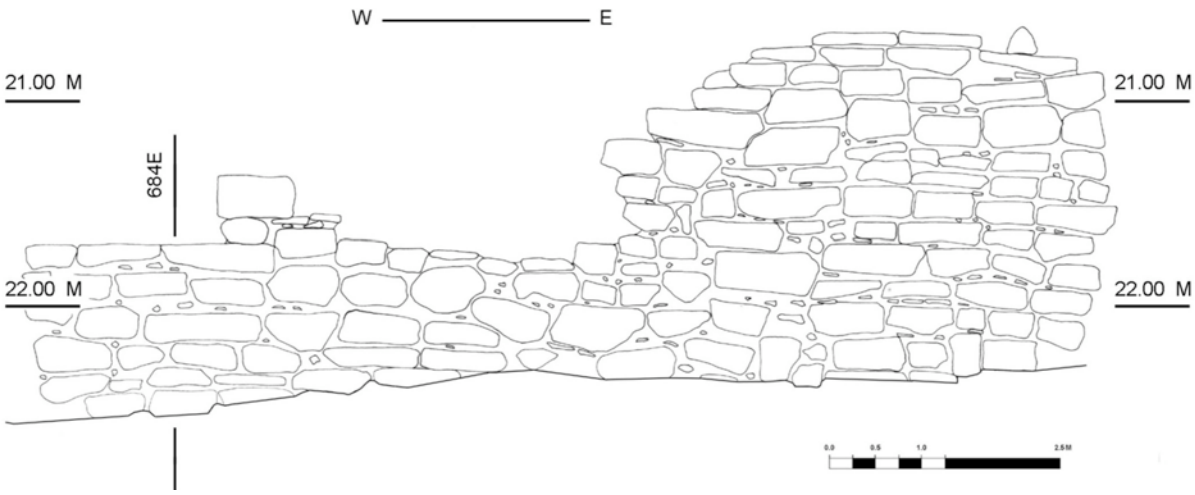


Fig. 21. Area A, Square A 22. Elevation of the southern Wall [9] of Room 28. Scale 1:40.

Although found in only one example in each case, it may nevertheless be significant that the floor sequence amounted to a thickness of 20-25 cms in the slope adjusting system (Plate 59.A) as opposed to only 8-10 cms beneath Room 10/16 (Plate 14.A).

In the dumps and pits in the NW part of Area A we found many scattered lumps of what seemed to be plaster, and throughout the excavation we had a suspicion that the walls of Basta houses had been plastered. However, in Area A not a single tiny spot was found with plaster still adhering to a wall (for minute remains of painted wall plaster still *in situ* refer to the corresponding section of Area B (2.2.3).

2.2.4 Houses

The uncovering of the architectural remains of Phase AI resulted from an attempt to obtain some indication of the nature and scale of those remains, which may have been lost due to the bulldozing activities in the building lot. To this end, trial trenches were sunk into the adjoining slope area just outside the pit – marked blue in the general plan of Area A. These remains, however, turned out to be very scattered, and preserved only to the height of one to three courses of stones (Plate 6.A). It seems unlikely that walls of this phase were preserved any better in the area of the building lot. In all probability not much of Phase AI had been lost.

We can see some indication regarding the relationship of the structures of Phase AI to the other architecture from the long NW Section of the building pit (Gebel, this volume, Fig. 2). Without any doubt the remains of Phase AI are separated from those of Phase AII by substantial layers of sediment. There is no direct contact, and we may even be seeing a long period without any settlement activities.

As we have seen before, the terraced slope of the ancient settlement rose towards the N or NW. As a result, because of the aim of the bulldozing was to create a level surface for building, the archaeological remains up-slope in the northern part of the pit suffered most. It is no surprise, therefore, that we should not be able to reconstruct larger structures in this area. Walls [3a] and [4] in Squares A 3; 5-6 have to be considered as remains of a larger context because of the presence of the substantial Wall [3b], visible only in the NE Section of the pit (Plate 10.A). The original connection to Wall [3a] is obscured because Wall [3a] has been erased almost totally by the bulldozer. We have only faint traces of what had been going on in the area between Walls [3b], [3a] and [4], such as a circle bordered by small rough edged stones which had once been exposed to high temperatures (Plate 9.B), and a patch of a polished floor to the S of this (Plate 9.C), without connection to any walls. Rather than being the floor of a room we believe this to be the remains of the bottom lining of a storage pit. “Rooms” 7-9 are disturbed to the extent that no connections can be established to the walls around Rooms 11a, 12 and 14a (Plate 9.A). Despite these uncertainties we assume that all of these walls date to Phase AII.

It seems clear, however, that Wall [4] in Squares A 4-5 marks an exterior limit to the N. This area of Squares A 1-2 and 5-6 contains pits and layers of occupation debris and seems to have been left open, as otherwise the continuation of walls should have been visible in both the NW and the NE sections of the building pit.

The first good context is present when we turn to Room 10/16 which probably is part of a larger unit including the unexcavated Space 15 (Plates 3.C, 10.C-11.B, 7.D, 15.A). It is delimited by Walls [7] and [15] in Squares A 8/9, Wall [2] in Squares A 9/13, and Wall [5] in Squares A

17/18; the latter two are probably the retaining walls of the upper terrace. Wall [2] in 12 appears to be an internal dividing wall since it rests directly on the covering slabs of the sub-floor system of Room 10/16 and abuts Wall [5] at its southern end (Plate 7.D). The northern end of Wall [2] in 12 disappears into the section. As mentioned above, the sub-floor system extends further W by at least 2 meters. The extension of the sub-floor system beneath Room 15 and the observation that Wall [2] in 12 rests on this floor could indicate that Room 15 may have been constructed as a parallel to Room 10/16, perhaps of the same size. In any case, at close to 20 sqm, Room 10/16 is by far the largest room uncovered in Basta. If combined with an equally sized Room 15 it would constitute an unusual unit, both because of its enormous size and because it would be one of the few complexes not to follow the basic plan of the "Basta House". Unfortunately, there is not the slightest hint as to its function or whether it was roofed or an open space. As with most of the other rooms there was no apparent access.

The situation at its northern limit is unclear, since on the one hand Walls [45], [15] and [2] are connected to each other, while on the other hand Wall [45] is founded on a higher level than Wall [15] which reaches to a considerable depth (Plate 10.B). Despite the bonding of Walls [15] and [45], Wall [45] may be the remains of a later addition.

Wall [5] in Squares A 12/17, while being both the terrace wall of the upper terrace and the southern outer wall of the building on the top, at the same time served as the northern outer wall of the complex to the S of Wall [5] (Plate 3.B). This is the only clearly definable building unit in Area A. It sits on the central terrace and uses the retaining Wall [45] of the central terrace as its southern exterior wall. This building unit consists of the larger Space 27b, bordered on its western side by the 3 small chambers 25a+b and 27a, and conforms to our "Basta house" type. The dirt floor of Room 27b again rested on rows of elongated stone slabs indicating the presence of another sub-floor channel system (Plate 19.B; 24.A); time did not permit any further investigation. The surface of the slabs at between +20.65 and +20.80 indicates a close parallel to the situation in Room 31 with its sub-floor channel system (see there), and suggests that we have part of an initial slope adjusting system beneath Room 27b.

Again, in compliance with our "Basta House" type and with dimensions of 1.3 x 0.5 m (25a), 1.0 x 0.9 m (25b) and 1.0 x 0.6 m (27a), these rooms cannot have served as anything other than storage. Rooms 27b and 25b are connected by a passage with its base 60 cms above the floor level of both rooms (both at approximately +20.80); this is shown on Plate 19.C in an early stage of the excavation. The walls are not preserved to a sufficient height to allow us reconstruct the top of this passage. Comparison with similar examples from Area B suggests that it may have been an opening of 50 by approximately 70 cms in height.

As mentioned, the southern exterior Wall [45] of this building unit is at the same time part of the retaining wall of the central terrace. This wall continues with a lateral shift in Wall [6]. The angle marks the end of a staircase leaning on Wall [6] and connecting the central and the lower terraces (Plates 5.B and 22.C). The southern face of the staircase is flanked by Wall [22], resting on the original slope like Wall [6], proving that Walls [45], [6], [22] and the staircase all were part of the retaining system of the central terrace. The function of [22], however, apparently was only that of a stringer to the staircase.

It remains unclear where the stairs had led to because, between the corners formed by Walls [45] and [16], and by Walls [2] and [6], the only way to continue the passage would have been to turn by 90° and enter the Space 29 between Walls [16] and [2] (Plate 5.B). Even if that could be established we would have no evidence for the subsequent continuation. Unfortunately,

all the walls were denuded to below the level of the uppermost stone of the stairs. Space 29 is in any case enigmatic as the soil had been disturbed down to a considerable depth and so no floors could be identified. This prevents us from placing a deposit of three human skulls found in the northeastern corner at a height of +20.11 into context. The slabs found in the southern section of Space 29 at depths of between +20.18 and +20.36 may be the remains of an original sub-floor system. Comparing the heights suggests that the skulls had originally been just covered by the floor.

Rooms 31 and 17-22 may have been part of a single complex, but we have not been able to make any sense of it. A close connection is suggested by the common sub-floor system at least beneath Rooms 20, 21 and 31 with a possible addition of Rooms 18 and 19; this was described in detail above.

In contrast to the upper terrace, where a sub-floor system of equally high channels rests on an even surface provided by an earlier slope adjusting system, the situation is different with the central terrace, since in the southeastern part of Area A no additional sub-floor system separates Phases A III and II. Instead, the walls of Phase AII are erected directly above the slabs of the slope adjusting system of Phase AIII. Only one or two courses of stones have been preserved of the walls of Phase AIII which originally stood on these slabs (marked red in the Top Plan of Area A); they have apparently been cut down to a level to be incorporated into the floors of Phase AII ([29]-[31], [15], [50]; see Plates 4.D; 7.C; 15.B and C; 17.B; 18.A; 20.A; 20.C; 21.B).

The apparently irregular arrangement of rooms may be the result of what might happen when a restructuring process replaces an original layout, which followed a regular plan; a different interpretation is put forward in the Summary section. As mentioned, only a few traces remain of such older structures. Though pure speculation, we nevertheless venture to propose a possible reconstruction of a building making use of the existing walls (Fig. 18). As suggested before, this proposal includes the assumption that terrace walls, even if they are attested only for Phase AII, nevertheless are part of the original layout of the settlement. The proposal of a large (central?) space beneath subsequent Room 20 is confirmed as the early Wall [15] shows no wall branching off to the E, nor has any trace been found during the process of exploring the sub-floor system beneath Room 20 (Plate 16.B). For the same reasons, the counterpart to Wall [15] must be at quite some distance to the E because no traces of it were found below either Room 20 or 21. Beneath Wall [8] and to its E heavy disturbance precludes interpretation. If an early stage of Wall [8] had been the eastern wall of the central space this would produce a room of 2 x 4 meters, which could easily qualify for the central space of a “Basta House”.

A secondary alteration within Phase AII is indicated by the closing of the door originally linking Rooms 17 and 18 (Plate 17.C). Similarly an installation of unknown purpose consisting of large stone slabs in the northern part of Room 19 (Plate 11.C and Fig. 19) may be a secondary addition.

Several rooms S of the retaining Wall [45]/[6] are attributed to the lower terrace, though this can only be ascertained for Room 32 with its sub-floor system of channels; this system has been discussed before. Walls [35] and [41] abut against Walls [45] and [22], and are bonded with Wall [39], continued as [9], which forms the northern exterior wall of a double row of Rooms 34-39. Though Wall [25] abuts against [9], and [10] against [24], they probably all belong to one context. As can be seen on Plates 24.B and 24.C, the walls have suffered immensely from a pit having been sunk right into the center of these rooms. In addition, this work could not be properly

completed as excavation here had only started late in the 1988 Season, at the end of which Area A had to be vacated. Rooms are again fairly small at around 1.7 sqm.

The long Room 28 presents another problem. On the one hand, its western end displays a nice door column (Plate 5.C, lower left corner; 60.A); but on the other hand, what happens on both sides of this door remains unclear: to the W because that part could not be investigated because of the danger of falling material from the edge of the building pit (Plate 3.B); to the E because the soil within Room 28 was disturbed down to a low level (Plate 16.C). No floor could be isolated; the last working level was at +19.81. This is taken as an indication that Room 28 was most probably part of the building activities on the lower terrace. The southern Wall [9] of Room 28 (see Fig. 21) is more likely to be the outer wall of the unit of Rooms 34-39 rather than being an interior dividing wall. In that case Room 28 could have served as part of a corridor or the like, although its relationships elude us.

2.3 Area B

As described in the section on the stratigraphy we can distinguish four phases of architectural activities in Area B. Although we are not sure about its relationships we may have exposed a piece of a floor from an older phase in Room VIII,7 (Bo Dahl H. in Basta 1992). Its wider context is unknown and it does not add much to our knowledge as drilling had already shown that our main building Phase BII was not the oldest one, being preceded by close to 3 m of earlier occupational debris. However we have designated it as Phase BIII. The same phasing may also apply to some wall stubs encountered in Squares B 53 and 70.

Most of the architectural remains are more or less contemporary and constitute our main phase, Phase BII. Though we do not know much about earlier remains, Phase II is definitely nowhere the oldest occupation. If by nothing else, this can be seen from the fact that all “channel-systems” found in Area B are of the type consisting of channels of the same height, showing that they rested on an already even surface, most probably provided by an earlier slope adjusting system like the one of Phase III in Area A. Though we have no proof, there are some indications that building Unit B III may represent a final phase within Phase BII.
Architectural remains belonging to Phase BI were found only in the northwestern sector of Area B. Owing to the proximity of the surface the deposits were shallow and had been disturbed by some pits cut in Squares B 23 and 24 making it difficult to establish the exact relationship between Phases B II and B I. As will be explained at some length, the relationship hinges on a wall of Phase BII having been lowered during Phase BI to a level that it could be used as one supporting shoulder for the slabs covering one of the sub-floor channels of a Phase BI building. In general, the main characteristics of Phase BI are curvilinear structures and walls made of stacked tabular stones (Plates 30.B-C).
Only vague traces exist in Square B 83 of some stone alignments included in the lower part of the so called rubble layers, perhaps indicating the presence of seasonal dwellings. These constitute the latest remains and are described as Phase B0.

2.3.1 Reconstructing the Slope

The modern surface before excavation had a slope with a gradient of close to 3.80 m in a distance of 45 meters, or 8.4 cms in 1 meter, between the northwestern and the southeastern most corners of the excavation. To make a similar comparison between the ancient floors in Squares B 22 and

B 105 would be misleading, however, because this would be comparing a floor of Phase BI with one of Phase BII. Most probably this would also apply if we were to compare the floor level in Squares B 48/49 with that of Square B 105, because of the possibility that Building Unit B III is somewhat later than Building Unit B I, as will be explained presently. We may come closest to an approximation for the degree of slope at the time of Phase BII if we draw a line between the floor level in Square B 65 at +19.60 and the floor level of Building Unit B II at +17.50. This amounts to a gradient of 210 cms over the length of 20 meters, or 10.5 cms in 1 meter. We will see later to what extent this remarkably low incline has influenced our general assessment of Neolithic Basta.

However, there is no way to even speculate regarding the original slope of Area B. A drilling operation in Square B 103 (Kamp 2004: 84) revealed that the floor of Phase BII sits on a massive sequence of earlier occupation debris. Drilling provided evidence for three m of lower deposits before hitting a hard surface: probably a stone or part of a wall as bed-rock is always indicated by an initial thick layer of decomposed limestone, only gradually becoming harder. Bed-rock and therefore the surface before the initial establishment of the settlement may therefore be even lower than indicated by those three meters. We have no evidence for what occurred between the first slope adjusting system of terraces and our Phase BII.

2.3.2 Terraces and Their Substructures

It was difficult in Area A to define individual units and hence the relationship between architectural units and the terraces. This task is somewhat easier for Area B. Despite significant pit cutting activities which most probably happened during the Neolithic and caused severe disturbance, at least for our main Phase BII, building units were recognizable as such and could be attributed to individual terraces (Fig. 23).

Architectural Unit B I represents the best example of the relationship between architectural unit and terrace since the entire terrace is occupied by the building. In principle this also applies to the other terraces although some may also serve for two units. Thus Units B II and B VII share the same terrace, as do Units B IV and B V. Unit B VIII appears to occupy a terrace by itself. Unit B III shares a terrace with the structures found in Squares B 48 and B 49, although their relationship to Unit B III cannot be established.

Altogether, we can distinguish seven terraces belonging to Phase BII:

1) (the lowest terrace) on + 17.50 (Units B VII and II)
2) at +17.90 (Unit B VIII)
3) at +18.00 (Unit B VI)
4) at +18.30 (Unit B I)
5) at +18.85 (Units B IV and V)
6) at +19.40 (walls in Squares B 65 and 83)
7) at +20.40 (Unit B III and walls in Squares B 48 and 49)

Wherever we had enough evidence from terrace or retaining walls separating the adjoining terraces they could be seen as an integrated part of one, but simultaneously used by the adjacent building.

Most of the structures found in Area B belonged to Phase BII; only the northwestern sector yielded structures of a later date, Phase BI (Fig. 34; Plates 30.B and C). No architectural

units could be defined there although it was possible to see that there are walls and rooms on two different levels. There is one place that shows that the principle of sub-floor channels had been maintained. In Square B 36 we found a Wall [16] which, as a continuation of Wall [22] in Square B 50 could be seen to be part of a structure of Phase BII. However, as it was brought down to the same level as the low Wall [25] placed in front and parallel to [16] at a distance of 20 cms, both most probably served as supports for a row of covering slabs. Though none of the slabs nor the floor survived it is nevertheless clear that the floor must have been at the same height as the immediately adjacent one in Room 14, as can be seen on Plate 32.B. At +21.75 the floor of Room 14 is part of the lower terrace of Phase BI. At the same time as providing evidence for the continued use of sub-floor channels in Phase BI, the re-use of the Phase BII Wall [16] in Phase BI, demonstrates a close link between the two phases. Traces of a second channel, parallel to the one just described may be hidden in the lines of stones S of the southwestern corner of Room 14 (Plate 39.A).

Though the walls in Squares B 22-23, and B 34-35 do not form a recognizable pattern, floor levels indicate that they were constructed on the same terrace. With a height around + 22.20 this would constitute a terrace higher than the one found in Room 14. The remains of Phase BI are restricted to Squares B 22-23, 34-36, suggesting that the line S of Squares B 34-36 marks the southeastern limit of the Phase BI occupation.

2.3.3 Floors and Wall Plaster

In general, floors were poorly preserved in Area B; in no case did we expose a floor, which had been smoothed and stained red as in Area A. We could never be sure whether the crumbly surfaces encountered were what remained of once smoothed floors, or whether these were the original surfaces. It is indicative of the general state preservation that in one space (B IV,1) not only was the floor missing but also the slabs which would have once covered the channels of the substructure; all that remained were the lines of stones which once bordered the channels (Plate 35.B, lower left corner).

The crumbly consistency of the soil in Room B I,1 (Plate 28.C) likewise did not allow us to recognize floors or trampled surfaces. Consequently we were unable to decide whether the presence of a stationary vessel (Plate 45.A and B), the remains of a large clay structure (Plate 45.C), a fire place (Plate 38.A; 47.B), and several shoulder blades of different large animals (Plate 46.A) on different levels indicated the presence of several such horizons, or whether the shoulder blades served as a kind of foundation for the fire place into which the clay structures had fallen. In that case the entire sequence would be indicative of only trampled surfaces. A fairly obvious difference in texture and soil colour was the only indication for the base of the fill.

We were bound by a guideline of not continuing beyond the first floor. We therefore did not obtain any systematic information on sub-floor structures in Area B except in the case of the Room B IV,1 mentioned above. However, in a number of cases the post-Phase BII pit cutting reached well below the original level of the floors, exposing sections of sub-floor channels in their edges. A good example is provided by the southwestern part of building Unit B I,1 where a deep pit reached well below the level of the structures of Phase BII, exposing sections of three parallel channels (Plates 52.B; 52.C). The same situation arises elsewhere suggesting that sub-floor channel systems were a regular part of the building process in Area B. Some additional evidence was found in building Unit B VIII,2 where a square opening in the center of the room gave entrance to a channel system (Plates 48.C; 50.B); see below.

Whenever we were able to recognize more than one parallel channel they had the same interior height. These substructures and terraces had therefore been erected on level surfaces. In no case in Area B did we find a slope adjusting system like the substructure of Phase III in Area A. Obviously, none of the excavated buildings and structures of Area B reaches back to the time of the original settlement.

The floor opening in B VIII,2 did raise some questions. The square opening of 60 x 60 cms was neatly lined by stones with flat surfaces, which were reported to have been "polished" indicating frequent use (see Gebel *et al.* 2004: 81). There were no signs of a lid or closing device (Plate 50.B). The opening gave access to a channel running parallel to the long walls of the room, for approximately 12-15 m before a bend in a northerly direction. The upper 80 cms were empty and would have allowed someone to crawl inside the channel. In addition, a perpendicular channel estimated to run for four m took off in northern direction. Because the opening was found only close to the end of the excavation, no efforts were made to establish whether this channel was part of a system of parallel ones. All that can be said is that the channel must have ended at or before Wall [7] which bordered the room to the SE. Since this wall marks the partition to a terrace on a lower level, any continuation would have been visible from an opening to this lower terrace.

As mentioned above, traces of wall plaster were found in many places in the fill of rooms and in the open area in the northern part of Area A. There can be little doubt that all walls were originally plastered. Large plaster fragments were extremely rare however, and in only one case did we find some patches of painted plaster still adhering to a wall (see the discussion of Area B Square 50, Room 19 at the end of the house-section).

Both the plaster fragments found in the debris within Room B VIII,2 and the patches in square 50, Room 19 show the same construction. First a layer of rather coarse mud was applied to the wall, which was then smoothed and coated with a thick reddish brown paint. We do not know whether this served only as preparation for the next step, or whether it was the final touch in the first instance. There is also no way of knowing whether the entire room was painted this way, or whether the paint was only applied to specific zones or bands.

A further step – which may have followed immediately or during the course of a renovation – consisted of adding a layer of fine white lime plaster which then was used as the surface for applying painted patterns. In the case of the plaster still *in situ* these patterns consisted of geometric shapes such as lozenges, pentagons and triangles (Plates 34.C and 35.A, and Fig. 24). The reddish brown paint was used as a sort of negative decoration so that the geometric patterns would stand out in white. Unfortunately, the patches were too small for deciding whether the shapes were part of a repeating pattern, or whether they were totally random.

Although the pieces found in the fill of Room B VIII,2 (Plate 50.C) showed the same construction, the painting was different, as the general design seems to have been vegetal in character. What survives appears like bushes painted in red lines on the white coating with fruits added to the branches as black dots. Again there is no way to reconstruct a full image of a decorated wall.

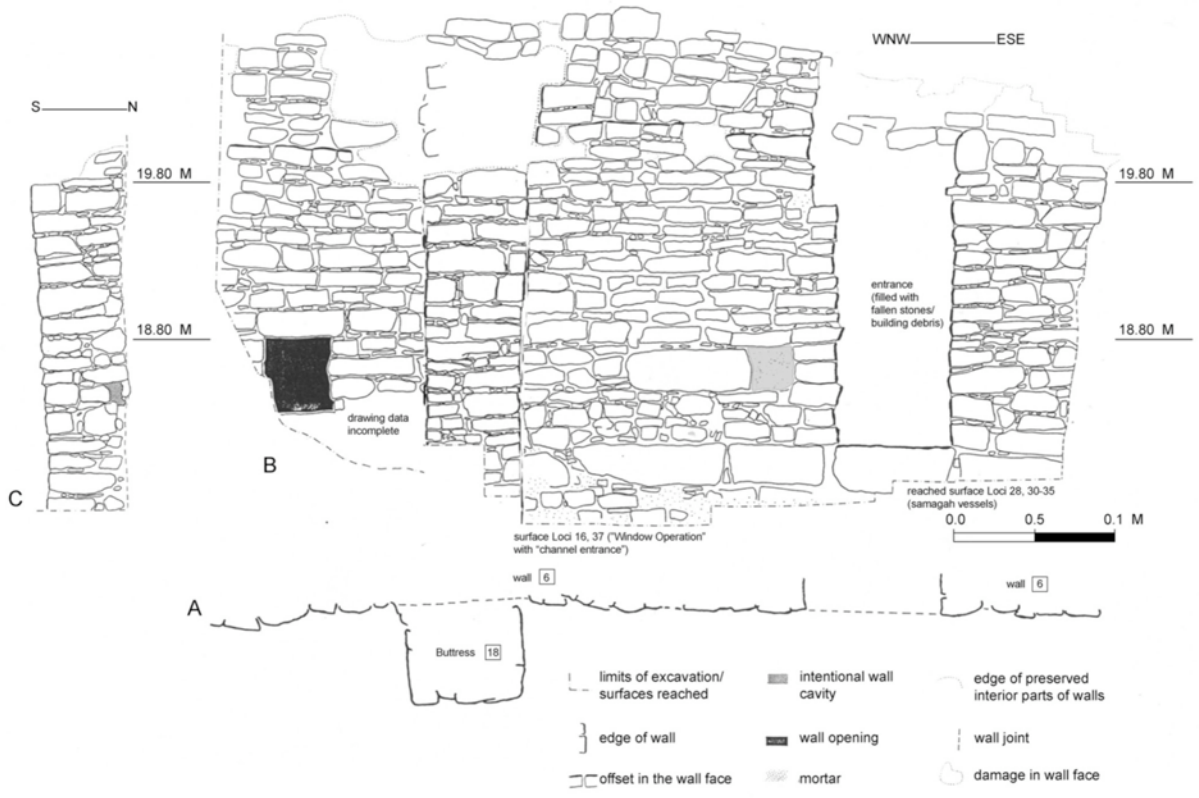


Fig. 22. Area B, Building Unit B VIII. Elevation of the northern wall of Room 2.

Fig. 23. Area B. Extension and elevation of the terraces of Phase BII. Scale 1:200.

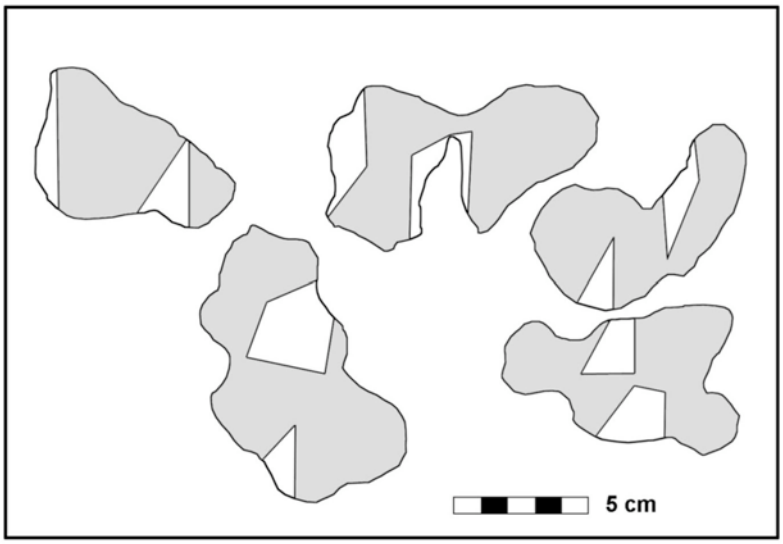


Fig. 24. Area B. Drawing of the remains of painted wall plaster in Space 19.

Fig. 25. Area B, Building Unit B I. Scale 1:100.

Fig. 26. Area B, Building Unit B II. Scale 1:100.

Fig. 27. Area B, Building Unit B III. Scale 1:100.

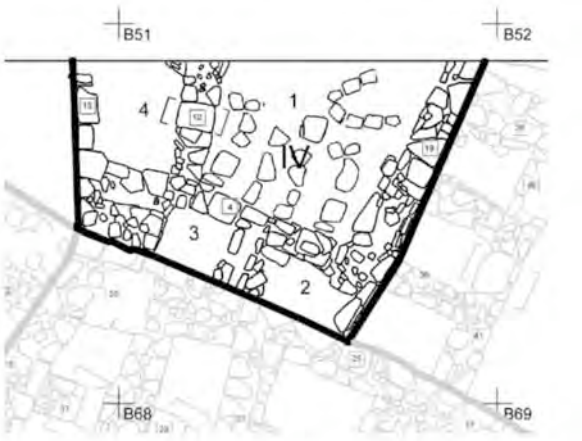


Fig. 28. Area B, Building Unit B IV. Scale 1:100.

Fig. 29. Area B, Building Unit B V. Scale 1:100.

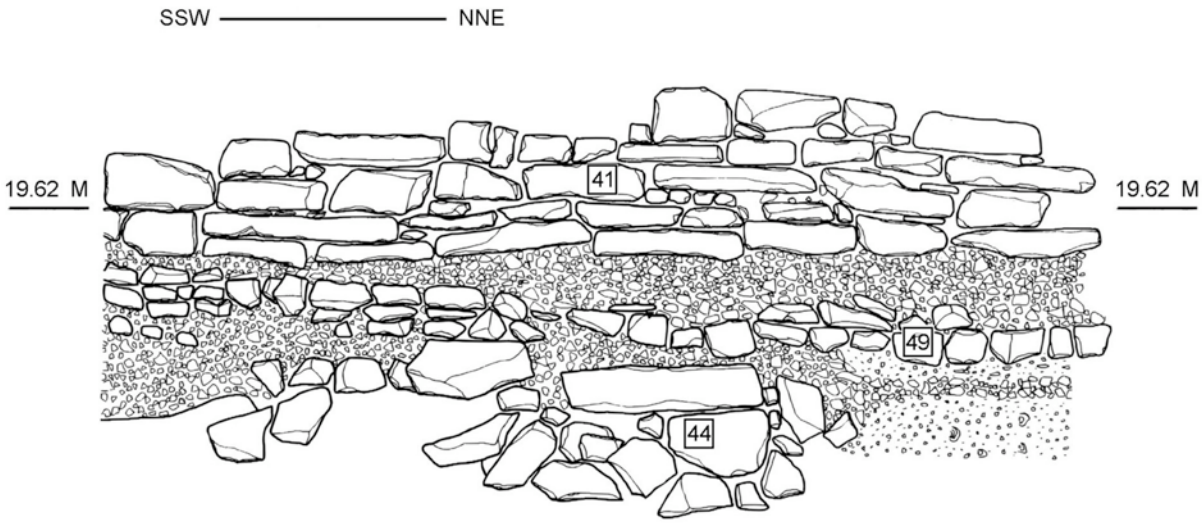


Fig. 30. Area B, Square B 52. Wall [41] with sub-structure, eastern face. Scale 1:40.

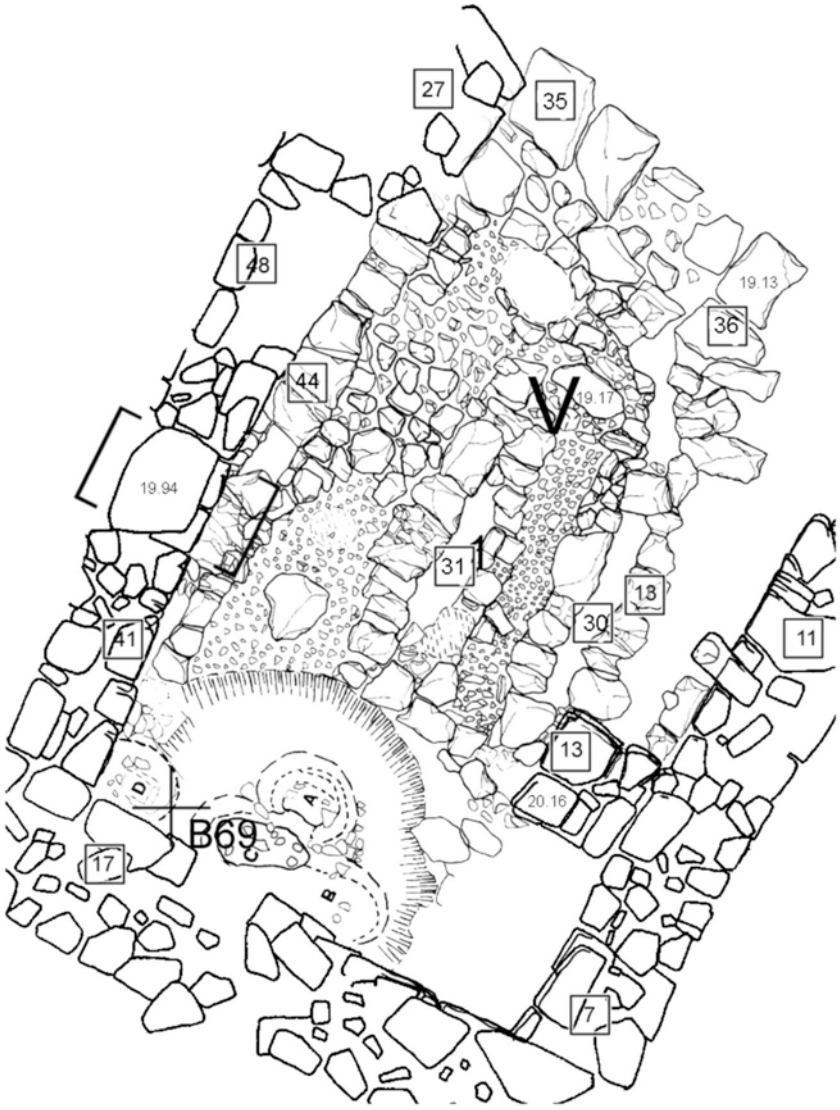


Fig. 31. Area B, Square B 52. Room B V.1. Sub-floor channel system with slabs removed. Scale 1:40.

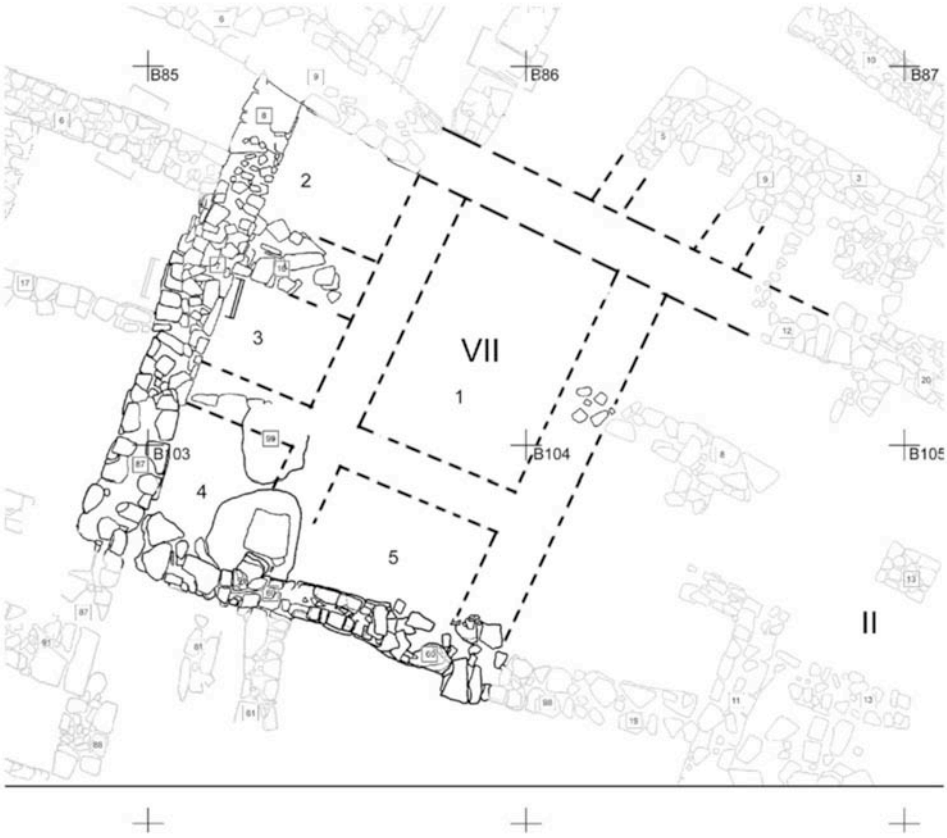


Fig. 32. Area B, Building Unit B VII. Scale 1:100.

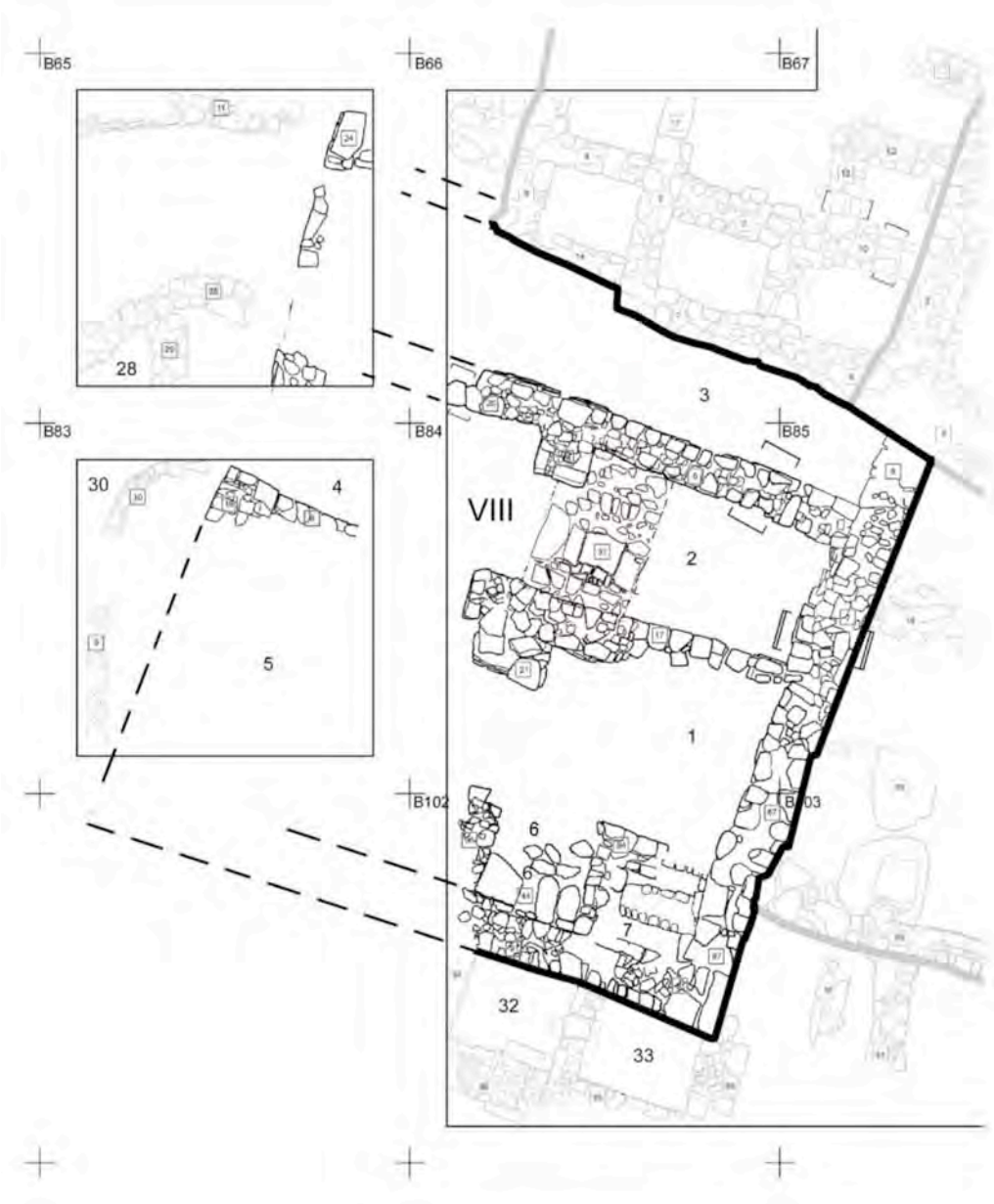


Fig. 33. Area B, Building Unit B VIII. Scale 1:100.

