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Burning down the house: the burnt building V6 at Late Neolithic Tell Sabi Abyad, Syria

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This article presents the remains of a T-shaped burnt building found in trench V6 in Operation II at Late Neolithic Tell Sabi Abyad, Syria. The burnt building closely resembles the so-called Burnt Village excavated earlier at Tell Sabi Abyad in Operation I, level 6, but is slightly older. Many objects were discovered in the ruins of the burnt building, but the most striking discovery was the burial of a young woman. In this paper we present the V6 burnt building and its remains. We argue that the building was purposely set ablaze as part of a ritual related to fire and death.

1 Introduction

Tell Sabi Abyad is an 8000 year-old settlement mound in the expanse of steppe in northern Syria, close to the Syro-Turkish border (fig. 1). Extensive excavation at the five-hectare site since 1986 has exposed substantial occupation layers from between roughly 7000 and 5800 BC. The research has provided a wealth of new data on Late Neolithic ways of life in the rolling plains of Syria and beyond, from settlement histories and subsistence practices to material culture and the treatment of the dead.

Excavation in 2004 over an area of roughly 100 square metres in the northeastern part of Tell Sabi Abyad (trench V6, see fig. 2) revealed the well-preserved remnants of a wholly-burnt T-shaped building, full of ashes and other incinerated material, dating from the very end of the seventh millennium BC (see table 1). An astonishingly large number of artefacts of all kinds have been recovered from the burnt fill in the building, comprising, among many other things, complete or fragmentary ground-stone tools, bone implements, clay tokens in various shapes and of different dimensions, and several dozen clay sealings with stamp-seal impressions. In addition, there was a crouched inhumation burial in the building. Although different in layout and somewhat earlier in date, the building closely resembles the structures of the so-called Burnt Village at Tell Sabi Abyad, not only because of its destruction by fire but also because of the distribution and richness of its contents (cf. Akkermans and Verhoeven 1995; Verhoeven 1999).

Initially, the available evidence may seem relatively straightforward, suggesting an unforeseeable, accidental burning of the house with its inventory still in it. However, a closer examination reveals many ambiguities allowing for the data to be interpreted in different ways. Several questions come to mind, such as: was the fire that reduced the building to ashes indeed an unfortunate accident or was it perhaps a conscious act of destruction? Was the house still in use for daily living and working at the time of the fire or was it specifically prepared to be burnt? And how did the many hundreds of artefacts end up in the burnt fill? Was there a connection between the fire and the nature and number of these finds, and perhaps with the burial that was found inside the building? This article[1] aims to present the burnt building and the many finds in it, elaborating on issues such as the intentionality of the conflagration and the evidence for ritual in the form of burial and abandonment.

2 The Burnt Building V6

The rectangular burnt building, measuring approximately 10 by 7 metres, has been excavated almost in its entirety; only its northern extremes are still hidden in the unexcavated north baulk. The highly regular and symmetrical structure was T-shaped in plan and consisted of three parallel rows of small rooms with a long but narrow room (divided into two smaller compartments) at a right angle in front of them. Each row consisted of a narrow, elongated room measuring about 3 by 1 m, with a much smaller square room at the back. Only the easternmost row seems to have been subdivided into smaller cubicles, each no more than 1.5 square metres (fig. 3).

The walls, partly still standing to a height of 1.5 m and tapering towards the top, were made of sizeable, irregularly-shaped clay slabs up to 1 m long, 35-40 cm wide and between 5 and 12 cm thick, joined with grey mortar. In several places they carried a thick mud plaster, which, due to the fire, had an orange to greenish-grey colour. The floors in the building were simply made of compact, trodden earth. No hearths or other installations were found inside the building, except for some heavy stone working platforms on the floor in rooms 1, 2 and 4, each roughly square in shape and measuring about 40 by 40 by 10 cm. In rooms 1 and 2, they were positioned about half-way down the room against the western wall. In room 4 were two platforms, one against the walls in the southwestern corner, the other in the southeastern corner.

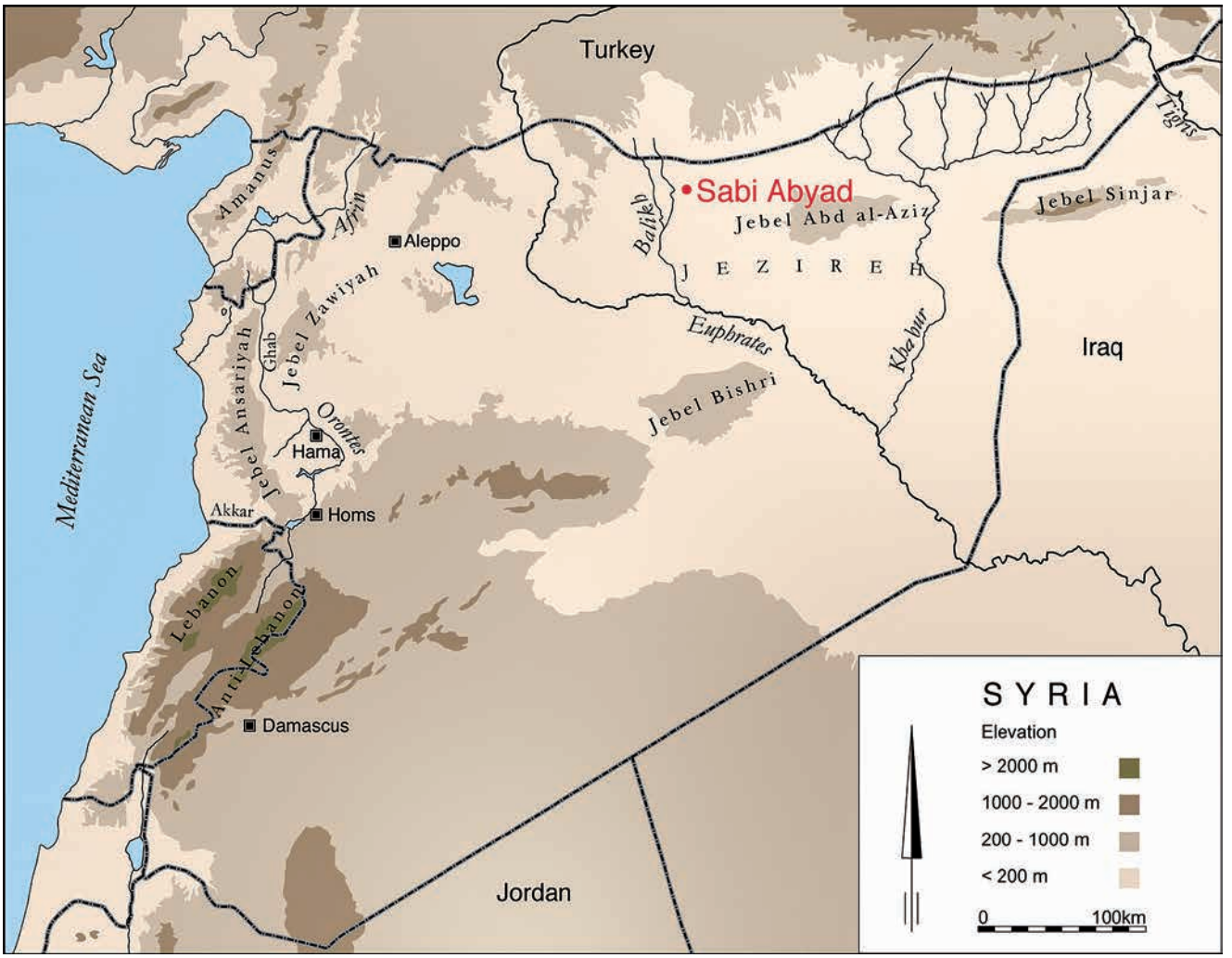

Figure 1 Map of Syria, showing the location of Tell Sabi Abyad marked in red.

Remarkably, the walls showed no evidence of entrances at floor level, except for a small, low opening (about 30 cm wide and 45 cm high) in the eastern wall of room 5 (fig. 4). This porthole contained a large flat stone measuring about 45 by 30 by 5 cm. The building and the rooms in it must have been accessible either through openings high in the walls or through passages in the roof. These openings may also have provided light and air in the rooms. Although there is the possibility of an upper storey, there is no unambiguous evidence for it.

The thick burnt deposits inside the building contained many fragments of what must have been roofing materials, in the form of charred wooden beams and hard-burnt clay fragments with impressions of reeds and circular wooden poles. They suggest that the building still had its roof at the time of the conflagration (or at least part of its roof; see the discussion below). The finds provided insight into the nature of the superstructure, indicating that the (assumedly flat) roof most probably consisted of timbers laid at regular intervals and covered with reed mats. A layer of clay was added on top for insulation (similar to the buildings in the so-called Burnt Village at Tell Sabi Abyad; cf. Akkermans and Verhoeven 1995, 11).

Originally the building must have been entirely free-standing, with relatively clean, open yards around it. Only at a later stage, when it had already been burnt and left to its fate, the structure became surrounded along its southern and south-western sides by small-scale rectangular auxiliary features, including some hearths and other installations. However, the ruins of the original building must have stood prominently

Lab No.	Material	Context	14C BP	1ð calBC	2ð calBC
GrA-26924	Charred seeds	In fill of oven AN, outside the burnt building	6930 ± 45	5870-5860 (2.1%) 5850-5740 (66.1%)	5970-5950 (1.5%) 5910-5720 (93.9%
GrA-26925	Charcoal	In fill of hearth 80, outside the burnt building	7025 ± 45	5990-5870 (68.2%)	6010-5800 (95.4%)
GrA-33546	Charcoal	From ashes on floor in room 1 of burnt building	7765 ± 45	6650-6560 (58.5%) 6550-6510 (9.7%)	6660-6470 (95.4%)
GrA-33547	Charcoal	From ashes on floor in room 1 of burnt building	7090 ± 40	6015-5970 (38.5%) 5950-5915 (29.7%)	6050-5890 (95.4%)
GrA-31880	Charcoal	In fill of room 5 of burnt building, c. 60 cm above floor	7250 ± 45	6210-6130 (38.2%) 6110-6060 (30.0%)	6220-6020 (95.4%)
GrA-32057	Charred seeds	In fill of room 3 of burnt building, c. 20 cm above floor	7260 ± 45	6210-6130 (41.8%) 6120-6060 (26.4%)	6230-6030 (95.4%)
GrN-29726	Charcoal	Piece of wood in fill of room 1 of burnt building, c. 22 cm above floor	7170 ± 35	6060-6010 (68.2%)	6090-5980 (95.4%)
GrN-29727	Charcoal	In ashes of room 1 of burnt building, on the floor	7320 ± 30	6230-6100 (68.2%)	6240-6080 (95.4%)
GrN-29728	Charcoal	Piece of wood in fill of room 5 of burnt building, c. 50 cm above floor	7270 ± 35	6210-6130 (47.1%) 6110-6070 (21.1%)	6230-6060 (95.4%)
GrN-29729	Charcoal	In ashes in room 3 in burnt building, c. 30 cm above floor	7100 ± 50	6030-5970 (42.3%) 5960-5910 (25.9%)	6070-5880 (95.4%)
GrA-32999	Charcoal	In ashes in room 3 in burnt building, c. on floor	7195 ± 35	6075-6015 (68.2%)	6210-6140 (6.0%) 6110-5990 (89.4%)

Table 1 Tell Sabi Abyad. Radiocarbon dates from the burnt building V6 and its surroundings.

amidst these newly erected structures, in the shape of a solidly filled-in block of burnt waste, contained within the limits of its still-standing, tall outer walls.

A series of radiocarbon samples has been obtained from the burnt building, ranging in date between roughly 6230 and 5880 BC at the 2-sigma level, with a best date around 6050-6020 BC and a few (unexplained) outliers of much earlier date (cf. table 1).

3 The burning of the building

The fire must have been intense, as it penetrated the walls of the building throughout, causing the clay walls to sinter and giving them an orange to grey-black or greenish colour. The rooms were entirely filled in with burnt waste of varying consistency. The lowest of these deposits, directly situated on the floors, mainly consisted of fine, black to grey and white ashes, representing fully-burnt organic material.[2] The vertical distribution of the ash layer varied within each room, with the ashes often sloping across the room (fig. 5). The ashes were mostly present in rooms 1, 3 and 5, less in rooms 2, 6 and 7, and absent in rooms 4 and 8. In room 5, the ash layer was up to 1.10 m thick in the southwest corner, from where it gently sloped towards the east, gradually becoming thinner until it finally disappeared only a few centimetres from the eastern wall of the room. Although no clear-cut stratigraphy was observed, the complex mixture of ashes of different colours in many irregular lenses and spots may point towards multiple, slanting deposits on top of each other, instead of a single, homogeneous layer. In the neighbouring room 1, the ashes appeared to slope as well, from the southwest corner, where the layer was about 35 cm thick, to the northern part of the room, where it was nearly absent. A similar situation was found in rooms 2, 6 and 7, where irregular layers of black ashes between about 15 and 35 cm thick sloped from south to north, each smoothing and vanishing towards the northern ends of the rooms. Room 3 is rather exceptional in the sense that it was entirely filled up to a height of about 70 cm with greyish-black ashes, very rich in artefacts of all kinds.

The ash layers in the rooms were covered with significant deposits of hard-burnt crumbly clay pieces (probably parts of the mud roof cover) and wall fragments, greyish-brown to greenish in colour, intermingled with ashes. Considerable roof fall in the form of hard-burnt clay impressions of reeds