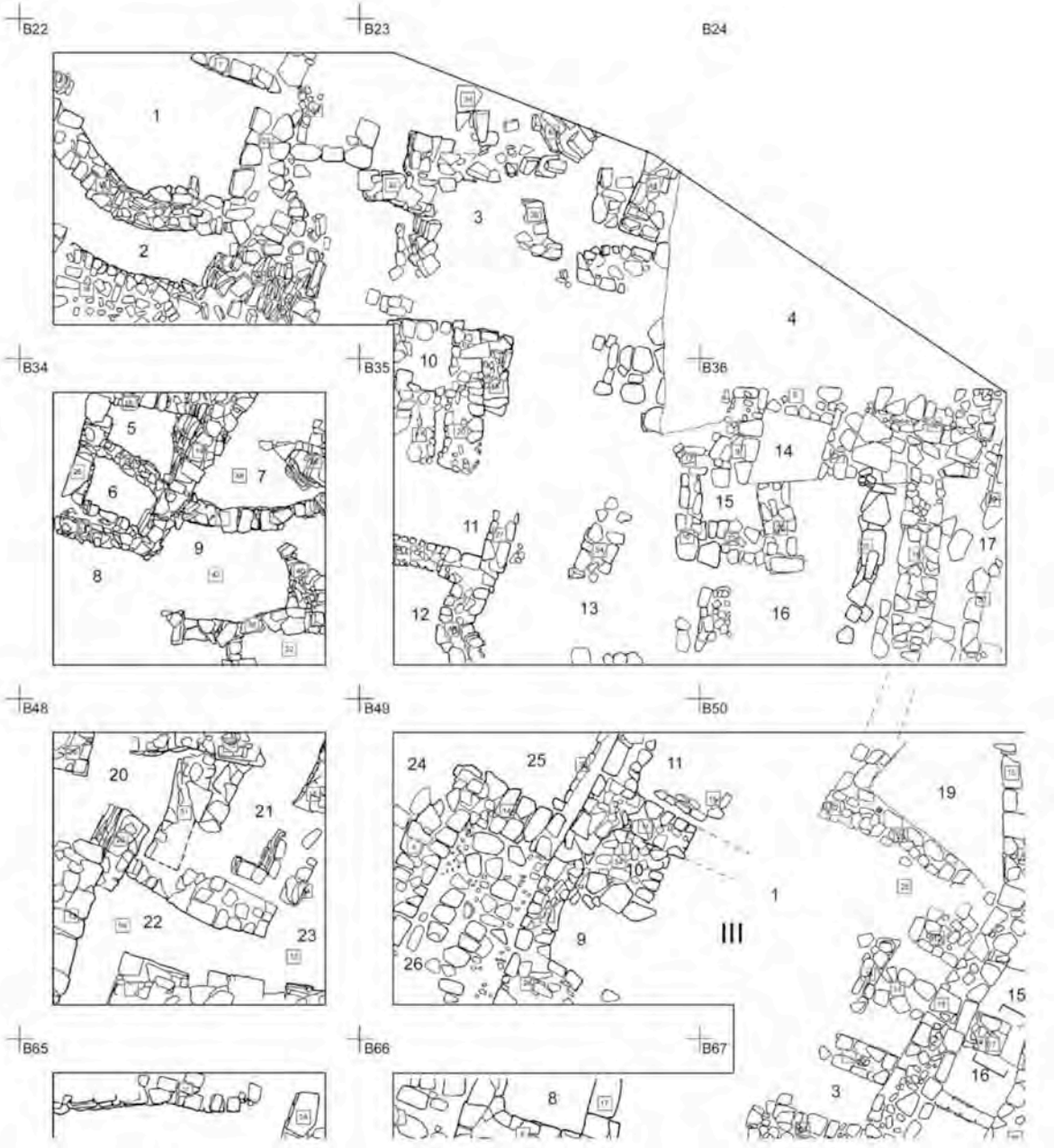


Fig. 34. Area B. Structures in Squares B 22-23, B 34-36, and B 48-50. Scale 1:100.

2.3.4 Houses

House B I (Fig. 25)

Out of the architectural remains of Area B, Unit B I is the best preserved and most prominent (Plates 25.B; 26.A; 27.A). It is also both the largest and best equipped building unit. Though it is by mere chance that it marks the center of our excavation Area B, it must have been of some central importance in antiquity. This is indicated by the fact that all the outer walls of this building are integrated and most of the interior walls bond into them. At the same time the outer walls serve as retaining walls of the various adjacent terraces, while the walls of the houses on the surrounding terraces all abut onto these outer walls. This house was obviously the first to be erected in this complex; although we assume that the neighboring houses were part of the same scheme. The temporal differences were not sufficient to attribute them to a separate phase. There may be one exception with a more substantial chronological difference, as will be discussed presently under House B III.

Building Unit B I came to be the proto-type of what since has been called the "Basta-House". With outside measurements of 15.4 x 10.7 m it is built around a central space of 7.0 x 4.5 m which is subdivided into smaller compartments and corners by three buttresses and a Wall [10] protruding three m into the central space. Both the buttresses and the protruding wall may have served as supports for a roof. Of this roof, however, no traces or other hints have been found, and in fact the buttresses in B I,1 may equally be explained as means to strengthen the walls. Help comes from Unit B II, however, where instead of attached buttresses, we find a free standing pillar marking the center of the central space (Plate 55.D and Fig. 26), leaving no doubt as to its original function as roof support.

Though we did not excavate beyond what appeared to be a trampled surface, we nevertheless came to understand that Building Unit B I also sits on a sub-floor channel system. This information arises from the large pit, which destroyed part of the southwestern walls of Unit B I. Once the edge of the pit had been exposed the remains of several parallel channels became visible (Plates 52.B and C). The low height and equal clearance of these channels tells us that this sub-floor system rested on an even surface, as in all other cases encountered in Area B.

The inner space of Unit B I is surrounded on all four sides by rows of small rooms, which in most cases are too small to have served for anything else but for storage purposes. Like the central space they were almost all filled with the so-called rubble layers. In no case did we find larger quantities of stones or other materials indicative of a roof construction, let alone of a second storey. As reported above, normally floors were almost indiscernible because of their crumbly consistency. Where they were identified there were no *in situ* finds or installations, with one exception. In addition to being somewhat larger than most of the other rooms, Room B I,20 was exceptional in having a number of grinding utensils on a horizon which, without these finds, would not have been recognised as a floor. In addition to a complete grinding slab there were fragments of some others as well as various hand stones and a pestle, all made of basalt (Plate 39.D).

A further difference from the other small rooms was the manner in which both this room and the adjacent Room B I,18 (again of somewhat larger dimensions) could be accessed from the central space. Where preserved, the connection between the other small rooms and the central space consisted of "passages" of 40-50 cms in width and 60-70 cms in height framed by sills and

thresholds each made of a single slab. The opening started at around 60-70 cms above the presumed floor level of the central space (Plates 27.B). In contrast, the door to Room 18, though again starting *c.* 70 cms above floor level, was 75 cms wide (Plate 44.A). Combined with the finds reported above, these differences may indicate a distinctive function for these rooms. This may be the case for Room 19, which is almost the same size as Room 20 and is connected to Room 20 by a door placed in line with the entrance from the central space into Room 20.

There is no indication of an entrance to this building unit, unless it was located in the large gap in the SW enclosure of the building. Here large-scale destruction had been caused by a pit, which in places had left traces of walls but in other places had damaged the walls and floors of the southwestern part of Unit B I down to a depth considerably lower than the substructures (Plates 25.B; 27.A). The deepest point of the pit had destroyed everything exactly where a possible entrance might have been expected. It remains unclear whether Walls [9] and [12] can be reconstructed to have formed a continuous line and so closed the building to the SW, or whether they left an opening which could have been used to enter Unit B I from outside.

There seem to be arguments for both possibilities. On one side, Wall [3] ends with a corner from where in all probability the perpendicular Wall [5] joined the outer wall, thus closing Room I,4. Furthermore, the entrance to Room I,20 looks more like an access from the central space than from another room. We assume that the area in front was a part of and open to the central space. There are no traces of a wall, which could have closed off Space 21 from the central space; at best it could have been an entrance chamber to the central space.

Counter arguments, however, are supplied by the observation that to the SW of Unit B I traces of walls, for instance Wall [16], have been found in Squares B 85 and B 103, which could possibly be reconstructed to form a building unit of its own, Unit B VII (Fig. 32). The remains of this building unit suggest that it rested on the same terrace as Unit B II, *c.* 80 cms lower than the terrace of Unit B I. Obviously, the southwestern Wall [9]/[12] of Unit B I additionally served as the retaining wall. Walls of Unit B VII would have abutted to this wall as is shown by what remains of the walls of Unit B II (Fig. 26). This argument is taken to be stronger meaning that Unit B I would have had no entrance on floor level. The significance of this is discussed in the context of the question of communication ways in general.

House B II (Fig. 26)

The destruction pit mentioned above also affected the structures in Squares B 86, 104, and 105, except that in this area the bottom of the pit hardly reached below floor level. Occasionally the lowest courses of walls have therefore been left in place. Of particular importance are those locations where walls abutted to the SW Wall [12] of Unit B I, or to its continuation in a SE direction. The most striking discovery was the observation of the remains of a rectangular, free-standing pillar [13] of 100 x 80 cms (Plate 55.D). Although only two courses remained, the neat arrangement of dressed stones does not leave any doubt as to its function. If the traces of the other walls are restored to form a ground plan, as shown in Fig. 26, this pillar would lie in the center of a space of 3.7 x 4.8 meters. The floor level was found at approximately +17.50. Bearing the Basta House type in mind, and using both the existing remains of walls and some imagination, we may arrive at a plan with the larger Space II,1 being flanked on at least three sides by rows of small chambers (B II,2-9). Thus the ground plan of Unit B II would be a variant on what constitutes our basic house type.

House B III (Fig. 27)

Unit B III also suffered from massive pit cutting, which mainly affected its central space. Nevertheless, there is no doubt that we are dealing with a building of the Basta House type, with a central space, surrounded by rows of little rooms at least on three sides; the evidence for the northeastern side will be discussed presently. Only the SW part of the building is preserved to the extent that fully articulated rooms can be defined. Both in the area of Room 2, and on the opposite side, of Rooms 9 and 10 the picture is obscured by destruction (Plate 33.B). The stone settings in Room 2 make no apparent sense regarding their function or their character.

The destruction extended to include the entire northern part of the unit to the extent that we cannot be sure even about its northeastern limit (Plates 25.B; 26.B, lower right parts). The total width of the building in a NW-SE direction can be established with certainty at 7.5 meters, but its SW-NE length is uncertain. While Wall [11] N of Room III,10 may appear to be a good candidate for a closing wall, it is difficult to find a counterpart which it could connect to. An additional problem is presented by Walls [25] and [22] which form a clear corner (Plates 34.A and 34.B), suggesting the presence of a passage way NW of Wall [22]. The relationship of Room 11 to Unit B III is very doubtful, although it was numbered as part of this building unit.

Despite all the uncertainties however, there is no doubt that Unit B III represents another variant of our main house type. Any additional features like attached buttresses and a fire place in the central space have not survived the later cutting of pits.

As preserved, the floors of the Rooms of Unit B III lie at a height of approximately +20.40, indicating that the terrace of B III was 210 cms higher than the terrace of adjacent Unit B I. The walls of the southeastern chambers of B III abutted onto the NW outer Wall [2]/[15] of B I (Plate 34.B; 42.A), testifying to B I being older than B III. The length of time involved remains unclear, however, and may be anywhere between a short period with the joint simply an artifact of the construction process, signifying a quasi-contemporaneity, or a longer period of time.

During the course of the excavation we were of the general impression that we were dealing with a series of well outlined building units set next to each other, indicating that in each case they represent the plan of the initial design. This led us to assume that the entire complex followed a common master plan with the individual units being built more or less at the same time. This applies also to the relation between Units B I and B III.

However, this assumption has to cope with some observations, which could point to a larger temporal range. For instance, walls between Rooms I,16-20, including Wall [25] closing off this part from the central space, are all preserved to a common level of between +19.41 to +19.56 (Plate 43.A), considerably lower than the walls to the NE and, particularly, the NW outer wall. The sharp steps at the point where Wall [30] meets the northeastern outer wall are particularly strange (Plate 43.B). The same oddity can be observed where the wall between Rooms I,16 and 18 continues as the Wall [36] between Rooms 14 and 15, clearly to be seen in Plate 43.A. If the walls between Rooms 16-20 had been reduced by a normal pit we should expect slanting edges following the destruction. Our conclusion therefore is that the walls between Rooms 16-20 were deliberately lowered to a specific level.

Coincidentally, or not, this level is close to a horizontal break in the NW outer wall of Unit B I [2/15] (Plate 42.B), suggesting that after some time this wall was raised on a slightly

different alignment. Within this upper part of the wall an opening became visible, though blocked (Plate 43.A upper left corner), which may once have allowed communication between Unit B III and whatever was on top of the lowered wall of former B I Rooms 16-20. This interpretation is strengthened by the way that the opening is located just above the point where Wall [30] meets the outer wall. If this dividing wall was still preserved to its original height, the passage would have made no sense.

A possible interpretation could consist of the following scenario: at a certain point later in the lifetime of Unit B I the walls between Rooms 16-20 were erased to the level of the adjacent terrace of Unit B III. Subsequently these rooms were filled to produce a trampled surface or similar, the former NW outer wall of Unit B I was raised creating a passage which connected the new Unit B III with whatever had been erected on the former northwestern part of Unit B I. This way, this former part of Unit B I would have been made part of the new Unit B III.

This interpretation could offer an explanation for the unusually large jump of 210 cms between the terrace levels of Unit B I at +18.30 and Unit B III at +20.40. Unit B III in its actual shape would be contemporary with a later phase of Unit B I, leading to the assumption that a predecessor of the excavated Unit B III would have been contemporary with the initial date of Unit B I. This predecessor to Unit B III would have rested on a terrace at a lower level than the present one, which would be more consistent with the normal difference in elevation of between 40 and 80 cms from the terrace of Unit B I. An indication of the height of this lower terrace may be the floor level of +19.60 of the remains found in Square B 65, joining Unit B III immediately to the SW. The structural remains in Square B 48 with a floor level at +20.30, on the other hand, would be contemporary with the excavated Unit B III.

Unit B III thus would be representative of a restructuring process within the later part of Phase BII. This process has to be inserted between our Phases B II and I, but should be seen rather as a final stage of Phase BII than constituting a phase of itself. The discussion of house B VIII considers the possible presence of any more remains of this sub-phase.

House B IV (Fig. 28)

Unit B IV has already been mentioned as the building where the floor and substructure of its central space has been denuded to the extent that only the lines of stones were left delimiting the sub-floor channels (Plate 35.B, lower left corner). Though this is in line with the generally bad state of preservation in Area B it is somewhat odd that not a single trace of the covering slabs was found in the debris. It seems that stone robbers did a thorough job, as the other explanation that the building had not been finished is hard to believe.

Enough is left of three sides of the central space of IV,1 to again recognize the basic pattern of the “Basta-House”. Two sides are flanked by rows of small chambers (IV,2-4) while on the southeastern side the central space is closed by the outer wall of this unit [19]. Both this wall and the one between chambers IV,2 and 3 abut on the northeastern outer Wall [20]/[25] of Unit B I, which in addition to serving as a retaining wall separating the terraces of Units B I and B IV is co-used as an outer wall of Unit B IV. The lower side of the channels in B IV,1 lie at +18.90/ +19.00 marking the height of the terrace. Although the walls are not preserved to a sufficient height to reveal possible passages between the central space and the chambers, the surviving tops of the walls between Rooms 1 and 3 and 1 and 4 – at the points marked [10] and [4] contain large stone slabs which in Unit B I are known as the thresholds of such passages (Plate 35.B). They

stand out from the normal stones not only by their size but also because of an unusually smooth surface, possibly left by repeated movements of goods through these passages.

House B V (Fig. 29)

With Unit B V we again enter a heavily disturbed area, particularly its eastern part. Enough remains to let us see the same principle of layout at work. The better preserved parts are a row of small chambers (V,2-5) bordering a central space (V,1) on its northwestern side. Part of this central space includes a Buttress [13] attached to what remains of its southeastern Wall [7]/[11]. In addition, traces of Walls [22], [25], [33], [36] testify to the presence of a double row of small rooms (Building Unit V,6-10). Though obscured by the baulk we assume that Wall [6] may be connected to Wall [33] between rooms V,6 and 9. Wall [5] may mark the remains of the southeastern outer wall of Unit V. However, after only a few stones the remainder vanishes in the steep edges of a deep pit (Plate 26.A). Towards the SW the central space borders immediately on the northeastern outer wall of Unit B I, without an additional row of rooms.

Again, no regular floor could be discerned in this case. In fact, everything was found in great turmoil, having been turned up with some large slabs, which probably once covered a sub-floor channel system lying around. In other areas these lines of covering slabs were still *in situ*. In addition, the soil was interspersed with rubble stones of the size which in Area A had been found to have served as leveling material on top of the rows of slabs before the dirt floor was put on (Plates 36.A, 36.B). This sequence becomes clear from looking at the section and elevation of Wall [41] (Fig. 30) where the sequence of layers remained undisturbed beneath this wall. This is obviously a case where an interior wall was built on the mud floor.

In this case we found evidence for part of the cause of this destruction when we located three upright cylindrical structures made of *samagah* set within a pit excavated into the substructures of the central space (Plate 35.C; 36.C and 37.A, and Fig. 31; on the material see J. Neuberger, Basta IV,2, forthcoming). The pit reached the southwestern outer wall (= northeastern outer wall of Unit B I) using the wall as a guide. In other parts of that central space similar installations had been sunk into the former channels (Plates 37.B; 37.C, and Fig. 31). We do not have an explanation for these installations nor was it possible to define the level from where the pits had been sunk into the ground. It is clearly dated after the desertion of Unit B V.

As in Unit B IV the walls of Unit B V were denuded to the point where we cannot hope to find traces of the passages, which doubtlessly once connected the central space with the adjoining small chambers. Also here, however, the exception is provided by a large stone slab in the top of the Wall [41]/[48] between V,1 and V,4 which because of its size and its polished surface may also qualify as the threshold of one of these passages.

“House” VI (see top plan of Area B)

The remains given the designation of Unit B VI are a series of walls that we cannot interpret. They were found at the bottom of the deep pit, which affected the eastern parts of Unit B V. They certainly had no connection whatsoever to the walls of Units B V or B I, and in fact may belong to an earlier phase, of which no other remains survived. But they are certainly not adequate use to draw any conclusions regarding such earlier occupation (Plates 38.A and B; 39.B), except that the same building technique was applied.

House B VII (Fig. 32)

This area SW of house B I was heavily affected by the large pit discussed above which had destroyed the southwestern part of house B I (Plate 51.C; 52.A). It seems impossible to even postulate the existence of a building with so little evidence. As far as we were able to differentiate trampled surfaces, they were at roughly the same height as the floor of Unit B II (+17.50). Various stubs of walls, such as Wall [16], abutting the outer Wall [7]/[87] of Unit B VIII, may be reconstructed to have separated the highly hypothetical Rooms B VII,2- 4 (Plate 51.A). The only Wall [60] of some substance enclosing Rooms B VII,4 and 5 on their southwestern side could have been the limit of this building unit. Its relationship to Unit B II must remain totally hypothetical. If reconstructed correctly the ground plan of this unit again would have been a variant of our main type.

House VIII (Fig. 33)

Unit B VIII is the only building in Area B, which does not conform to the basic ground plan found with all the other building units. Although it is not complete, both because of old destruction and that it lay on the edge of our excavation, the surviving exposed part reveals a ground plan consisting of at least two long rooms parallel to each other (B VIII,3 and 2) with the further possibility that Room 1 should also be reconstructed as another long room. Remains of some walls on the southwestern side of Room VIII,1 suggest that it once had been flanked by a row of small chambers (VIII,6-7). No additional work was done there except to trace the upper parts of the walls of Room VIII,3, as removing a chaotic mass of large stones in the fill (Plate 40.C, right side; 48.C, bottom) would have been impossible during the last days of the last season. If anything, then this collection of stones could be what remains of the walls of a second storey. The reconstruction of the ground plan of Unit B VIII offered in Fig. 33 must remain speculative.

This building unit stands out from the others because of other reasons as well. There is the opening in the floor discussed above which apparently offered an entrance into a sub-floor channel (Plate 50.B). Time did not permit investigation as to whether this channel was part of a larger system, or whether this system formed the base for the entire unit, or to establish the depth of this channel.

Floor levels were +17.80 in Room B VIII,2 and +17.90 in Room 1, giving a difference of 30-40 cms to the terrace of Units B VII and II, and 50 cms to the terrace of Unit B I; the surprise is again the unusually large difference of 250 cms to the terrace of house B III. We were faced with a similar problem to the difference of 210 cms between the terraces of Houses B I and B III. We may be able to find a solution along similar lines.

In spite of the clear ground plan of the surviving and exposed part of the building unit, the northeastern Wall [20]/[6] of Room VIII,2 offers some riddles (Plate 48.D; Fig. 22). The attached buttress seems to have been cut off at +19.80, coinciding in height with a horizontal joint which can be traced along the entire length of the wall. This height happens to be the same as the preserved height of the Wall [17] between Rooms 2 and 1 at +19.78/ +19.80. Both may have served as supports for beams as part of a floor. This offers the possibility of a second storey, the floor of which would have been at a height of +19.80 + the floor sequence = approximately +20.00. Although no traces were found of such a floor, strong support in favor of this assumption is provided by the contents of the fill. As has been mentioned, large quantities of fragments of

painted wall plaster were found to constitute a major component of this fill, some sufficiently large enough to show traces of the same painting style and pattern (Plate 50.C). Surprisingly, they were found indiscriminately in the fill both above (+20.70) and below (+19.25) what would be the floor level of any second storey. Apparently the space below this level had been empty when the fill flowed in from above.

While this shows that at least in the case of Room VIII,2 the lower space was still open and used during the time of the upper structure (because of the entrance to the channel system in its floor), it is not clear whether the building was conceived as a two story structure from the beginning, or whether this was only a second building phase. If so, this may relate to the restructuring of Unit B III. In this case, the difference in height between the terraces of B III and what succeeded B VIII would be reduced to 40 cms.

Rooms B VIII,6 and 7 require special attention: Room 6 because amongst the slabs covering a sub-floor channel we find a particularly large one with a semi-global hollow of 15 cms in diameter sunk in close to one corner (Plate 53B; see also 54.A and B). In later contexts, this could easily be described as a door socket, but here we have no idea what this piece may have served for originally. Several trampled surfaces in the upper fill indicate the presence of ruin dwellers at an undetermined later date.

Room VIII,7 is the location where the hoard of animal figurines and pendants were found lying at the bottom of a pit which had destroyed the upper parts of the surrounding walls (see Hermansen, Basta 1992..). On investigating the sub-floor channel system beneath Room 7 it was found that it rested on a plaster floor, which may belong to an older building. This was referred to earlier as one possible trace of a Phase BIII. However, this is only a faint indication of what could be expected if more work was done here, in light of the drilling operation mentioned above (2.3.1).

2.3.5 Area B. Unrelated Structures

A number of walls and structures have been found on the fringes of the complex of houses described which could not be related to those the houses, nor could they be connected to form units of themselves. This was partly due to their position at or close to the excavation edges, as is obviously the case for Rooms 32 and 33 S of Building Unit VIII (Fig. 33). At +17.54-17.60 their floors are lower than the floor of Building Unit VIII, indicating that the unit they belonged to occupied a lower terrace. As in other examples, terrace Wall [91] was an integrated part of outer wall of Unit VIII and was co-used by this neighboring unit, the walls of which abut the terrace wall.

Rooms 32 and 33 are connected to each other by a typical passage with a high threshold (Plates 54.C and D, 55.A), and Room 32 even has two parallel passages linking the room to what must have been adjacent to the SW.

Though isolated from its original context Room 32 could be another remnant of an older stage, because a still earlier intact mud floor was found (Plate 55.A) underneath an intact mud floor (Plate 54.C) resting on a layer of rubble stones (Plate 54.D). Lack of time at the very end of the excavation did not permit any further investigation.

Rooms 34 and 35 in Square B 87 may also be what remain of a neighboring unit, but as mentioned above, both the clearing of Squares B 53 and B 70 and the section E of Rooms 34 and 35 make it obvious that large pits had destroyed all relationships, as they reached down below the deepest excavation level. Continuing to excavate here would not in all probability yield meaningful results.

The situation was different again in the W and the NW. In Square B 83 high up within the lower rubble layers some disconnected lines of stones of uncertain date were revealed. They are probably evidence for an ephemeral or seasonal occupation some time after the abandonment of the Neolithic settlement. Lower down, and on the northern edge of a deep pit, traces of a wall with a sharp corner appeared which, given its height and direction may link up with Wall [17] between Rooms 1 and 2 of Building Unit VIII. In our reconstruction we tentatively designated it as part of Unit VIII, but the blunt termination of Wall [17] indicating the presence of a door, and particularly, the corner of the wall in Square B 83 make this assumption questionable.

The structures found in Square B 65 do not connect to anything else nor do they join each other. The height +19.60 in Space 27 may, however, indicate a relationship with Phase BII, since this level could match the one of the building underneath the excavated Building Unit B III, and thus be part of the terrace contemporary with the initial building of Unit B I.

Further N in Squares B 48 and 49 matters become confusing (Fig. 34). In Square B 49, Wall [9]/[13] definitely belongs to Unit B III as the Walls [14], [8], [26] and [11] are bound in. The structures in the western half of Square B 49 therefore must belong to a different unit, which the structures in the NW corner of Square B 86 may link up with. Again, the structures found in Square B 48 may be part of this, but if so, they certainly do not produce a plan conforming to our main house type. Spaces 22 and 23 look as if they were part of a corridor or passage way. The floor level of this space at +20.30 suggests some relationship with both the structures around Room 26 and the Unit B III.

Before turning to the remains of Phase BI in Squares B 22-23 /B 34-36 some attention needs to be given to Space 19 at the northern end of Unit B III, as the interior face of the northwestern Wall [22] happens to be the only place where painted wall plaster was found still adhering to the wall (Plates 34.C; 35.A). The sharp corner formed by Walls [22] and [25] prevents an easy connection being established with Unit B III; but it does not join any other building unit as well. From its height there seems to be no question that it dates to Phase BII (Fig. 34).

Although it is obscured by the baulk we nevertheless take it for granted that Wall [22] links up with Wall [16] in Square B 36, the only trace of Phase BII structures identifiable N of the line of Squares B 48-B 51. This proves to be of particular importance, because Wall [16] of an original Phase BII context, apparently was reused in Phase BI.

A well preserved floor at +21.10 in Room 14 is the starting point. As can be seen in Plate 32.B this floor sits on a foundation which, with a slight shift to the E, turns out to be a sub-floor channel system. Within the highly disturbed area one channel stands out: that between Wall [16] and a row of stones [25] forming the other shoulder of the channel. Wall [16], the continuation of Wall [22], was apparently cut down to a level where it could serve to border a channel forming part of the sub-floor system of the floor of Room 14 and whatever unit it belonged to. Since we take Room 14 and adjoining structures to belong to Phase BI, Wall [16]/[22] presents a direct link between Phases B II and B I.

Unfortunately, nothing can be gathered from the walls and structures in Squares B 22-23 / B 34-36 (Fig. 34). At best, the structures uncovered in Square B 22 and B 34 make some sense. Rooms 1 and 7, enclosed by curvilinear walls, are linked up with right-angled structures like Rooms 5 and 6, or are enclosed by a curved corridor 2. Nothing can be made of the other remains in Squares B 23 and B 35.

The difference with the structures of Phase BII is not only the curvilinear character of some of the walls but also the building technique. A good example is the wall bordering Space 1 to the S, as thin tabular stones are used instead of the large and sometimes dressed stones of the walls of Phase BII; the occasional use of wedge stones driven into the joints are however reminiscent of the older technique. On the whole, less attention is given to form right angles, and nothing comes close to the care given to the execution of plans and building processes found in Phase BII.

2.3.6 Communication Ways

During our work in uncovering Unit B I it became increasingly clear that the question of the entrance to this unit would pose a major problem. The destruction of the SW part of that unit initially seemed to offer an easy way out and an entrance could be imagined there; but as explained above, the notion of the buildings being erected on terraces of different heights plus the discovery of walls – as faint as they may be – in the area of a possible access area forced us to abandon this idea.

Unfortunately, none of the other building units is preserved to such an extent that this question can be answered, as in all cases there is a possibility that entrances happen to have been located in the destroyed parts. The problem is intensified when we look at the general situation as in all cases the houses within our excavation area are attached to each other, leaving no space for communication ways between the units.

The situation is similar to that in Area A as in general the walls are only preserved to such a height that any remains of an entrance with a higher threshold would have disappeared. However, the location of building units on terraces of different heights and the immediate juxtaposition of terraces leaves no opportunity for the reconstruction. There is no alternative than to assume that the units were entered from the roof. Furthermore, the close proximity of the units makes it appear that roofs also served as the main communication ways (modern and sub-recent examples will be discussed by Kinzel, this volume). There is a problem that communication over the roof tops cannot be extended over certain distances, and certainly could not cover an entire village of the size of Basta. This is dealt with in the summary, under “The Concept of Dwelling Islands”.

The Architectural Reconstruction of Basta*

Moritz Kinzel

3.1. Introduction

This contribution focuses on the possibility of reconstructing the Late Pre Pottery Neolithic B (LPPNB) architecture found in Basta. Interpretations and reconstructions of Basta's LPPNB architecture have been a matter of discussion since the beginning of Basta excavation. The clear outlines of House Unit B I offered themselves for understanding this ground plan as an ideal master plan. Nissen explained this "Basta House" type as a preconceived type that was planned from the exterior to the interior (Nissen 1993 and this volume). This "Basta House" type was modified both in Basta itself and in several other sites in Southern Jordan like Ba'ja (Gebel and Hermansen 2004), Ghwair I (Simmons and Najjar 1999), 'Ain Jammam (Waheeb and Fino 1997), al-Baseet ('Amr 2004) and es-Sifiya (Mahasneh 1997 and 2004). Ian Kuijt presented a conceptual and functional interpretation of building B I (Kuijt 2000) based on the published plan (Nissen, Muheisen, and Gebel 1987).

Our understanding is that architectural reconstruction is a medium to illustrate the context of the findings and to visualize what LPPNB architecture could have looked like. Reconstruction drawings are "eye catchers" to attract people's interest in this early phase of building traditions and in the Neolithic period in general; but, as a matter of course, they can never be more than plausible suggestions.

* The following thoughts on the architectural reconstruction of LPPNB Basta are based on the reconstruction of Area B houses, submitted as master thesis to the Technical University of Berlin in the winter of 2002/2003. I would like to thank Professors Dorothee Sack for accepting and supervising my thesis, and Hans J. Nissen for inviting me to work on this subject, and Hans Georg K. Gebel for sharing his insights into the LPPNB architecture during writing my thesis (Kinzel 2003). As a member of the Ba'ja and the Shkarat Msaied Neolithic Projects I was able to sharpen my ideas. I am particularly grateful for intensive discussions of several aspects of PPNB architecture and reconstruction during the fieldwork of both projects with Hans Georg K. Gebel, Bo Dahl Hermansen and many other colleagues. I have also benefitted from the experimental work carried out by Samantha Dennis in Beidha. Since 2003 I visited and revisited the traditional villages of Basta, Rajif and Dana several times in order to study their architecture, the dilapidation of the buildings and the ongoing processes of decay.

Offering proposals for architectural reconstructions one has to keep in mind that any reconstruction cannot be more than a snapshot, focusing on one moment within a living process of development both of a given building and of a complex consisting of several building units. It is therefore necessary to decide which moment the reconstruction is going to be illustrated, the last one before the abandonment which would include all alterations occurred during the life-time of the building, or the initial one. This may not always be easy to disentangle, or that one line can be followed throughout. Thus every time it will be necessary to make explicit what is intended.

3.2 Basic Consideration on Reconstructing LPPNB Architecture

Reconstructing something that has happened in the past needs to combine all information available on every level. Reconstruction is an ongoing process of discussion and interpretation. Even more so in the case of reconstructing LPPNB architecture because missing data and various building events makes the preserved architecture too complex for simple explanations. We therefore have to distinguish three levels of probability during the reconstruction process:

- a “provable” reconstruction is based on the archaeological results and findings. This includes interpreting ground plans, profiles, projections and photos if they are available.
- a “plausible” reconstruction is the result of comparisons with similar results from other squares, areas and sites. Though the situation above the preserved crown of walls is never clear, a reconstruction may become plausible if compared with construction and form of similar situations.
- a “free” reconstruction in addition to all evidence available, includes elements of imagination, is based on building characteristics from comparable areas with similar climate and building technology, and includes aesthetic elements.

Combining all three different levels of approaches creates a more complex view on LPPNB architecture than using only one of these levels. In particular, it is only the third point using controlled imagination which is able to enhance our understanding of LPPNB architecture.

As a matter of course any attempt to reconstruct architecture in an archaeological context presupposes a careful analysis of the architectural remains. This has been a continued effort over the years, resulting sometimes in changing our view from our primary interpretation. For instance it was only during our extended discussions about the possibility of two-storey houses that the confusing relation between the Building Units B I and B III became apparent. Yet, many problems remain unresolved due to the largely fragmentary preservation of the architecture, at least as far as the upper parts of the buildings are concerned. As can be gathered from the chapter on the architecture enough is extant, however, to allow different approaches and differing proposals for a reconstruction.

An important source of inspiration is the comparison of the LPPNB architecture of Basta with traditional village architecture in similar climatic and topographical settings. A one-to-one adoption of modern features for explanations of the LPPNB architecture is hardly ever justified but such observations are highly welcome when it comes to supporting existing proposals or to formulate new ones.

One point in case is the missing passageway or communication system on ground level in the Basta architectural context; neither do houses have wall openings and doorways to the ex-

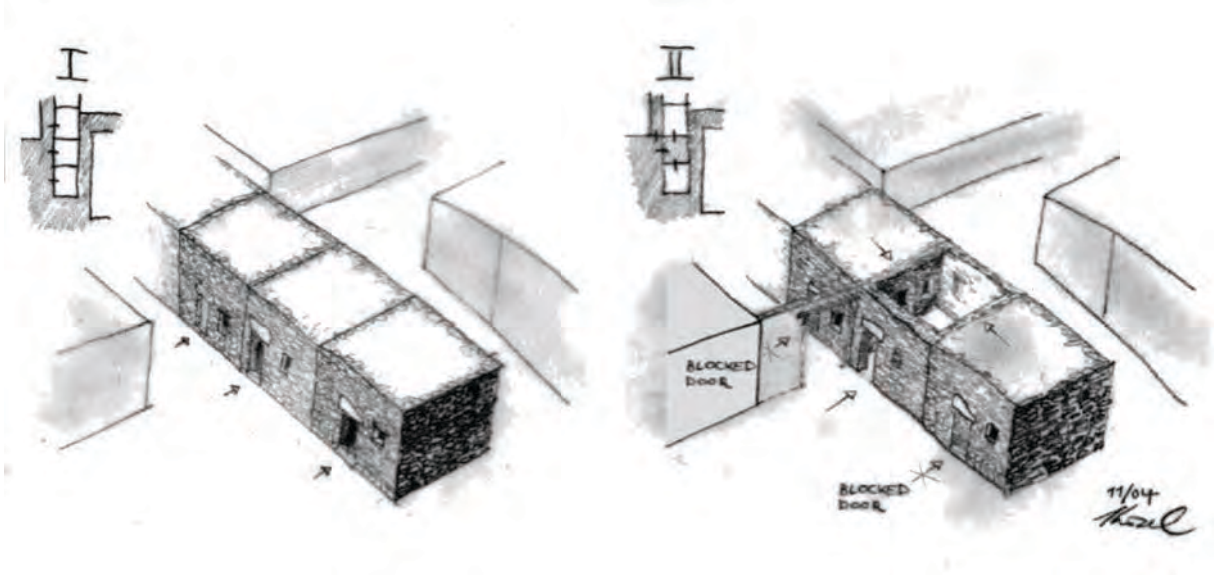


Fig. 1. Rajif Old Village, Southern Jordan. Complex building events: modification and alteration of ground plans. Three single-roomed houses (I) were transferred in a two-roomed house with a courtyard (II).

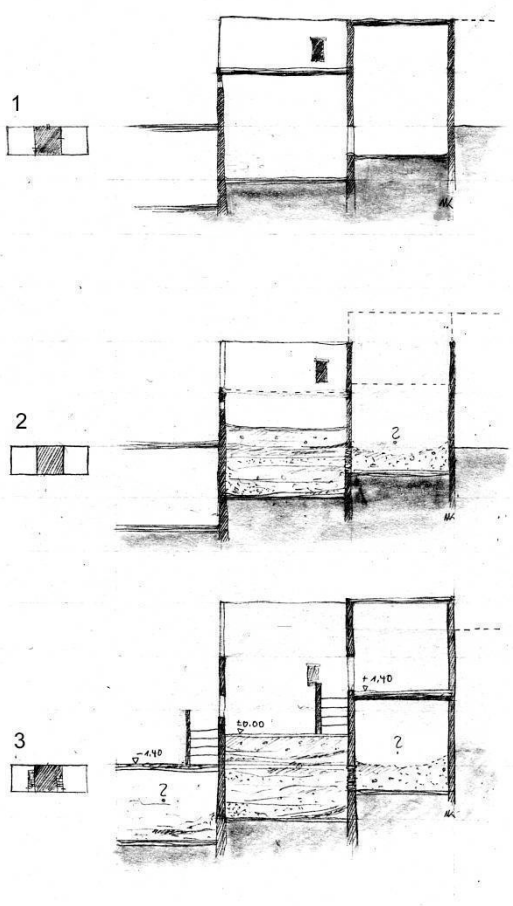


Fig. 2. Late PPNB Ba'ja, Squares C 20-21. Rising floor levels, 1-3 showing a functional transformation.

terior. A striking comparison is offered by villages in the mountains of Eastern Afghanistan (Wutt 1981). There, roofs are used as communication ways as well as being used as areas for daily activities, offering the possibility that LPPNB Basta roofs were used for similar purposes.

A third source of valuable information is presented by a comparison with other contemporary settlements, both because of similarities and differences. To be sure, there are alterations of ground plans in Basta in form of secondary wall openings, additional walls and the deconstruction of walls in connection with intentional filling activities during the LPPNB. But in comparison to other Neolithic sites, the LPPNB architecture of Basta shows markedly less alterations of ground plans, and compared for instance to Ba'ja there are almost no indications of second storeys, nor of "split-level" arrangements. A case study about two-storey buildings is presented in point 3.4.3 and 5.6.4 of this contribution.

Evidently, each site shows local characteristics and an independent development, sometimes deviating markedly from the "normal case". Obviously it would be misleading to concentrate on the phenomena of one site only when the intention is to come to a better understanding of PPNB architecture in general. The present study, however, will concentrate on the phenomena of LPPNB architecture in Basta.

Finally, we should acknowledge, that the discussion on reconstructing PPNB structures received new impulses from experimental archaeology studies at Beidha by Samantha Dennis (Dennis 2003, 2004).

3.3 Building Characteristics Relevant for Reconstruction

Help in the reconstruction endeavor comes from an analysis of the building process; details are given in the chapter on the architecture. This process is broken down into "building events", a designation for any action during the building process. These building events may- and normally do – occur consecutively, but they also may happen at the same time.

Altogether, a normal house would run through at least five stages:

1. Preparations: Choosing building ground and building material; Planning of layout
2. Erection of buildings
3. Use and alterations of buildings and ground plans
4. Dilapidation and development of a ruinous state
5. Excavation and architectural interpretation

Each building event is a result of human agency, local building material resources, social structures and time. Other factors are the economic situation, the accessibility of raw materials, the knowledge of the building materials, the climatic influences and regional building trends and innovations. Another influence on the buildings can come from ritual and symbolic thoughts. All these factors together make the reconstruction of LPPNB architecture difficult. An additional difficulty arises from the fact that these stages are not necessarily fixed in their temporal order.

3.3.1 Development of Building Ground and Building Material

The first event consists of clearing the prerequisites. This includes the development of the building ground and the provisioning of building material, depending on the planned size and layout. In Basta the building material is predominantly banked limestone which is found ca 300m

away from the excavation site on the road to Wadi Musa and even closer, *c.* 50 m NE of Area A (Plate 63.A lower left; Plate 71.A).

The building ground is prepared by creating slope adjusting terraces at different heights, sitting on parallel dry stone walls, which leave enclosed air chambers between them; they are described in detail in the chapter on the architecture. As a rule, these terraces are just large enough to accommodate one building unit, at most two of them. Only as result of a secondary development, a building may extend over more than one terrace.

3.3.2 Erection of Buildings

With the exception of the retaining or terrace walls, the double-faced walls were erected on the gravel-leveling layer of the artificial terraces. In contrast to the dry stone walls of the substructures, walls use mud and/or lime mortar (for further details on the LPPNB building techniques see the chapter on the architecture).

The erection of the building can be a single event, but it may also be resulting from several consecutive building events. There may be shorter or larger intervals due to a number of reasons including changes in planning and function.

3.3.3 Use and Alterations of Buildings and Ground Plans

Obviously, the condition of the excavated architectural remains represents the final result of all stages mentioned above, including the stage of dilapidation and destruction. Depending on what state of development is intended to show, everything that happened after the abandonment has to be eliminated in order to reconstruct this last stage; or, for the reconstruction of the initial stage all alterations have to be peeled off. Though during this process, the "life" of a building may become visible, still reconstructions at best can be a sequence of stages rather than a continuum.

In the particular case of Basta this "peeling off" process is relatively easy for Area B (Area A, on the other hand, is almost incomprehensible from this point of view). As was shown in the chapter on architecture, the building units of Area B almost all still show a plan, which can be considered to represent the original plan. Though no final assessment is possible, the feeling is that this initial stage did not see more than one, or at most two, rounds of alteration. In most cases, they were not very radical, like the blocking or creating of a wall opening within the unit. These measures do signify some kind of change in use and function, but normally the intention eludes us. There is only the instance of the relation of buildings B I and B III, discussed in 2.3.4 sub House B III, where the making of a new opening in the shared outer wall created a new merger of parts of the two houses.

3.3.4 Dilapidation and Development of Ruins

As indicated, the first stage before offering a reconstruction has to consist of stripping off all traces of events after the abandonment of a building. Though these may be obvious in many cases it nevertheless is necessary to visualize the various processes involved in order to understand what has been going on. Help comes from carefully observing the processes affecting the architecture of modern villages, as described below.

In one case in LPPNB Basta there is an indication for intentional demolition apart from the natural disintegration processes. In a secondary stage, the upper parts of the walls of the northwestern part of House B I were apparently razed, and the remaining spaces filled with rubble in order to create a higher floor before that part of the building could be joined to House B III (2.3.4)

3.3.5 Excavation and Architectural Interpretation

As a matter of course, the possibilities to reconstruct ancient architecture depends on the kind of excavation. While excavating architecture may require exposing large areas, the necessity of minute observation of finds and stratigraphy commands working in spatially delimited squares. Much more restrictive proved to be the decision not to excavate beyond the first floor resulting from an initial idea to render Basta into a place which could attract tourists. What kind of additional information can be gained from also exposing the lower parts of a building is not only shown by the results in Area A, in particular in Squares A 13/ A 18 with the exposure of the slope adjusting system of terraces but also by the observation that apparently all floors rested on grid-like structures. Another example is provided from Ba'ja where most information about the architecture goes down under the floors. For example, Ba'ja Area has a location which was transformed by floor raising and refilling. A room connected to the others by doorways was filled, and on top of the new plastered floor level, a staircase was added connecting different levels independent of the site's topography (Fig. 2).

All in all, however, the initial goal was reached to leave an area where even today one gets an idea of the houses of Area B resting on terraces of different heights.

3.4 Aspects of the Traditional Architecture of Southern Jordan

3.4.1 Principles in Traditional Architecture of Semi-Arid Highlands as a Source of Interpretation

The traditional architecture of Southern Jordan, especially the vernacular architecture of the greater Petra area, shows the characteristics of the building tradition in semi-arid mountain areas along the 30th degree of latitude (Adam 1981). In that case they belong to the same building type as the LPPNB architecture mentioned above. The way of constructing a house is at several points similar to the Neolithic technology. But we should use the traditional architecture only to get ideas about what we are dealing with.

For instance, looking at the traditional village of Rajif we get an idea about how radically a change in use may affect the layout of buildings. Near the mosque three houses stand next to each other in a line. Originally, each building had a separate entrance and one or two windows. The entrances were oriented towards the alley. Later the house in the middle was transformed into a courtyard. The entrances of the other two buildings were then blocked and new doorways oriented to the courtyard were added. These changes resulted in a completely different context of these buildings within the settlement system. Before the middle house was changed into a courtyard, the three buildings were part of different units. Later, two separate areas with their own entrance gates came into being (Fig. 1).

Again, useful information for the assessment of the state of Basta LPPNB architecture comes from the observation of the dilapidation and disintegration processes in modern villages, especially as some of the agencies involved become visible which remain obscure from Neolithic times. Thus dilapidation is omnipresent and can start at any building stage. Reasons for dilapidation are various. Inadequate execution of the masonry may result in the collapse of entire walls, and neglect in maintenance of roofs leads to dilapidation and abandonment of entire upper storeys (Plate 64.B). The natural aging of the building materials also plays an important role. Events like earthquakes, fire, heavy rainfall and the depression of the slope on the terrace substructures accelerate the dilapidation processes of the buildings. Some of the building units were left intentionally and were given up to dilapidation (Plates 63.C and 64.A).

Houses in the traditional village architecture of the Petra area are rectangular and erected with the local sand- and limestone sometimes covered with mud on the inside and outside, although often only the inside is plastered (Plates 69.A, 65.C, and 72.B). Walls butt bluntly against each other and are not really connected in the corners. Typical for the South and mountain setting, the characteristic arch of Jordanian village houses is often replaced by two walls that minimize the span at certain parts of the building (Khammash 1986). The flat roof consists of a number of layers. Wood cut from juniper was used for the roof beams. Branches and brush were placed across the beams, covered by thick layers of mud, which had been stamped down hard. In the layers of mud are embedded cobble-sized stones. The traditional architecture of the Petra region is predominantly windowless. Only small wall openings for air circulation are common.

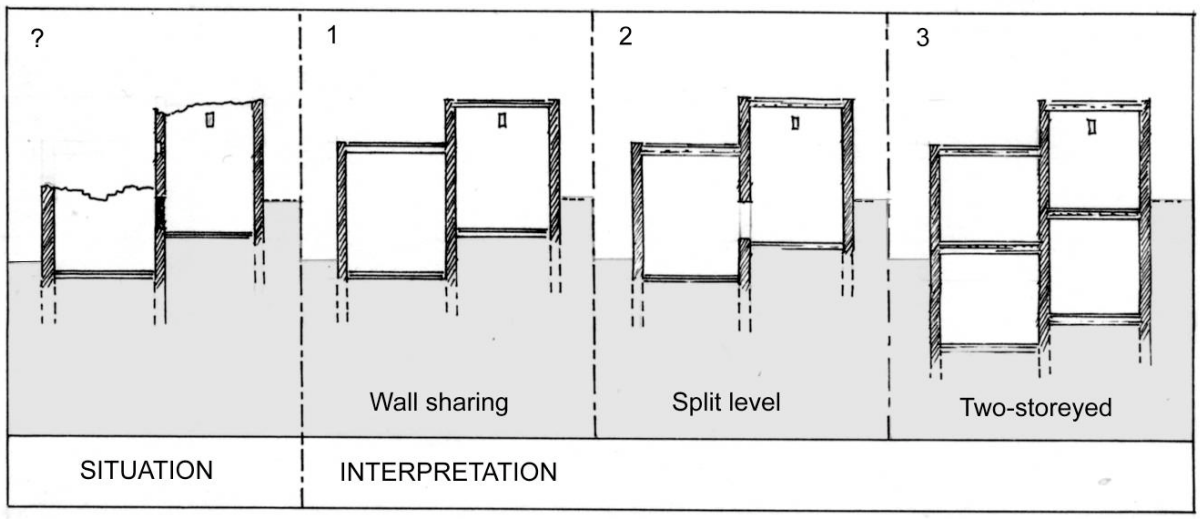


Fig. 3. Late PPNB architecture: Possible interpretations.

The study of the traditional architecture allows us to recognize the complexity of building events as described in Part 3. These villages show a wide range of local varieties that characterize this rural architecture (Kinzel 2004). Each of the villages suggests another possible interpretation shown presently in the following parts (Fig. 3). As will be discussed in the final chapter, there is every reason to assume the same range of local diversities for the Neolithic period.

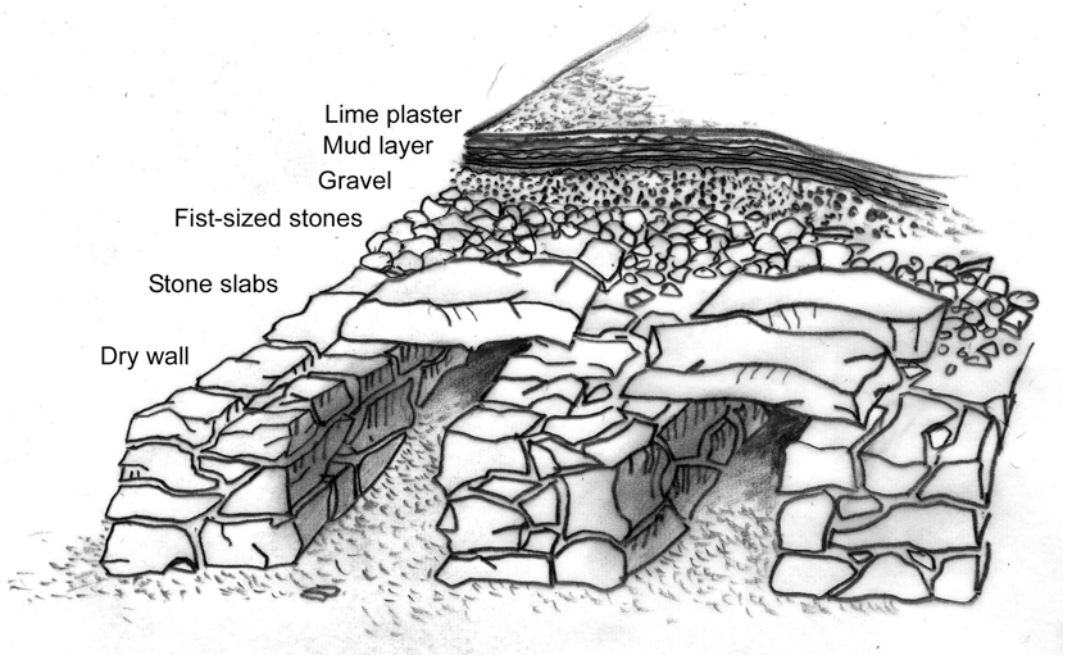


Fig. 4. Late PPNB terraces/ substructures. Construction.

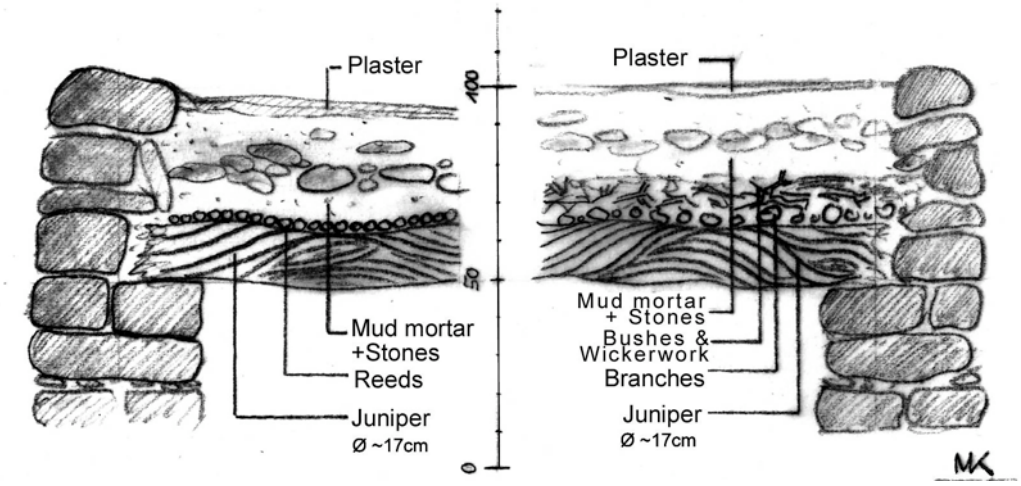


Fig. 5. Rajif and Basta Old Villages. Two traditional roof constructions similar to Late PPNB constructions.

3.4.2 Wall Sharing and One-storey Buildings: Example from Old Basta

The village of Old Basta is situated on the northern, steep slope of the Wadi Basta, NE of excavation areas A and B. The houses erected on terraces are about one hundred years old. Today most of the buildings are used as sheep and goat folds, and for storing fodder. The example shown on Plate 67 is located right in the center of the settlement next to one of the "main roads" of the village.

Three or four other building units surround this building unit. Following the relief of the slope the floor level of the units in the SE is around 2.20 m lower, the building level in the NE is 1.50 m higher, and the level of the southwestern houses is around one meter higher than the central building unit.

This central complex is split up into two main parts. First, in a room, 7x 6 m, with a lot of roof collapse material is a niche and some small wall openings. The room of the rear part is divided by two walls, as described above. In 2003 the roof of this part was still standing. However, when revisiting the building in the spring of 2005, the roof had collapsed and the room was partly filled by the material, reminiscent of similar situations in the excavated LPPNB structures. We find a high wall up to 4.50m with a supporting structure for a roof. In Old Basta it is common that neighboring buildings share walls, which may support two roofs on different levels. If wall and roofs are intact, a hint may be found as to the chronological sequence of the two roofs. If they collapse, however, any possibility of differentiating has vanished – creating a situation exactly like in Neolithic Basta.

3.4.3 Two-Storey Buildings: Example from Dana

The village of Dana is situated around 25 km north of Shobak near the Kings Highway. The characteristic clustered village sits on the line that marks the boundaries between the lower sandstone and juniper tree area and the upper land of limestone and oak trees. Dana is placed at the entrance of Wadi Dana, which is part of the Fenan-Wadi-system.

In Dana, we find some examples for two-storey buildings near the so-called "Dana Tower Hostel". Two-storey buildings are not the "normal case" in traditional villages of Southern Jordan, but here and there, you can find some examples. In Dana there were three or four houses with an upper storey. The house as seen on Plate 68 is a typical two-storey building for this region. The ground floor of the building is windowless and has only a 1.30 m wide entrance door. The ground floor and first floor have separate entrances. While the door of the ground floor seems to be meant for animals, the upper storey has a narrower doorway. The first floor is a single room with a niche and a door like wall opening to the roof. The house has two different faces. Seen from the E it looks like the usual one-storey buildings in the village. The two storeys are visible from the W and north only.

Referring to the situation described under 4.1 we have to look at this example carefully. Here we have a house still standing with the roof. However, there are other ruins in Dana where you can see how this construction dilapidated. Finally, just a high wall with traces of a support for a roof or ceiling is left. The results are similar to the example from Old Basta.

Perhaps it is not without reason that two-storey buildings should be placed in the middle of the settlement, where there is no other way to expand the space needed for the family. Traditional villages follow a concept to minimize the expanse of the settlement area and to maximize the adjoining agricultural areas. Therefore, if in these settlements a family needed more "space" and "rooms", they had to go vertical in order not to lose agricultural resources. Nevertheless, there are several other aspects of these compact settlement structures.

Clustered villages like Dana create a landscape of roofs, which is useful in many ways. All buildings have flat roofs and are in principle horizontally organized. Vertical development as in this example is rare or follows the relief of the site topography or it is isolated from the village communication system. Narrow passages divide the house clusters of the village. Normally these passages are dimensioned for two packed mules. Twisty and meandering passages are usual and intended. We can assume on the one hand a desire for security and on the other hand a wish to minimize the wind and rain intensity (Yousef 1987).

3.4.4 "Split-level" Buildings: Example From Rajif

The traditional village of Rajif is placed around 14 km S of Wadi Musa on the borderline between the limestone and the sandstone area. Like Dana, Rajif is one of the typical clustered villages of the S. The houses stand close together and form a landscape of roofs following the relief of the slope and the relief formed by the settlement itself.

In Rajif we find evidence for a third way to interprete the results of LPPNB Basta. "Split-level" buildings are building units that use more than one terrace level. A building unit can use different levels. The example shown on Plate 70 is a building complex in the southern part of the Old Village of Rajif. The complex has three main parts. Starting in the W there is a two-room sequence followed by a level that is 90 cms higher. Here we have a courtyard with two big fig trees and a three-room sequence running on the eastern side of the courtyard. Finally, there is another courtyard with a two-room sequence in the S on a 90 cms higher level. Small window-like wall openings connect all these different levels. Plate 70 also shows one of these wall openings. This example makes clear that we are dealing with the phenomenon of floor rising processes in this particular context. The floor level rose about twenty centimeters. Therefore, the stairs were shifted to that level, too.

The "split-level" concept is the most flexible one. This concept is a variation of the one-storey building with the wall sharing type. Building units can be connected with small window-like wall openings. These connections can be closed again easily. Therefore, the ground plans of the building units can be easily modified and transformed to the size, which was needed at a certain point. It seems that single rooms can change the building unit in this process. "Split levels" are a way of organizing space in building structures erected on sloping sites. Especially on steep slopes, this system allows a more efficient use of space. If it is impossible to expand in open spaces, you have to expand inside the house structures or, as described before under 4.3, you have to expand to the vertical space. To study the changes of room sequences gives us the chance to follow the changes of the settlement's social structures, passageway system and ground plans.

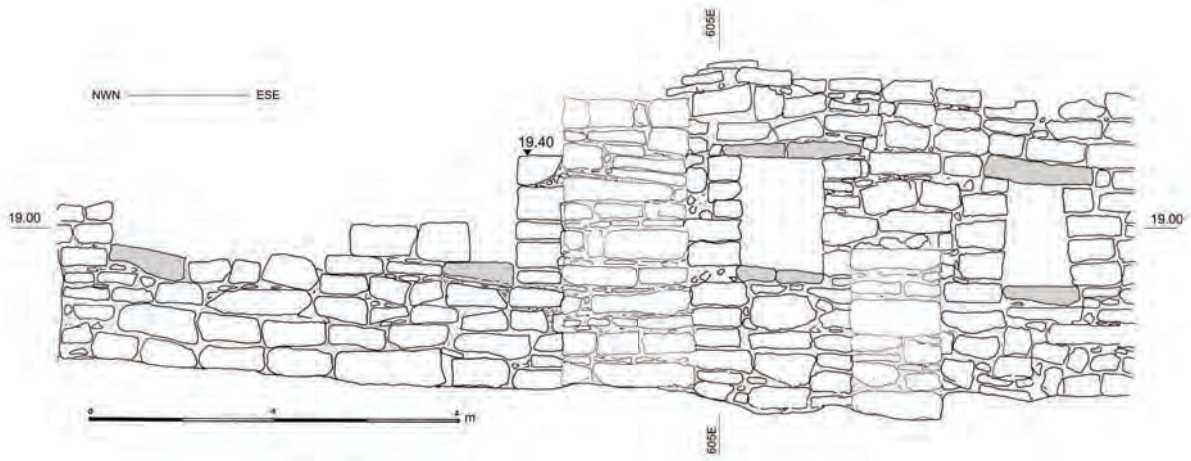


Fig. 6. Area B, Building Unit B I (Squares B 68, Locus 19 and B 69, Locus10). "Window-like" wall openings with stone lintels and thresholds (shaded in grey).

Fig. 7. Late PPNB Basta. Reconstruction of Building Unit B VIII (Square B 84). Door with a wooden lintel, a niche, ceiling, and a possible second storey.

3.4.5 Transition: Rural Village Architecture from Aurès, Algeria

The traditional village architecture of Algeria belongs to the same category of architecture as the described villages of Southern Jordan. They are part of this characteristic building type along the 30th degree of latitude around the world. However, the villages of the mountain areas of Algeria suggest another possible interpretation of the results from LPPNB Basta.

The examples from Aurès, Algeria, show that walls rising over roof level can have nothing to do with upper storeys (Plate 66.B). Walls protect the roof against views from outside. Walls are social borders of territories. Walls run around the roof and create rooms without solid and substantial roof constructions. Some of these roofs are subsequently turned into floors of real upper storeys with solid roof constructions. However, the normal case here is a roof as an activity floor shielded by walls built on the walls of the ground floor.

3.4.6 Roofs and Ceilings in the Traditional Village Architecture of the Petra Area

The construction of roofs may serve as examples for the reconstruction of LPPNB roofs. With a distance of 55 cms to 65 cms, roof beams of about 18 cms in diameter, were laid parallel across the short distance of the room. Reeds or branches were placed across the beams and above was a layer of brush and wickerwork. Thick layers of mud and mortar embedded with cobble-sized stones covered this layer. Yearly renewing processes heavily compressed this mud and mortar layer (Fig. 5).

This construction as described above is solid and substantial enough for the extreme climate of the semi-arid mountain setting of Basta. This is comprehensible from results in Basta and examples of the local roof construction tradition. In villages like Rajif, Ail, Dana and Basta we can find variations of similar roof constructions.

Roof and ceiling constructions need to be regularly maintained. These constructions had to be under control. Neglected maintenance of roofs results in dilapidation and surrender of possible upper storeys. Following Yousef (1987) and Pütt (2005) roof maintenance has to be done yearly or within three years. Generally, roof maintenance takes place in the spring after the heavy winter rainfalls. First, the old wet material would be compressed with a heavy stone roller. New mud and mortar material was added on top of the roof layers. Then it would be compressed again. These yearly maintenance processes create heavily packed mud and mortar layers. If the load became to heavy, the old roof material would be removed entirely, to be used as fill of leveling material on the spot. This could be an explanation for floor rising processes. If the roofs are communication-areas and function as a communal passageway system, then the community had to have a kind of maintenance management or the people living under a particular roof were responsible for maintenance.

Roofs may be used for a number of purposes. The most interesting example for our argument comes from Eastern Afghanistan (Wutt 1981). There, roofs create more or less “streets” you are stepping on when you are leaving a house. The villages of East Afghanistan are sited on steep slopes and one roof could be the building ground of another house above. All through the year villagers are living mostly on the roofs, in “half-opened” rooms or under a pergola. Domestic life is mixed up with daily village life. The roofs are communication areas (Plate 66.A). In Afghanistan this communication area is not divided by recognizable frontiers and the

low steps of the different roof levels are used as seating accommodation (Wutt 1981). Another example is the *pueblo* architecture of the Southwest of the USA (Scully, Current 1971). In *pueblo*s ladders connect the different roof levels. It seems that in *pueblo* architecture the landscape of roofs is more complex than the one in LPPNB Basta. As a reason for a landscape of flat roofs and narrow passages, we can note a desire for security and a wish to minimize the intensity of wind and rain (Yousef 1987).

3.4.7 Wall Openings in the Traditional Village Architecture of the Petra Area

In addition to entrance doors with wooden lintels, houses of the traditional village architecture of Southern Jordan feature a number of smaller wall openings. There is a "rule" for wall openings (Plate 69.D): small wall openings are for ventilation and larger, window-like wall openings are for light and access. In the traditional village of modern Rajif we can find both of these features. Different parts on different levels of a building unit are connected with window-like wall openings.

3.5 Architectural Reconstruction

In the following part about architectural reconstruction, possible interpretations will be presented for the reconstruction of certain structural members. Starting with the substructures I will continue with the exterior of the buildings followed by the interior. Finally, I discuss different interpretations of the architectural results and the consequences for the excavated architectural remains in Basta. Generally as mentioned above, we have to consider that reconstruction of LPPNB architecture can only cover building characteristics and small parts of complex building units.

3.5.1 Terraces, Substructures, Foundations

As described in the chapter on the architecture the building ground is formed by substructures which even out the inclination of the slope. A good example has been uncovered in Area A (Plate 14.B and Figs 2. and 3). The construction of grid-like substructures seems to be a common feature of the LPPNB settlements of the area since similar constructions were found in 'Ain Jammam (Waheeb, Fino 1997), 'Ain Ghazal (Banning and Byrd 1987), and el-Hemmeh (Rollefson 1999). There are no examples of artificially built terraces as building ground in the traditional village architecture of Southern Jordan.

3.5.2 Exterior of Buildings

3.5.2.1 Exterior Walls

Focusing on the exterior of the LPPNB buildings of Basta is a little bit paradoxical. In a dense complex of building units, where one house unit is built against another one, it is not really clear what is exterior and what is interior. At least, this concerns the lower parts of the walls. Since, however, houses stood on terraces of different heights some of walls must have been visible in their upper parts. Yet, walls are never preserved to such heights.

There is a possibility that we might be speaking of exterior walls depending on our reconstruction of the process leading to the present situation in Area B. As described in the chapter on architecture 2.3.4, and summarized in 4.4, House B I is contained in integrated outer walls, while the walls of all adjoining units abut them. It must remain open how much time elapsed between the erection of House B I and of the others, as from the excavated evidence it could range between several days and several years. If years, these walls would have been visible from outside for a while. As suggested in 4.4, House B I may have formed the nucleus of a living quarter consisting of several shells of buildings around B I. Such a quarter ultimately must have been surrounded by exterior walls but such points were never reached during excavation.

All "exterior" or enclosing walls of house units are windowless. No doorways were recognized. The blocked opening in the NW enclosing wall of House B I (Plate 43.B) is secondary and part of the alteration process joining House B III and part of B I (see 2.3.4 *sub* House B III). For further information about wall openings, see 3.5.5.3.

We have no evidence for exterior wall plaster from the archaeological findings, but it is possible that outer walls were plastered to reduce seepage of water into the walls during winter rain. Banning and Byrd suggest the same for the houses in 'Ain Ghazal (1987). Like in today's traditional villages, it could be a mud plaster with embedded straw chaff (Plate 72.B).

3.5.2.2 Roofs and Ceilings

The so-called fifth face of a building is the roof. Unfortunately, no traces are preserved of LPPNB roof constructions. The room fills give a faint idea of the materials used as mud, loam and cobble-sized stones were found in these fillings. Because wood is a much sought-after raw material and a necessary energy source, it is not surprising that there is no evidence of wooden constructions. With some beam holes preserved in the upper part of Wall [6] of Unit B VIII Room 2 we at least get an idea of the roof and ceiling construction.

Some new results from MPPNB Shkarat Msaied show that the roof construction described above for the traditional village architecture stands in a long building tradition. There we could find evidence of solid and substantial flat roof construction (Kinzel 2004, Jensen *et al.* 2005). The experimental structures in Beidha built by Samantha Dennis add other aspects for consideration. Flat roofs providing not only additional space for daily life, are nevertheless practical in construction. In Beidha Dennis observed that flat roof constructions are simple to build and require less maintenance than other roof constructions (Dennis and Finlayson 2005).

Ceilings were constructed in the same way as roofs, perhaps without a similarly high amount of embedded cobble-sized stones.

Like in traditional village architecture we presume that roofs played an important role in the LPPNB settlement system, for instance for activities like producing dried fruits, grinding wheat, etc. and as sleeping places in the summer. They certainly needed to be built to endure much strain not only because of the daily life activities but also because they were affected daily by extreme climatic variations, especially the winter rain.

In addition, roofs in all probability served as communal passageways. As described above exterior walls did not show any wall openings suggesting that the buildings were entered from the roof. A further discussion on concepts of communication is given in 3.5.3.

3.5.3 Communication Ways

3.5.3.1 Passages

There is only one space in Area A which might qualify for a passage or corridor: Room 29 between the Building Units 25a+b, 27a+b, and 31. It could be reached from Room 32 on the lower terrace by a flight of stairs (locus 30). However, since exterior walls of building units have no door openings there is no possibility of linking this passage to either one of the adjoining, or to connect it to, other units. Space 29 may have served as a distributor from where ladders lead to one or more roofs (Fig. 8).

Whether internal passages were a normal part of the architecture is hard to say; if it were, we might have expected to find traces in the larger coherent complex of Area B. Their absence, however, may be due to the limited exposure. External passages may have divided LPPNB Basta into several living quarters. But the excavation never reached a spot which could have been part of the edge of such living quarter.

3.5.3.2 Roofs as Communal Space

As mentioned before we have no evidence of real passages and no preserved roofs, but the archaeological results from Basta suggest that the roofs were used as passages and for all kinds of daily activities. Communal activities took place on the roofs and all building units were part of it, much in the same way as described above for villages in Eastern Afghanistan. Still these examples should not be transferred indiscriminately to LPPNB Basta, if only because in Basta we are not dealing with these extreme differences of floors and roof levels. To reach different levels in LPPNB Basta they probably used ladders and/or stones for stepping on.

Recent findings in MPPNB Shkarat Msaied indicate that as early as in MPPNB people started to experiment with the flat roof construction and its use in daily life (Kinzel 2004, Jensen *et al.* 2005).

3.5.4 Interior of Buildings

“Interior” covers all aspects of building events that happened inside a building unit. The fixed exterior outline serves as the frame of the interior alterations.

3.5.4.1 Interior Walls

Interior walls of LPPNB structures are technically similar to exterior walls. Sometimes, later additions and alterations show an inferior execution of masonry: the stone material is coarser and the walls are not very carefully worked. This phenomenon is also known from Ba‘ja (Gebel and Bienert 1997).

The results from LPPNB Basta suggest that the interior walls were plastered, though only small pieces of painted plaster were found (see the detailed description in 2.3.3).

Another significant feature of interior walls are wall openings of different kinds (3.5.5.3).

3.5.4.2 Pillars and Buttresses

Pillars and buttresses structure the central rooms of the LPPNB buildings in Basta like in Room 1 of building B I. However, the function of the buttresses is not yet clear. Subdividing the sides of long walls they may have served to reduce the danger of collapsing. They could either be a later addition to walls, or built simultaneously with the wall (Plate 48.D) like in Room B VIII,2, or Buttress 18 in Room 1 of House B I. However, buttresses could also be used as support for roof or ceiling constructions, although because of short distances they are not necessary in most cases. Freestanding pillars, on the other hand, like in Unit B II are clearly a support for roof or ceiling constructions. Both buttresses and pillars may also have served to support structures on higher levels that were not preserved. They could have absorbed part of the weight of the upper structures and taken the load off the walls. Pillars and buttresses were constructed in the same way as the walls.

3.5.4.3 Floors

Plaster floors are general features of PPNB architecture (Aurenche 1981: 23-26). They had been found in several PPNB sites like Jericho (Kenyon 1954), Beidha (Kirkbride 1968), ‘Ain Ghazal (Banning and Byrd 1987), Ghwair I (Simmons and Najjar 1999) and Ba‘ja (Gebel 2001), just to name a few. They often have been smoothed and stained red.

In LPPNB Basta, plastered floors are rare. However, this may be more resulting from the state of preservation than representing the original situation. In many cases, both in Area A and B, the floor level was indicated by a crumbly mud surface which may have been the base for a plaster floor. As described in 2.2.3 and 2.3.3 whenever the plaster was found surviving it showed traces of red paint and of smoothing.

In Ba‘ja (Gebel 2001) and ‘Ain Ghazal (Banning and Byrd 1987) we can show that plaster material had been recycled and reused. We can assume the same for Basta.

3.5.4.4 Wall Openings

3.5.4.4.1 Doors

All wall openings encountered in Basta are found inside the buildings. Even there, doors are rare. Two such wall openings of 75 cms to 85 cms in width connect Room 1 of House B I with Rooms 18 and 20 of the same building (Plate 44.A). Though we would expect doors to reach down to floor level their thresholds were 60 cms above the floor level of Room 1. An idea of the height of the opening is offered by the blocked door in Wall [6] of Room 2 of Unit B VIII (Plate 048.D). There is no ready explanation for this raising of the thresholds, in particular as it would have to cover the high thresholds or sills of the “windows” as well.

Except in the case of Room 2 in Unit B VIII walls are never preserved high enough to show lintels *in situ*. Unfortunately, the upper part of the Wall [6] in B VIII,2 is disturbed without

indication as to the kind of lintel. Because of the width of the door, however, and in accordance with the evidence of the modern traditional architecture (Plate 069.B). We assume the lintel to have consisted of a wooden beam. In fact, the disturbance above the door may have resulted from ripping out the wooden lintel. See Fig. 7 for a reconstruction of the door feature in Building Unit B VIII.

3.5.4.4.2 "Windows" and Air Circulation Openings

A much more common kind of wall openings are the so-called "windows" in LPPNB building interiors. They vary in size, from 35 x 50 cms to 45 x 65 cms. These "windows" were the interior connections between adjacent rooms.

In contrast to doors, large limestone slabs were used as lintels (Fig. 6 and Plate 61.A) as well as for the thresholds or window sills. The surface of most sills was smoothed (Plates 61.A-C, and 62.A). This means that either people crawled through these narrow "windows", or that sacks or other containers were dragged through – depending on what purpose we assign to these little rooms. Window flannings were well constructed. Thresholds or sills were between 60 and 75 cms above floor level, though there are some exceptions.

In accordance with the modern traditional architecture (see supra) small openings of about 15 x 15 cms may have served for air circulation (*e.g.* Square B 85, Locus 8). As known from the traditional architecture of the region they could be easily closed with one or two stones and opened again. They were found in high or very low positions in the interior walls. Contrary to what could be expected they were never found in exterior walls, though they may have been located in the missing upper parts of the houses.

3.5.4.5 Niches

Principally niches were constructed the same way as "windows". They had a stone lintel, well-built frames and sills. However, their depth is limited to half or at least one third of the wall thickness. In Room B VIII,2 (Square B 84) we have a small niche in wall Locus 6 between the buttress and the door (Plate 48.D**)**. This niche is 20 x 20 cms wide in the interior. Niches could wrongly be interpreted as blocked "windows", if only one wall face was excavated. In the rural village architecture of the Petra region niches are common and come in various sizes.

3.5.5 Modification of Ground Plans

Compared with other Neolithic sites in Jordan, LPPNB Basta did not show the same amount of massive modifications and alterations of the ground plans, resulting from repeated modifications during the use of the building. Modifications like changing wall openings, new additional walls and the deconstruction of walls signal changes in use and function in LPPNB structures. Changing integration of parts of the building and rooms is a normal effect of changes if more space is demanded (Kuijt 2000; Banning and Byrd 1987 for 'Ain Ghazal; Gebel 2004 for Ba'ja). Invariably this happens when a building complex remains inhabited over an extended period of time. Inversely, the low rate of alterations in Basta – in particular in Area B – may be an indication that the complex as excavated in Area B did not live long enough to undergo such changes. The few changes observed do not lend themselves to suggest the existence of different

building phases. One exception is the case mentioned before of a part of House B I being annexed to House B III in a subsequent phase.

3.5.6 Reconstruction of Buildings

3.5.6.1 Wall Sharing

Wall sharing is a common feature of all LPPNB structures in Basta. Though it is possible to attribute such walls to one of the two adjoining buildings by virtue of whether the interior walls bond or not, it is by no means easy to propose a simple explanation. The dilemma is most obvious in Area B. As mentioned several times, House B I is a self-contained unit which all neighboring units are attached to. The particular problem rests with the question of one wall supporting two roofs at different heights. The relation of an initial building (B I) to a building on a higher terrace (B III) may find an easy explanation in the sense that it was only necessary to raise the wall up to the height desired for the upper building. This leaves open the question of the length of a temporal gap between the two building events. The problem is different if a building is going to be attached which rests on a lower terrace. In this case the holes for the beams of the lower building either have to be inserted already during the building process of the initial unit, or they have to be put in secondarily. Unfortunately, no situation was exposed which would have allowed this kind of observation.

3.5.6.2 Single-Storey Buildings

So far there only very few pieces of information pointing to the existence of more than one storey. Though the presence of two storey buildings cannot be excluded, one-storey houses seem to be the rule. If it comes to use and function, on the other hand, the use of the roof as additional living and working space has to be taken into account.

3.5.6.3 “Split-Level” Buildings

“Split-level” buildings are building units that use more than one terrace level as described above for the traditional village architecture. An example for LPPNB Basta is offered by the specific relation between House B III and a later stage of House B I, described in 2.3.4 sub House B III. It should be noted, however, that this represents a secondary alteration, while no case was observed where such split level arrangement constituted the initial layout.

3.5.6.4 Two-Storey Buildings

During the LPPNB a new phenomenon made its first appearance: two-storey buildings. There are examples of two-storey buildings from ‘Ain Ghazal (Banning and Byrd 1987) and Beidha (Byrd 2005) and they even seem to be quite common in Ba‘ja due to the narrow natural limits of the settlement area and the steep sloping building ground (Gebel and Hermansen 2000; Kinzel 2004; Gebel 2006; Gebel, Hermansen, and Kinzel 2006). However, indications for two-storey buildings are rare in LPPNB Basta. The only example (Kinzel 2003) is Building Unit B VIII. There Wall [6] preserved holes for beams of the roof construction (Fig. 7) which after the wall was raised, was converted into a ceiling. The height between floors was about 2 m (Plate 48.C) The large

buttress in B VIII,1 (Square B 84, Locus 21) seemed to support constructions of a second storey. As an example the traditional village of Dana may be cited, presented in 4.3.

3.5.7 Reconstruction of the Settlement

3.5.7.1 Area A

In Area A it is more or less impossible to reconstruct building units, as has been described in detail in 2.2. In particular, the situation is obscured by the enigmatic relation of the staircase connecting Rooms A 32 and A 29 (see here 5.3 sub “Passages”). Fig. 8 shows a possible schematic reconstruction of this situation.

3.5.7.2 Area B

Area B is easier to comprehend than Area A because of clearly delimited building units, or houses. The building remains of Area B seem to be a house cluster that constituted the center of one of the living quarters in the Neolithic village of Basta which will be discussed in 4.4.1. At least seven building units adjoining each other formed an inner shell enclosing the central building B I on all sides (Nissen, Muheisen, and Gebel 1991); except Unit B VIII consisting of two, respectively three long parallel halls, they all were variations of the “Basta House” type (see 2.1.3). Initially single storey, alterations have created situations which in one case resulted in a “split-levels” arrangement (B I and B III), in another situation possibly a two-storey building (B VIII in B 84). Only ground floors were preserved.