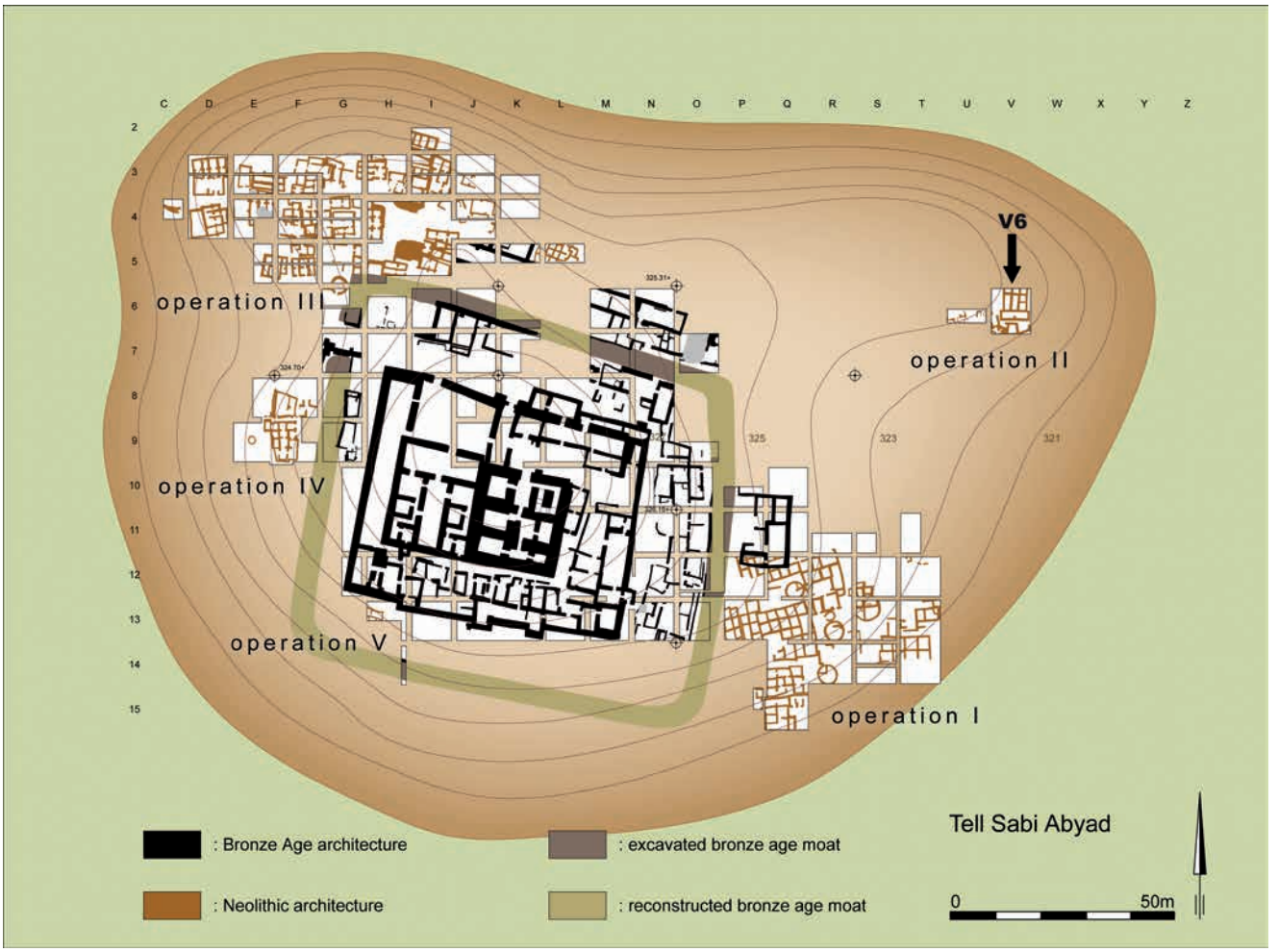

Figure 2 Plan of Tell Sabi Abyad I, showing the location of trench V6 in the north-eastern area (Operation II).

and wooden poles was found in the rooms. It was found either at the interface of the ashes and sintered clay or higher in the burnt fill, but never in the ashes proper (see below). The many dozens of roofing fragments suggest that at least part of the building still had its roof at the time of the fire. Although the number of impressions is considerable, it is still far too small to account for the roof in its entirety. Buildings with flat mud-covered roofs do not burn easily, unless provisions are made for extra fuel and adequate draught (see below). It is possible that openings in the roof (air vents) were created or that parts of the roof were deliberately removed prior to the fire. In any case, the quantities of organic materials (wood, reeds) which were used for roof construction were insufficient to produce the very large quantity of ashes in the building (cf. Dennis 2008).

Interestingly, the stratigraphic sequence in the burnt building of V6 is very much in agreement with modern experimental conflagrations of clay-made, flat-roofed structures: first, a layer of highly burnt fine ashes on the floor, then lumpy compact deposits representing later roof and wall collapse, and, finally, a layer of charred roof timbers, burnt-out reed imprints and clumps of mud (cf. Dennis 2008, 172ff).

There is good reason to believe that the building in area V6 ended in an intentional conflagration, rather than in accidental burning. First, the fire was almost entirely confined to the building proper, with hardly any ashes or burnt debris beyond the structure's exterior walls. It seems that precautions were taken to contain the fire under strictly controlled, regulated conditions. In his account on colonial warfare in the Afghan borderlands, Gordon notes: "A house with mud and rubble walls and a flat mud covered roof has to be prepared for burning or it will not burn at all: the two essentials being extra fuel and a good draught. These houses

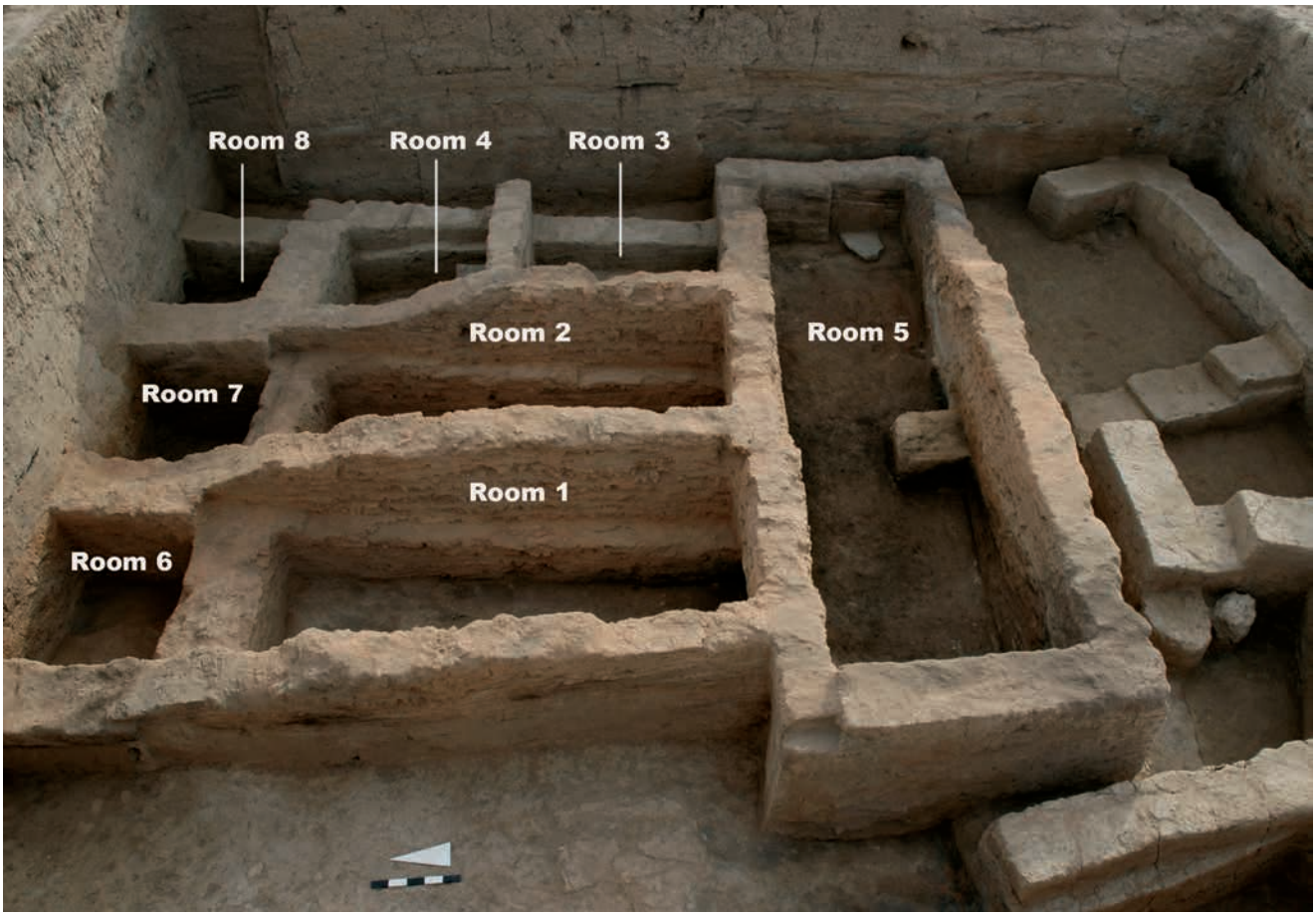

Figure 3 Tell Sabi Abyad. The burnt building V6 during excavation.

will not burn by the simple application of the torch to such woodwork as forms part of their fabric; elaborate preparation must be made if they are to be even rendered uninhabitable." (Gordon 1953, 149).