The Basta House type consisting of a central space flanked by rows of small compartments is difficult to interpret. Thus, there is no way of deciding whether the central space was roofed, or not. Rooms 2 and 3 in B I seem to have been covered and the division wall (B 86 Loc.10) obviously served as a support for beams. For Room B I,1 the results are not clear. There are two possibilities: Either this space was completely open or this area was partly covered. A total coverage can be excluded because this was the way the house could be entered through; on the other hand, smoke originating from the large fire place in front of the protruding Wall [10] (Nissen, Muheisen, and Gebel 1991) had to be given the chance to escape. The buttresses of B I,1, then, would have served as support for this partial roofing constructions.

The possibility of two-storey buildings has already been discussed. Fig 9 shows a reconstruction for an earlier stage of Area B consisting only of single-storey buildings, and Fig. 10 shows a reconstruction referring to the different possible interpretations. No proposal can be made for the remains of Phase BI in the northwestern part of the excavation area, because of their bad preservation which does not even allow definition of building units (see also 4.4.2).

On the other hand, we take it for granted that the small compartments surrounding the central space were covered. Their function must be left open because their floor space of sometimes less than 1 m^2 almost excludes any other purpose than for storage (Suter 1964, p. 245). Unfortunately, nothing was found inside these little room what could point to their use. Where preserved all of these small compartments in House B I were oriented to, and accessible from, the central space.

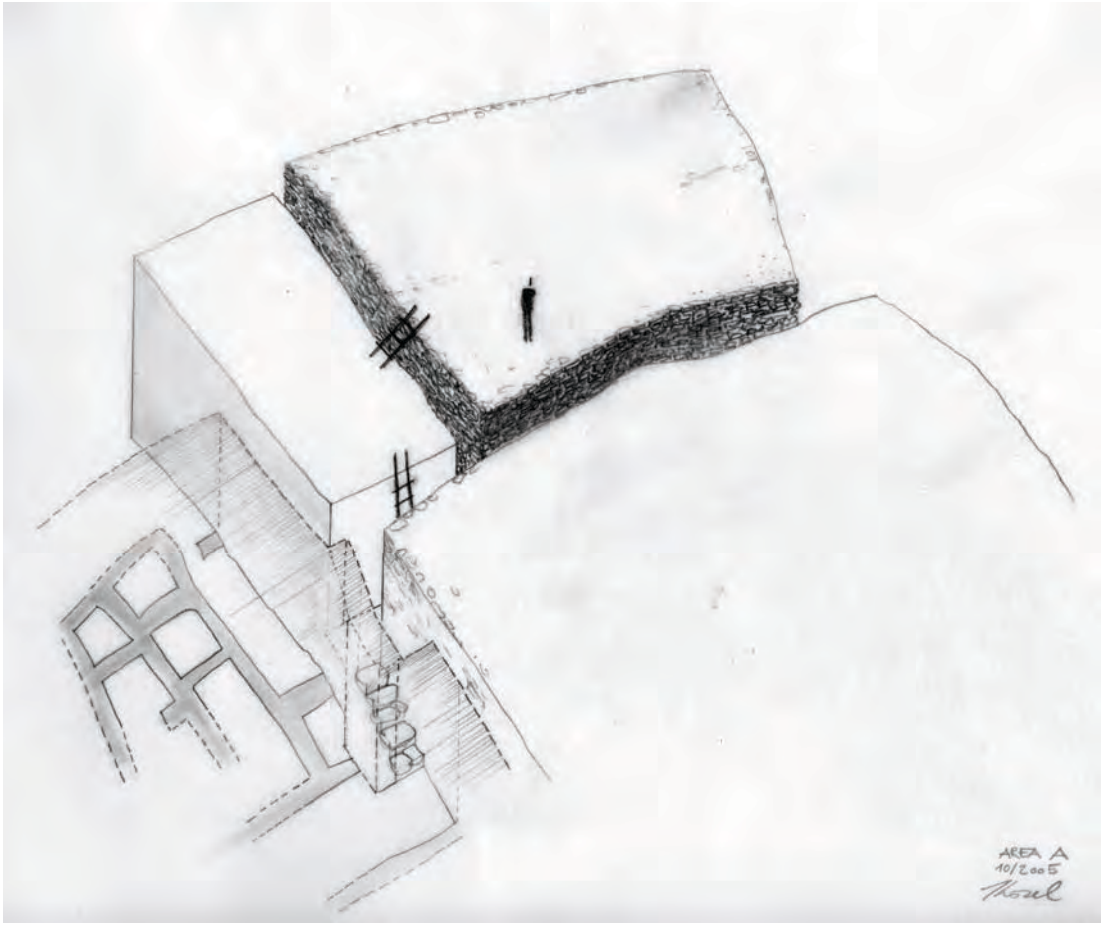


Fig. 8. Late PPNB Basta, Area A, Squares A 12-14, 17-18. Architectural reconstruction. View from SE.

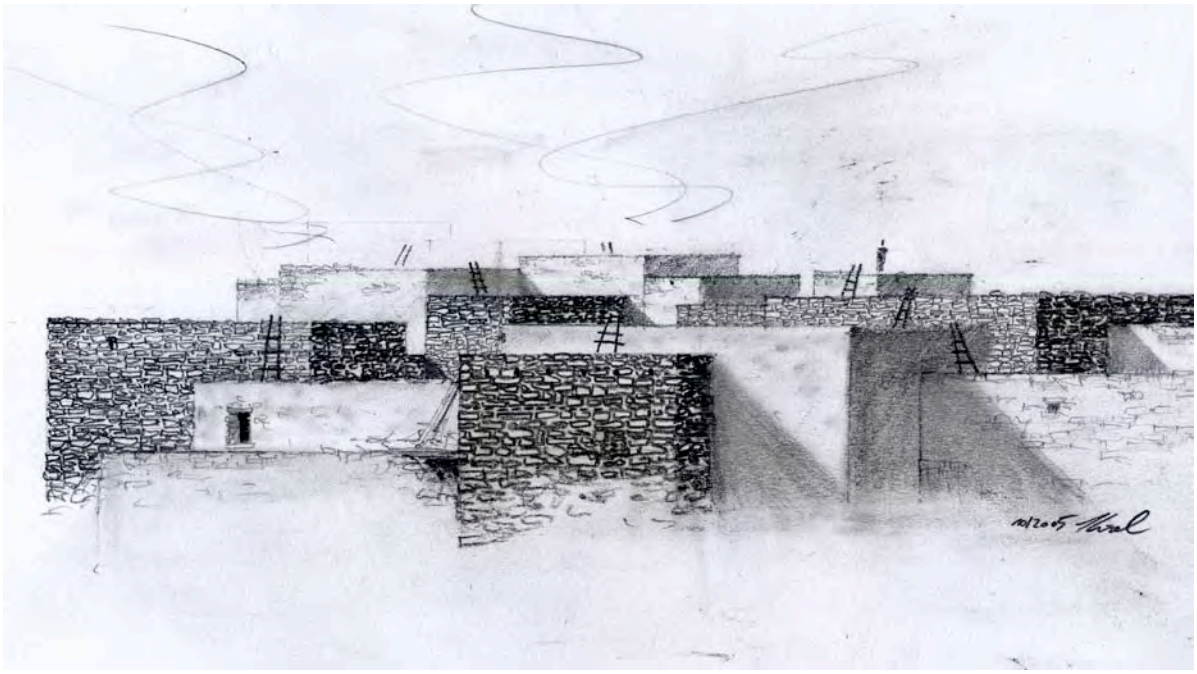


Fig. 9. Late PPNB Basta, Area B. Architectural reconstruction. Single storey buildings. View from South.

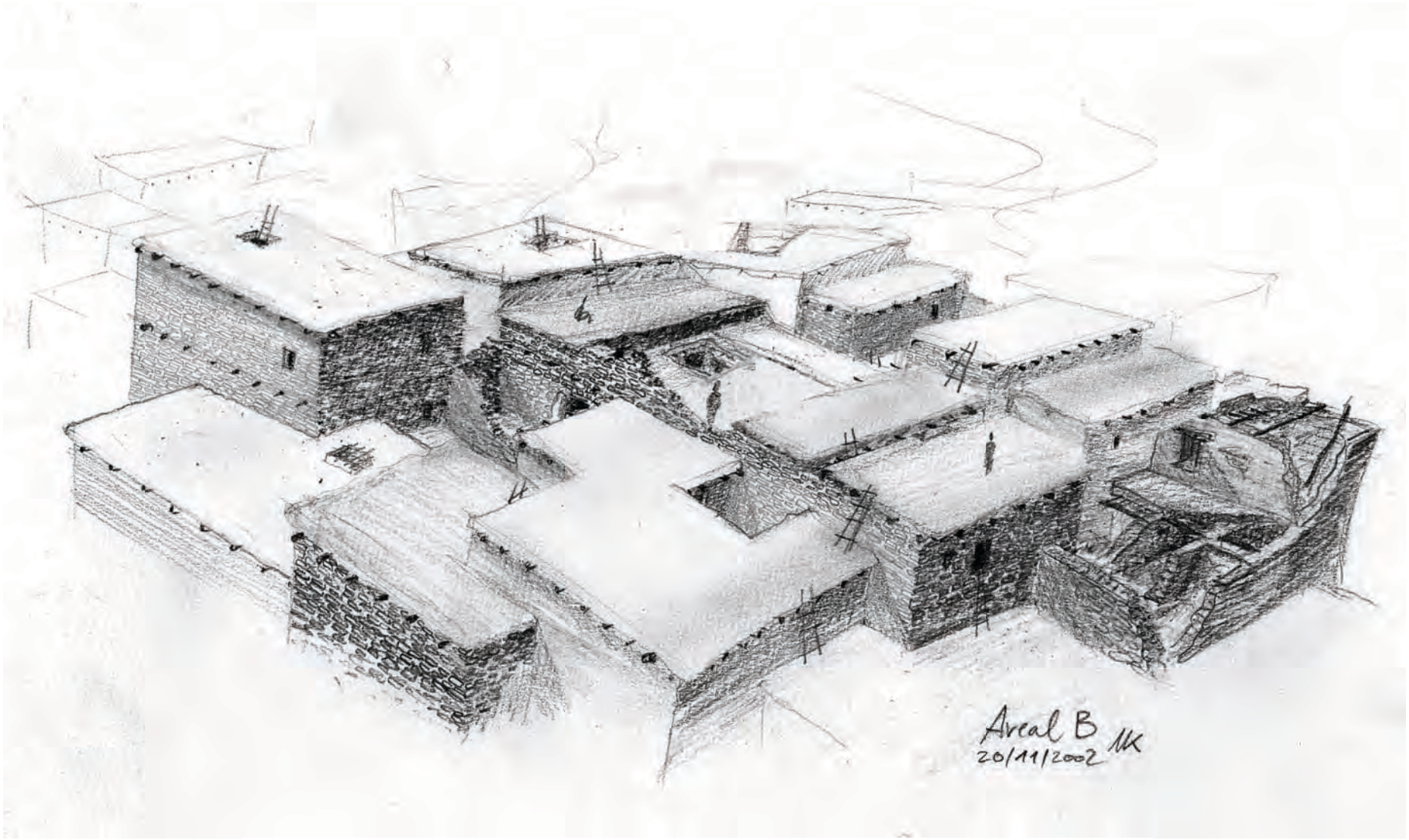


Fig. 10. Late PPNB Basta. Generalized architectural reconstruction, related to the evidence of Area B.

3.6 Summary and Further Questions

The reconstructed Neolithic architecture of Basta shows in an exemplary way the characteristics of LPPNB architecture in Southern Jordan. In Basta Area B we can isolate the so-called "Basta House" type. Its essential parts consist of a central space with a fire place, and buttresses attached to the walls, surrounded by small, sometimes silo-like room cells. This "master plan" was modified in Basta itself as well as in other PPNB sites like Ba'ja, Ghwair I, 'Ain Jammam and es-Sifiya according to the site topography.

Yet, in spite of these similarities with the other LPPNB sites the differences should be stressed. They concentrate on the question of primarily one storey architecture in Basta as opposed to the more widespread two storey building practice in other contemporary sites like Ba'ja. Again Basta differs from most of the other sites in the regular use of right angles and straight walls with very few deviations. Partly this may be due to the fact that the layout of the Area B complex in its final shape probably was still close to its initial plan without too many alterations, while other sites such as Ba'ja or 'Ain Jammam in their excavated layout seem to represent the outcome of a long duration. Another reason could be that in comparison to Ba'ja there were no natural limits to the expansion of Basta, nor did Basta have to cope with the problems of extremely steep slopes like Ba'ja, es-Sifiya, or 'Ain Jammam.

As has been shown, the traditional architecture of Southern Jordan, especially the rural village architecture of the greater Petra area, has been particularly helpful for the reconstruction of the LPPNB architecture of Basta, in the same way as the traditional architecture in semi-arid mountain areas with annual average precipitation of 150-250 mm along the 30th degree of latitude (Adam 1981). The traditional architecture of these regions from Morocco, Algeria, Tunisia and Iran to Afghanistan and N America shows similar concepts and constructions like the LPPNB architecture of Basta. As aforementioned the way of constructing a house is on several points similar to the Neolithic technology. The windowless buildings with exterior walls 75 cms thick were adapted well to the extreme climate variations of the region. Yet, also here an essential difference has to be kept in mind: the use of slope adjusting terraces in LPPNB Basta as opposed to simple soil terracing used in modern traditional architecture. While the Neolithic terracing system established fixed limits for the entire life time of the settlement – or at least of the Living Quarter – modern traditional architecture encountered no such restrictions.

Reconstruction is an ongoing discussion and is not limited to the architecture. Architectural reconstruction is one part of the reconstruction of the Neolithic life and environment. Because of the limited area excavated in Basta, several aspects of the settlement structures have to stay unanswered. This includes the aspect of drainage in nucleated settlements, the organization of quarters, possible assembly places, the organization of building workshops and aspects of raw material resources and building material recycling management. Future investigations may be more successful in understanding the relations between building units and the communication ways. A more comprehensive documentation of the development of the ruins of the traditional architecture could enhance our understanding of both the building and the dilapidation processes of the LPPNB remains.

Summary and Conclusions

Hans Georg K. Gebel, Moritz Kinzel,
Hans J. Nissen, and Zaydoon Zaid

4.1 The Stratigraphical Framework

4.1.1 Sedimentary Environments

The sedimentary environments of Basta developed at a time when the overall climatic framework witnessed a distinctive changes. After a colder and drier period between 11.000 and 10.000 BP (correlated with the Younger Dryas, *cf.* Baruch 1994 and Goldberg 1994), a gradual transition to more arid conditions took place from around 10.000 BP (Gebel 2004b). Settlements in the Mediterranean zone of Palestine and in the Jordan Valley most probably could not develop further from MPPNB times onwards, since environmental restrictions here did not allow further positive population dynamics. Soon, "refuge" settlements like 'Ain Ghazal on the eastern side of the Rift Valley, reached their carrying capacity. Between 8.800 and 8.500 BP eolian activity increased and even dunes could have formed as a result of agricultural practices. After 8.500 BP, a period with – for the region – extreme precipitation events and flash floods occurred that led to the deposition of clast-rich sediments with sharp-edged stones ("rubble layers"), which covered and preserved much of Basta's architecture. In the lower rubble layers of Basta, covering the Late and Final PPNB architecture, flimsy wall structures and Early Neolithic pottery indicate a pre-Yarmoukian and Yarmoukian seasonal or ephemeral site use. These rubble slides seem to be characteristic not only for the Southern Levant (e.g. Sha'ar ha-Golan, 'Ain Rahub, 'Ain Ghazal, Munhata and many others), they seem to exist at many sites occupied around 8.200 calBC in Turkey, Cyprus, and Northern Greece (Weninger et al. 2005). Weninger *et al.* are describing such a sediment for 'Ain Ghazal: it covers the settlement by a thickness of 2 m and includes sharp-edged and angular slope debris and artifacts. It was called "Yarmoukian Landslide" or "Yarmoukian Rubble Slide", since it contains potsherds from the Yarmoukian period. The layer very probably dates to 8.300 and 8.100 BP into a period with many flash-floods. 'Ain Ghazal was abandoned once and for all between 8.300 and 8.000 BP. While around 8.200 BP we have to assume the existence of a short-termed cold-dry period, during which the slide events were interrupted (Weninger *et al.* 2005: Fig. 13), all the period between 8.500 and 7.100 BP must have been characterized by flash floods in the Southern Levant (Bar-Matthews 1997, 1999, 2003).

One of the most influential factors in the development of a sedimentary environment, the palaeorelief, is rather ill-known for our research area. In the excavation areas, bedrock was touched only in the NW Corner of Area A and along the gridlines 535N, 545N, and 565E (*cf.* Kamp 2004: Figs. 1, 7-8). The bedrock of Basta is composed of dolomite, limestone, weathered dolomite and limestone, sometimes of feldspars and quartzite; at some spots in the side valleys outcrops of marl deposits may be found. Weathered bedrock was reached after 2.1 and 2.5 m in the drilling carried out by H.J. Pachur and M. Goschin in Area A (from below the level reached by excavation, *cf.* Pachur in Nissen *et al.* 1987). Drilling in Area B did not reach bedrock as it came to a sudden stop, presumably caused by a wall 3 m below the excavated levels.

The landscape of the research area is today characterized by a number of dry tributary valleys draining eastwards into a larger wadi systems. In the region of Basta the Wadi Muhaidarat descending from NW joins Wadi Basta, running from W to E (Gebel 2004a: Plate 1.C). The Early Neolithic settlement of Basta was located on the northern flank of this confluence. Until the start of the LPPNB occupation, the palaeorelief of Basta was mainly formed by gullies which transported weathered materials down into Wadi Basta. It was mainly aquatic slope erosion which shaped the palaeorelief by accumulating colluvial and alluvial material in depressions and on the wadi banks and floors (Kamp 2004). Most probably, the first settlers had already reacted to such natural drainage processes by building protective (terrace) walls, barriers, and ditches.

In addition, the site's sedimentary environments (*cf.* Kamp 2004) were formed by aeolian deposition, both during occupation and in the post-occupational deposits. For example, the stratigraphy of Area C revealed a high proportion of aeolian silts (> 30 %) up to several metres thick. This phenomenon has not been sufficiently explained although dust storms are a common element of weather in the area.[1]

In the Basta research area aeolian erosion is an important process of mass movement. The proportions of aeolian material vary between 17.7 % in the "Garden", 20.8 % in Area B and 32.5 % in Area C. In Area C aeolian sedimentation was more intensive (*cf.* above). Other potential inductors of mass movements in the area are earthquakes, mostly as high energetic events. Basta is situated in a zone of seismic activity (2-8 earthquakes/ 9000 sq. km/ year with magnitudes from 4.5-5.5; Gebel 1992), resulting from tectonic movements along the Rift Valley.[2]

Products of physical weathering (angular rock detritus from block size to sand/ silt) form a major part of the material in the site's catchment area (*cf.* Kamp 2004). The most common type of physical weathering is thermal (frost, heat) fragmentation, while chemical weathering is rather insignificant. Aquatic slope erosion not only shaped the pre-occcupational palaeorelief, it is also

[1] We assume that the aeolian material reached the settlement's area from farther out, and did not originate from the site's "substance". In some cases, sections even contained such aeolian events preserved *in situ*.

[2] Although seismic activity is more a natural impact on a site's preservation and thus formation (adaptive planning in building, renovation, re-building), the human fear of such potential catastrophes must have found expression in relevant measures influencing anthropogenic site processes. Cultural deposits and structures will be influenced, too: walls can be destroyed directly by the erosive sediments or by stone accumulations, which slide down. However, the identification of seismic disturbance ssituations was difficult for LPPNB Basta: there is some evidence of displaced and cracked walls in the main occupation of Area B, but these may also result from slope pressure or structural instabilities. Tumbled walls as witnesses for earthquakes do not exist (as known from Ba'ja Areas B-South and D), and would have been subject of immediate repair during the occupation. Earthquake damage would have been identifiable with deserted site parts, which we did not hit.

another important type of natural influence on Basta's formation and preservation processes. It permanently contributed to denudation, accumulations, and weathering during and after the occupations. Due to the expected better moisture storage capacity in the area during the LPPNB occupation, aquatic slope erosion may not have affected the settlement and its suspected garden area (Wadi Basta) to the same extend as today. However, torrential rainfall is common in the area, and it may have resulted in episodic accumulations of coarse-grained detritus. These were most likely removed seasonally by the inhabitants, especially where such deposits conflicted with domestic and horticultural aims. Part of the annual rainfall falls as snow and melts over a longer period, and thus does not cause large accumulations.

The information from Area C appears most interesting for the sedimentary history at Basta,. It shows that a fossil drainage may have completely disappeared in the Basta area since the Early Holocene. It is possibly buried under the mysterious accumulation of fine-grained material with high proportions of aeolian silt, reaching a height of 5.90 m in the drainage's center. The stratigraphies in Area C contain substantial cultural *in situ* deposits, probably all representing settlement fringe activities (human and animal carcass burial, flaking ateliers, garden areas, fire places, ash/ charcoal/ kitchen dumps). Above the aforementioned possible fossil drainage or ancient wadi the natural silt deposits are much stronger than at its sides (*cf.* 1.4).

4.1.2 Stratigraphical Events

As described in the Stratigraphy section, anthropogenic stratigraphical events and contemporary natural impacts were responsible for the site's morphological development and represent a sequence of depositions, re-depositions and "extraction" events, which modified the relief over a period of roughly one millennium (*cf.* also Gebel 2004): The LPPNB permanent village life lasted from *c.* 7500-6900 BC leaving major architectural bodies on the slopes, post-LPPNB Neolithic squatters modified the ruins (6900-6500 BC), and Pottery Neolithic people inserted flimsy structures and casual deposits (6500-6200 BC). Flows of colluvial and cultural debris went inside and across the LPPNB ruin during the 7th Millennium BC (Lower and Upper Rubble Layers), containing remains of disturbed *in situ* findings and redeposited finds from these post-LPPNB occupants of the area.

Our conclusion (Gebel) is based more on the stratigraphical analysis than a scenario based on definite findings that the buildings on the slopes of Basta acted as barriers for the mixture of cultural debris and natural sediments that permanently moved downslope towards the Wadi Basta. We should expect that the LPPNB inhabitants cleared areas by re-dumping and leveling, and that part of the settlement garbage and non-recycled building material remained in the domestic parts and accumulated here. It should have contributed to the rise of intra-mural floors and the surfaces of potential open spaces. We may be dealing with considerable cleaning and clearing activities in the domestic LPPNB architecture of Basta, and a consistent maintenance of buildings. There is almost no evidence showing the raising of floors during occupation, or the so-called raising floor structures as at Ba'ja (Gebel 2006).[1] Room fills were built up by layers of settlement debris, mostly separated by deposits of fallen wall material and roofs. It indicates that the LPPNB inhabitants of Basta also used the ruins when staying in other quarters of the site, including filling them with settlement debris and leftovers from nearby building activity (*cf.* the

[1] The topograhically influenced "sliding value" for LPPNB architectural preservation (*cf. e.g.* Gebel and Bienert *et al.* 1997: 232-233), which is most important for a settlement's security and preservation, appears not very relevant for shallow-sloped Basta.

floors, ash layers etc. mentioned for these stratigraphical positions in App. A and C and in the relevant Stratigraphic Charts).

In Basta the matrix of sediments is mainly silty and fine-sandy. Silty sediments possess a poorer structural stability than clayish sediments and a higher flexibility than sandy sediments. Post-LPPNB mud and debris flows are a common feature for the preservation of LPPNB sites in Southern and Central Jordan. Most often it remains unclear from where this material originated. Most of the potential catchments appear too restricted to provide the amount of the transported material, and sometimes the present-day topography does not allow us to envisage how these accumulations arrived at the place of their deposition. Seen from Basta, these were substantial sedimentation events, each taking place within a very restricted period. The Basta evidence suggests that they must have started shortly after the abandonment of the settlement, since the flows entered the ruin when walls were still standing tall. An additional argument for dates between 6900 and 6500 BC are finds in the flow deposits, culturally belonging to the FPPNB. In the upper parts, our so-called Upper Rubble Layers, however, pottery also occurs. The few identifiable sherds belong to the PNA, some were considered as undiagnostic PN. The sherds were independently addressed as dating to these periods by Zeidan Kafafi, Daif'allah Obeidat, Mujahed Muheisen, and Nabil Qadi. The scarcity of sherds from the PN is not an argument against the presence of some sort of Pottery Neolithic occupations of the Basta site territory, since these periods remained rather "aceramic" in the S of Jordan. The (pre-?) Yarmoukian arrowheads and the related flint industry are much safer chronological fossils for dating these layers. To what extend the Upper Rubble Layers relate to the recently discussed 8.2 ka calBP event (Weninger *et al.* 2005) must be the subject of further discussion. The character of the accumulations attest a "porridge"-like transport, indicating that the amount of rain/ slope runoff was just sufficient for a constant sedimentation. Thus, the flows of Basta may represent a period of progressing aridity. U. Kamp has observed "parallel to this a stronger aeolian accumulation of fine material", an observation which also could refer to drier conditions. The recent suggestion by H.J. Pachur (Free University of Berlin), and independently by C. Hannß (University of Tübingen), to see in these mud and debris flows even a reason for the termination of the LPPNB dwellings, deserves also further discussion.

4.1.3 Site Preservation

The following major reasons were influential in the preservation of the Basta deposits:

- large intra-site masses of building material and small room ground plans are responsible for a rapid filling of the rooms (especially during their decay), thus causing high wall preservation

- re-use and maintenance of major walls/ terrace walls helped their continuous preservation and thus the height of preservation

- extensive layers of LPPNB flint waste from the workshops on the slopes protected archaeological deposits (Area A, NW Section)

- huge accumulations of weathering products and high aeolian silt proportions developed rapidly during the LPPNB and especially in the two millennia after (*e.g.* Area C), and buried the Neolithic deposits

- partial preservation of *in situ* remains of LPPNB squatters and of a flimsy FPPNB occupation in sediment traps during the mud and debris flows ("rubble layers") in the 1st half of the 7th millennium

- surface protection of the site in later prehistoric and historic periods by the deflated accumulations (pavements) of its solid natural and archaeological material

Impact events on the preservation of the stratigraphies were:

- potential gully erosion destroying architectural and other depositional remains adjacent to slope drainages during the LPPNB occupation

- disturbance and destruction of LPPNB architecture by stone extraction during and after the LPPNB occupation is responsible for a bad architectural preservation at certain locations (*e.g.* B 102)

- aquatic slope erosion, the mud and debris flows of the 1st half of the 7th millennium BC, and other combined colluvial, aeolian, erosive and anthropogenic processes are responsible for an ill-preserved Phase B0

- recent building and road construction activities in the modern village destroyed more of the LPPNB village, including a recent re-use of LPPNB wall stones building Old Basta

4.1.4 Stratigraphical Formation and Sequence

The major elements of the material framework for Basta's site formation were:

- artificial slope terraces allowed the agglomeration and agglutination of buildings
- the type of ground plans and building technologies "brought in" a considerable material body of deposits on the slopes
- a possibly long duration and high variability and intensity of activities formed considerable non-architectural deposits on the slopes
- expanding architectural agglomerations may have reduced the rate of intra-mural alterations at Basta (compared with other LPPNB sites), causing the site's larger extension

While the earliest structures in the northern corner of Area A are founded on shallow cultural debris layers, which in turn rest on and follow the slope inclination, the structures to the S are founded on terraces with a stratigraphy of a thickness of 2.10 (Drilling 1) to 2.40 m (Drilling 2), according to drilling operations of H.J. Pachur and M. Goschin in 1987 (for the calculation of the slope inclination *cf.* Nissen, 2.2.1.). Colluvial and cultural layers lie on top of a 0.45 m thick yellowish-brownish weathering horizon of calcareous bedrock (Pachur in Nissen *et al.* 1987). A radiocarbon date on pistachio charcoal found in the cultural horizon lying directly on top of the bedrock in A 5 (500N/685E) produced a date of 8380 +/- 100 bp (GrN-14537, uncalibrated) (Gebel *et al.* 1988). In Area A some burials were dug into the weathering horizon of bedrock by Neolithic inhabitants. The first cultural debris horizon on top of this weathering layer is 8.380 years old (bp).

The NW Section exhibits four major stratigraphical event series in Area A (Gebel, this volume, Fig. 2). Parallel to the Main Architectural Building Phase AII, and later, a huge dump

developed in the area of A 1-2, A 5, and further to the W of these squares. This dump seems to have been located in the northern edge of the residential space of Area A, serving also as a burial ground in its lower stratigraphy, proving that open spaces and dump areas were used in Basta as burial grounds ("trash burials"). Architectural remains were not preserved in the NW part of Area A, and may not have existed as these parts of the NE and NW Sections show. The stratigraphical relationship to the architecture in Squares A 3 and 5-7 is not understood ("bulldozed" information). Since, however, the edge of the housing area (A 5-6, Locus 4) immediately overlaps with the weathered bedrock layers, there is a possibility that the lowermost NW dumps started simultaneously with the residential occupation S of them. The upper parts of the NW dump area contain architectural traces at similar levels as those of the Upper Architectural Phase AI in the upper Squares A 1 and A 2. As they are neither stratigraphically nor in terms of building techniques related to AII, they must have been erected well after the foundation of the Main Architectural Phase AII. Stratigraphically, the NW dump area should be subdivided into at least two phases: a lower part, perhaps contemporary with AII, and an upper one containing the architecture of AI. It therefore appears that the Upper Architectural Phase AI was founded into the dump layers.

The stratigraphical evidence from Area C suggests that cultural layers were sitting directly on the bedrock. None of the cultural layers excavated in the Test Units C 208 and 217 had a nature comparable with the settlement layers in Areas A and B. The PPNB artefacts on the surfaces of Area C must have been re-deposited from elsewhere. The LPPNB cultural horizons of C 204 start 1 m beneath the modern surface, and they are found at greater depths further W. The formation of the relatively thin-layered and non-homogeneous stratigraphy of C 204 was heavily influenced by human activities, as is manifested by many archaeological finds. The youngest LPNNB horizons rest at a depth of 2 m beneath the surface in Test Unit C 217, located in the central part of Area A. Human activity is shown by an eroded field clearance pile lying directly upon bedrock and a burial 0.15 m above bedrock. This "trash burial" appeared associated with a bovid burial, or dumped bovid carcass. High phosphate values of the overlying 0.85 m sediments point to human use of the slope for a considerable time. The excavation reached dolomitic bedrock at a depth of 3.00-3.70 m.

4.1.5 Comparative Site Stratigraphy

At the beginning of the LPPNB human land use of Areas A, B, and Area C the palaeorelief must have been almost free of colluvial sediments; erosion must have dominated over sedimentation as we have more evidence of cultural sediments contacting the bedrock than natural deposits resting on the bedrock. The cover of natural sediments on the bedrock must at least have been shallow compared with the deep stratigraphies formed during and after the LPPNB.

The architectural complexity of Area A indicates a longer occupation than we assume for Area B, since we consider the architectural modification "rate" attested as a factor of time and less of function. Missing or rare modification within a building phase and intra-mural deposition, like in Area B, let us assume a more restricted duration of occupation. However, this does not help to explain the temporal relationship between Areas A and B. On the one hand, the remains in Area A clearly existed from the very beginning of human occupation in that part of the site, with a stratigraphic contact to the bedrock: the terrace Wall [6] in Square A 18 must have been erected with, or not much later than the first occupation in Basta, and was reused in the Main Architectural Phase AII. On the other hand, no such evidence can be reported for Area B: here we have to expect at least three m of building strata between Phase BII and bedrock. It must remain

Table 1. Basta. Chrono-stratigraphic summary.

calBC	Basta Periods	Area A	Area B	Area C
		top soil	top soil and fine-grained deposits	top soil
		?	?	?
6000	_____		Upper Rubble Layers with remains of field clearing piles, debris and mud flows	predominantly
	PNA	downslope sedimentation		
			Phase B0 / Lower Rubble Layers: curvilinear wall fragments, fire places and surfaces embedded in debris and mud flows	aeolian sedimentation
	PPNC-related			
	FPPNB	Phase AI:		
6900	_____	rectangular rooms build of undressed cobbles	Phase BI: room fills, burial ground, rectangular and curvilinear rooms build of small slabs, substructures	?
		huge accumulations of workshop refuse (naviform chipped stones)	Phase BII: room fills, large multi-roomed and rectangular architecture, substructures	C 208 and C 217
		Phase AII		
	LPPNB	room fills, large multi-roomed and rectangular architecture, substructures, “trash burials”		site fringe
			Phase BIII and earlier phases: floor of an earlier architectural phase (BIII in B 102) and anthropogenic and natural sediments (>3m) of unknown character (Drillings 6 and 6a)	activities without buildings
		Phase AIII		
		room fills, large multi-roomed and rectangular architecture, substructures, in-room and in-channel burials		
7500		bedrock	bedrock not reached	bedrock (reached in C 217)

open whether Phase BII was (at least partly?) contemporary with AII, or whether Phase BII was established only after Phase AII was deserted already, and that the dumps seen in the NW section above Phase AII are partly contemporary with BII. In the first case, Phase BIII (i.e. those 3 m below BII) would have been contemporary to AIII, which appears rather unlikely. Our present feeling is for the latter scenario meaning that Phases AIII and AII would correspond to those 3 m below Phase BII, while the probable temporal gap between Phase BII and the end of AII would remain undetermined. All this understanding is guided by the idea that Basta wasn’t inhabited on all its territory at the same time, but rather that separated settlement quarters coexisted and followed each other within the territory defined by our surface finds. Agglomeration processes led to the interior and exterior expansion of these living quarters.

From around 6900 BC, sedimentation became dominant and potential drainages in the slopes of the sites were filled up; the land surfaces of Area C were raised by silty deposits, particularly in the central parts of Area C. Precipitation and slope runoff were insufficient to empty the drainages and to reduce the new surfaces. Less material was transported and thus deposited in form of mud and debris flows by periodic and episodic rainfalls. It is the time (7th millennium BC) in which the FPPNB (Phase B0) and PN cultural deposits developed and eroded again, leaving only flimsy remains in an instable sedimentary slope environment. The vegetation must have become less dense in this time (Kamp 2004), a process which could have already started with the LPPNB exploitation of the near-site areas.

4.2 The Architecture

Building in Neolithic Basta was a highly complex matter which required a high level of accumulated knowledge both on its organization or planning and on the technical side. Short of proposing full time specialists it is nevertheless assumed that there were special members of the community who would be asked to assist in the planning process and who probably also were the ones supervising the entire building process.

4.2.1 Planning Procedures

Any planning of a house or a settlement must begin with selecting the site. Out of several criteria two were favored apparently looking at Basta and contemporary sites: an easy access to fresh water and a sloping situation. While the first one is self-explanatory, we have no ready-made explanation for the second preference, although it seems to be a common feature for all settlements of the LPPNB. It might have a climatic background as this would be the easiest way to cope with the sudden and heavy rains in the area as such situations would enable an easy and natural drainage. This could well be in line with another measure to be discussed presently, to keep moisture off the floors.

While these steps only need some general knowledge and common sense the next steps require specific skills.

4.2.1.1 Preparing the Building Lot

Of the two main possibilities to create an even building ground in a sloping area: digging into the slope or constructing a terrace out from the slope, people in Basta chose the second way – at least in the area where we were able to reach the original slope. The way this was achieved was to build a terrace, the substructure of which had to be higher the more it reached out of the slope. Rather than piling up a mass of stones a wall was built perpendicular to the incline of the slope in order to serve as a retaining wall for what was to come further up the slope. At certain intervals parallel walls were erected to match the absolute height of the first wall up to a point when this level would hit the height of the natural slope. The next step was to bridge the intervals between the walls by rows of stone slabs eventually forming the basis of a terrace.

The layout of such a terrace required some thought. The evidence from Basta shows that as a rule a terrace was just large enough to accommodate one house or building unit. Thus at the

outset, the size of the house and thus the size of the terrace had to be determined. Unlike a building lot dug into the slope whose size could be adjusted during the building process if necessary, a terrace did not allow secondary changes. Careful calculation was also necessary regarding the height of the retaining wall. To this end the intended size of the terrace had to be reconciled with the gradient of the slope. Incidentally, this poses the question of the instrument used for keeping the level as exact as shown by the terraces of Basta.

4.2.1.2 Sub-Floor Systems

One reason for choosing this kind of wall system instead of a solid packing might have been the wish to save on material. But in light of the skills, effort and time required the reason may have been a more important one. It is assumed that the creation of air chambers without connection to the outside atmosphere aimed at achieving an insulation effect keeping the floors dry. The extent to which this needed to be pre-planned is shown by an additional observation. In several of the "channels", as we came to call these air chambers, we found human burials, at least in those which were high enough to allow a person to move inside. To this end there must have been possibilities to enter these channels once in a while. But in order not to need to open each of the channels individually if necessary, the channel system was devised in a way that a central perpendicular channel would connect the various parallel ones, allowing movement within the entire system starting from one "entrance" only.

As a matter of course, movement was only possible below that part of the terrace where the interior height of the channels would allow it. As another sign of careful planning it is interesting to note, that already in laying out the grid for the walls, there was a difference in the width of the spaces between the walls. While interstices were wide enough in those parts which were going to have the necessary height, interstices were narrower in those parts where because of insufficient height movement was impossible. This kind of layout of the wall grid at the beginning of the work on the terrace shows that in addition to planning height and extension the idea to use these channels as burial ground must have been in mind and been part of the planning procedure.

There is another piece of background knowledge involved in the initial planning. This derives from the observation that normal walls including the retaining walls employ much care in erecting stable walls using dressed stones set in mortar. For those walls which were only supposed to support the terrace unworked stones were piled up without mortar. Again one may argue that this way less effort was needed for those walls which could not be seen anyway; but in view of what has been said about insulation it seems probable that it was known that through capillary action mortar would be able to transport moisture upwards into the floors.

Terraces of the type described above were presumably not placed on the slope individually and in isolation. Although we excavated only part of one of these slope adjusting systems we nevertheless assume that from the outset a large number of them were built next to each other, to judge from the dense coverage of the area with buildings. The diligence and background knowledge required for the planning of one terrace would have been applied also to the neighboring building activities, and one may even see something as a master plan at work, sc. a master planner.

4.2.2 Building Technique

Taking advantage of limestone available locally coming in parallel, separated bands certainly helped create stable walls. However, this was done with such care and experience that the masons could afford to approach the limits of security. Walls of 30 to 40 cms wide and keeping exactly the same width from bottom to top were found still standing up to 2 meters, and probably once measured 2,5 m and more to the roof. This exceptional stability was achieved by carefully selecting the stones, laying them when possible in courses of equal height, or at least inserting such courses once in a while, and setting everything in mortar. To enhance a stone-to-stone connection small wedge-like stones would be driven into the joints increasing stability.

4.2.3 Preservation of the Architecture

In spite of the excellent masonry there are large differences in the preservation of the various walls and buildings. While in our Area A this bad state of preservation can partly be attributed to the bulldozer activities prior to the start of the excavations, more severe damage had been inflicted already in ancient times, probably in several stages, the oldest one probably dating to the time shortly after the abandonment of the settlement; they were the results of pit cutting activities. Both in Areas A and B these pits were found to reach below the floor level of the buildings leaving almost no building without damages. Even deeper are the pits on the eastern and western sides of Area B which did not make it worthwhile to continue excavation in these directions because presumably no contexts had survived.