Secondly, the V6 structure contained exceptionally large quantities of ashes and other burnt waste, up to 1.10 m in some places – much more than one would expect in the case of an ordinary, accidental burning. The experimental conflagration of a Neolithic building at Beidha in Jordan revealed interior debris to a height of no more than about 35 cm (Dennis 2008, 176).

Thirdly, the walls of the V6 building were baked and sintered throughout, which is another sign of a fierce and prolonged fire when taking into account that walls at Beidha exposed to severe heat for 45 minutes were only fired to a depth of 2 to 3 mm (Dennis 2008, 163). A simulated burning of wattle-and-daub buildings in Calabria confirmed that accidental fires of modest intensity and short duration, even if they are allowed to smoulder for a long time after the initial blaze, result in very little sintering of mud walls. Only a more substantial blaze with extra wood fuel and lasting for at least five hours hardens the house walls in a significant manner (Shaffer 1993). In the case of an experimental burning of an abandoned wattle-and-daub house in Serbia, it appeared that, apart from the thatched roof that caught fire with ease and started to collapse within 20 minutes, the building itself suffered relatively little damage, with only a thin layer of fallen burnt thatch and debris from the roof in and around the house. Also very little wall sintering had occurred during the fire (cf. Bankoff and Winter 1979, 13, who conclude: "It would have taken relatively little effort to repair the roof, clear the house of burned debris and restore it to a habitable condition"). Mirjana Stevanović argues that, in the case of the Neolithic burnt houses at Opovo in Bulgaria, the complete firing of clay walls to a state of sintering required a vast amount of combustibles exceeding the capacities of the building itself: " (…) the quantities of wood needed as fuel must have been larger than the wood

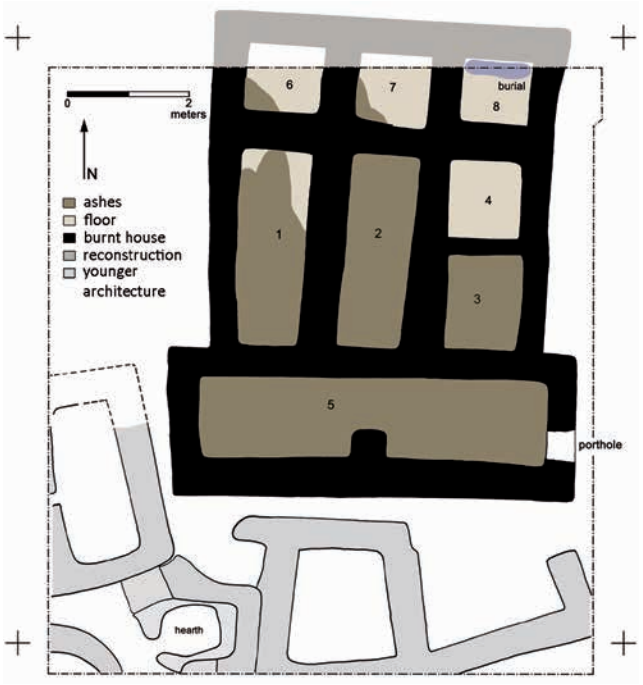

Figure 4 Tell Sabi Abyad. Map of the burnt building V6, showing the distribution of ashes.

incorporated in the house construction. Consequently, in order to burn down the houses at Opovo the Neolithic people needed an additional source of fuel to that provided by the wood used in house construction." (Stevanović 1997, 373).

Although the burning of the V6 house very likely resulted from its having been filled with combustibles and its deliberately having been set alight, it is difficult to establish the order of events that led to the destruction. The burning must have been carefully planned, with extensive preparations having been made for a long and sustained ferocity of fire. Because of the vast quantities of ashes in the building as well as the sintering of the walls, the fire must have been very substantial (a small brush fire or such like results in only very thin ash layers and minimal sintering). Many cubic metres of brush wood and other combustibles were undoubtedly brought in (cf. Stevanović 1997, 372), probably in several replenishments. When it was fully ablaze and the heat had probably risen to about 500-1000 °C, the building would have been difficult to approach, even though the walls may have acted as insulating shields. But when the fire had subsided and was turning into smouldering debris, new materials for the fire may have been added.

Ignition (and refuelling) probably took place at several points in the corner of rooms, in view of the substantial piles of ashes in these areas (cf. DeHaan 1991, 109).[3] Taking the many roofing fragments into account, the roof must have

Figure 5 Tell Sabi Abyad. Partial reconstruction of the burnt building V6, showing the distribution of ashes in grey.

been still intact, although openings may have been created to ensure an adequate draught. In the case of room 5, the draught was probably further enhanced by the low porthole in the eastern wall. Since most of the heat would have been directed upwards (by the very nature of fire; cf. DeHaan 1991), the roof with its wooden poles and dry reed mats is likely to have caught fire easily and a (partial) collapse may have happened quickly. The fire-dried mud cover of the flat roof would have come apart from the reeds and beams (some of which left their burnt-out impressions in the clay) and would have fallen into the rooms below in irregular chunks – hence the roof imprints. Subsequent reloads of fuel may have kept the fire going for many hours, if not for days, until the wood and other fuel were entirely consumed, the walls were burnt throughout, and an extensive fill had accumulated in the rooms.

The obvious next question is: why was the building in area V6 set alight intentionally? Part of the answer may rest in the burial found in one of the rooms of the burnt house.

4 THE BURIAL IN THE BURNT BUILDING V6

The primary grave of a young woman, between 14 and 20 years old, was found in room 8, at the back of the building. She had been laid on her left side in a crouching, east-west position, parallel to the back wall of the building,[4] with the head towards the east, facing southeast (fig. 6). The right arm was folded in front of the body, while the left arm was extended and positioned underneath the body, with the left knee resting on the hand. The back of the hand lay upon one half of a basalt mace head. Underneath the skull a small piece of yellow ochre was found, together with a large