The reason for this pit cutting is unknown but it is very likely that they served the robbing of the nicely dressed ashlars found in large numbers in the walls of the Neolithic houses. There is the possibility that the pits destroying parts of the buildings of Phase BII have to be attributed to the people of Phase BI. Unfortunately, however, we came across remains of this latest occupation only in the northwestern most part of Area B. They were disturbed to the extent that no building units could be restored and the employment of curvilinear walls using mainly thin tabular stones makes them clearly distinct from the walls of our main phase. Within this mess we were unable to isolate stones which gave the undoubted impression of having been robbed from the earlier houses. At any rate, anyone who spent some time in the area and by digging wells or the like came across early walls surely was attracted by the well-shaped stones and extracted them for whatever purpose. This, by the way, is going on still today and between the houses of modern Basta you can recognize pits with Neolithic stones stacked up ready to be transported to a new building site.

4.2.4 Recycling of Building Material

Although we have no evidence, we cannot exclude the possibility that some kind of recycling, including reusing stones from abandoned houses, happened already during the life time of our main phase. While the heaps of material found in the open northwestern part of our Area A seem merely to be raw material for the production of plaster the possibility that small portions of it had been used before cannot be excluded. This digging into older levels, occasionally destroying intrusive human burials, may have been responsible for the fact that in some cases bones of the same individual – according to our anthropologist, Michael Schultz – were dispersed over 3 squares.

4.2.5 Alterations

There were only a few cases of deliberate alteration of the architecture. An obvious example are blocked doors like the one which originally linked Rooms 17 and 18 in Area A, or the blocked passages occasionally found in Area B. They testify for minor changes in the function and use of rooms and complexes. On the whole, however, remarkably few changes were observed in architectural substance and layout – with one possible exception.

It looks as if at some time late during the lifetime of Building Unit B I the building on the neighboring terrace to the NW was set on a new terrace, about 80 cms higher than that of the building contemporary with the erection of Unit B I. This required the raising of the joint Wall [2/15] between Building Units B I and III. At this point, the walls between Rooms 16 to 20 of Unit B I were razed to the new ground level of Unit B III; the rooms were probably filled to form the foundation for a new walking surface, which was linked to Unit B III by means of a passage left in the raised wall.

This reconstruction rests on several assumptions since no remains were found of that new walking surface, nor of the rooms being filled deliberately; but as explained above, this assumption would not only account for some details – inexplicable otherwise – but also for the abnormally large differences in terrace levels. If correct, this would be one example of what normally happens within a longer life time of a dwelling quarter: single rooms or larger parts of one unit may change owner and be added to a neighboring complex.

Another example along different lines may be found in Building Unit B VIII; here, however, it is a case of raising the building within its former limits. While the first floor level of the Rooms B VIII,2 and 1 were found at a depth of +17.90 there are clear traces in the northern wall of Room VIII,2 for a floor construction at +19.80, indicated by a raised buttress, a horizontal joint with a slight deviation of the upper part of the wall, and what appear to be holes for supporting beams. The opposite wall reaches this exact height suggesting that such a floor could have rested on that wall.

The evidence allows two interpretations: either – as above – we assume these rooms to have been filled creating a new main level for the building; or we assume the former long rooms to have been left empty, creating a two-storey building. The latter is supported by the observation that contrary to most of the other room fills containing lots of rubble stones, animal bones and flint debitage the fill of Room VIII,2 was interspersed from high up (+20.70) to lower down (+19.25) by a mixture containing abundant plaster material which once bore the same painted pattern (see Plate 50.C) and is likely to have originated from the same room. Thus the fill is homogenous above and below the assumed floor level, and therefore must have originated from a possible second storey penetrating into an empty lower space. Both the raising by a second storey and/or the creation of a new living floor could be contemporary with the raising of Unit B III.

Another kind of change of the architectural layout in Area A will be discussed under the next heading, as it may indicate a change in function.

4.3 Functional Analysis

4.3.1 Domestic *vs.* Communal Space

On the whole, next to nothing was found on the floors of rooms and complexes that could be indicative of use or function. A differentiation between domestic or communal space proves difficult and rests entirely on our impressions. Criteria are gained only from a study of the ground plans. As far as we can recognize clear units, most belong to the Basta House type, consisting of a central space with a row of small chambers attached to at least one side.

There is one unit in each area, however, which clearly diverges from this scheme. In both cases, the main feature is an elongated hall, perhaps doubled in the case of Rooms 10/16 in Area A, and even arranged in three parallel rooms in the case of Building Unit VIII in Area B. They obviously were meant to serve a different purpose from the "Basta House". But on which level?

A hint may be found in the different size. While the examples of the Basta House range in size from 10,5 to 71,5 m^2 – the largest space of the latter one amounting to 13,7 m^2 -, one of the long rooms of Unit B VIII in its preserved length alone measures 13,4 m^2; while the large hall 10/16 in Area A has an internal surface of 22 m^2. On the one hand, because of their size the central spaces of all Basta Houses cannot be meant to accommodate a larger number of people let alone a communal gathering; but on the other hand, the difference in size of the long rooms is not so significant to force us to attribute a communal function to them. Still, such an outspoken difference in layout and room size adds to the general impression of high complexity.

Although they follow a clear design principle the function of the "Basta House" is far from settled, but it is very likely that it served domestic purposes. This is supported by the find of grinding slabs, some hand stones and a pestle close to the floor of Room 20 of Building Unit B I. A household function is also indicated by the large fireplace in the central space of that same unit. At the same time, however, it should be noted that we did not find indicators of other activities like butchering (animal bones were found in the fill but not on floors), nor of any working or finishing of stone tools or implements.

4.3.1.1 Upper Storeys?

The absence of any obvious living and sleeping space has initiated discussions about the possibility of a second floor. There is no evidence for it (for a possible exception see the discussion of Unit B VIII). Yet, the existence of a room or two on one part of the building should not be excluded; a second storey of the same size and layout as the first floor, however, does not make sense and can be excluded by the simple fact that roofs at the same time as providing additional living and working space served as the main communication ways.

4.3.1.2 Possible Change of Function

Though the preservation and the layout of rooms and walls in Area A is far from allowing a clear picture we may as well try to offer an interpretation. Taking the main phase of Area A, the arrangement is clearly set apart from Area B. The dominating feature is the complex of the long Room 10/16 with the possible inclusion of the similar Space 15. To be sure, there is the little

Basta House of Rooms 25 a+b, 27 a+b, but otherwise we find no closed unit. Either rooms are too large to fit the normal type of Basta House like Rooms 34 to 39, or they are added to each other in a way that no order becomes apparent; in particular none of these rooms qualifies for a central space – except when we assume Rooms 10/16 + 15 to have been the point of reference for the entire complex. Any notion about the function of this complex totally eludes us, but as said before this function must have differed from that of Area B.

In this respect it is interesting to turn to the few traces left by the previous phase – which incidentally was the earliest settlement activity in this area as it rests immediately on the initial slope adjusting terrace system. An attempt to make sense of these walls results in a plan of a Basta House (Nissen, this volume, Fig. 18). Unfortunately, nothing is known about predecessors on the upper terrace underneath Rooms 10/16 + 15; as outlined above these spaces cannot have been part of the earliest phase because of its terrace resting on sub-floor channels of equal height.

Such emendation of the wall stubs of Phase AIII could suggest that the initial slope adjusting terraces bore an array of houses of the Basta type. A former dwelling quarter of a similar character to Area B at one point would have been converted into a complex dominated by a central building (Rooms A 10/16 and 15), of possibly communal character. But this may be stretching the evidence too far.

4.3.2 Open Space and Site Fringes

While in Area B the entire area was occupied by buildings leaving no open space, we encountered clearly contemporary but open areas in both of our Areas A and C. The northern part of Area A was mentioned already as containing heaps of plaster raw material in addition to pits with flint debitage and rubbish. Since this area was the northern limit of our excavation there is no way of deciding whether this open area was placed within the settlement, or was already the beginning of the unoccupied fringes of the settlement.

In contrast, we can be sure that Area C was beyond the confines of the Neolithic settlement. The trenches did not reveal any trace of architecture, nor did the extensive drilling operations (30 holes spread over the entire area described in detail by Kamp 2004: 55, Fig. 1) hit a single piece of a wall.

4.3.3 Burial Grounds

As will be discussed in greater detail in Basta volume III we could not observe any rule when it comes to human burials. We found them in sub-floor channels, below floors as skull-settings, intrusive in walls – both during the life time of the building and after its abandonment – as well as in the open areas of Areas A and C. The latter give a haphazard impression and certainly cannot interpreted as remains of cemeteries; if cemeteries existed then they are certainly out of our reach.

4.4 Size, Layout, and Inner Organization of the Settlement

Our estimate referred to in the early preliminary reports of a size of 10 to 12 hectares for Neolithic Basta was based on the distribution of artifacts on the surface (see the detailed report in Nissen, Muheisen and Gebel 2004: 8-16, Fig. 4 and Table 2). We have to retract this estimate

considerably since both geomorphological as well as archaeological investigations showed that Area C was definitely outside the built-up area of the settlement. We always had the idea of a settlement area continuously occupied by buildings. This view was influenced from our inability to find any traces of public or open space. However, just that same argument should have warned us. Even in its more limited size, however, Neolithic Basta would still be too large to imagine houses in the center to be accessible only over 200 m of roof tops.

4.4.1 The Concept of Living Quarters

The alternative idea to a continuous coverage, of the settlement consisting of settled islands or quarters was developed first with a general concept of easier access to the compounds. It became somewhat more substantial after reviewing the possible course of the building process in Area B. In particular, examining all cases where two units share a common outer wall established that in all cases the wall is an integral part of only one building while the interior walls of the other unit abut against the wall. In terms of the building process it means that the one unit was completely finished before the other one was attached to it.

It has been noticed several times that Building Unit B I represents a central building not only because of its size and its complexity but also because its four outer walls are all integrated. Wherever preserved to the extent to allow sufficient observation, the walls of all surrounding units abut this central unit, clearly seen Units B III, IV and V. Though seriously damaged this also holds true for the wall stumps remaining of Unit B II. It looks as if a shell of other buildings was put around Unit B I, all of a smaller size.

Unfortunately, things are less well preserved the more we move out from the center. Thus we cannot be sure of the existence of a second shell which is indicated when looking at the western part of Unit B III. Also there the western outer wall of Unit B III is a fully integrated part of this unit, while walls which presumably once belonged to another unit further W abut onto it. We find the same situation if we turn to the southernmost part of Unit B VIII: there the outer wall proves to be an integral part of Unit B VIII, which the walls of Rooms 32 and 33 abut onto; as has been shown above, Rooms 32 and 33 are almost certainly parts of another unit further S. Such a second shell could also have included buildings outside of Units B IV, V and II, as well as on the eastern edge of Area B, where remains of even the first shell have been lost.

Joints between building units obviously testify to temporal differences of unknown length; one could imagine Unit B I standing by itself for a while before the units of the first shell and successively, of the second shell were added. However, considering what has been said about the planning and erecting of terrace systems, we may as well assume that the entire complex was built within one period of time, the joints being merely markers of different stages.

An additional point has to be raised. Both from the nature of the sub-floor channel systems underneath the floors of the buildings in Area B and from the drilling made in Square B 103 we know that the buildings encountered are not the oldest structures; in fact, according to the drilling there are about 3 m of occupational debris below the present floors. How does this situation fit the observation that the layout of the better preserved units in Area B shows the original arrangement without alterations which would be normal with the progressive age of a living quarter? Obviously, both the central building and at least those of the first shell were erected without apparent consideration of earlier structures, perhaps even showing that either earlier structures had been razed or that the place had lain open for while.

If continued, this hypothesis could lead to a scenario not uncommon among Near Eastern sub-recent traditional architecture: of a village site where the entire area would never be covered with buildings but there will be open space between compounds or quarters, resulting from abandoned older structures. Such open space will be used again as building ground once the existing buildings fall apart. Applied to Neolithic Basta this could mean that the settlement consisted of several of these multi-shell compounds separated by open spaces. Within a generation or two this situation could turn around.

If this scenario were true it would offer an explanation for the unaltered layout of the building units in Area B. Area B could be one of those newly resettled areas which had remained open for a while. However, this would have happened not too long before the large-scale abandonment of the site. Thus this quarter did not have time to undergo those alterations which any living quarter would be affected by over the course of generations – with one possible exception: the changes affecting Units I and III. Area A, on the other hand, would be an example of a quarter which rather than being abandoned and left open after the decomposition of a housing complex had been devoted to another function

4.4.2 Phase BI ("Final LPPNB")

Although we have a hint that the walls of Phase BII were still visible to some extent at the time of the erection of the Phase BI buildings, possibly indicating that they were not too remote from each other in time, the Phase BI structures are clearly distinct in employing different principles of layout and stone laying. An uninterrupted tradition, on the other hand is proven by the employment of the same principle of sub-floor channel systems and of using the same technique of driving wedge-stones into the joints of walls. We assume the temporal interlude to have been long enough to let the buildings of Phase BII fall into ruins; yet, undoubtedly, Phase BI still belongs in the "Late Pre-Pottery Neolithic B" horizon.

Since not a single structure reminiscent of Phase BI was found S of Squares B 34-36 we assume this line to have marked roughly the southern limits of the settlement during Phase BI times. In that case, the center of the village during Phase BI should be sought further N, in the area covered by houses of the modern village of Basta.

4.4.3 Size of the Settlement

Referring to the comparative stratigraphy of Area A and B, and emending it in the sense that presumably Area B had been part of the initial settlement of the A III Phase we may end up differentiating three stages of the size of Neolithic Basta:
- a first one (roughly A III) would have been the most extensive one, including at least both of our areas A and B
- a second one (roughly B II) was already substantially reduced in size as Area A apparently was not part of the built-up area anymore
- a third one (B I) was reduced even more as a major part of Area B was not settled anymore.

Since the surface material does not allow any exclusive attribution to one of these phases nothing can be said about the actual size including the unexcavated parts of the Neolithic settlement. Still, the listing should be taken as representing a trend. The end of Neolithic Basta may not have been as sudden as we tended to believe but part of a longer course of decline.

4.5 Basta Architecture in Comparison

According to our present understanding, building activities started in the Greater Petra Area only half a millennium before the first Late PPNB settlers built their houses in Basta. The area seems to have been occupied by late hunter/ gatherers until the Khiamian and into Early PPNB (*e.g.* Sabra 1; Gebel 1986, 1988; Uerpmann and Schyle 1988) around 8200 BC. The onset of permanent (or semi-permanent) settled life – and thus solid architecture – may date to the Early Middle PPNB (Gebel 2004c), probably developing out of a local transhumant substratum, and starting with villages composed of round house clusters (Beidha: Byrd 2005; Shkarat Msaied: Hermansen *et al.* 2006). This picture is suggested by the surveys in the Greater Petra Area headed by one of the authors (H.G.K.G.) between 1981 and 1985 by the *Palaeoenvironmental Investigations in the Greater Petra Area - Holocene Research* (Gebel 1988), in 1989 by the Basta Joint Archaeological Project, and the various non-systematic surveying conducted after 1997 by the Ba'ja Neolithic Project. No pre-MPPNB evidence for solid/ permanent architecture in the area was found (*cf.* also the results of D.O. Henry for the Humeima, or the surveys results of the Wadi Fenan/ Wadi Fidan regions). However, the absence of permanent Late PPNA/ EPPNB settlements may only reflect the current research situation. Solid architecture of one possibly permanent site is recorded for EPPNB Abu Hudhud in the Wadi al-Hasa (Rollefson 1996). A probable seasonal occupation with architecture is reported from PPNA Dhra' in the Jordanian foothills of the southern Dead Sea; it already represents an architecture executed on raised floors (Finlayson, pers. comm.). Since from the northern regions solid architecture is known at least from EPPNB settlements and earlier (*e.g.* Jericho), it appears possible to conclude that the beginning of solid architecture and permanent village life in the Greater Petra Area was a belated introduction in the S of Jordan (Gebel 2002b). Not too long after its beginning architecture there takes on a completely different appearance with changes like the shift from round to rectangular multi-roomed architecture, with the introduction of built terraces as building lots, and with the increasing use of vertical space. The outcome was the complex LPPNB architecture with the Basta House as its main component. In order to understand these developments we need to understand the social and economic background which prompted them (*cf.* Gebel 2002b).

4.5.1 Thoughts on the Roots of Complex Architecture

In our discussions, there was general agreement that the complexity of the Basta House was an answer to specific socio-economic conditions. However, there were different opinions whether these conditions had developed locally, or were "imported" from outside. This was discussed in connection with the question of whether the Basta House could be shown to have had its roots in the older local architecture, or not. In particular, this involved the problem of the relation between round and rectangular structures.

So far, there are no direct lines connecting MPPNB single-roomed round houses and LPPNB multi-roomed rectangular domestic units.[1] There are indications for an integration of small annex rooms into the round MPPNB houses, and for a beginning of the use of the right

[1] It has to be emphasized that this development from round to rectangular ground plans was repeated locally in the Greater Petra Area at a much later date and in a much shorter period, while in other areas (*e.g.* the Middle Euphrates or in Jericho) this development took place earlier and over a longer period. In a way it shows that these architectural developments needed to follow a regionally repeated building experience, and not necessarily be brought in by interregional exchange. This is one argument for a local development in the M-LPPNB architecture in the Greater Petra Area (H.G.K.G.).

angle (observations of Moritz Kinzel, Shkarat Msaied Project). Byrd 2005 also records curvilinear walls and sub-rectangular ground plans for Beidha B. In fact, Beidha presents the transition to rectangular structures with the so-called corridor houses of Beidha C, but there are two problems. One is the alleged attribution of the corridor house to the PPNC (based on evidence from ‘Ain Ghazal, an issue raised by G.O. Rollefson at various conference occasions). If this were true we would be faced with a hiatus of considerable length between Beidha B (MPPNB) and Beidha C (PPNC) which would have gone unnoticed by both the excavators and the editors. The other one is the difference between the corridor house and the Basta House, which except for both displaying rectangular plans have nothing in common. There is nowhere they can be shown to have existed simultaneously. Since the assumption of a hiatus is highly unlikely and since the corridor houses of Beidha C do not fit the Basta House horizon of LPPNB we cannot escape the conclusion that Beidha C should antedate the Basta House horizon, meaning that the corridor house would have enjoyed a much longer lifetime than claimed so far. This would correspond to the proposal of Byrd’s (2005: 132) that the corridor buildings socially still represent nuclear family structures, which would place them more into the MPPNB social framework. This could all mean that Beidha C represents a sort of the aforementioned vernacular, autochthonous development towards complexity. If so, the relation to the Basta House horizon needs to be explained since in spite of both using the principles of right angles and internal differentiation, there are still substantial differences between the organization of Beidha C and the LPPNB mega-site indoor and outdoor settlement organization.

Though not fully convincing, these were the arguments for one of the hypotheses put forward during our discussions of the origins of the Basta House complexity as the result of an autochthonous development. In the absence of conclusive evidence, however, the hypothesis of an arriving socio-economic paradigm from the N was retained, requiring multi-roomed ground plans (Gebel 2004c), and that it “absorbed” the earliest rectangular building tradition (corridor buildings, Beidha C) in the area.

No arguments can be made for either hypothesis by comparing the building technology through the periods, as there are fundamental differences in the construction of round and rectangular houses, almost demanding to see them as two separate evolutionary stages.

The MPPNB wall constructions from Beidha and Shkarat Msaied were erected around a wooden scaffold. The wooden posts were inserted in perpendicular wall channels in the interior face of the walls. Most round and oval buildings in Beidha B of MPPNB date could be shown to have been semi-subterranean (Byrd 2005: 97). Stone walls standing up to 1.80m were recorded for Middle PPNB Shkarat Msaied (Kinzel 2004, Jensen *et al.* 2005), founded on big limestone boulders. The walls were leaning against the wooden scaffold and it seems that the diameter of the walls is increasing from the top to the bottom. The MPPNB houses of Shkarat Msaied were placed on terraces cut into the sloping surface of the site.

Especially the erection of walls with slanting sides points to a technique employed by experienced traditional construction workers with their tendency of increasing the security standards many times beyond static necessities. Nevertheless, at least some of the workers must have been specialists in the buildings trade. As later on, modifications and alterations of ground plans, often connected with renovation activities (Banning and Byrd 1987; Gebel 2004b) were probably done by the occupants themselves, as well as the maintenance of the wall plaster, roof and ceiling constructions and floors.

The LPPNB architecture of the Greater Petra Area differed in many ways. The walls were constructed using selected straight sided stones, sometimes even dressed to ashlar shapes. The double-faced walls consisted of stretcher courses only; headers and bond courses were rare. Different from the MPPNB walls, walls of the Basta Houses retained their width from bottom to top and were of such a thinness that allowed for almost no safety margin. They were found to be preserved to a height of up to 3.5 meters.

Houses were founded on terraces built out of the slope. The layout and size of the houses had to be predefined in order to erect the system of terraces accordingly. Some of those people involved certainly were specialized craftsmen with enough building experience to plan and to supervise the building processes. Short of calling them architects we consider them being on a higher level of planning and building competence. Though there are no apparent differences in the quality of the building technique we may assume that in addition to the specialists the owners took part in the building process.

Despite a significant change in building competence as well as in the details of the building process itself, we nevertheless find no answer to the question of local continuity or the latter stage being influenced from outside. This is even more the case since we may think of a possible candidate for the origin of such influence but we can not name any area whose architecture would resemble that of Basta and could have served as example.

4.5.2 “Mega-Site” Architecture

Basta’s place in the LPPNB mega-site architecture of the eastern Rift Valley is unique and characteristic at the same time. The site is unique in the sense that it is a good example for the local LPPNB architectural diversity, and it is characteristic as it shows all the general features of the LPPNB mega-site architecture.

So far, in addition to Basta eleven other mega-sites or sites related to the Jordanian mega-site phenomenon are known: ‘Ain Jammam, al-Baseet, Ba‘ja, Wadi Fidan A and C, Khirbet Hammam, al-Hammeh, es-Sifiya, ‘Ain Ghazal, Wadi Shu‘eib, and LPPNB Jericho. Recent investigations at Abu Suwwan (al-Nahar 2006) seem to indicate that the northern extension of the Jordanian LPPNB mega-site phenomenon could be extended to the Jerash region. None of these sites, however, show the same combination of architectural features we have in Basta, as they all seem to be slightly different in their details of planning, substructures and slope adjustment strategies, building layouts and especially in their architectural morphodynamics. Unfortunately, intersite comparison is hampered by the limited information available, and many of the following statements are based on personal observations by repeated visits to the sites.

If we want to compare Basta with other sites, we have to consider the specifics of mega-site complexity in architectural morphodynamics and their relation to slope inclinations. Architectural morphodynamics are defined as the sequence of structural events taking place within a site’s cultural and natural life, and mega-site morphodynamics are characterized by

- specific slope adjustment strategies
- their potential for functional ground plan modification by wall openings, wall and buttress insertions
- the option of vertical wall extension (raising floor structures: Gebel 2006) combined with filling rooms and insertion/ prolongation of stairs

- missing open spaces between buildings
- and by an excellent wall preservation due to erosional events which would fully fill and cover the building remains within a short space of time

Very basic comparative observations can to be made for Basta on the architectural "alteration rate" and the optional use of the vertical space (second storey use), or between shallow and steep-slope LPPNB architecture in general. Steep-slope architectures of sites like ʻAin Jammam, Baʻja, and Ghwair show a high rate of maintenance, ground plan modification and alteration or use of the vertical dimension (Gebel 2006), while shallow-slope architecture like in Basta, Khirbet Hammam, es-Sifiya (partial), and ʻAin Ghazal show less of these alterations. However, among all the sites, Basta shows the least evidence for ground plan modifications and for the use of the vertical space. In particular, the question of Basta having two-storied architecture (*cf.* Nissen, this volume) has to be answered negatively, if the archeological evidence is interpreted conservatively. There is potential and isolated evidence for second storeys in Basta, like the re-fitted strengthening buttresses and Wall [10] in Building I,1 or the findings in Room BVIII,2, but these do not stand up to the strict catalogue of criteria and definitions for mega-site two-storied buildings (Gebel 2006). It is the opinion of two of the authors (H.G.K.G., M.K.) that Basta had houses or house parts which were two-storied, that it was a kind of architecture with a two-storied option. But different from the steep-slope LPPNB architecture, where restricted space and topographical constraints caused a steady vertical extension of the settlement and thus a higher wall preservation, the open land and shallow-slope architecture of Basta remained rather stable and free from the need of modifications. The general preservation of wall heights at Basta, however, is just below the heights were we can expect the firm evidence of second storeys.

As is true for all the other sites, the domestic nature of the architecture in Basta prevails, this goes along with the many intra-mural inhumations found in connection with many building units. Evidence of possible non-domestic structures in Basta Area A (Room 16) matches such evidence from ʻAin Ghazal and es-Sifiya, although these findings are of a different nature and also not clear as to their function.

The most characteristic feature, however, at least in the Southern Jordanian LPPNB architectural contexts, is the house type of Building I first encountered at Basta (the so-called Basta House), consisting of large, central spaces surrounded by rows of smaller rooms. The regular and rectangular layout of these houses in Basta was not affected by the topographic constraints of differently steep slopes, and was much helped by the regular building terraces. The latter were observed as well in ʻAin Jammam, es-Sifiya, Khirbet Hammam, Ghwair I, and al-Baseet. In cases when for unknown reasons the initial step of terrace construction was not employed as in parts of ʻAin Jammam and Ghwair I, and all of Baʻja, the ground plan of the Basta House was adapted to the topography by a reduced number of rooms, the use of split levels and polygonal room layouts. In these cases, the buildings rest on a complex system of various levels and have a considerable evidence of staircases and indications for roofments or upper storeys.

The available information on settlement sizes, shifts of residential quarters, open spaces and settlement fringes does not allow detailed comparisons. The idea of living quarters growing closer to each other and slowly "swallowing up" the open space between the "settled islands" of a settlement rather than a progressive exploitation of the building land from one spot dominates our understanding of mega-site developments. However, no LPPNB settlements in S Jordan have been excavated on a sufficient scale, nor were open spaces found which could qualify as areas separating such living quarters.

4.5.3 Recent and Sub-Recent Comparisons

The buildings of LPPNB Basta erected on artificial terraces without any apparent openings to the outside show the characteristics of traditional architecture in semiarid mountain areas. In these aspects they belong to the same building type as the traditional vernacular architecture in the same climatic and topographical settings along the 30th degree of latitude (Adam 1981). The way of constructing a traditional house of the Greater Petra area is in several points similar to Neolithic technology. Thus traditional architecture could help us in our understanding of some Neolithic features. However, there are differences. Especially the layout of the traditional villages is different from the LPPNB villages. While in traditional villages the houses were build in lines following a communication way or the slope line, the houses of LPPNB Basta were organized in clusters, sitting on artificial terraces which in most cases were just large enough to accommodate one house. Nothing of that sort can be observed in recent traditional villages.

Although the building technology of recent architecture in several aspects resembles the Neolithic way of building, there are significant differences. In most cases the Neolithic masons carefully selected their building material even to the extent that they tried to form courses of equal height. Recent architecture takes its stone material "out of the Wadi" and is generally less regular than the LPPNB stones. In contrast to the Neolithic houses, recent and sub-recent traditional houses have no plaster floors. Different from the Neolithic Basta House with its central hall bordered by rows of small spaces the traditional house consists of long rooms structured by arches. These rooms had some compartments with low walls for storage facilities and other purposes (Khammash 1986).

One of the most conspicuous differences is the way access is gained to the houses. In contrast to the LPPNB buildings with their entrance from the roof, the recent vernacular buildings are accessible directly from the streets or alleys through doors. Villages like recent Rajif in Southern Jordan are in principal horizontally organized and have flat roofs. One point where modern traditional architecture helps us in the reconstruction of the Neolithic houses is the construction of the roofs, as has been mentioned before. But modern examples may also give us some hints when it comes to the use of the roofs. Of course, there are differences according to the setting of the site, especially in regard to the relief of the slope, but principally the way of use is the same, in being regarded as additional space for all kinds of activities. We even find parallels for erection of houses in clusters. Thus for instance, in East Afghanistan the roofs serve as building ground for the next house (Wutt 1981) as also known from the *pueblo* architecture (Sculy and Current 1971). This incidentally is helpful for the evaluation of the roof system in Basta: because there the gradient of the slope is much less steep than in the examples cited it is highly unlikely that normally the roof of a house would be used by the owner of the house on the next level. Rather it should be assumed that roofs were used by the inhabitants of the house they belong to. This resembles the situation in most traditional villages in Southern Jordan like recent Rajif which show a roof landscape more similar to the one of LPPNB Basta. There are only "small" steps from one roof to the other following the topography of the slope. As a reason for clustered villages we can assume on the one hand a wish to minimize the wind and rain intensity and on the other hand a desire for security (Yousef 1987). Obviously, the site topography – primarily the gradient of the slope – is an important factor for layout and organization of the ground plans and the terracing.

In spite of differences, study of recent and sub-recent traditional architecture allows us to recognize the complexity of building events and the complexity of dilapidation and erosion processes. At the same time, however, we have to be aware of the dangers involved, in particular when it comes to comparing the socio-economic realities behind these forms of architecture.

Bibliography

Note: This bibliography serves also the purpose to present all publications on Basta through 2006; not all of the following entries are referred to in the text.

Adam J.
1981 *Wohn- und Siedlungsformen im Süden Marokkos*. München.

Affonso M. Thais Crepaldi and E. Pernicka
2004 Mineralogical analysis of Late PPNB rings. In: H.J. Nissen, M. Muheisen, and H.G.K. Gebel (eds.), *Basta* I. *The Human Ecology*: 155-168. Berlin, ex oriente.

'Amr K.
2004 A note on the discoveries at al-Baseet during the implementation of the Wadi Musa Water Supply and Waste Water Project. In: H.D. Bienert, H.G.K. Gebel, and R. Neef (eds.), *Central Settlements in Neolithic Jordan*. Studies in Early Near Eastern Production, Subsistence, and Environment 5: 65-70. Berlin, ex oriente.

Aurenche O.
1981 *La Maison orientale, L'architecture du proche orient ancien des origines au milieu du quatrieme millenaire*. Paris, Librairie orientaliste Paul Geuthner S.A.

Banning E. and B. Byrd
1987 Houses and changing residential unit: domestic architecture at PPNB 'Ain Ghazal, Jordan. *Proceedings of the Prehistoric Society* 53: 309-325.

Bar-Matthews M.A., Ayalon A. and Kaufman A.
1997 Late Quaternary paleoclimate in the Eastern Mediterranean region from stable isotope analysis of speleothems at Soreq Cave, Israel. *Quaternary Research* 47/2: 155-168.

Bar-Matthews M.A., Ayalon A., Kaufman A., Wasserburg G.J.
1999 The Eastern Mediterranean palaeoclimate as a reflection of regional events: Soreq Cave, Israel. *Earth and Planetary Science Letters* 166/1-2: 85-95

Bar-Matthews M.A., Ayalon A., Gilmour M., Matthews A., Hawkesworth C.J.
2003 Sea-land oxygen isotopic relationships from planktonic foraminifera and speleothems in the Eastern Mediterranean region and their implication for paleorainfall during interglacial intervals. *Geochimica et Cosmochimica Acta* 67/17: 3181-3199.

Baruch U.
1994 The late Quaternary pollen record of the Near East. In: Bar-Yosef O. and Kra R.S. (eds.), *Late Quaternary Chronology and Palaeoclimates of the Eastern Mediterranean*: 103-120. Tucson, Radiocarbon.

Becker C.
1987 Faunal remains. In: H.J. Nissen *et al.* Report on the first two seasons of excavations at Basta. *Annual of the Department of Antiquities of Jordan* 31: 115-117.
1991 The analysis of mammalian bones from Basta, a Pre-Pottery Neolithic Site in Jordan: problems and potential. *Paléorient* 17.1: 59-75.
1998 The role of hunting in Pre-Pottery Neolithic pastoralism and its ecological implications: the Basta example (Jordan). *Anthropozoologica* 27: 67-78.
1999 Early domestication in the Southern Levant as viewed from Late PPNB Basta. In: L.K. Horwitz, E. Tchernov, P. Ducos, C. Becker, A. von den Driesch, I. Marzin, and A.N. Garrard, Animal domestication in the Southern Levant. *Paléorient* 25.2: 70-72.

2000 Bone and species distribution in Late PPNB Basta (Jordan) – rethinking the anthropogenic factor. In: M. Mashkour, A. Choyke, H. Buitenhuis, and F. Poplin (eds.), *Archaeozoology of the Near East* IV/A. *Proceedings of the 4th International Symposium on the Archaeozoology of Southwestern Asia and Adjacent Areas*: 196-207. Paris.
2002 Nothing to do with indigenous domestication? Cattle from Late PPNB Basta. In: H. Buitenhuis, A.M. Choyke, M. Mashkour, and A.H. al-Shiyab (eds.), *Archaeozoology of the Near East* V. Proceedings of the 5th Intern. Symposium on the Archaeozoology of Southwestern Asia and Adjacent Areas, Groningen 8: 112-137.
2004 On the identification of sheep and goats: the evidence from Basta. In: H.J. Nissen, M. Muheisen, and H.G.K. Gebel (eds.), *Basta* I. *The Human Ecology*: 219-310. Berlin, ex oriente.

in press Fire-damaged bone artefacts and a vessel: a remarkable marriage. In: J. Schibler (ed.), *Bone Antler and Teeth. Raw Materials for Tools from Archaeological Contexts*. Proceedings of the 3rd Meeting of the ICAZ Worked Bone Research Group, Basel 2001.

Berner M. and M. Schultz
2004 Demographic and taphonomic aspects of the skeletons from the Late Pre-Pottery Neolithic B population of Basta (Jordan). In: H.D. Bienert, H.G.K. Gebel, and R. Neef (eds.), *Central Settlements in Neolithic Jordan*. Studies in Early Near Eastern Production, Subsistence, and Environment 5: 241-258. Berlin, ex oriente.

Bienert H.D. and H.G.K. Gebel
1998 Archaeological excavations at Late PPNB Ba'ja. Preliminary report on the 1997 Season. *Annual of the Department of Antiquities* 42: 75-90.

Bienert H.D. and H.M. Mahasneh
1998 es-Sifiya, eine Siedlung des frühen Neolithikums in Südjordanien. In: H. Hübner and A. Knauf (eds.), *Nach Petra und ins Königreich der Nabatäer*. Bonner Biblische Beiträge (Festschrift Manfred Lindner) 118: 9-21. Bodenheim, Philo.

Bienert H.D., H.G.K. Gebel, and R. Neef (eds.)
2004 *Central Settlements in Neolithic Jordan*. Studies in Early Near Eastern Production, Subsistence, and Environment 5. Berlin, ex oriente.

Bienert H.D., M. Bonogofsky, H.G.K. Gebel, I. Kuijt, and G.O. Rollefon
2004 Where are the dead? In: H.D. Bienert, H.G.K. Gebel, and R. Neef (eds.), *Central Settlements in Neolithic Jordan*. Studies in Early Near Eastern Production, Subsistence, and Environment 5: 157-176. Berlin, ex oriente.

Bisheh G.
1972 *Report About a Survey in the Ma'an District (Petra-Area, Wadi Rum, Shobak, Aqaba), 25th September - 8th October 1972*. Amman, Department of Antiquities: Open File Report.

Bisheh G. *et al.*
1993 The Cultural Resources Management Project in Jordan: archaeological rescue survey of the Ras an-Naqab-Aqaba Highway Alignment 1992. *Annual of the Department of Antiquities of Jordan* 37: 119-134.

Braidwood R.J.
1957 Jericho and its setting in Near Eastern history. *Antiquity* 31:73-80.

Byrd B.F.
2005 *Early Village Life at Beidha, Jordan: Neolithic Spatial Organization and Vernacular Architecture. The Excavations of Mrs. Diana Kirkbride-Helbaek*. Beidha Excavations 2. British Academy Monographs in Archaeology 154. Council for British Research in the Levant. Oxford, Oxford University Press.

Dennis S.
2003 The experimental reconstruction of a Pre-Pottery Neolithic B structure at Beidha. *Levant* 35: 39-48.
2004 PhD Dissertation Project: The Use of Experimental Archaeology to Explain and Present Pre-Pottery Neolithic Architecture at Beidha in Southern Jordan. *Neo-Lithics* 2/03: 37-38.

Dennis S. and B. Finlayson
2005 Comments on “Some Notes on the Reconstruction of PPNB Architecture” by Moritz Kinzel (Neo-Lithics 2/04). *Neo-Lithics* 1/05: 30-31.

Gebel H.G.
1984 *Das Akeramische Neolithikum Vorderasiens. Subsistenzformen und Siedlungsweisen. Tabellarische Material- und Befundpräsentation zu Fundorten des Protoneolithikums und des Akeramischen Neolithikums*. Beihefte des Tübinger Atlas des Vorderen Orients B 52. Wiesbaden, Ludwig Reichert.
1986 Die Jungsteinzeit im Petra-Gebiet. In: M. Lindner (ed.), Petra. Neue Ausgrabungen und Entdeckungen: 273-308. München, Delp.
1988 Late Epipalaeolithic-Aceramic Neolithic sites in the Petra-Area. In: A.N. Garrard and H.G. Gebel (eds.), *The Prehistory of Jordan. The State of Research in 1986*. British Archaeological Reports- Intern. Series 396.1: 67-100. Oxford, B.A.R.
1990 *Vorderer Orient. Neolithikum. Beispiele zur Fundortökologie. Petra- Region. Middle East. Neolithic. Examples of the Ecological Setting of Sites. Petra Region*. Tübinger Atlas des Vorderen Orients Map B I 15.1. Wiesbaden, Ludwig Reichert.
1992a *Neolithic ‘Ain Jammam Near Ras an-Naqab: Observations on the Site Preservation Since 1986 and the Field Operation in September 1992*. Unpublished report submitted to the Department of Antiquities of Jordan, Amman.
1992b Territories and palaeoenvironment: locational analysis of Neolithic site setting in the Greater Petra area, Southern Jordan. In: S. Kerner (ed.), *The Near East in Antiquity. German Contributions to the Archaeology of Jordan, Syria, Lebanon and Egypt* 3: 85-96. Amman, al- Khubta Publishers.
1996 Chipped Lithics in the Basta Craft System. In: S.K. Kozlowski and H.G.K. Gebel (eds.), *Neolithic Chipped Stone Industries in the Fertile Crescent, and Their Contemporaries in Adjacent Areas.* Studies in Early Near Eastern Subsistence, Production, and Environment 3: 261-270. Berlin, ex oriente.
1998 Die Petra-Region im 7. Jt. vor Chr. Betrachtungen zu Ausbildung und Auflösung einer frühneolithischen Siedlungskammer. In: H. Hübner and A. Knauf (eds.), *Nach Petra und ins Königreich der Nabatäer*. Bonner Biblische Beiträge 118 (Festschrift Manfred Lindner): 1-8. Bodenheim, Philo.
2001 Frühseßhafte verborgen in Felsen. Ba‘ja in Süd-Jordanien stellt der Jungsteinzeitforschung neuartige Fragen. *Antike Welt* 32/3: 275-283.
2002a The Neolithic of the Near East. An essay on a polycentric process and other research problems. In: A. Hausleiter, S. Kerner, and B. Müller-Neuhof (eds.), *Material Culture and Mental Spheres*. Internationales Symposium für Hans J. Nissen. Alter Orient und Altes Testament 293: 313-324. Münster, Ugarit-Verlag.
2002b *Subsistenzformen, Siedlungsweisen und Prozesse des sozialen Wandels vom akeramischen bis zum keramischen Neolithikum, II: Grundzüge sozialen Wandels im Neolithikum der südlichen Levante*. http://www.freidok.uni-freiburg.de/volltexte/466. Freiburg, Universiätsbibliothek.
2004a Present-day site setting and physiographic units. In: H.J. Nissen, M. Muheisen and H.G.K. Gebel (eds.), *Basta* I. *The Human Ecology*: 35-52. Berlin, ex oriente.
2004b Site preservation and site formation processes. In: H.J. Nissen, M. Muheisen and H.G.K. Gebel (eds.), *Basta* I. *The Human Ecology*: 95-116. Berlin, ex oriente.
2004c Central to what? Remarks on the settlement patterns of the LPPNB mega-sites in Jordan. In: H.D. Bienert, H.G.K. Gebel, and R. Neef (eds.), *Central Settlements in Neolithic Jordan*. Studies in Early Near Eastern Production, Subsistence and Environment 5: 1-20. Berlin, ex oriente.
2004d Die Jungsteinzeit Jordaniens- Leben, Arbeiten und Sterben am Beginn seßhaften Lebens. In: *Gesichter des Orients. 10000 Jahre Kunst und Kultur aus Jordanien:* 46-56. Mainz: Phillip von Zabern
2006 The domestication of vertical space: the case of steep-slope LPPNB architecture in Southern Jordan. In: E.B. Banning and M. Chazan (eds.), *Domesticating Space: Construction, Community, and Cosmology in the Late Prehistoric Near East*. Studies in Early Near Eastern Production, Subsistence, and Environment 12: 65-74. Berlin, ex oriente.

Gebel H.G.K. and H.D. Bienert, with contributions by T. Krämer, R. Neef, B. Müller-Neuhof, J. Timm, and K.I. Wright
1997 Ba‘ja hidden in the Petra Mountains. Preliminary results of the 1997 investigations. In: H.G.K. Gebel, Z. Kafafi and G.O. Rollefson (eds.), *The Prehistory of Jordan*, II. *Perspectives from 1997*. Studies in Early Near Eastern Production, Subsistence, and Environment 4: 221-262. Berlin, ex oriente.

Gebel H.G., F. Hahme, B. Dahl Hermansen, and N. Qadi.
1994 Brotbacken in Basta. *Das Altertum* 39: 301-316.

Gebel H.G.K. and B. Dahl Hermansen
1999a A third little head from LPPNB Basta, Southern Jordan. *Neo-Lithics* 2/99: 11-12. Berlin, ex oriente.
1999b The Ba'ja Neolithic Project 1999: short report on architectural findings. *Neo-Lithics* 3/99: 18-21. Berlin, ex oriente.
2000 The 2000 Season at Late PPN Ba'ja. *Neo-Lithics* 2-3/00: 22-24. Berlin, ex oriente.
2001 LPPNB Ba'ja 2001. A short note. *Neo-Lithics* 2/01:15-20. Berlin, ex oriente.
2004 Ba'ja 2003. Summary on the 5th Season of excavation. *Neo-Lithics* 2/04: 15-18. Berlin, ex oriente.

Gebel H.G.K., B. Dahl Hermansen, and M. Kinzel
2006 Ba'ja 2005. A two-storied building and collective burials. Results of the 6th season of excavation. *Neo-Lithics* 1/06. Berlin, ex oriente. (in press)

Gebel H.G., Z. Kafafi, and G.O. Rollefson (eds.),
1997 *The Prehistory of Jordan*, II. *Perspectives from 1997*. Studies in Early Near Eastern Production, Subsistence, and Environment 4. Berlin, ex oriente.

Gebel H.G., M. Muheisen, and H. J. Nissen, with contributions by N. Qadi and J.M. Starck.
1988 Preliminary report on the first season of excavations at the Late Aceramic Neolithic site of Basta. In: A.N. Garrard and H.G. Gebel (eds.), *The Prehistory of Jordan. The State of Research in 1986.* British Archaeological Reports - Intern. Series 396.1: 101-134. Oxford, B.A.R.

Gebel H.G. and M. Muheisen.
1997 "Basta". In: E.M. Meyers (ed.), *The Encyclopedia of Near Eastern Archaeology* 1: 279-80. New York, Oxford University Press.

Gebel H.G.K., Muheisen M., Nissen H.J., Qadi N., with contributions by C. Becker, B. Dahl Hermansen, R. Neef, R. M. Shafiq, and M. Schultz
2004 Late PPNB Basta: Results of 1992. In: H.D. Bienert, H.G.K. Gebel, and R. Neef (eds.), *Central Settlements in Neolithic Jordan.* Studies in Early Near Eastern Production, Subsistence and Environment 5: 71-104. Berlin, ex oriente.

Gebel H.G. and J.M. Starck.
1985 Investigations into the stone age of the Petra area (Early Holocene research). A preliminary report on the 1984 campaigns. *Annual of the Department of Antiquities of Jordan* 29: 89-114.

Goldberg P.
1994 Interpreting Late Quaternary continental sequences in Israel. In: Bar-Yosef O. and Kra R.S. (eds.), *Late Quaternary Chronology and Palaeoclimates of the Eastern Mediterranean*: 89-102. Tucson, Radiocarbon.

Glueck N.
1934-35 Explorations in Eastern Palestine, II. *Annual of the American School of Oriental Research* 15.

Hauptmann A.
2004 "Greenstones" from Basta. Their mineralogical composition and possible provenance. In: H.J. Nissen, M. Muheisen, and H.G.K. Gebel (eds.), *Basta* I. *The Human Ecology*: 169-176. Berlin, ex oriente.

Hermansen B. Dahl
1997 Art and ritual behavior in Neolithic Basta. In: H.G.K. Gebel, Z. Kafafi, and G.O. Rollefson (eds.), *The Prehistory of Jordan*, II. *Perspectives from 1997*. Studies in Early Near Eastern Production, Subsistence, and Environment 4: 333-343. Berlin, ex oriente.
2004 Raw Materials of the small finds industries. In: H.J. Nissen, M. Muheisen, and H.G.K. Gebel (eds.), *Basta* I. *The Human Ecology*: 117-126. Berlin, ex oriente.

Hermansen B. Dahl and H.G.K. Gebel
2004 Towards a framework for studying the Basta industries. In: H.J. Nissen, M. Muheisen, and H.G.K. Gebel (eds.), *Basta* I. *The Human Ecology*: 175-186. Berlin, ex oriente.

Hermansen B. Dahl, I. Thuesen, C. Hoffmann Jensen, M. Kinzel, M. Bille Petersen, M.L. Jørkov, N. Lynnerup
2006 Shkarat Msaied: The 2005 Season of excavations. A short preliminary report *Neo-Lithics* 1/06. Berlin, ex oriente.

Jensen C.H., B. Dahl Hermansen, M. Kinzel, M.M. Hald, P. Bangsgaard, M. Bille Petersen, N. Lynnerup, and I. Thuesen
n.d. The excavations at Shkarat Msaied, 1999-2004. *Annual of the Department of Antiquities of Jordan* 49, 2005. (in prep.)

Johnson G.A.
1982 Organizational structure and scalar stress. In: C. Renfrew (ed.), *Theory and Explanation in Archaeology*: 389-421. New York.

Kaliszan L. Rehhoff
1993 *The Relationship Between Society and Technology in the Ancient Near East. An Analysis of the Mutual Interdependence Between Technological Developments and Changes in Social and Societal Structure. The Development of Technology and its Relation to the PPNB Period in the Southern Levant*. Copenhagen University, Carsten Niebuhr Institute: unpub. MA Thesis.
1998 *Technological Development in Neolithic Plaster Production. An Archaeometric Study of Plaster Materials in PPN Southern Levant.* Part I. *Synthesis*. Part II: *Manuscripts and Appendices.* Copenhagen University, Carsten Niebuhr Institute: unpub. PhD Dissertation.

Kammash A.
1986 *Notes on village architecture in Jordan*. Lafayette/ Louisiana

Kamp U.
1992 *Geomorphologische und geochemische Untersuchungen im Rahmen des Basta Joint Archaeological Project in Süd-Jordanien*. Berlin, Free University: unpub. diploma thesis.
2004 Geomorphological site setting and geochemical results. In: H.J. Nissen, M. Muheisen, and H.G.K. Gebel (eds.), *Basta* I. *The Human Ecology*: 53-94. Berlin, ex oriente.

Karasneh W.
1989 *Bone Artifacts from Basta*. Irbid, Yarmouk University: unpub.M.A. thesis. (in Arabic)

Kenyon K.M.
1953 Mankind's earliest walled town. *Illustrated London News* 17.10.1953: 603-604.
1954 Excavations at Jericho, 1954. *Palestine Exploration Quarterly* 86: 45-84
1956 Jericho and its setting in Near Eastern history. *Antiquity* 30: 184-196.

Kinzel M.
2003 *Basta, Südjordanien. Überlegungen zur Rekonstruktion von Area B (7000 BC) nach bauarchäologischen Befunden*. Berlin, Technische Universität: unpub. Abschlußarbeit Aufbaustudium Denkmalpflege.
2004 Some notes on the reconstruction of PPNB architecture. *Neo-Lithics* 2/04: 18-22.
2005 Stein auf Stein. Frühjungsteinzeitliches Bauen in Südjordanien. *AIV Forum* 1/2005: 55-59. Berlin.

Kirkbride D.
1959 Short note on some hitherto unrecorded prehistortic sites in Transjordan. *Palestine Exploration Quarterly* 98: 8-72.
1968 Beidha: an interim report. *Palestine Exploration Quarterly* 100: 90-96

Kuijt I.
2000 People and space in early agricultural villages: exploring daily lives, community size, and architecture in the Late Pre-Pottery Neolithic. *Journal of Anthropological Archaeology* 19: 75-102.

Lindner M.
1973 Eine archäologische Expedition nach Jordanien (1973). *Jahresmitteilungen der Naturhistorischen Gesellschaft Nürnberg 1973*: 20-42.

Mahasneh H.M.
1997 A Pre-Pottery Neolithic B site in the Wadi el-Mujib. In H.G.K. Gebel, Z. Kafafi, and G.O. Rollefson (eds.), *The Prehistory of Jordan*, II. *Perspectives from 1997.* Studies in Early Near Eastern Production, Subsistence, and Environment 4: 203-214. Berlin, ex oriente.

2001 The Neolithic burial practices in Wadi al-Mujib during the seventh millennium B.C. In: G. Bisheh (ed.), *Studies in the History and Archaeology of Jordan* 7: 121-141. Amman, Department of Antiquities of Jordan.
2004 Spatial and functional features of Area B in the Neolithic es-Sifiya, Jordan. In: H.D. Bienert, H.G.K. Gebel, and R. Neef (eds.), *Central Settlements in Neolithic Jordan.* Studies in Early Near Eastern Production, Subsistence and Environment 5. Berlin, ex oriente.

Mahasneh H.M. and H.G.K. Gebel
1999 Geometric objects from LPPNB es-Sifiya, Wadi Mujib, Jordan. *Paléorient* 24.2: 105-110.

McCartney C. and E. Peltenburg
2000 The colonization of Cyprus: questions of origins and isolation. *Neo-Lithics* 1/00: 8-11. Berlin, ex oriente.

Muheisen M., Qadi N, and H.G.K. Gebel
2004 Raw materials of the flint and ground stone industries. In: H.J. Nissen, M. Muheisen, and H.G.K. Gebel (eds.), *Basta* I. *The Human Ecology*: 29-154. Berlin, ex oriente.

al-Nahar M.
2006 The Neolithic site of Tell Abu es-Sawwan. Preliminary Report. *Neo-Lithics* 1/06. Berlin, ex oriente.

Neef R.
1997 Status and perspectives of archeobotanical research in Jordan. In: H.G.K. Gebel, Z. Kafafi, and G.O. Rollefson (eds.), *The Prehistory of Jordan,* II. *Perspectives from 1997*. Studies in Early Near Eastern Production, Subsistence, and Environment 4: 601-609. Berlin, ex oriente.
2004 Vegetation and Plant Husbandry. In: H.J. Nissen, M. Muheisen, and H.G.K. Gebel (eds.), *Basta I. The Human Ecology*: 187-218. Berlin, ex oriente.

Neuberger J.
1999 *Plastisch formbare Materialien und frühe Gefäßtechnologie in der südlichen Levante*. Berlin, Freie Universität: unpub. M.A.-Thesis. (to appear as: J. Neuberger, Technology of Containers, in: *Basta* VI.2. *The Mouldable Materials.)*

Nissen H.J.
1990 Basta: excavations of 1986-89. In: S. Kerner (ed.), *The Near East in Antiquity. German Contributions to the archaeology of Jordan, Syria, Lebanon and Egypt* 1: 87-94. Amman, al- Khubta Publishers.
1993 The PPNC, the Sheep, and the "hiatus palestinienne". *Paléorient* 19.1: 177-183.
2004 Proto-Urbanism: an early Neolithic feature?- *in lieu* of an introductory remark. In H.D. Bienert, H.G.K. Gebel, and R. Neef (eds.), *Central Settlements in Neolithic Jordan*. Studies in Early Near Eastern Production, Subsistence, and Environment 5: 41-44. Berlin, ex oriente.

Nissen H.J., M. Muheisen, H.G. Gebel, with contributions by C. Becker, R. Neef, H.J. Pachur, N. Qadi, and M. Schultz
1987 Report on the first two seasons of excavations at Basta. *Annual of the Department of Antiquities of Jordan* 31: 79-120.

Nissen H.J., M. Muheisen, H. G. Gebel with contributions by C. Becker, B. Dahl Hermansen, W. Karasneh, N. Qadi, M. Schultz, and A. Scherer
1991 Report on the excavations at Basta 1988. *Annual of the Department of Antiquities of Jordan* 35:13-40.

Nissen H.J., Muheisen M, and Gebel H.G.K.
2004 Editors' introduction. In: H.J. Nissen, M. Muheisen and H.G.K. Gebel (eds.), *Basta I. The Human Ecology*: 7-34. Berlin, ex oriente.

Peltenburg E.
n.d. Social space in early sedentary communities of Southwest Asia and Cyprus. In: E. Peltenburg and A. Wasse (eds.), *Neolithic Revolution. New Perspectives on Southwest Asia in the Light of Recent Discoveries on Cyprus*. Levant Supplementary Series 1. Oxford, Oxbow Books.

Peterson J.
2000 Test excavations at PPNB/PPNC Khirbet Hammam, Wadi el-Hasa, Jordan. *Neo-Lithics* 1/00: 2-4. Berlin, ex oriente.

Pike G. and A.C. Vroman
1974 *Anasazi, Ancient People of the Rock. The Monumental Remains of the Legendary American Indian Civilization.* New York, American West.

Pütt K.
2005 *Zelte, Kuppeln und Hallenhäuser- Wohnen und Bauen im ländlichen Syrien*. Petersberg, Michael Imhof.

Roehrer-Ertl O., K.W. Frey, and H. Newesely
1988 Preliminary note on the early Neolithic human remains from Basta and SabrA 1. In: A.N. Garrard and H.G. Gebel (eds.), *The Prehistory of Jordan. The State of Research in 1986*. British Archaeological Reports - Intern. Series 396: 135-136. Oxford, B.A.R.

Rollefson G.O.
1989 The Aceramic Neolithic of the Southern Levant: the view from 'Ain Ghazal. *Paléorient* 15.1: 135-140.
1992 Neolithic Settlement patterns in Northern Jordan and Palestine. In: S. Tell (ed.), *Studies in the History and Archaeology of Jordan* 4: 123-127. Amman, Department of Antiquities.
1996 An EPPNB settlement in Wadi el-Hasa, Central Jordan. In: S.K. Kozlowski and H.G.K. Gebel (eds), *Neolithic Chipped Stone Industries in the Fertile Crescent, and their Contemporaries in Adjacent Regions.* Studies in Early Near Eastern Production, Subsistence, and Environment 3: 159-160. Berlin, ex oriente.
1999 el-Hammeh: a Late PPNB-PPNC village in the Wadi el-Hasa, Southern Jordan. *Neo-Lithics* 2/99: 6-8. Berlin, ex oriente.
2001 Jordan in the seventh and sixth millennia BC. *Studies in the History and Archaeology of Jordan* 7: 95-100. Amman.

Rollefson G. and Kafafi Z.
1997 The 1996 Season at 'Ayn Ghazal: Preliminary Report. *Annual of the Department of Antiquities of Jordan* 41: 27-48.

Schirmer W.
1980 Zur neolithischen Architektur von Çayönü Tepes. Bericht über die 31. Tagung für Ausgrabungswissenschaft und Bauforschung (Berichte Koldewey-Gesellschaft). 1980 (1982): 9-14. Osnabrück.

Schmidt K.
2002 Göbekli Tepe -Southeastern Turkey. The seventh campaign 2001. *Neo-Lithics* 1/02: 23-25. Berlin, ex oriente.

Schultz M., M. Berner, and T.H. Schmidt-Schultz
2004 Preliminary results on morbidity and mortality in the Late PPNB population of Basta (Jordan). In: H.D. Bienert, H.G.K. Gebel, and R. Neef (eds.), *Central Settlements in Neolithic Jordan.* Studies in Early Near Eastern Production, Subsistence, and Environment 5: 259-270. Berlin, ex oriente.

Sculy V. and W. Current
1971 *Pueblo architecture of the Southwest.* Austin – London.

Simmons A.H. and M. Najjar
1999 Preliminary field report of the 1998-1999 excavations at Ghwair 1, a Pre-Pottery Neolithic B community in Wadi Feinan Region of Southern Jordan. *Neo-Lithics* 1/99: 4-6. Berlin, ex oriente.
2000 Preliminary report of the 1999-2000 excavation season at the Pre-Pottery Neolithic settlement of Ghwair 1, Southern Jordan. *Neo-Lithics* 1/00: 6-8. Berlin, ex oriente.

Suter K.
1964 Wohnhöhlen und Speicherburgen des tripolitarisch- tunesischen Berglandes. *Zeitschrift für Ethnologie* 89: 216-275.

Schyle D. and H.P. Uerpmann
1988 Palaeolithic sites in the Petra Area. In: A.N. Garrard and H.G. Gebel (eds.*), The Prehistory of Jordan. The State of Research in 1986.* British Archaeological Reports- Intern. Series 396.1: 39-65. Oxford, B.A.R.

Waheeb M.
1996 Archaeological excavations at Ras an-Naqab-Aqaba road alignment: preliminary report (1995*). Annual of the Department of Antiquities of Jordan* 40: 339-348.

Waheeb M. and N. Fino
1997 'Ain Jammam: a Neolithic site near Ras an-Naqab, Southern Jordan. In: H.G.K. Gebel, Z. Kafafi, and G.O. Rollefson (eds.), *The Prehistory of Jordan,* II. *Perspectives from 1997*. Studies in Early Near Eastern Production, Subsistence, and Environment 4: 215-219. Berlin, ex oriente.

Wutt K.
1981 *Pashai. Landschaft, Menschen, Architektur*. Graz.

Weninger B., E. Alram-Stern, E. Bauer, L. Clare, U. Danzeglocke, P. Jöris, C. Kubatzki, G.O. Rollefson, and H. Todorova
2005 Die Neolithisierung von Südosteuropa als Folge des abrupten Klimawandels um 8200 calBP. In: D. Gronenborn (ed.), *Klimaveränderung und Kulturwandel in neolithischen Gesellschaften Mitteleuropas 6700 v. Chr.* RGZM-Tagungen 1: 75-117.

Yousef S.
1987 *Ländliche Architektur in Jordanien*. Düsseldorf.

Plates

Photo Acknowledgements

Photos in the excavation were taken by:

Gerald Sperling: 1986, 1987, 1988, 1989 Seasons

Margret Nissen: 1987, 1988, 1989 Seasons

Hans Georg Gebel: 1992 Season

Yusuf Zu'bi took the winch photos in 1992.

The helicopter and Basta Old Village photos of 1988 were taken by Margret Nissen; the photos of the Dana and Rajif Villages were taken by Moritz Kinzel, as well as the later photos of Old Basta and of Ba'ja. The drawings on Plates 67-68 and 70-71 are by Moritz Kinzel.

Plate 1.A. Aerial photo of part of the modern village of Basta with the location of Areas A, B and C from SE. 1988.

Plate 1.B. Aerial photo of Area A from E.1988.

Plate 1.C. Aerial photo of Area Bfrom NE. 1988.

Plate 2.A. View into the building lot, subsequently Area A, before excavation, with part of the NE section. 1986.

Plate 2.B. View N over the northern part of Area A, at the end of the 1986 Season.

Plate 2.C. View SW over Wadi Basta, the southern part of Area A in lower right. 1986.

Plate 3.A. Area A. Walls, pits and the NE section at the end of the 1986 Season.

Plate 3.B. Area A. General View N at the end of the 1987 Season.

Plate 3.C. View W over the southern part of Area A, at the end of the 1986 Season. Right part of the first channel system discovered.

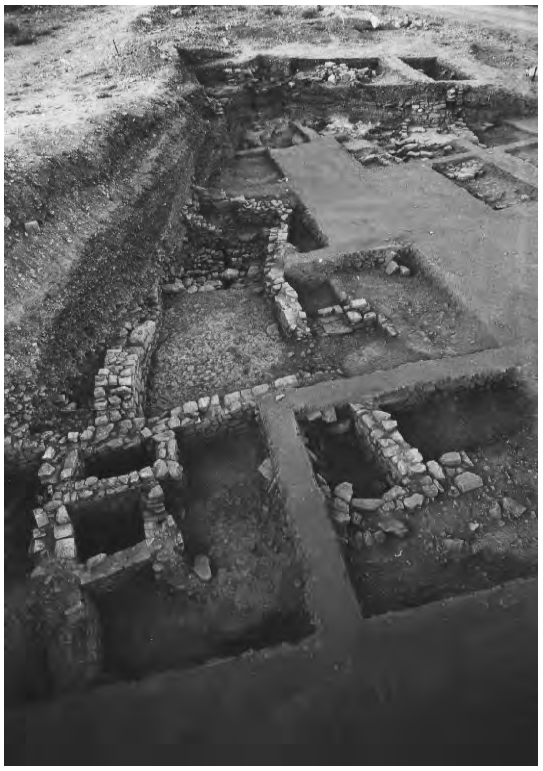


Plate 4.A. General View N of Area A, at the end of the 1986 Season.

Plate 4.B. Area A. View SW over the southern part. 1987.

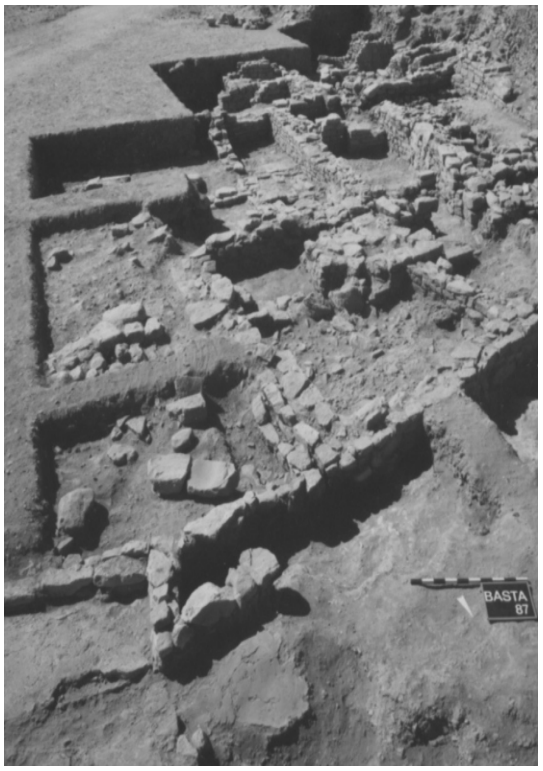


Plate 4.C. Area A. General View S at the end of the 1987 Season.

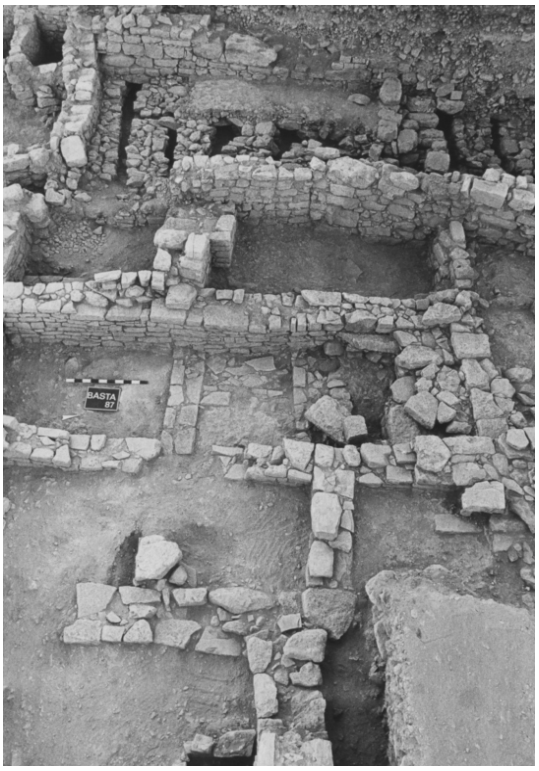


Plate 4.D. Area A. General View W over the central part of the excavation. In the background Room 10/16 with the channel system. 1987.

Plate 5.A. Area A. View N of Room 19. 1988.

Plate 5.B. Area A. General View N over the SE part of the excavated area. In the center Rooms 27b, 29 and 31 at the end of the 1988 Season.

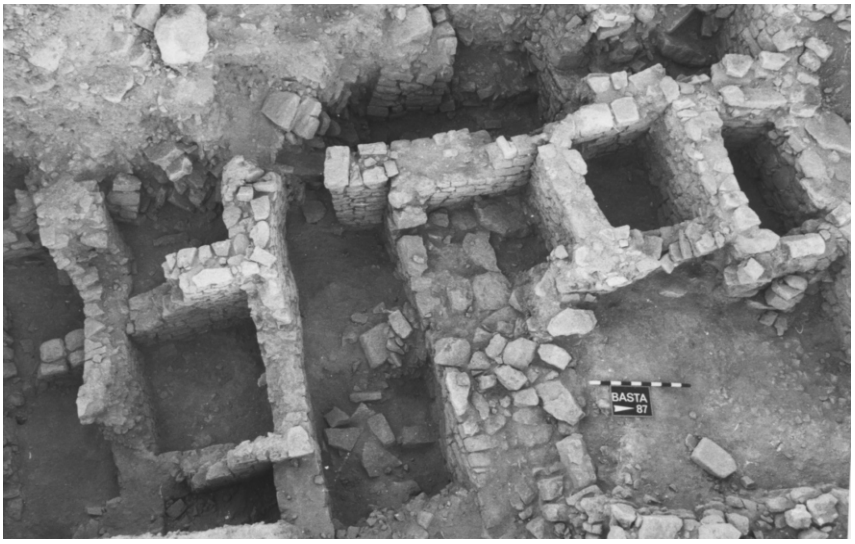


Plate 5.C. Area A. View W over the SW part of the excavation. 1987.

Plate 6.A. Area A, Square A 2. View W. Remains of a wall on the shoulder outside the bulldozer pit. 1986.

Plate 6.B. Area A, Square A 3. View W of Wall [3a]. 1987.

Plate 6.C. Area A, Square A 5. View E. Pit with rubble stones and flint debitage, after removal of the top soil. 1987.

Plate 7.A. Area A. View N over Rooms 32 and 31, before removing the covering slabs. 1988.

Plate 7.B. Area A, Square A 3. View N along Wall [3a]. 1987.

Plate 7.C. Area A, Squares A 9 and 13. View N. Rooms 20 and 19. In the center the razed walls of Phase A III. 1987.

Plate 7.D. Area A, Square A 12. View W over the southern part of Room 16 after the removal of the covering slabs. Plate 12.A is a close-up of the spot where the left channel disappears below Wall [2]. 1987.

Plate 8.A. Area A, Squares A 1-2. View W. Area of pits and building debris with burials. 1986.

Plate 8.B. Area A, Square A 5. View E as in Plate 6.C, after partial clearance of the pit. 1987.

Plate 8.C. Area A, Square A 5. View S. Area of pits and building debris. In the background Wall [4]. 1987.

Plate 9.A. Area A, Square A 6. View W. In front Wall [3a] in conjunction with Wall [3b] in the upper right corner. 1986.

Plate 9.B. Area A, Square A 6. View E. Circle of small rough edged stones, once exposed to high temperatures. 1986.

Plate 9.C. Area A, Square A 6. View E. In the center foreground a patch of a polished floor, probably of a storage bin. 1986.

Plate 10.A. Area A, Square A 7. View NE. Face of the Wall [3b] abutting to Wall [3a]. 1987.

Plate 10.B. Area A, Squares A 8-9. View NW. Walls [7]/[15] and [45]. In the lower left corner the beginning of the channel system below Room 10. 1987.

Plate 10.C. Area A, Square A 8. View W. On the right side Walls [7]/[15]; to the left the channel system beneath Room 10 with the covering slabs and leveling rubble still *in situ*. 1986.

Plate 11.A. Area A, Square A 8. View W. On the right side Walls [7]/[15]; to the left the channel system beneath Room 10 with the leveling rubble removed. 1986.

Plate 11.B. Area A, Square A 8. View W. On the right side Walls [7]/[15]; to the left the channel system beneath Room 10 with the covering slabs remarked. 1986.

Plate 11.C. Area A, Squares 9 and 13. View N. North end of Room 19. Below the large boulder in the center the walls of Phase A III. 1987.

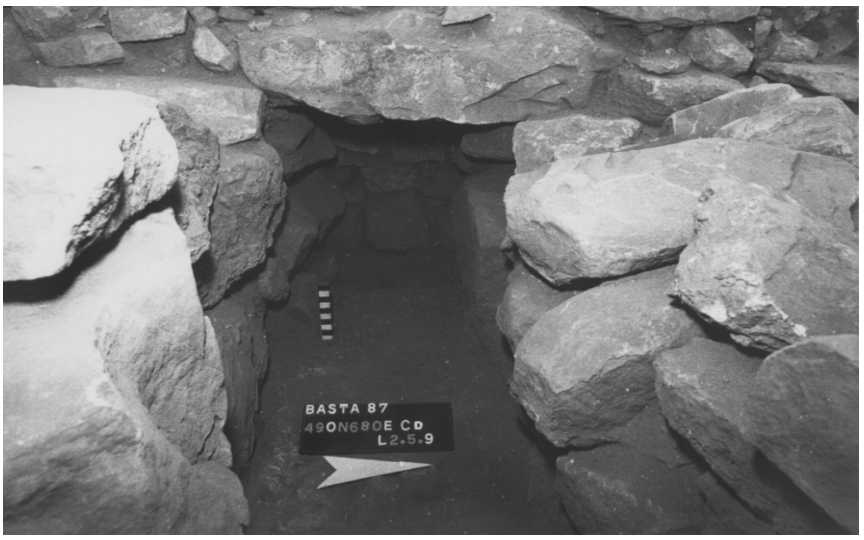


Plate 12.A. Area A, Square A 12. View W. Looking into the southernmost channel beneath Room 16, *cf.* Plate 7.D. 1987.

Plate 12.B. Area A, Squares A 12-13. View E. Successive stage of the excavation of Room 16: floors of packed earth. 1987.

Plate 12.C. Area A, Squares A 12-13. View E. Successive stage of the excavation of Room 16: layer of small rubble stones used to level off the uneven surface provided by the covering slabs. 1987.

Plate 13.A. Area A, Squares A 12-13. View E. Successive stage of the excavation of Room 16: layer of coarser stones between the covering slabs. 1987.

Plate 13.B. Area A, Squares A 12-13. View E. Successive stage of the excavationof Room 16: rows of slabs covering the channels. 1987.

Plate 13.C. Area A, Squares A 12-13. View E. Successive stage of the excavation of Room 16: slabs removed, displaying the channel system. 1987.

Plate 14.A. Area A, Square A 12. View W in Room 16. The floor package remaining intact. 1987.

Plate 14.B. Area A, Square A 12. View W over the same channels as presented in Plate 14.A: the mud floor removed, exposing the layer of rubble stones. 1987.

Plate 14.C. Area A, Square A 12. View W over the same channels as presented in Plate 14.A: exposing the covering slabs. 1987.

Plate 15.A. Area A, Square A 12. View W over the same channels as presented in Plate 14.A: after removal of the covering slabs. 1987.

Plate 15.B. Area A, Square A 13. View N into Room 18. The walls on floor level are those of Phase AIII. 1988.

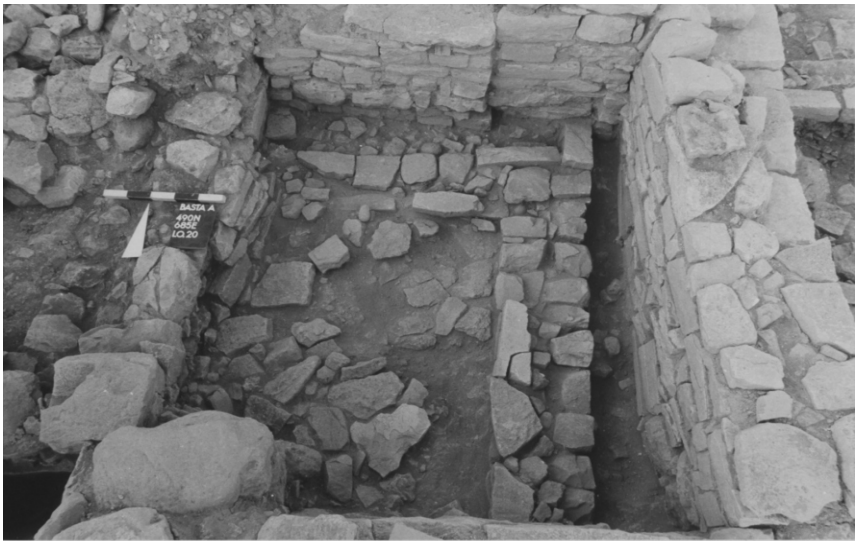


Plate 15.C. Area A, Square A 13. View S over Rooms 20 and 18 in the foreground, and 31 in the back. 1988.

Plate 16.A. Area A,
Squares A 12-13. View S in Room 16:
floor of packed earth. 1986.

Plate 16.B. Area A, Square A 14. View W. 1988.

Plate 16.C. Area A, Squares A 17/22.
View W over Room 28. 1987.

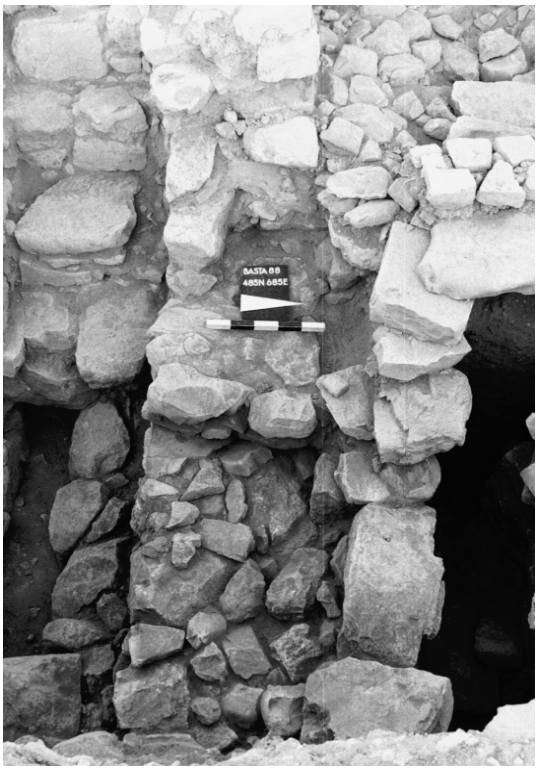


Plate 16.D. Area A, Square A 18. View W onto
Wall [6]. Left the staircase, right part of the first
channel after removing the covering slabs. 1988.

Plate 17.A. Area A, Square A 13. View W into Room 20. 1988.

Plate 17.B. Area A, Square A 13. View S into Room 18. In the upper part the cut off wall of Phase AIII appears embedded in the layer of rubble stones below the mud floor. 1987.

Plate 17.C. Area A, Square 13. View S into Room 17. Clearly visible in the upper left is the blocked doorway to Room 18. 1987.

Plate 18.A. Area A, Square A 13. View N over Rooms 20, 19 and 21. 1987.

Plate 18.B. Area A, Squares A 13-14. View N. Southern part of Room 21. Exposing some channels after removing the covering slabs. Particularly instructive is the situation in the upper left corner which shows Wall [29] of Phase AIII sitting directly on top of the channel system. 1988.

Plate 18.C. Area A, Square A 14. View N into Room 22. 1987.

Plate 19.A. Area A, Square A 14. View W over the installation leaning on Wall [3]. 1987.

Plate 19.B. Area A, Square A 17. View W over the rows of covering slabs below the floor of Room 27b. 1988.

Plate 19.C. Area A, Square A 17. View W over the floor of Room 27b onto the small Rooms 25a and 25 b. 1986.

Plate 20.A. Area A, Square A 18. View W over Room 31 in the center, and to the left showing the uppermost steps of the staircase between Walls [6] and [22].1988.

Plate 20.B. Area A. Square A 18. View W. In center staircase flanked by Walls [22] on the left, and [6]. 1988.

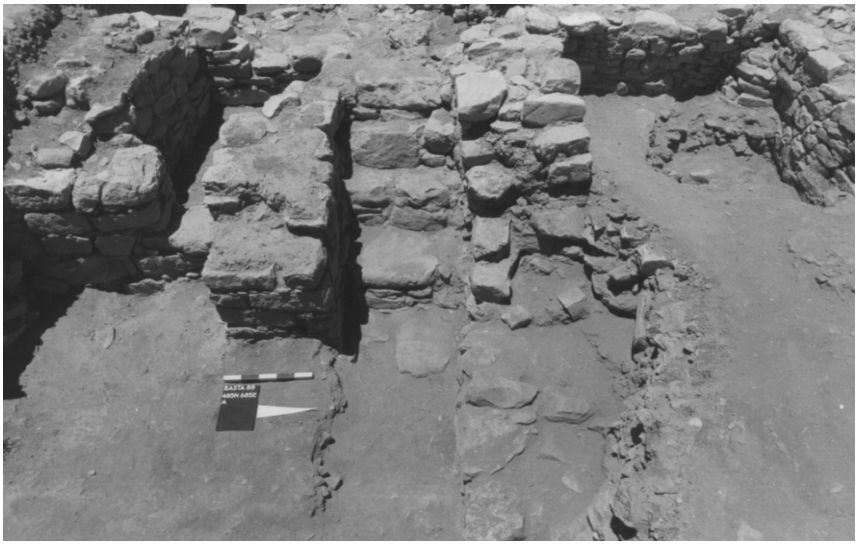


Plate 20.C. Area A, Square A 18. View over the same area as in Plate 20.A after removing the floor in Room 31, with the stones of the leveling layer, the first covering slabs, and Wall [50] of the Phase AIII appearing. 1988.

Plate 21.A. Area A, Square A 18. View N over Room 31, after exposing the covering slabs and Wall [50] of Phase AIII. In the upper left part the mess of stones which may indicate the old entrance into the sub-floor channel system. 1988.

Plate 21.B. Area A, Squares A 13/18. View W over the staircase, Room 31, and Rooms 20 and 18, from left to right. 1988.

Plate 21.C. Area A, Square A 18. View W over Room 32, showing the channels after removing the covering slabs, the staircase, and Wall [7] at the right side. 1988.

Plate 22.A. Area A, Square A 18. View W over parts of the Rooms 32 and 31, exposing the open channels, Walls [22] and [6] flanking the staircase. 1988.