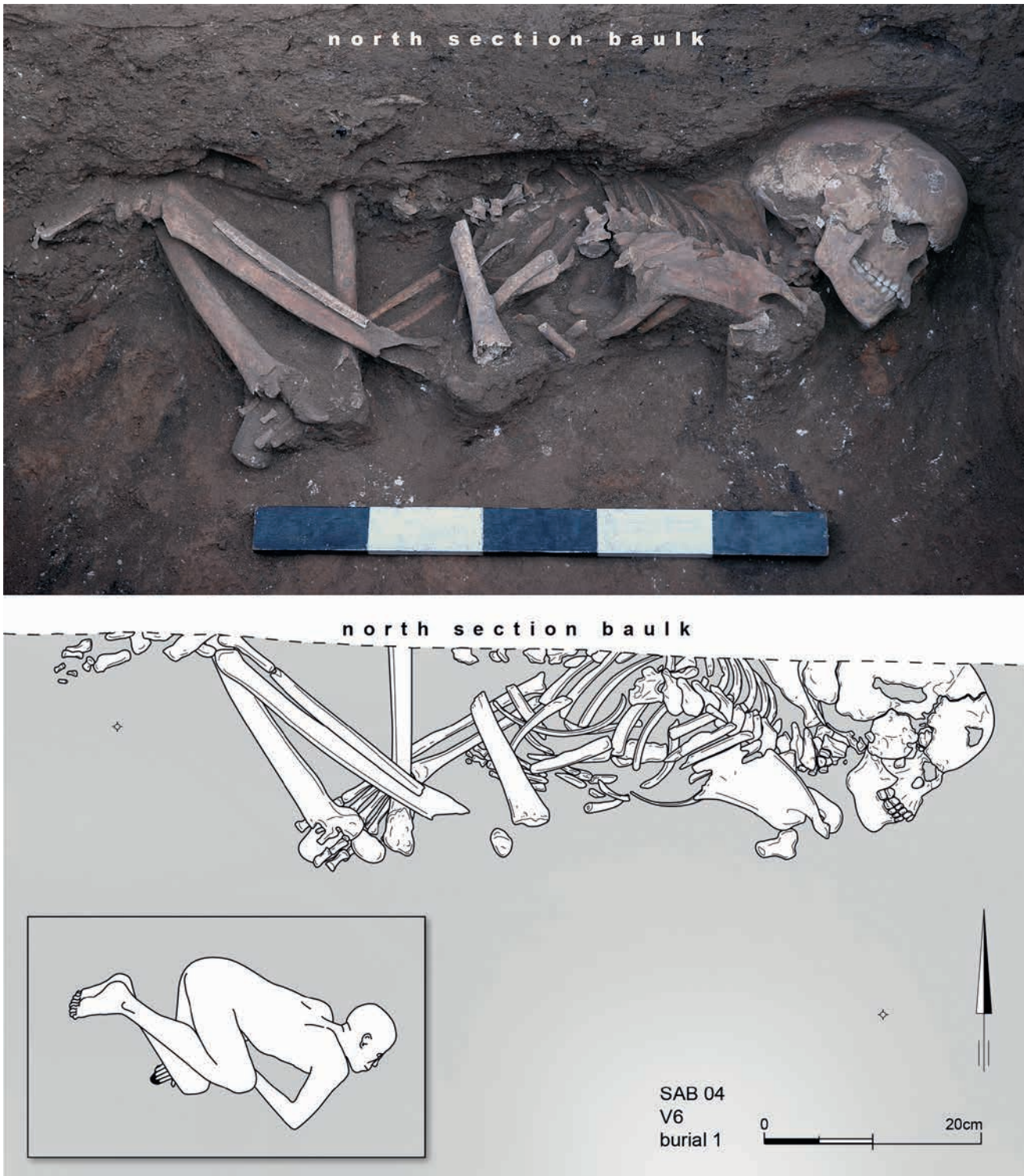

Figure 6 Tell Sabi Abyad. The burial in the burnt building V6 (room 8).

mammal bone. In its complete form the mace head probably had a diameter of 7.5 cm. It was pierced in the centre, creating a hole with a diameter of 2 cm. Mace heads are a rare find in the Neolithic occupation layers at Tell Sabi Abyad (Collet and Spoor 1996), which suggests that this mace head had been placed with the burial on purpose, rather than being a chance find.[5] One might wonder whether the mace head got broken by accident or as part of a funerary ritual involving the breakage or 'killing' of artefacts, often related to the removal of the impurity and ill effects of death (cf. Hodder 1980, 164; Parker Pearson 1999, 26).

Evaluation of the dentition showed that the young woman suffered from dental hypoplasia – a defect in the development of tooth enamel, possibly a hereditary trait, but also associated with local trauma and systemic metabolic disruption through dietary deficits or disease (Goodman and Armelagos 1985, 1; White and Folkens 2005, 329). Two teeth showed traces of caries, and several teeth and molars had been affected by attrition. Furthermore, there was proof of Allen's fossa, *i.e.* stress-induced atrophy of the bone.[6]

Apart from its position within a burnt building, the burial is not strikingly different from other burials of the same period at Tell Sabi Abyad (Akkermans 2008). The grave contained no gifts other than the associated mace head. Thus the inconspicuous nature of the burial itself does not leave us many clues that associate it with the burning of the building. Furthermore, the skeleton does not display any traits that might indicate that the person in this room held a special position or had been subject to any extraordinary treatment. As the room associated with the burial contained no other objects, we are left to wonder what the function of this small room was and why the young woman was placed here in death.

In this respect, it is important to emphasize that the deceased was not buried underneath the floor of the room but had been placed on it, after which the room was partly filled with soil, covering the corpse (there was no evidence whatsoever of a burial pit sunk into the room). Moreover, the burial took place *prior* to the burning of the building. Although it is technically possible that the room was once filled with burnt debris, then emptied, and subsequently used for interment, this option is highly unlikely since neither the fill nor the inner walls of this room show traces of extensive burning. Unlike most of the other rooms, the small cubicle seems to have stayed untouched by the fire. Therefore, it is more plausible that the deceased had been placed on the floor in the room on purpose and had been covered with soil prior to the onset of fire. Although the time elapsed between the burial and the fire remains unclear, it is not unlikely that the building met its end through conflagration shortly after the construction of the grave. Or, phrased differently, the building may have been crammed with fuel and set alight, precisely *because* of the burial in it (cf. Akkermans 2008). A similar explanation has previously been suggested for the Burnt Village at Tell Sabi Abyad, linking the skeletal remains of two individuals to the intentional burning of buildings, as part of an extended ritual act of death and abandonment (cf. Verhoeven 2000).

5 The artefactual finds in the burnt building V6

If, indeed, a link can be established between the grave of the young woman and the deliberate destruction of the building, the question comes to mind whether or not the other finds in the building support this conclusion. In total there were 371 objects of all kinds in the ruins of the burnt building, including very large numbers of ground-stone tools, as well as (much) smaller quantities of bone tools, spindle whorls, pierced pottery discs, clay sling missiles, jewellery, clay tokens, jar stoppers, sealings with stamp-seal impressions, and so on (cf. figs 7 and 8; table 2).[7] We shall give a short description of the various groups of artefacts and their possible meaning.

Ground-stone tools. Altogether 142 (or 38% of the total assemblage) ground-stone tools were found in the burnt house, comprising pestles, mortars, palettes, grinders,

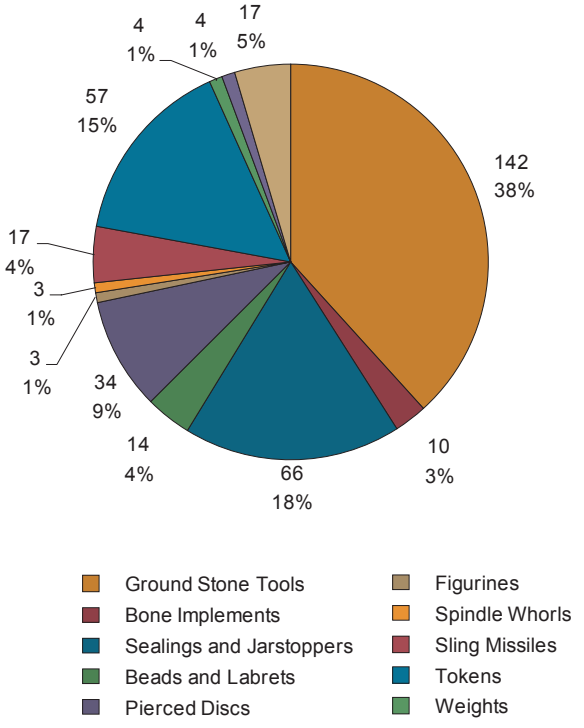

Figure 7 Tell Sabi Abyad. The composition of the small finds assemblage recovered from the burnt building V6.

Figure 8 Tell Sabi Abyad. A selection of artefacts found in the burnt building V6. (A) Pestles and mortars. (B) Pierced discs. (C) Sealings. (D) Ground-stone tools.

	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7	Room 8	Total
Ground stone tools	53	5	36	2	45	0	0	1	142
Bone implements	3	0	3	1	3	0	0	0	10
Sealings, jar stoppers	14	0	22	0	30	0	0	0	66
Beads, labrets	5	2	0	1	2	4	0	0	14
Pierced discs	14	4	2	2	9	3	0	0	34
Figurines	2	0	1	0	0	0	0	0	3
Spindle whorls	2	1	0	0	0	0	0	0	3
Sling missiles	6	1	7	1	2	0	0	0	17
Tokens	15	0	34	3	5	0	0	0	57
Weights	2	0	0	0	2	0	0	0	4
White Ware	2	0	2	0	0	0	0	0	4
Miscellaneous	6	0	5	2	3	0	1	0	17
Total	124	13	112	12	101	7	1	1	371

Table 2 Burnt building V6. The quantitative distribution of objects per room.