Plate 22.B. Area A, Square A 18 and A 13. View W over Room 32 in the foreground, and over the entire slope adjusting channel system. 1988.

Plate 22.C. Area A, Square A 18. View N over Rooms 32 and 31 with the covering slabs *in situ*. 1988.

Plate 23.A. Area A, Square A 18. View W into Room 32 on the rows of covering slabs. 1988.

Plate 23.B. Area A, Square A 18. View W over Rooms 32 and 31 with the covering slabs *in situ*. 1988.

Plate 23.C. Area A, Square A 18. Horizontal view W at the staircase. 1987.

Plate 24.A. Area A, Square A 17. View N over Rooms 27a and 29. 1988.

Plate 24.B. Area A, Square A 22. View N over Rooms 34 to 39 showing the deep destructions. 1987.

Plate 24.C. Area A, Square A 22. View W into Room 35. 1987.

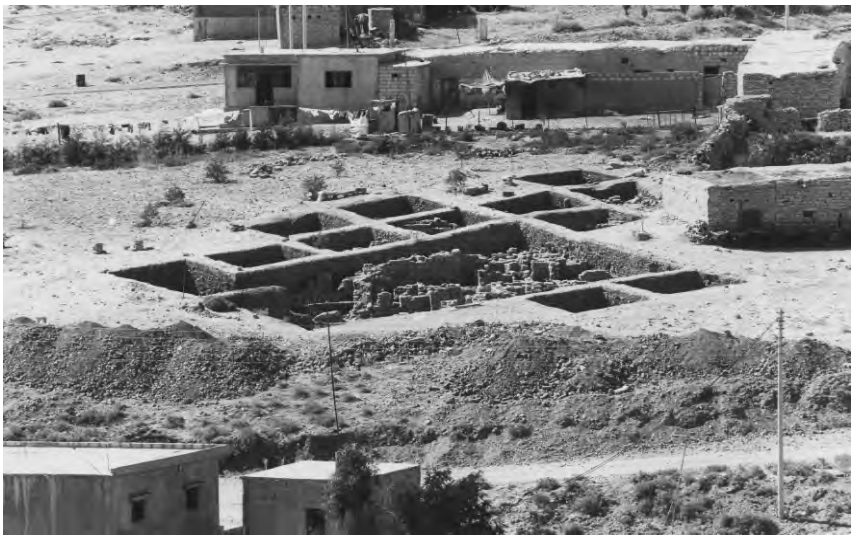


Plate 25.A. Area B. View over the site towards NW. 1989.

Plate 25.B. Area B. Aerial photo of Building Units B I, III, IV. 1992.

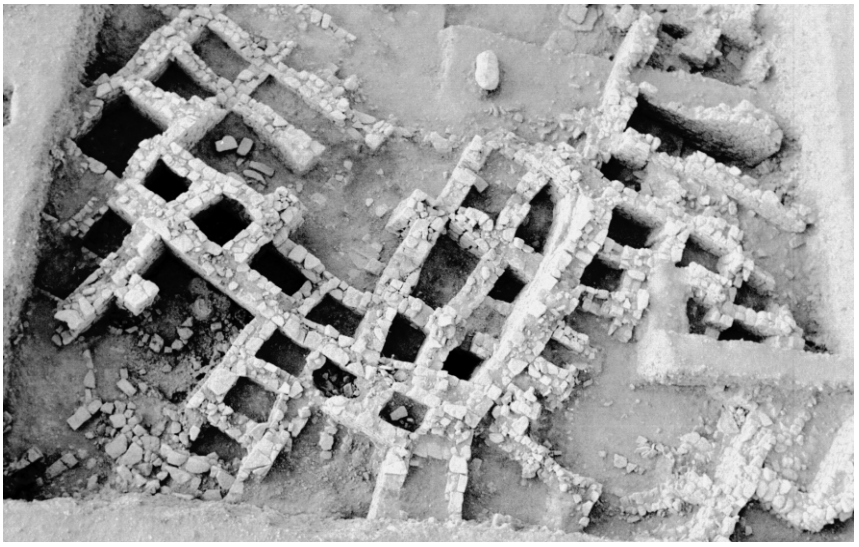


Plate 25.C. Area B. Aerial photo of Building Unit B I. 1992.

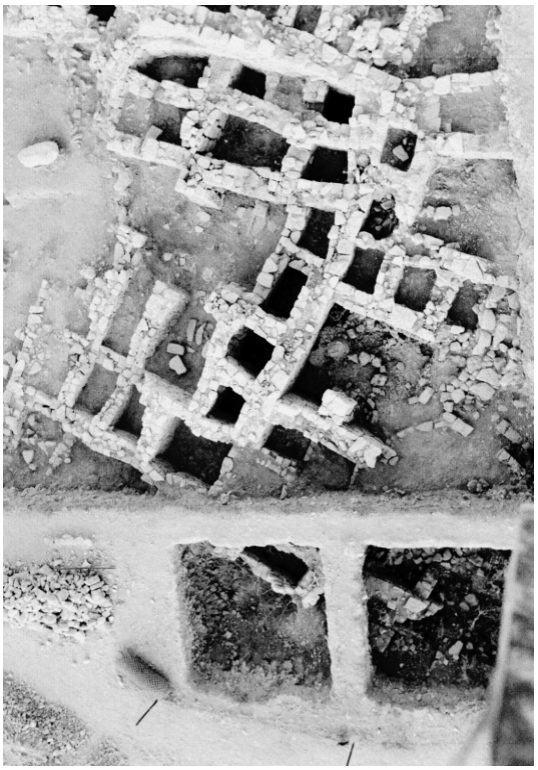


Plate 26.A. Area B. Aerial photo of Building Units B I, IV, V, and VI. 1992.

Plate 26.B. Area B. Aerial photo of Building Units B I, II, III, VII and VIII. 1992.

Plate 26.C. Area B. Aerial photo of Squares B 22-23; 34-36; 48-51. 1992.

Plate 26.D. Area B. Aerial photo of Building Unit VIII. 1992

Plate 27.A. Area B. View N over Building Unit B I. 1989.

Plate 27.B. Area B. View N into the central space of Building Unit B I. 1989.

Plate 27.C. Area B, Squares B 84 and 85. View NE into Room VIII,2 (left) and VII,2. The slanting wall in the right foreground matches the one on Plate 27.B in the lower left corner. 1989.

Plate 28.A. Area B. View NE over Building Unit B I. Foreground Building Unit VIII. 1989.

Plate 28.B. Area B. View E over part of Building Unit B I. In the center the row of Rooms I, 13,12,11,10. 1988.

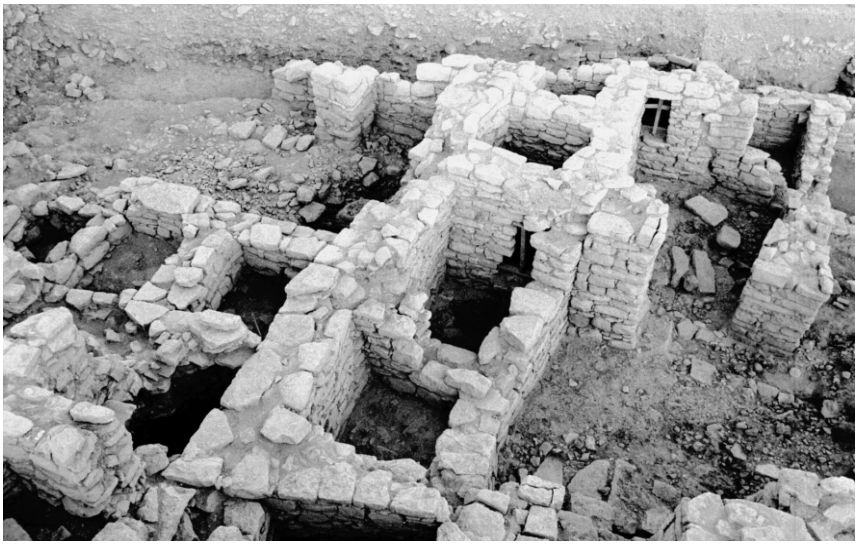


Plate 28.C. Area B. View E into the central space of Building Unit I. Joins the right part of Plate 28.B. 1988.

Plate 29.A. Area B. View NE. Status of the excavation of Building Unit B I by the end of the 1987 Season.

Plate 29.B. Area B. View W over Building Unit B I. 1988.

Plate 29.C. Area B. View N into Square 48. 1992.

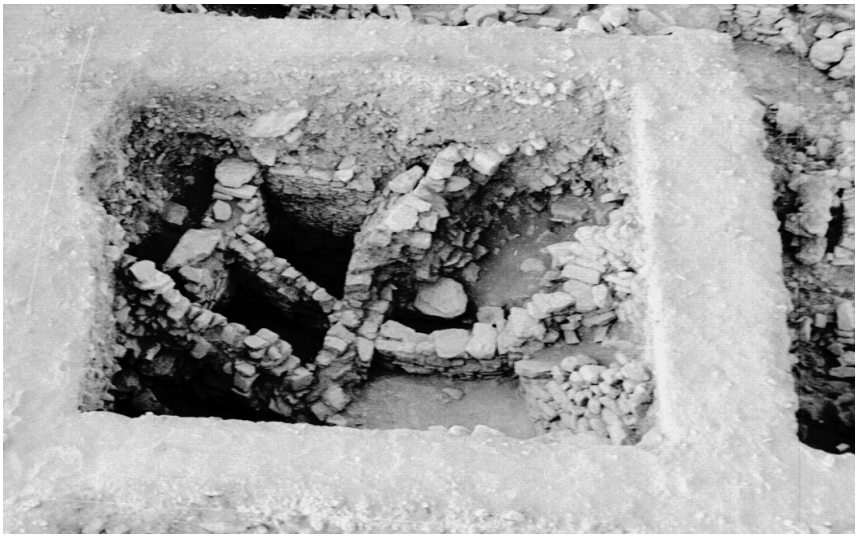


Plate 30.A. Area B. View N into Square 34. 1992.

Plate 30.B. Area B, Squares B 22 and 23. View S. 1989.

Plate 30.C. Area B, Square B 22. View E. 1989.

Plate 31.A. Area B, Square 34. View E. 1992.

Plate 31.B. Area B, Square B 34. View E. 1992.

Plate 31.C. Area B, Square B 34. View E. Outcropping LPPNB walls at the same height as curvilinear structures of the Lower Rubble Layer. 1989.

Plate 32.A. Area B, Square B 35. View E. Foreground and right: Rooms 11 and 12. 1989.

Plate 32.B. Area B, Square B 36. View N . Channel between Walls [16] and [25]. In the upper left a part of Room 14. This photo gives evidence for the floor of Room 14 of Phase B I drawing over the walls bordering the channel, of which Wall [16] originally belonged to Phase B II. 1989.

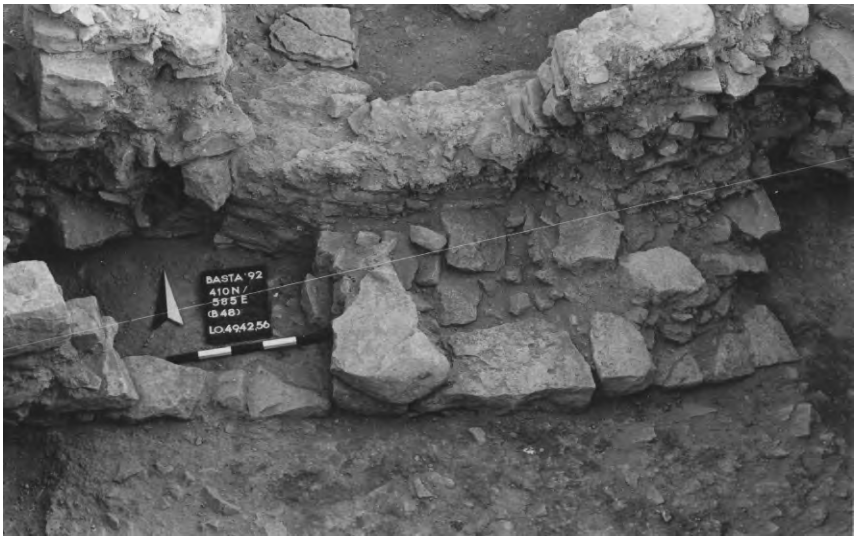


Plate 32.C. Area B, Square B 48. View N. 1992.

Plate 33.A. Area B, Square B 48. View NW. Face of Wall [31]. 1992.

Plate 33.B. Area B, Square B 49. View W into Rooms 10 and 9 of Building Unit B III. Note the door in Wall [26] in the upper left corner. 1989.

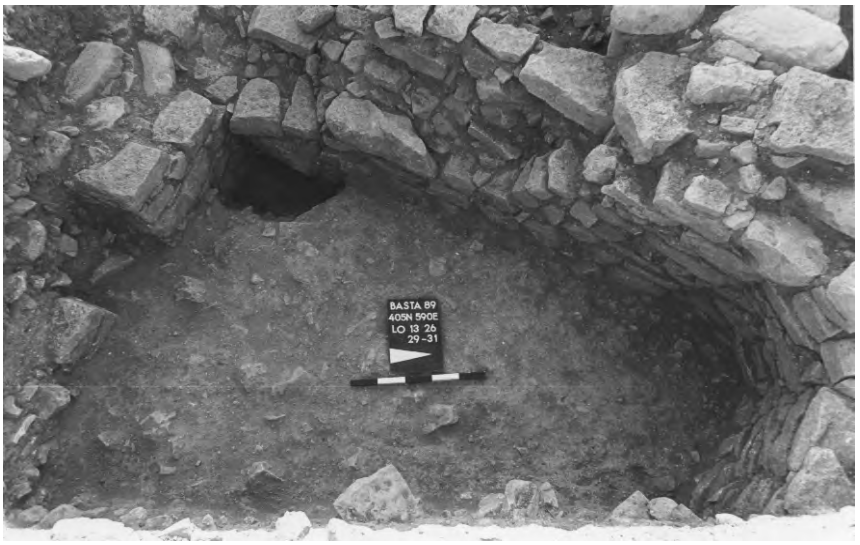


Plate 33.C. Area B, Square B 49. View S into Room 30. 1989.

Plate 34.A. Area B, Square B 50. View NE onto Wall [25], with the right-angle corner with Wall [22]. Space 19 is still unexcavated. 1989.

Plate 34.B. Area B, Square B 50. View NE over the NE part of Building Unit B III. On the eastern face of Wall [22] in Space 19 we found the only *in situ* remains of painted wall plaster. 1989.

Plate 34.C. Area B, Square B 50. E-face of Wall [22] in Space 19 showing the location of the painted plaster fragments. 1989.

Plate 35.A. Area B, Square B 50. Close-up of the painted plaster fragments. 1989.

Plate 35.B. Area B, Square B 50. View S over part of Building Unit B IV. 1988.

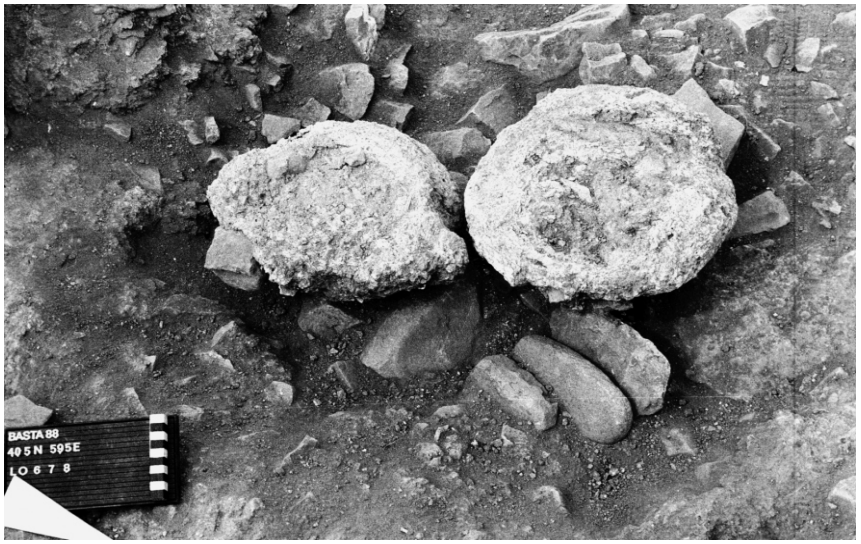


Plate 35.C. Area B, Square B 52. Two of the *samagah*-installation in the channels of Space 1 of Building Unit B V. Note the runners serving as base.1988.

Plate 36.A. Area B, Square B 52. View SW into Space 1 of Building Unit B V. Below the disturbed floor a line of covering slabs is appearing. On the wall in the background one sees the pit with 3 *samagah* installations. 1992.

Plate 36.B. Area B, Square B 52. The same SW view as Plate 36.A, after removal of the layer of rubble stones. 1992.

Plate 36.C. Area B, Square B 52. Vertical view of the 3 *samagah* installations close to Wall [17]. 1988.

Plate 37.A. Area B, Square B 52. Side view of the 3 *samagah* installations close to Wall [17]. 1988.

Plate 37.B. Area B, Square B 52. *samagah* installation in one of the channels beneath the floor of Space 1 of Building Unit B V. 1992.

Plate 37.C. Area B, Square B 52. Two more *samagah* installations in one of the channels beneath the floor of Space 1 of Building Unit B V. 1992.

Plate 38.A. Area B, Square B 53. View W. 1988.

Plate 38.B. Area B, Square B 53. View S. 1988.

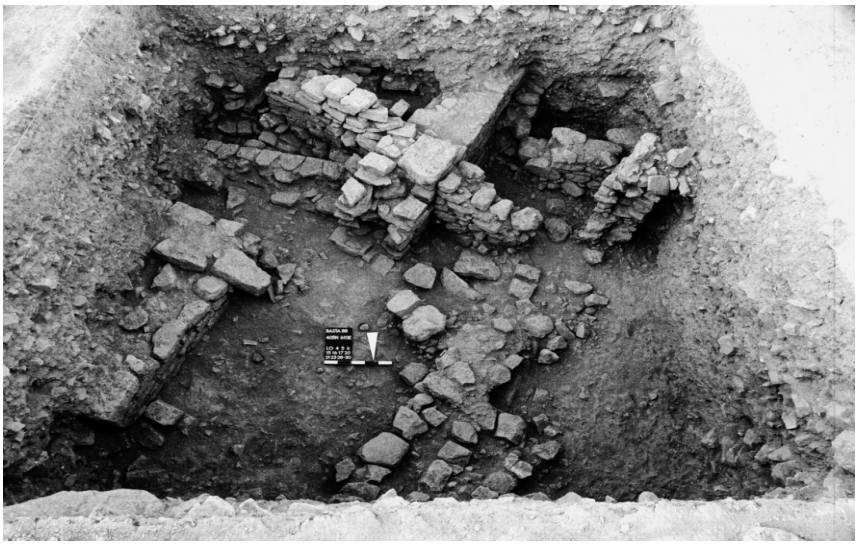


Plate 38.C. Area B, Square B 65. Stones and rubble on top of the deposit of human bones shown in Plate 40.A. 1992.

Plate 39.A. Area B, Square B 36. View N. Situation W of Plate 32.B. This view again shows the superimposition of the floor of Room 14 over a wall bordering a channel. 1988.

Plate 39.B. Area B, Square B 53. View S. 1988.

Plate 39.C. Area B, Square B 65. View N. 1989.

Plate 39.D. Area B, Square 67. View S into Room 20 of Building Unit B I. 1988.

Plate 40.A. Area B, Square B 65. Deposit of human bones. 1992.

Plate 40.B. Area B, Square B 65.View N at the S-face of Wall [11]. 1989.

Plate 40.C. Area B, Square B 66. View E showing retaining Walls [14], [7], [6] separating Building Unit B III (Rooms 7 and 6) on the left, from Building Unit B VIII (Room 3) on the right. 1992.

Plate 41.A. Area B, Square B 68. View NE into the central Space 1 of Building Unit B I. 1988.

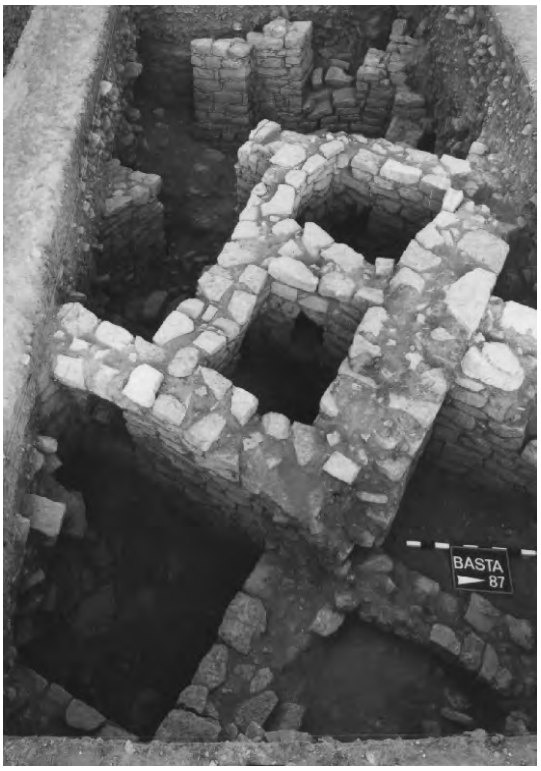


Plate 41.B. Area B, Square B 68. View W over Rooms 10 and 11 of Building Unit B I at an early stage of excavation (Season 1987). 1987.

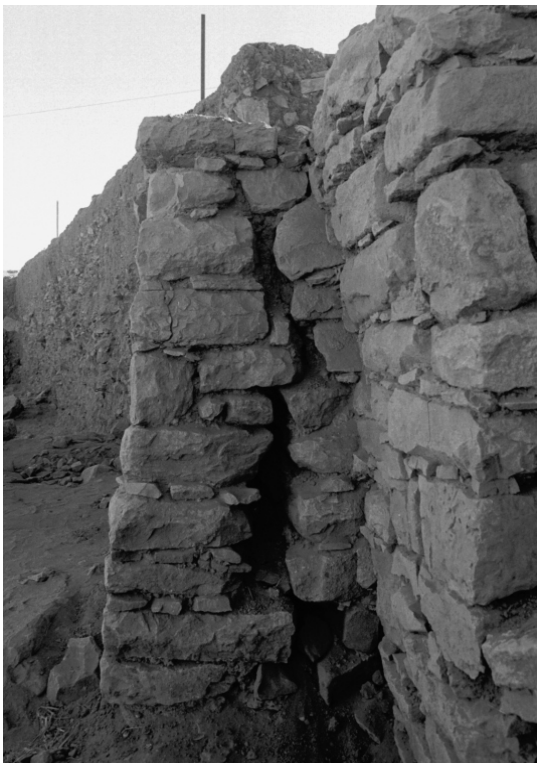


Plate 41.C. Area B, Square B 68. Detail of the NE side of the Buttress [18] attached to Wall [25]. 1988.

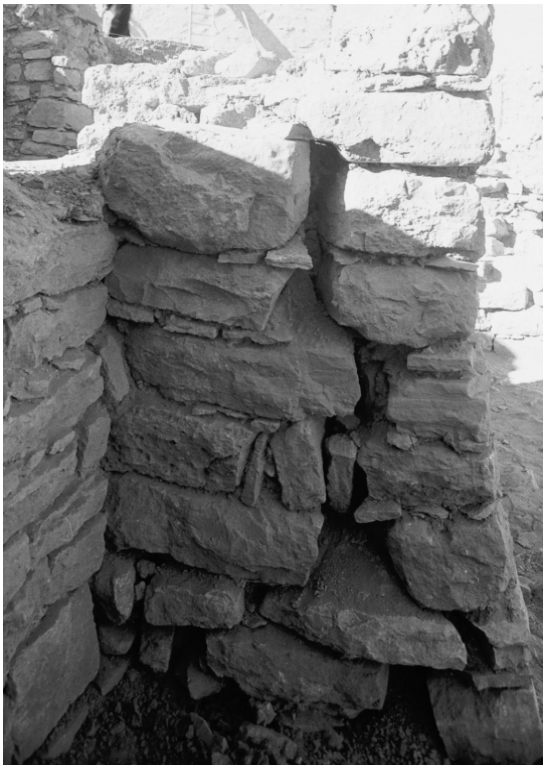


Plate 41.D. Area B, Square B 68. The Buttress [18] seen from SW. 1988.

Plate 42.A. Area B, Square B 67. View E. Looking into Rooms 3, 4 and 5 of Building Unit B III. 1988.

Plate 42.B. Area B, Squares 67-68. View N over the space which subsequently became Rooms 16 to 20 of Building Unit B I. Note the equal height of the separating Walls [23], [30], [36] between these rooms beginning to appear, corresponding to a horizontal joint in the Wall [2] in the upper left corner. Above the joint a blocked doorway becomes visible. 1988.

Plate 42.C. Area B, Square B 68. View E into the central Space 1 of Building Unit B I. Note particularly the dark ashy area in front of the protruding Wall [10]. 1988.

Plate 43.A. Area B, Squares B 67-68. View N over Rooms 16 to 20 of Building Unit B I. Sequel to Plate 42.B with the horizontal joint in the Wall [7] in the upper left corner, and the blocked doorway above the joint. 1988.

Plate 43.B. Area B, Square B 67. View NW on the upper part of Wall [2]; note the horizontal joint and the blocked passage. 1988.

Plate 43.C. Area B, Square 68. View NE into Room 12 of Building Unit B I. Note what is left of the passage between this room and the central space, with the threshold slab *in situ*. 1987.

Plate 44.A. Area B, Square B 68. View NW. In the center the unusually wide doorway from the central space to Room I,18 of Building Unit B I. 1987.

Plate 44.B. Area B, Square A 68. View NW on the entrance to Room I,18. 1988.

Plate 44.C. Area B, Square 68. View NW into the NW part of Room 1 in Building Unit B I. On the floor up side down a cup made of flint. 1987.

Plate 45.A. Area B, Square B 68. View NE into the space between the end of Wall [10] and the buttress on the opposite wall, with the "clay" vessel *in situ*. 1987.

Plate 45.B. Area B, Square B 68. Remains of the "clay" vessel shown in Plate 45.A and Plate 47.B. 1987.

Plate 45.C. Area B, Square B 68. Close-up of the "clay" fragments visible in Plate 47.B. 1987.

Plate 46.A. Area B, Square B 68. Close-up of the shoulder blades of large animals underneath the clay fragments shown in Plate 45.C. 1987.

Plate 46.B. Area B, Square B 69. View SW into Space 2 of Building Unit B I. 1988.

Plate 46.C. Area B, Square B 70. View W. In the center Room 2 of Building Unit B VI. 1989.

Plate 47.A. Area B, Square B 68.
Detail of the NW face of the buttress attached to Wall [31] in front of Rooms I,12 and I,11. 1988.

Plate 47.B. Area B, Square B 68.
Vertical view with the fireplace and the "clay" fragments in front of the end of Wall [10], and the "clay" vessel around the corner. 1987.

Plate 47.C. Area B, Square B 68/69. Wall between Rooms 12 and 11 of Building Unit B I showing a partly blocked passage once linking these two rooms. 1987.

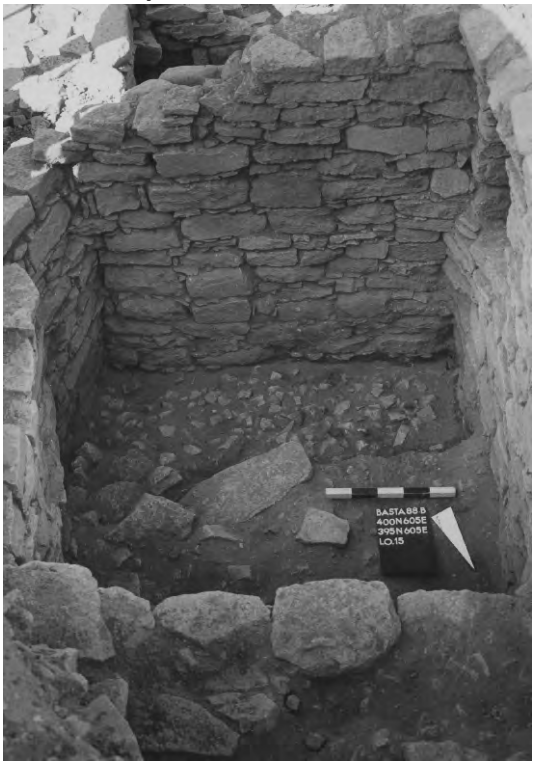


Plate 47.D. Area B, Square B 69.
View SW into Room 9 of Building Unit B I. 1988.

Plate 48.A. Area B, Square B 69. View NE into Room 10 of Building Unit B I. 1987.

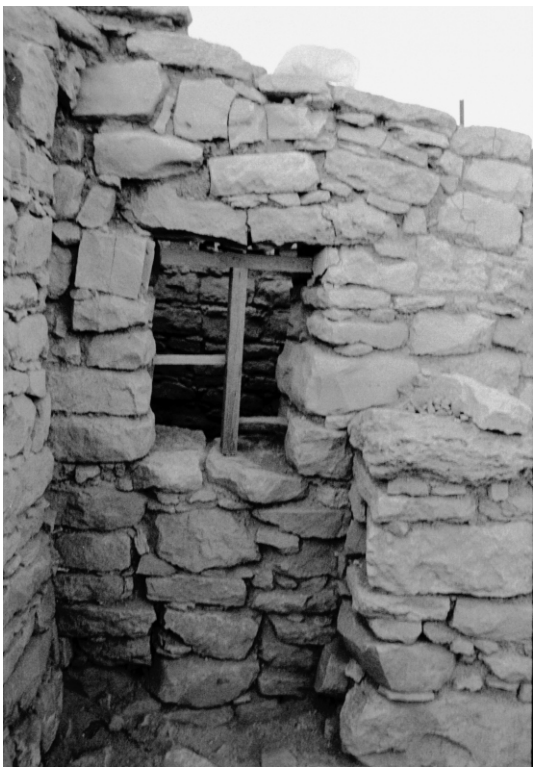


Plate 48.B. Area B, Square B 69. View NE. Passage into Room I,11. 1988.

Plate 48.C. Area B, Square B 84. Perpendicular view into Room 2 of Building Unit VIII. 1992.

Plate 48.D. Area B, Square B 84. View of the NE Wall [6] of Room 2 of Building Unit B VIII. Note the horizontal joint in height of the upper end of the attached buttress, and the doorway. 1992.

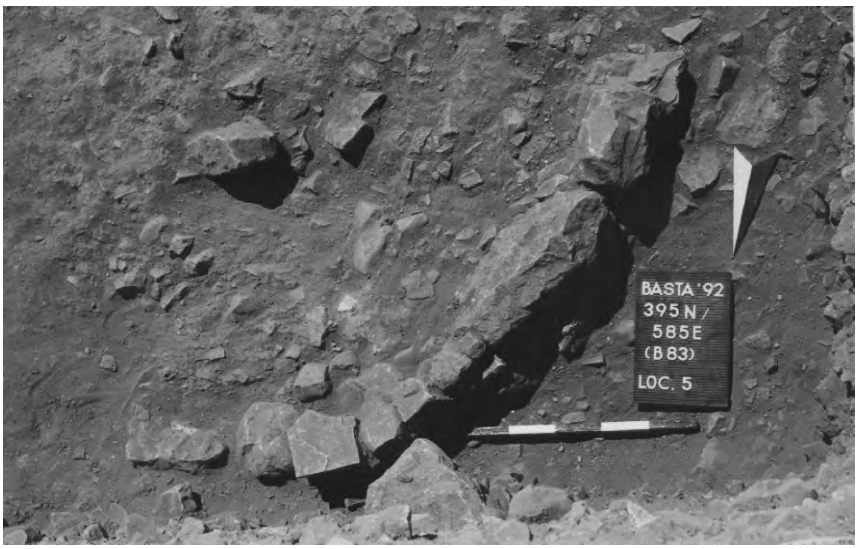


Plate 49.A. Area B, Square B 83. View S. Remains of a curved stone setting in the Lower Rubble Layer. 1992.

Plate 49.B. Area B, Square B 83. View W. Floor remains in the contact layers between the LPPNB walls and the Lower Rubble Layers. 1992.

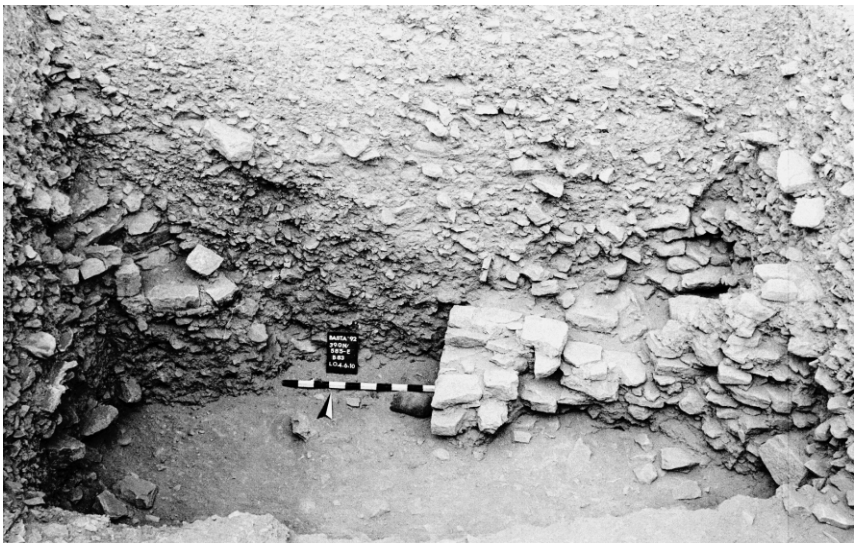


Plate 49.C. Area B, Square B 83. View N of the corner of Wall [16]. 1992.

Plate 50.A. Area B, Square B 84. Look at a part of a walking surface in the E-corner of Room 2 of Building Unit B VIII. In the upper right traces are visible of 2 circular *samagah* installations. 1992.

Plate 50.B. Area B, Square B 84. Look at the square opening into the sub-floor channel system in the floor of Room 2 of Building Unit B VIII. 1992.

Plate 50.C. Area B, Square B.84. Room 2 of Building Unit VIII: Locus 5. Fragments of wall painting (motif: branches with berries). 1989.

Plate 51.A. Area B, Square B 85. View NW over Room 3 of Building Unit B VII, onto Wall [7]. 1989.

Plate 51.B. Area B, Square B 85. Close-up of Plate 51.A. 1989.

Plate 51.C. Area B, Square B 85. View N onto what remained of Rooms 2 and 3 of Building Unit B VII. In the center background and right Room 20 and part of the central space of Building Unit B I. 1989.

Plate 52.A. Area B, Square B 85. View N over the area of Building Unit VII. 1988.

Plate 52.B. Area B, Square B 86. View N. Look at the edge of the pit which cuts into the floor and sub floor system beneath Building Unit B I. 1989.

Plate 52.C. Area B, Square B 86. View NE. Situation to the right of Plate 52.B, showing the section of several parallel channels. 1987.

Plate 53.A. Area B, Square B 87. View SW into Room 7 of Building Unit B I. 1988.

Plate 53.B. Area B, Square B 102-103. View S. Close-up of the covering slabs on the floor of Room 6 of Building Unit VIII. Note the re-use of a (door?)-socket as covering stone. 1992.

Plate 53.C. Area B, Squares 104-105. View N. The large flat stone in the center obscures the view on the free standing pillar of Building Unit II. 1988.

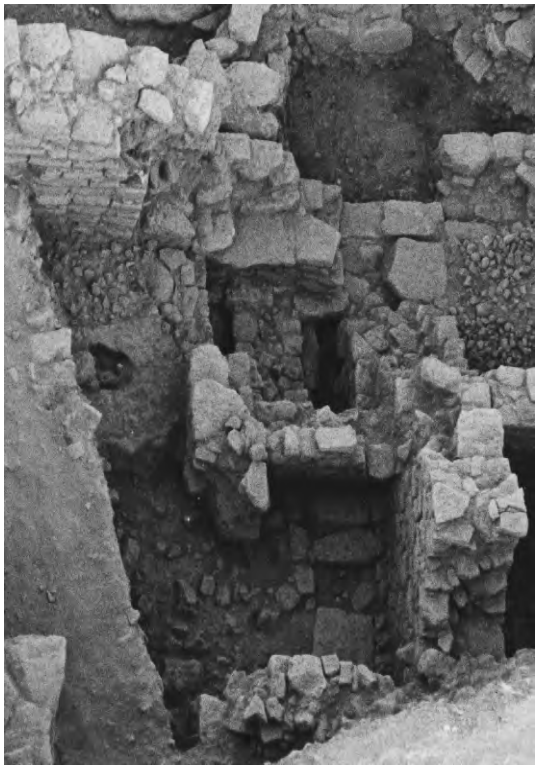


Plate 54.A. Area B, Square B 102.
View E into Rooms 6 and 7 of Building Unit B VIII, and Room 33. 1992.

Plate 54.B. Area B, Square B 102.
View E into Room 6 of Building Unit B VIII. 1992.

Plate 54.C. Area B, Square B 102.
View S into Room 33 with some flat stones on an intact mud floor. 1992.

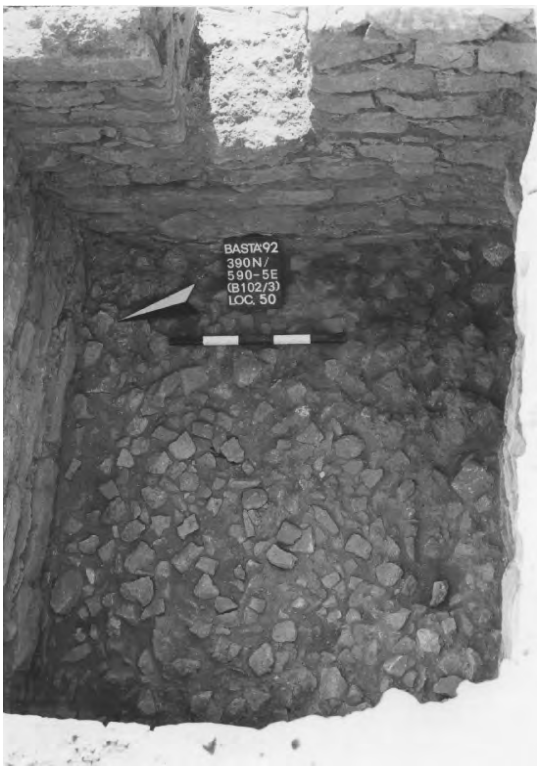


Plate 54.D. Area B, Square B 102.
Same room as in Plate 54.C; layer of rubble stones serving as base for the floor seen in Plate 54.C. 1992.

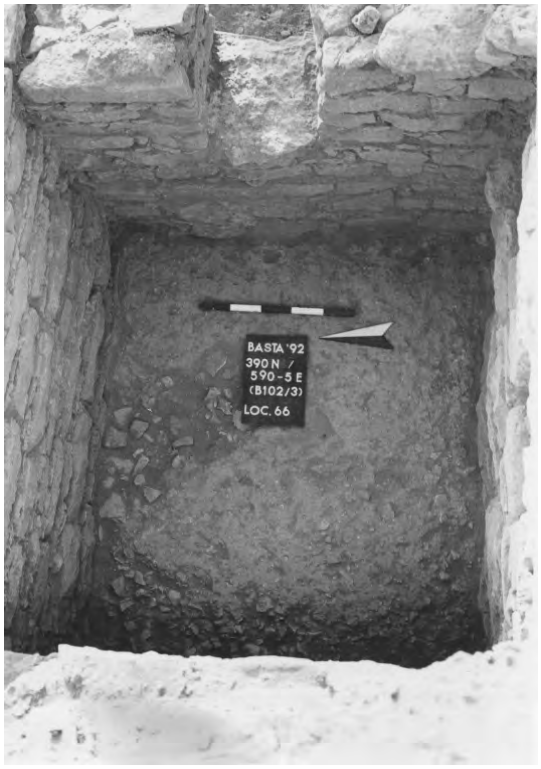


Plate 55.A. Area B, Square B 102.
Same room as in Plate 54.C and 54.D. Another mud-floor beneath the layer of rubble stones shown in Plate 54.D. 1992.