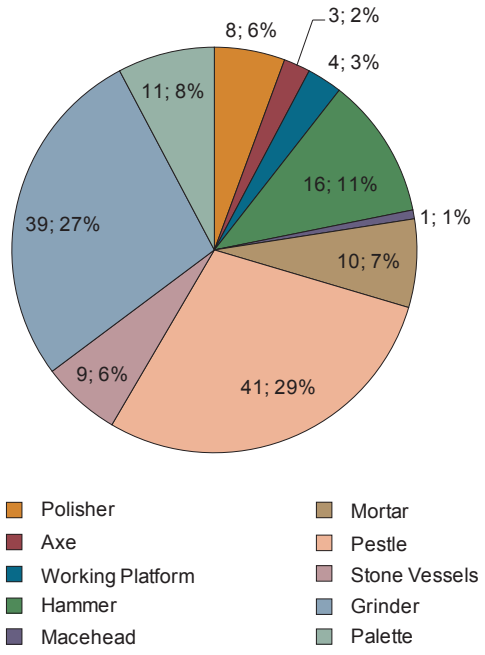

Figure 9 Tell Sabi Abyad. Composition of the ground-stone industry from the burnt building V6.

working platforms, axes, hammers, polishers and vessels (fig. 9). Two groups were predominant: pestles and grinding slabs. There were 41 pestles mainly made of basalt, of which 27 were complete. This seems to be more than one would expect in an ordinary domestic assemblage at the single household level, certainly when taking into account that only 10 mortars were found. Half of the pestles was found in room 1, the others were divided over rooms 2 (n=7), 3 (n=5) and 5 (n=15). Another group of ground-stone tools which seems overrepresented is that of the grinding slabs and hand grinders, of which 39 were found (including 5 complete or nearly complete specimens). They occurred in rooms 1 (n=13), 2 (n=2), 3 (n=19) and 5 (n=5).

Sealings and jar stoppers. Sealings are pieces of clay either pressed on the fastening of a container or closing this container entirely when the clay is still plastic. They served administrative purposes, to control the distribution and ownership of the sealed containers (cf. Akkermans and Duistermaat 1997 on the sealings earlier found at Tell Sabi Abyad). There was a relatively large number of clay sealings inside the burnt building: 36 of them were found in rooms 1 (n=8), 3 (n=8) and 5 (n=20). All sealings showed stamp-seal impressions and/or finger prints. They were all fragmented, which indicates that the originally sealed objects had been opened. Among the sealings there were also four *bullae* with the impressions of tokens inside them found in rooms 3 (n=3) and 5 (n=1). In addition, a total of 30 clay jar stoppers was found, distributed over rooms 1 (n=6), 3 (n=14) and 5 (n=10). The jar stoppers came in a variety of shapes, from ovoid and conical to, less common, rounded or mushroom-shaped.

Tokens. Small clay tokens – counters for administrative purposes – occurred in spherical, oval and conical shapes. Altogether 57 tokens were found, distributed over rooms 1 (n=15), 3 (n=34), 4 (n=3) and 5 (n=5). The quantity of both sealings and tokens might suggest that (part of) the building was used for extensive storage.

Spindle whorls. Three spindle whorls of baked clay were found in rooms 1 (n=2) and 2 (n=1). Two of these had a biconical shape and were 2.7 cm in diameter. The third specimen was incomplete and had an irregular shape.

Pierced discs. There were 34 pierced discs inside the burnt structure, each roughly circular in shape, pierced in the centre and made of a re-used pottery sherd. Two of them were made of unbaked clay and three others were made of stone. The discs may have served as spindle whorls. They were found in rooms 1 (n=14), 2 (n=4), 3 (n=2), 4 (n=2), 5 (n=9) and 6 (n=3).

Beads and labrets. Only four stone beads were found in the burnt building, in rooms 1 (n=2), 2 (n=1) and 4 (n=1). In addition, there were ten labrets: small ear or lip ornaments made of clay (n=7) or stone (n=3). They occurred in rooms 1 (n=3), 2 (n=1), 5 (n=2) and 6 (n=4).

Bone implements. Bone tools occurred in very small quantities, comprising seven awls in room 1 (n=2), 3 (n=2), 4 (n=1) and 5 (n=1) and two spatulas, one in room 1, the other in room 3. In addition, there was one bone fragment in room 5, believed to be a tally stick, with cut marks of varying lengths at small intervals. If so, an administrative purpose may be indicated, perhaps in relation with the many tokens and sealings found in the building; cf. Spoor and Collet 1996, 453.

Sling bolts. There were 17 oval or biconical sling bolts of unbaked clay in the burnt structure, in rooms 1 (n=6), 2 (n=1), 3 (n=7), 4 (n=1) and 5 (n=2).

White ware. Four fragments of so-called white ware or *vaisselle blanche* were found in rooms 1 (n=2) and 3 (n= 2), some of them with impressions of basketry.

Figurines. Three unbaked-clay figurines were found, one of an anthropomorphic shape and the other two zoomorphic in form. They are very small; their size does not exceed 5.5 cm. They occurred in rooms 1 (n=2) and 3 (n=1).

Miscellaneous objects. In addition to the above, there were a number of finds in the building which could not be assigned to a specific category, including four stone objects which may have served as weights and a number of clay lumps or unidentifiable objects.

Pottery. Almost two thousand fragments were counted, weighing some 80 kilogrammes (table 3). This material was

	Room 1	Room 2	Room 3	Room 4	Room 5	Room 6	Room 7	Room 8	Total
Complete	0	0	0	0	0	0	0	0	0
Section	2	0	1	0	3	0	0	0	6
Rim fragment	90	5	4	12	55	13	7	0	186
Body sherd	555	74	40	80	600	99	99	31	1578
Base fragment	23	0	1	1	12	0	2	0	39
Other	1	0	0	0	2	0	0	0	3
Total	671	79	46	93	672	112	108	31	1812

Table 3 Burnt building V6. The quantitative distribution of pottery finds per room (frequency counts).

most unequally distributed over the various rooms. Most sherds came from room 5 (n=672) and room 1 (n=671), while room 6 and room 7 yielded much less (n=112 and n=108, resp.). The other rooms yielded almost nothing (table 3). In terms of its typology, this assemblage corresponds well to the later Pre-Halaf ceramic assemblage recovered from domestic contexts in Operation I, level 8 (Nieuwenhuyse 2007). No special, 'ritual' types could be identified.

Lithics. The building yielded lithic finds, distributed in different quantities across the various room fills. The composition of this lithic assemblage suggests this was mostly secondary or tertiary material. No *in situ* finds could be identified either on the floors or higher up in the fills. No concentrations of either raw materials or tools or even obsidian clusters (Astruc *et al*. 2007) were found to suggest that lithics had been stored in the building (Astruc pers. comm. May 2012).

A crucial question is whether or not the hundreds of artefacts found inside the burnt structure constitute an ordinary domestic assemblage. And if not, do they perhaps represent extensive storage, or an intended (ritual?) deposition, or even mere rubbish? Answers to these questions may shed light on the nature of the structure itself as well as on the fire that devoured it. An evident problem is that it remains unknown what a 'normal' domestic assemblage looks like. So far, none of the houses excavated at Tell Sabi Abyad has provided a complete, primary inventory. Once the houses were in the process of abandonment, most of their inventories must have been taken away. The deserted buildings became ruins, either left entirely to their fate or used for the disposal of waste (*i.e*. secondary deposits).

While most of the finds were highly useful for daily domestic tasks,[8] it is difficult to believe that a single household, whatever its size, would be in need of the extraordinary quantity of tools and so on found inside the building. Hence, it seems more likely that the building served communal purposes, as a repository for objects of all kinds used by many people. Support for this comes from the numerous sealings and jar stoppers, indicative of extensive storage in often controlled (*i.e*. sealed) circumstances. Together with the tokens and the single bone tally stick, the sealings suggest some form of administration of stored properties (cf. Akkermans and Duistermaat 1997). In short, the burnt building in area V6, it seems, was a storehouse in the first place, and not a structure for ordinary living and working.

However, it is difficult to establish whether or not the finds in the building were part of the structure's original inventory. Only very few objects occurred (*in situ*?) on the floor in the building; the many hundreds of other finds were all in the fill at different elevations, with most of them below the fallen roofing debris (see below). If they were in the house prior to the fire, some of these may have been stored originally either on shelves or in containers high against the wall or on top of the roof. It cannot be excluded that there were also commodities made of perishable materials (wooden receptacles, baskets, textiles, etc.) in the building, which by their very nature were entirely consumed by the fire.[9]

There is, however, another option to explain the large number of finds in the building: they may have been intentionally added because of the anticipated destruction by fire, even *during* the event, in a ritual setting. The circumstance that many objects in the burnt waste of the V6 building were complete suggests that no attempt was made to rescue these tools and other items either during or after the fire. This is a rather astounding observation, because they are implements which were not only for a very large part still fully usable but which were also a basic, day-to-day requirement for village life (for example, the many ground-stone tools). Moreover, the tools were often made of non-local stones, *i.e*. they were relatively rare, valuable import items brought to Tell Sabi Abyad over a distance of many dozens or even hundreds of kilometres. The experimental house burnings in Serbia and Jordan have made it clear that within the first 20 minutes or so, either before or after the (partial) roof collapse, it was still possible to enter the smouldering

buildings and retrieve valuable items (Bankoff and Winter 1979, 13; Dennis 2008, 177-78). In this respect it seems that the decision *not* to recover the items from the V6 building, was not based on practical objections but must have been deliberate and imbued with symbolic meaning.

More than half of all the items (57%) in the building was complete or virtually complete; they certainly must have been still useful. The very few objects found directly on the floors of the building, for instance, were all complete. Possibly these were deposited inside the building before the fire began. The remainder, however, was found in various states of preservation. Although occasionally fragments could be refitted into larger pieces, none of them resulted in complete or even nearly complete objects[10]. Many items, it appears, ended in the fill of the building as broken and often highly fragmentary pieces from the very beginning. Interestingly, the proportion of complete versus fragmentary items in the fill, both in the ashes immediately above the floor and in the subsequent wall and other debris at higher elevations, was roughly equal. It appears that large numbers of broken objects were deposited in the building *during* the fire.

The fragmentation patterns observed on the ceramic finds perhaps shed further light on what happed to the V6 building. Intriguingly, not a single complete vessel was recovered from any of the rooms (table 3).[11] Either no pottery containers had originally been stored inside the building, or they had all been taken out before the fire began. The ceramic assemblage, furthermore, does not suggest that people deliberately smashed sets of pottery containers and then deposited the resulting fragments in the building. Available fragmentation indices suggest that this may be secondary, perhaps even tertiary material. The percentages of rims versus bases and body sherds, the average sherd weights, even the proportion of the rims and bases preserved are virtually indistinguishable from ceramic fragmentation statistics computed for material from secondary and tertiary depositions excavated previously in Operation I (Nieuwenhuyse 2007). Did people deposit handfuls of sherds in the building during the fire?

6 The distribution of finds inside the building

Most objects inside the building were found in the ash layers, which were most extensive in rooms 1, 3 and 5. The layer of wall and other debris shows a more even distribution, with objects found in all of the rooms (fig. 10).

Although the building yielded several hundreds of objects, only very few of these (n = 14) were found on the floor of the building. Floor finds occurred only in rooms 1, 2, 3, 5 and 6 (fig. 10). In room 1 were two clusters of ground-stone tools, the first (in the southeast corner) consisting of three complete grinders and the second (further north) comprising a complete mortar, two pestles and what may have been a polisher. In room 2 was a complete stone pestle together with a pierced pottery disc in the northeast corner. Other objects were found isolated on the floors of various rooms, including a damaged pierced pottery disc in room 5, and a complete labret as well as another damaged pierced pottery disc in room 6. Although these objects may have been part of the building's original inventory, the relative scarcity of objects on the floor suggests either that most of the content was taken away prior to the fire or that most of the inventory was placed in containers, on shelves or hung from the walls or the ceiling of the building. Very few sherds were found in a floor context; as floors were simply made of beaten earth, these sherds may just have been residual in the soil making up the floor.

The greater majority of objects and pottery sherds came from the layers of ash piled up inside the rooms (particularly in rooms 1, 3 and 5) and from the deposits of red-burnt debris above them. Although the ash and debris layers appear to be stratigraphically separated to some extent, this is hardly reflected in the distribution of small finds (fig. 10). In rooms 1 and 5 the finds were found in the ashes, as well as in the debris layer above it, albeit in slightly smaller numbers. Room 3 contained hardly anything apart from a thick deposit of ash, in which a very large number of small finds was found. The other rooms (nos. 2, 4, 6-8), where the blaze seems to have been less given the small quantity of ash found here, yielded considerably fewer small finds. Although most finds thus seem to have been found in the areas most affected by the fire, a direct correlation between the intensity of the fire and the number of finds found there does not seem to hold entirely. It appears that in the areas where most ashes had piled up, i.e. in the south of room 1 and in the west of room 5, only a few objects were found, even though directly adjacent to those areas objects were abundant.

There is a difference between the distributions of objects and sherds inside individual rooms. Room 1 revealed a scatter of objects in the black ash at the lowest levels in the northern part of the room, including a cluster of pestles along the western wall, above which a mixed deposit revealed a variety of items, while the northern end of the room was without objects in both layers. The southern half of the room contained another cluster of finds in black ash, including many tools at the lowest levels, a mixed debris layer in between, and more black ash above it containing lighter items, such as discs and tokens. To the west of this cluster a scatter of items was found in the mixed deposit, including a vessel and a grinder, continuing vertically towards the north of the cluster, above the black ash. Room 2 showed a clear distinction between the two layers, with the northern part of the room having objects only in the ash layer and the rest of the room only in the debris layer. Room 3 had a large number of finds in the ash layer across the whole room,