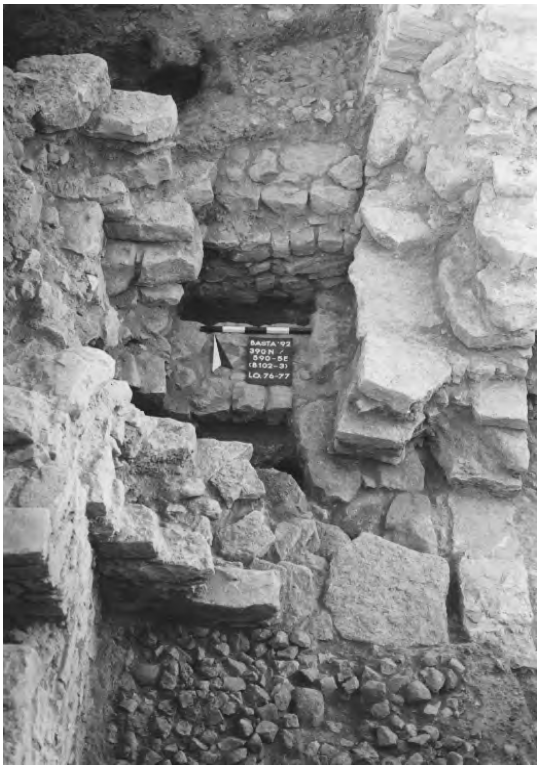


Plate 55.B. Area B, Square B 102.
View N into Room 7 of Building Unit B VIII. Open channels after removal of the covering slabs. 1992.

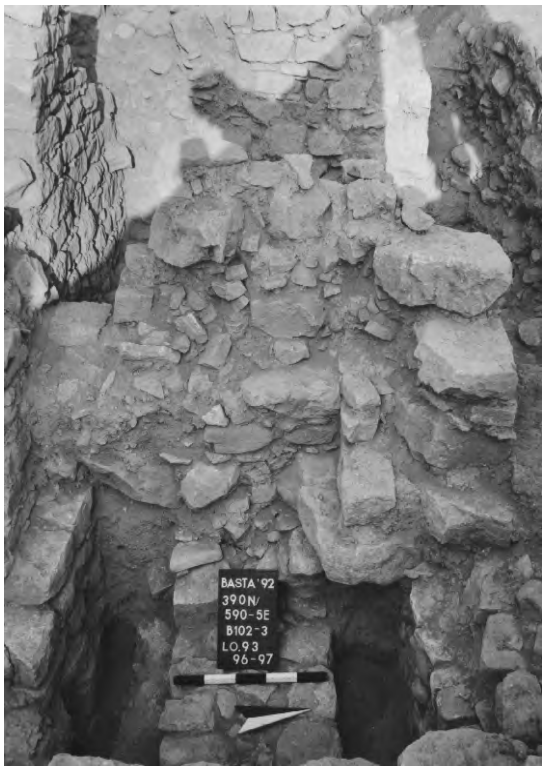


Plate 55.C. Area B, Square B 102.
View W into Room 7 of Building Unit B VIII. 1992.

Plate 55.D. Area B, Squares 104/105.
View NE on the free standing pillar of Building Unit B II. 1988.

Plate 56.A. Area B, Squares B 104/105. View N. In the right hand foreground the corner between Walls [21] and [12]. Note the heavy overburden of the "Rubble Layers" (ca. 120 cms on top of Wall [21]) and the fine-grained soil and topsoil of another 50 to 70 cms. 1988.

Plate 56.B. Area B, Squares B 103-105. View ESE. Rubble Layers above LPPNB walls in the S Section. 2004.

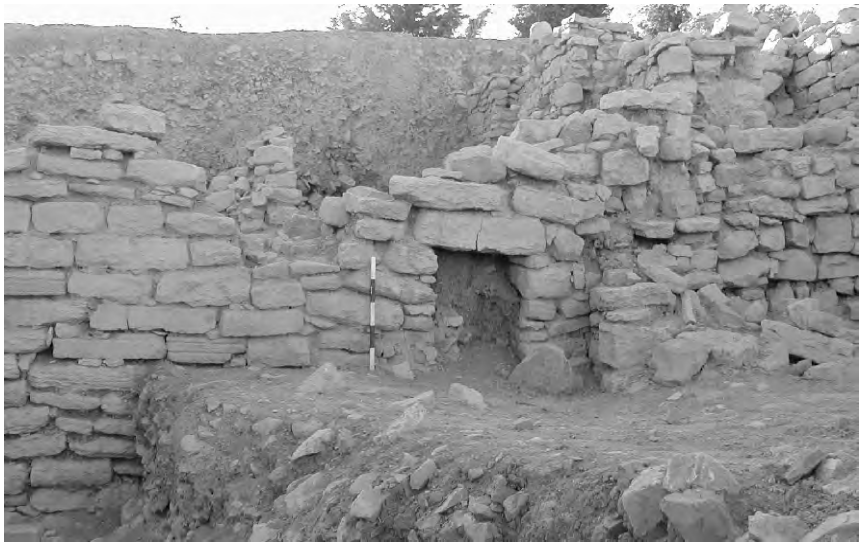


Plate 56.C. Area B, Square B 85. View WNW. Note the material of the Lower Rubble Layer passing through the wall openring in the LPPNB Wall [7].

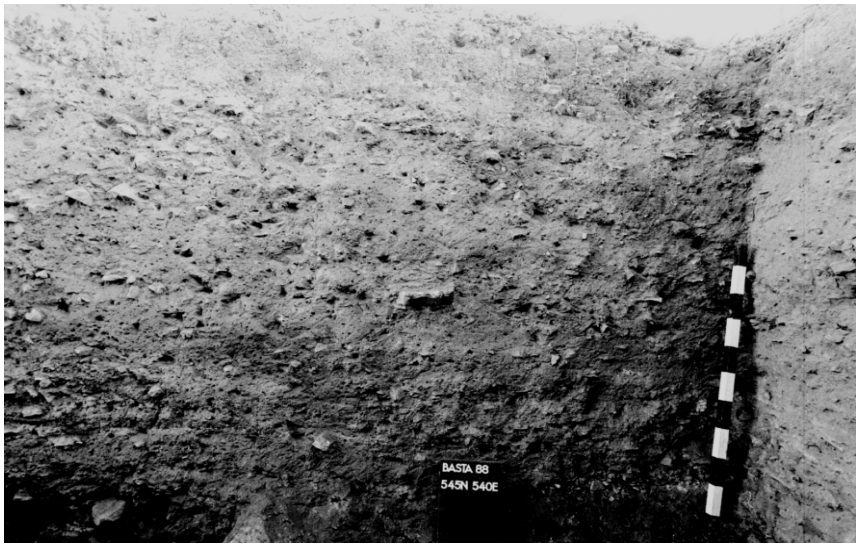


Plate 57.A. Area C, Square C 208. Upper part of S Section (detail). 1988.

Plate 57.B. Area C, Square C 208. *in situ* flaking ground. 1988.

Plate 57.C. Area C, Square C 217. Stone setting of Locus 10. 1989.

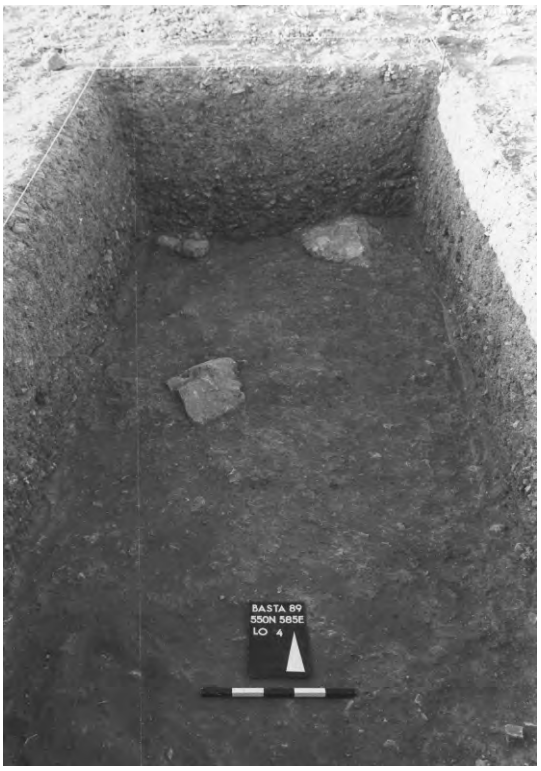


Plate 58.A. Area C, Square C 217.
Locus 4. 1989.

Plate 58.B. Area C, Square C 217.
Bedrock reached in the W part of square. 1989.

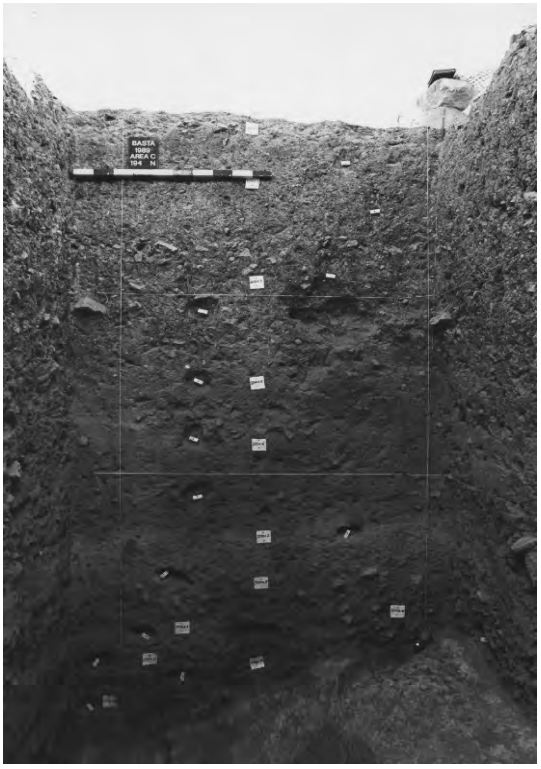


Plate 58.C. Area C, Square C 217.
N Section. 1989.

Plate 58.D. Area C, Square C 217.
E Section. 1989.

Plate 59.A. Area A, Square A 13. View W into Channel 24 (*cf.* Nissen, this volume, Fig. 4) below Wall [2]. 1988.

Plate 59.B. Area A, Square 22. Room 35, E-face of Wall [10].

Plate 59.C. Area A. Square A18. Supporting Wall [64] between Channels 61 and 63 (c*f.* Nissen, this volume, Fig. 4). 1988.

Plate 59.D. Area B, Square B 85. View NW. Looking into the corner between Walls [16] and [7]; note on the left part of the passage into Room VIII,2. 1989.

Plate 60.A. Area A, Squares A 17/22. View W to the doorway at the W-end of Room 28. 1988.

Plate 60.B. Area A, Square 17. E-wall of Room 24. 1988.

Plate 60.C. Area B, Square B 69. NW-elevation of Wall [7] with passage into Room B I,9. 1988.

Plate 61.A. Area B. Example of a lintel above a wall opening.

Plate 61.B. Area B. Example of a "threshold" of a passage.

Plate 61.C. Area B. Example of a "threshold" of a passage.

Plate 62.A. Area B. Example of a "Threshold" of a passage.

Plate 62.B. Area B, Square B 84. Detail of the upper part of the SW face of Wall [6]. 1992.

Plate 62.C. Area B, Square B 51. NE-elevation of Wall [4] closing the central Space B IV,1 to the SW. In the foreground the final stones of the grid of the sub-floor channel system. 1989.

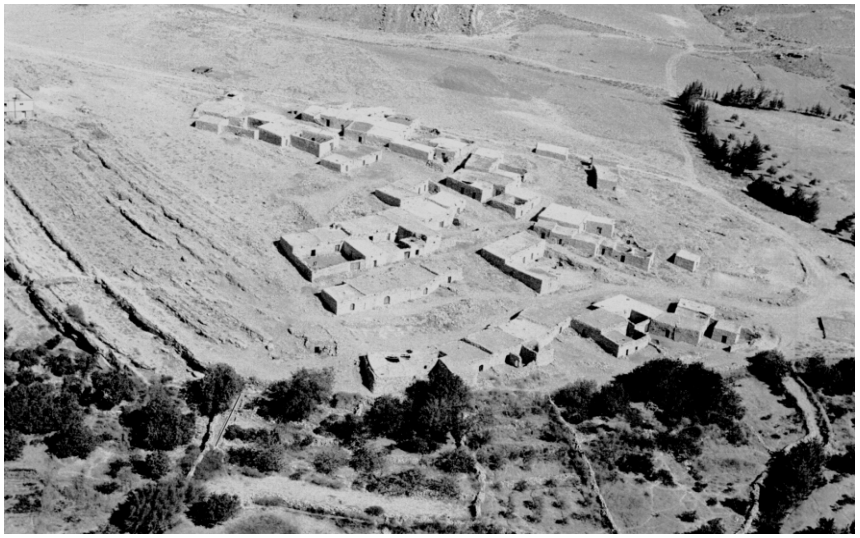


Plate 63.A. Aerial photo of the old village of Basta, View NW. The trees in the foreground mark the slope into Wadi Basta. 1988.

Plate 63.B. Aerial photo of the Old Village of Basta. View SE. 1988.

Plate 63.C.
Intramural dilapidation.
An Example from Dana Village.
South Jordan. 2005.

Plate 64.A. Dilapidation on a slope Dana Village. 2005.

Plate 64.B. Collapsing roofs, Dana Village. 2005.

Plate 64.C. Traditional roof construction. Dana Village. 2005.

Plate 65.A. Traditional roof construction. Example from Old Basta. 2005.

Plate 65.B. Traditional roof construction, interior view. Example from Ba`ja, South Jordan. 2005.

Plate 65.C. House interior. Example from Ba`ja. 2005.

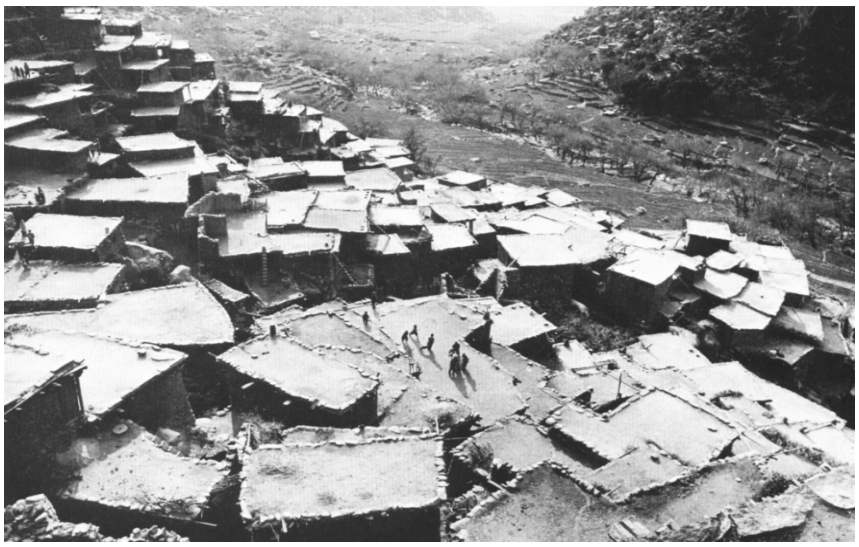
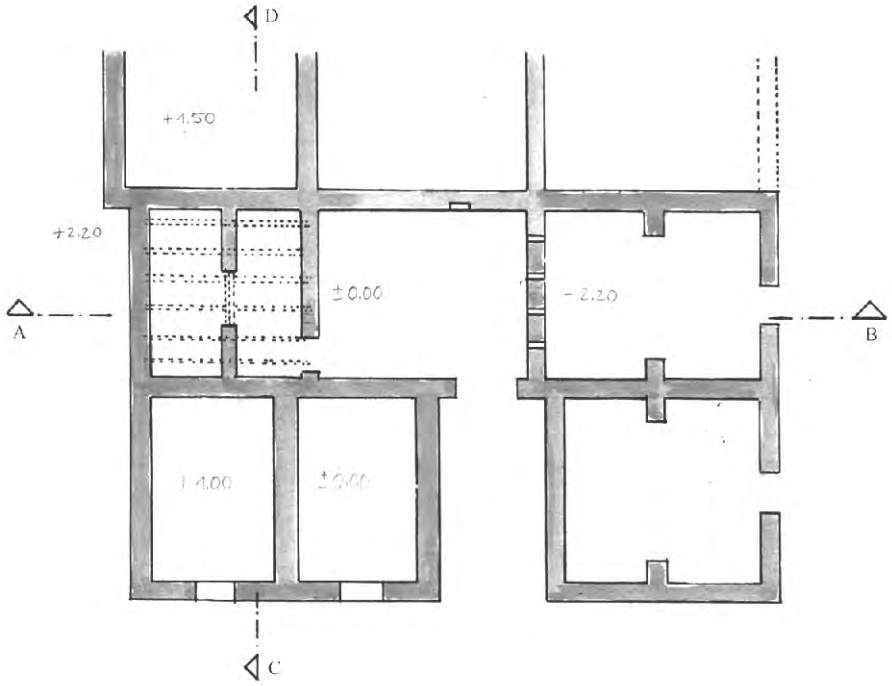
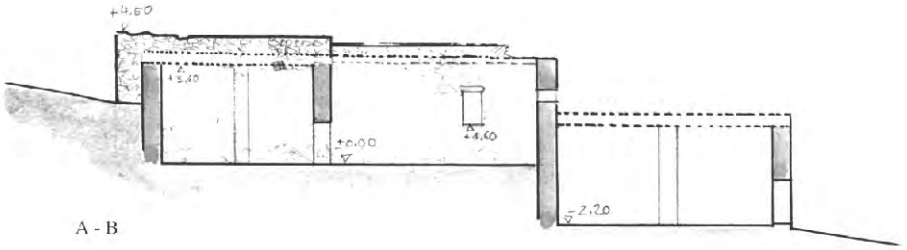


Plate 66.A. Traditional architecture in East Afghanistan: Oigal Village (Wutt 1980: Fig. 16).

Plate 66.B. Traditional architecture in Algeria (Ministere de l'Information et de la Culture (ed.) 1974: 82).

Plate 66.C. Landscape of roofs in a traditional village in Marocco, Atlas Mountains.





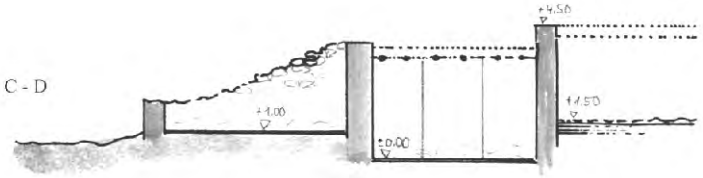


Plate 67.
Single-storey buildings.
Example from Old Basta. 2005.

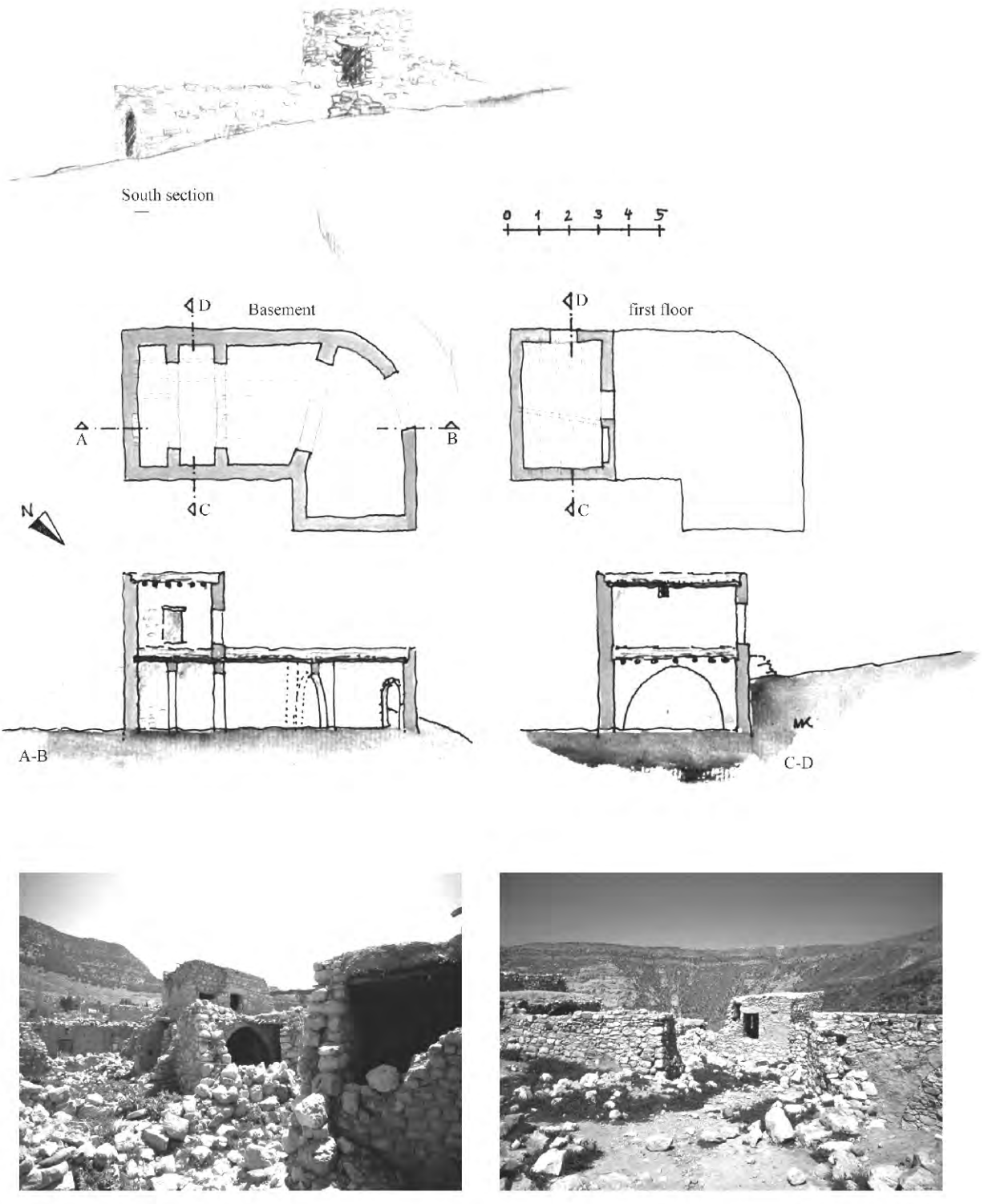


Plate 68. Two-storey buildings. Example from Dana Village. 2005.

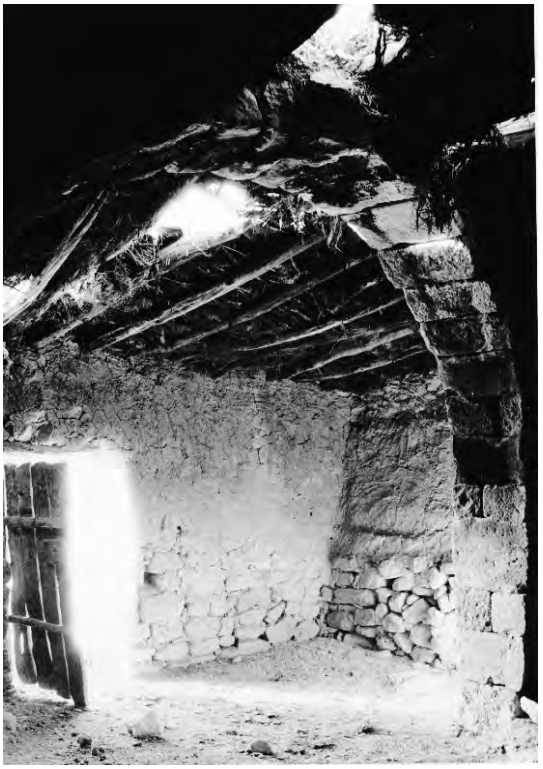


Plate 69.A. House interior.
Example from Old Basta. 1987

Plate 69.B. Door with wooden lintel.
Example from Old Basta. 1987

Plate 69.C. Double- faced wall with
rubble fill. Example from Old Basta. 1987.

Plate 69.D. Example of a window-like
opening in Old Basta. 2003.

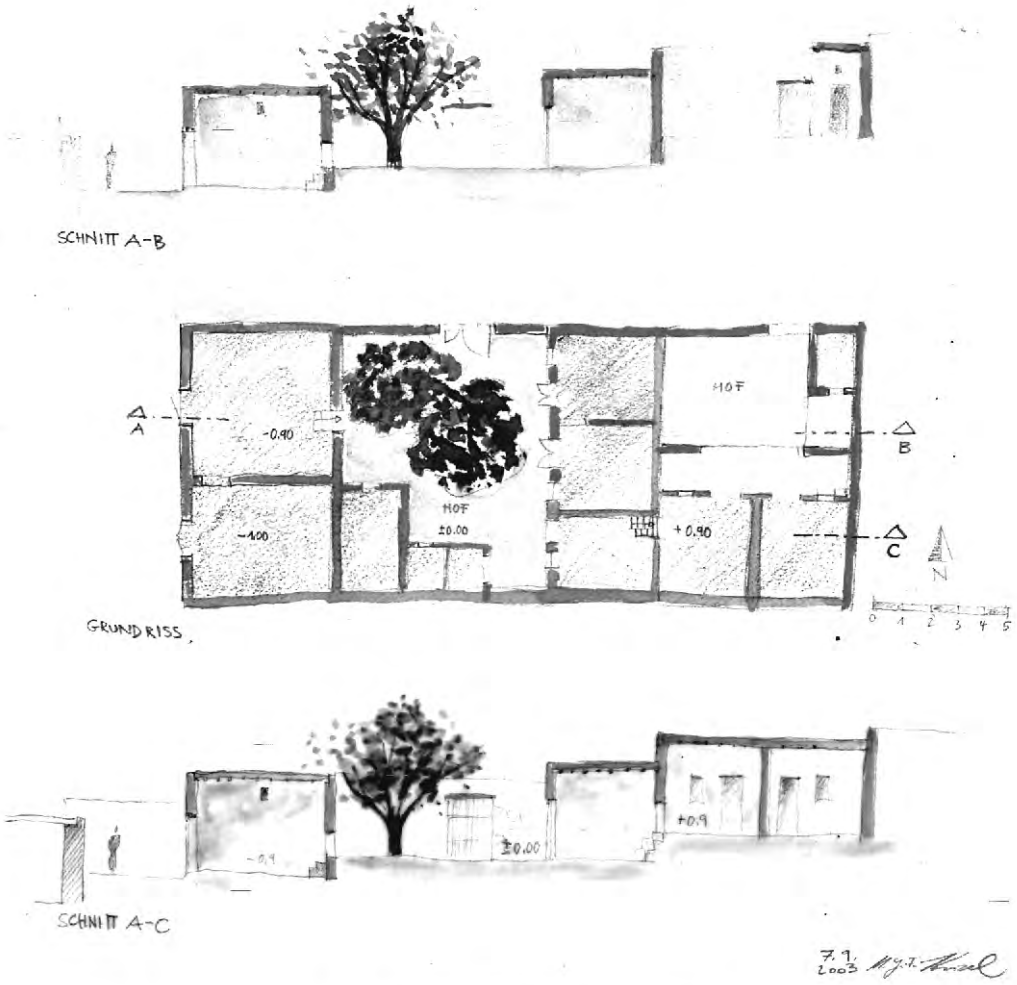


Plate 70. Split-level buildings. Example from Rajif. 2003.

Plate 71.A. Panorama of the modern village of Basta from ESE. 2002.

Plate 71.B. Reconstructed panorama of the LPPNB village of Basta from ESE.

Plate 71.C. Old Basta. Windowless exterior walls. 1987.

Plate 72.A. Traditional exterior. Example from Ba`ja. 2004.

Plate 72.B. Exterior wall with partly preserved mud plaster. Example from Old Basta. 1987.

Plate 72.C. *pueblo* architecture. Example from *pueblo* Zuni/ Mesa Taaiyalone (Parezo 1992: 44).

ex oriente e.V.
Early Near Eastern Production, Subsistence, and Environment

Studies in Early Near Eastern Production, Subsistence, and Environment

Editors-in-Chief: Hans Georg K. Gebel and Reinder Neef

Vol. 1 (1994) *Neolithic Chipped Stone Industries of the Fertile Crescent*, edited by Hans Georg Gebel and Stefan K. Kozlowski (44 contributions, IV + 601 pages, 270 figures, 16 plates, 89 tables, paperback - 45 Euro) [ISBN 3-9804241-0-3]

Vol. 2 (1995) *Die neolithische Keramik aus Abu Thawwab, Jordanien (with English Summary)*, by Daif'allah Obeidat (XIII + 186 pages, 62 figs., 9 tables, paperback - 28 Euro) [ISBN 3-9804241-1-1]

Vol. 3 (1996) *Neolithic Chipped Stone Industries of the Fertile Crescent, and Their Contemporaries in Adjacent Regions*, edited by Stefan K. Kozlowski and Hans Georg K. Gebel (39 contrib., IV + 460 pages, 214 figs., 21 plates, 52 tables, paperback - 60 Euro) [ISBN 3-9804241-2-X]

Vol. 4 (1997) *The Prehistory of Jordan,* II: *Perspectives from 1997,* edited by Hans Georg K. Gebel, Zeidan Kafafi, and Gary O. Rollefson (49 contributions, III + 662 pages, 207 figures, 46 plates, 153 tables, paperback - 80 Euro) [ISBN 3-9804241-3-8]

Vol. 5 1998 (2004) *Central Settlements in Neolithic Jordan. Proceedings of the Symposium Held in Petra, July 1997,* edited by Hans-Dieter Bienert, Hans Georg K. Gebel, and Reinder Neef (21 contributions, XIV + 300 pages, 82 figures/ diagrams, 12 tables, 36 plates incl. 2 color plates, paperback, 48 Euro) [ISBN 3-9804241-4-6]

Vol. 6 1999 (2002) *The Dawn of Farming in the Near East,* edited by René T.J. Cappers and Sytze Bottema (16 contributions, I + 189 pages, 52 figures, 11 tables, paperback - 38 Euro) [ISBN 3-9804241-5-4]

Vol. 7 (2000) *Die Neolithisierung im Vorderen Orient. Theorien, archäologische Daten und ein ethnologisches Modell,* by Marion Benz (V + 260 pages, 59 + 2 figures, 7 tables, 3 appendices, 6 transparencies, paperback - 70 Euro) [ISBN 3-9804241-6-2]

Vol. 8 (2002) *Magic Practices and Ritual in the Near Eastern Neolithic,* edited by Hans Georg K. Gebel, Bo Dahl Hermansen, and Charlott Hoffmann Jensen (12 contributions, III + 173 pages, 62 figures incl. plates, one clour plate, 8 tables, paperback - 35 Euro) [ISBN 3-9804241-9-7]

Vol. 9 (2001) *Beyond Tools. Redefining the PPN Lithic Assemblages of the Levant. Proceedings of the Third Workshop on PPN Chipped Lithic Industries (Ca' Foscari University of Venice, Nov. 1998),* edited by Isabella Caneva, Cristina Lemorini, Daniela Zampetti, and Paolo Biagi (33 contributions, IV + 455 pages, 206 figures incl. plates, 63 tables, paperback - 72 Euro) [ISBN 3-9804241-8-9]

Vol. 10 (2004) *Vorratshaltung. Die spätepipaläolithische und frühneolithische Entwicklung im westlichen Vorderasien. Voraussetzungen, typologische Varianz und sozio-ökonomische Implikationen im Zeitraum zwischen 12,000 und 7,600 BP,* by Karin Bartl (XXX + 841 pages; 222 plates with more than 600 illustrations, incl. 4 colour figures; more than 367 tables, paperback - 120 Euro) [ISBN 3-9807578-1-1]

Vol. 11 *(2005)* *Flint and Stone Axes as Cultural Markers. Socio-Economic Changes as Reflected in Holocene Flint Tool Industries of the Southern Levant,* by Ran Barkai (XIV + 410 pages, 126 figs., 26 tables, paperback - 68 Euro) [ISBN 3-9807578-2-X]

Vol. 12 (2006) *Domesticating Space: Construction, Community, and Cosmology in the Late Prehistoric Near East,* edited by E.B. Banning and Michael Chazan (11 contributions, 112 pages, 52 figs., 7 tables, paperback - 25 Euro) [ISBN 3-9807578-3-8]
with contributions by: E.B. Banning & M. Chazan, T. Watkins, D. Nadel, N. Samuelian & H. Khalaily & F.R. Valla, S.K. Kozlowski, S. Kadowaki, H.G.K. Gebel, M. Verhoeven, Z.A. Kafafi, M. Cutting, Y. Garfinkel

bibliotheca neolithica Asiae meridionalis et occidentalis

Editors-in-Chief: Hans Georg K. Gebel and Gary O. Rollefson

Jebel Abu Thawwab (Er-Rumman), Central Jordan.
The Late Neolithic and Early Bronze Age I Occupations

by Zeidan Kafafi, with contributions by Nizar Abu-Jaber, Bo Dahl Hermansen, Ilse Koehler-Rollefson, Reinder Neef, Nabil Qadi, Raeda Quraan, Ziad al-Saa'd, Danielle Stordeur, & Hisahiko Wada

bibliotheca neolithica Asiae meridionalis et occidentalis (2001)
& Monographs of the Institute of Archaeology and Anthropology, Yarmouk University 3 (2001)
(with 7 specialist contributions, XIII + 222 pages, 2 colour plates, 77 figures, 42 plates, 23 tables, hardcover - 70 Euro) [ISBN 3-9804241-7-0]

Basta I. The Human Ecology

edited by Hans J. Nissen, Mujahed Muheisen & Hans Georg K. Gebel, with contributions by Maria Thaís Crepaldi Affonso, Cornelia Becker, H.G.K. Gebel, Andreas Hauptmann, Bo Dahl Hermansen, Ulrich Kamp, M. Muheisen, Reinder Neef, H.J. Nissen, Ernst Pernicka & Nabil Qadi
bibliotheca neolithica Asiae meridionalis et occidentalis (2004)
& Yarmouk University, Monograph of the Faculty of Archaeology and Anthropology 4 (2004)
(with 10 specialist contributions, XV + 310 pages, 69 figures, 34 plates, 63 tables/ diagrams/ appendices, hardcover - 98 Euro) [ISBN 3-9807578-0-3]

Basta II. The Architecture and Stratigraphy

by Hans Georg K. Gebel, Hans J. Nissen, & Zaydoon Zaid, with a contribution by Moritz Kinzel
bibliotheca neolithica Asiae meridionalis et occidentalis (2006)
& Yarmouk University, Monograph of the Faculty of Archaeology and Anthropology 5 (2006)
(XVI + 306 pages, 56 figures, 72 plates, 6 tables, 6 appendices, 2 stratigraphical charts, 2 fold-up top plans as insertions, hardcover – 115 Euro) [ISBN 3-9807578-4-6]

Gesher: A Pre-Pottery Neolithic A Site in the Central Jordan Valley, Israel. A Final Report

by Yosef Garfinkel and Doron Dag, with contributions by Shoshana Ashkenazi, Shmuel Belitzky, Gaelle Le Dosseur, Liora K. Horwitz, Mordechai E. Kislev, Yoel Melamed, Henk K. Mienis, Orit Simchoni

bibliotheca neolithica Asiae meridionalis et occidentalis (2006)
(with 11 specialist contributions, XIV + 230 pages, 12 colour plates, 158 figures, 33 tables, hardcover - 85 Euro) [ISBN 3-9807578-6-2]

Ramat Tamar and Metzad Mazal. The Early Neolithic Economy of Neolithic Flint Mining and Production of Bifacials Southwest of the Dead Sea

by Daniel Schyle

bibliotheca neolithica Asiae meridionalis et occidentalis (2007)
(XIV+ 220 pages, 48 figures, 48 tables, 94 plates. hardcover – 72 Euro) [ISBN 3-9807578-7-0]

* * * * * *

NEO-LITHICS. The Newsletter of Southwest Asian Neolithic Research

edited by Gary O. Rollefson and Hans Georg K. Gebel

since 1994: Contributions on Current Chipped Lithics and Field Research, General Contributions on / Discussion of Southwest Asian Neolithic Issues, Neo-Lithics Forum/ Dialogues, Reports from Meetings and Gatherings, Notes & News, Recent Theses and Publications, Upcoming Conferences and Meetings, *etc.* (minimum subscription of three years = 6 issues, 40 pages plus, postage included - 60 Euro; back issues available) [ISSN 1434-6990]

Orders please send to:
ex oriente e.V., Hüttenweg 7, 14195 Berlin, Germany
Fax 0049 30 98 311 246 or 0049 30 8385 2106 - Email: ex-oriente@gmx.net

Basta, Area A

Field records Zaydoon Zaid (1987-1988)
Edited by H.J.Nissen, H.G.Gebel and Zaydoon Zaid
Digital editing by Zaydoon Zaid

- Earliest Architecture, Phase III
- Substructures of Phase III
- Earliest and Main Architecture, Phase III-II
- Main Architectural Phase, Phase II
- Substructures of Phase II
- Alterations of the Main Architectural Phase II
- Upper Architectural Phase, Phase I
- Phase of wall not clear
- Edges of walls, offsets
- Leaning walls
- Wall openings (passages, windows, wall niches)
- Blocked wall openings (passages, windows, wall niches)
- Edges of bedrock
- Weathered edges of bedrock
- Edge of trench
- Reconstructed wall
- 495N — Coordinates
- A9 — Square designation
- 23.40 — Level
- 4 — Locus designation of wall
- 11a — Room number
- Grid system

0.0 0.5 1.0 2.5 5.0 M
1:40
N

Basta, Area B

Field records Zaydoon Zaid (1987-1988)
H.G.Gebel (1992)
Edited by H.J.Nissen, H.G.Gebel and Zaydoon Zaid
Digital editing by Zaydoon Zaid

- Later Architectural Phase, Phase BI
- Substructures of Phase BI
- Earliest and Main Architectural, Phase BI-BII
- Main Architectural Phase, Phase BII
- Substructures of Phase BII
- Architectural remains within Lower Rubble Layers
- Phase of wall not clear
- Edges of walls, offsets
- Leaning walls
- Wall openings (passages, windows, wall niches)
- Blocked wall openings (passages, windows, wall niches)
- Edge of trench
- Reconstructed wall
- 495N — Coordinates
- B53 — Square designation
- 23.40 — Level
- 4 — Locus designation of wall
- 11 — Room number
- Grid system

415N B22 B23 B24
410N B34 B35 B36
405N B48 B49 B50 B51 B52 B53
400N B65 B66 B67 B68 B69 B70
395N B83 B84 B85 B86 B87
390N B102 B103 B104 B105
385N
585E 590E 595E 600E 605E 610E 615E

0.0 0.5 1.0 2.5 5.0 M
1:40

Basta, Area B