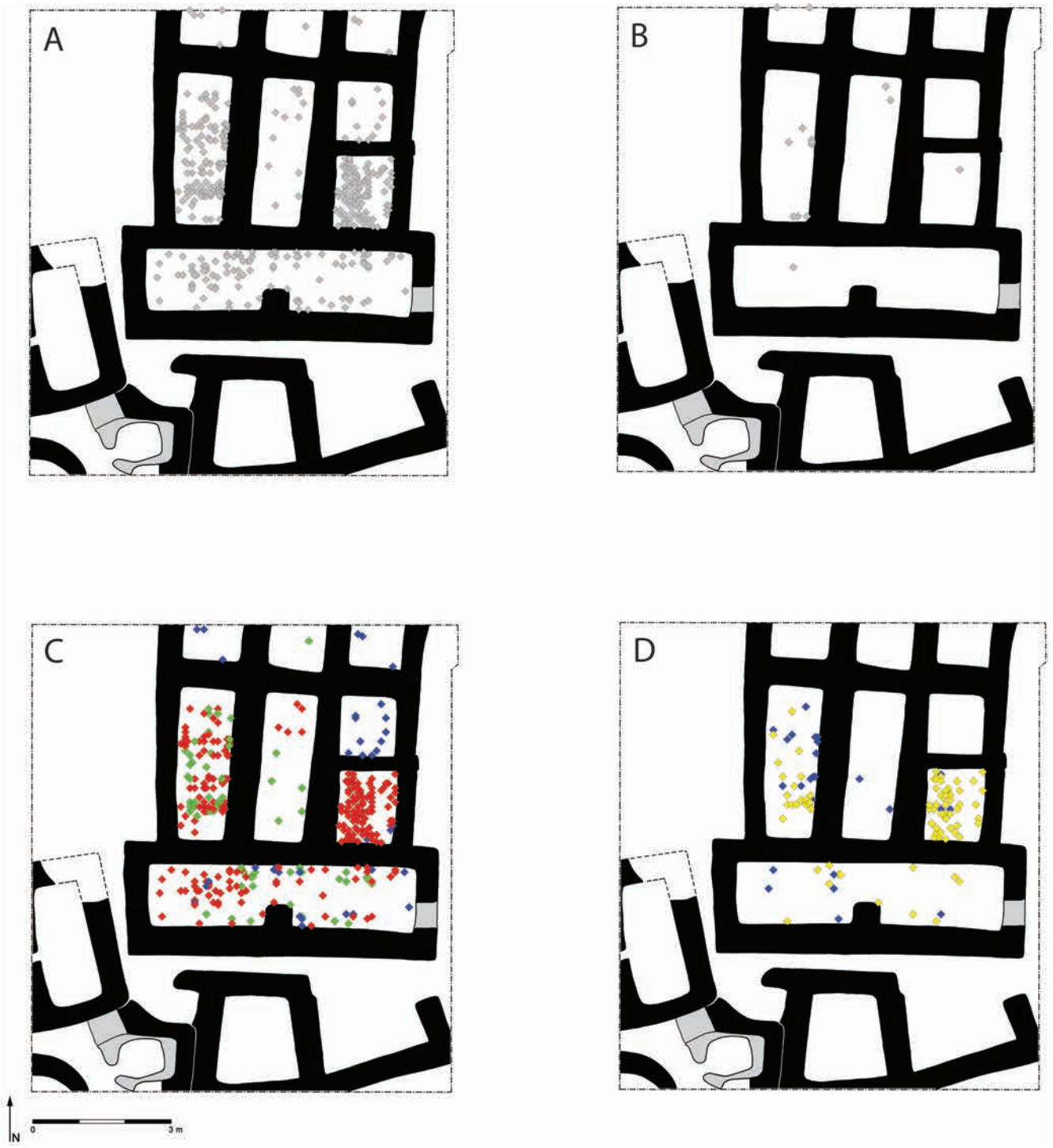

Figure 10 Tell Sabi Abyad. Distributions of objects inside the burnt building V6. (A) All objects found inside the building. (B) Objects found on the floor of the building. (C) Objects found in black ash (red), in red-burnt debris (green), and in unburnt debris (blue). (D) Distribution of pierced discs and spindle whorls (blue) and tokens and jar stoppers (yellow).

mainly clustered towards the west of the room and including many grinders, pestles, tokens, jar stoppers and sealings, amongst others, continuing vertically, increasing in number, and covering almost the entire room. The highest level also revealed three grinders in the mixed debris against the southern and eastern walls of the room. In room 4 objects were found only in the debris layer with a prominent distribution along the eastern and southern parts of the room. In room 5 most items were found along the long walls in both layers (as if they had been on shelves originally), with the southeast corner devoid of finds, although the ash layer had an additional concentration of objects at the western end of the room, with tools such as hammers, pestles, palettes and vessels, but also some smaller items such as tokens and sealings, in a cluster rising vertically with lighter items increasing in the higher levels. All the clusters contained some small items in mixed debris, mainly along the walls, especially at the eastern end of the room where they increased above the ash layer. Rooms 6 and 8 had only two objects in the southwestern part of the rooms; in room 7 one object was found in its eastern half in the debris layer; and only one object was found in the ashes in the southwestern part of room 6.

Furthermore, when differentiating between various find categories found in the ashes and burnt debris layers, it appears that although most objects show a more or less random distribution, some find categories seem to cluster in specific rooms. Pierced discs and spindle whorls were mainly found in room 1, whereas tokens and jar stoppers seem to be somewhat overrepresented in room 3 (fig. 10).

A small amount of finds was found in more or less clean fill layers sometimes located on top of the burnt debris or in the fill of rooms unaffected by the fire, such as rooms 4 and 8. Therefore, these objects do not seem to bear a direct relationship to the fire. Rather, they seem to have been deposited here at a later stage.

The distribution of charred wood and the many roof imprints in clay in the building showed a number of relevant patterns. The wood (as yet unspecified as to species) comprised fragments of charred beams, as well as (in room 1) two pieces of flattened, possibly worked wood or shelves, one only being some 10 cm in length but the largest measuring 70 by 5 by 2 cm. The charred wood occurred in the burnt deposits of rooms 1 and 4, between 30 and 80 cm above the floor, never actually on the floor. It mainly represents the remnants of either fuel for the fire or of the roof beams. This find high above the floor is in accordance with the documented conflagration experiments where the (charred) timber was usually near the top of the debris sequence (cf. Dennis 2008, 175).

The clay roof impressions, together 48 pieces of various size (fig. 11), were primarily found in the western and southwestern rooms 1 (n=19), 2 (n=14) and 5 (n=11), while only a few pieces were found in rooms 6 (n=2) and 7 (n=2) and none in the northeastern rooms 3, 4 and 8 (cf. fig. 12). They were widely distributed throughout the fill in these rooms, with some of them close to the floors (but never in the ashes immediately on the floors) and others higher up in

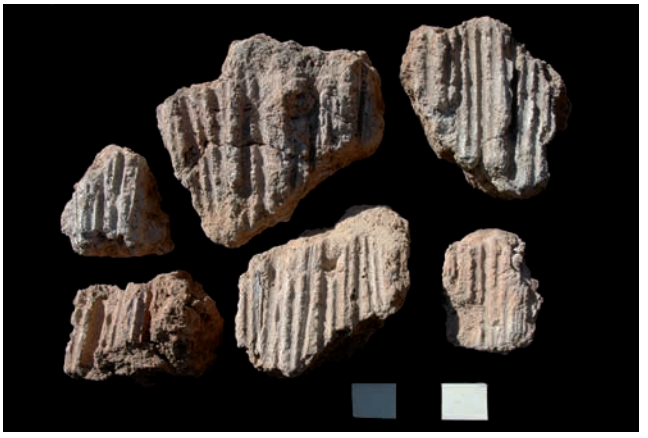

Figure 11 Tell Sabi Abyad. Clay fragments with reed impressions from the fill of the burnt building V6.

Figure 12 Tell Sabi Abyad. Distribution of roof material fragments in the burnt building V6. Clay roof fragments with reed imprints (red triangle), wood remains (green circle).

the fill. Debris was also found on top of the impressions, burying them below crumbly, sintered wall fragments.

Significantly, the superstructure debris in rooms 1, 2 and 5 occurred in roughly two layers, with one layer of roof impressions at an elevation between about 80 to 120 cm above the floor and the other slightly lower at an elevation of 40-50 cm above the floor. While most imprints in room 1 were found in the upper layer, in the other rooms they were mainly in the lower layer. The occurrence of the impressions in layers suggests that the collapse of the roof in these rooms was not a single event but that it took place in a series of episodes. In the nearby room 6 the roof imprints were close to the floor, with wall debris on top of them. In the debris in the northwest corner of this room there was an ash midden; it is very likely that one part of the roof collapsed at a given moment, leaving the clay impressions, while another part kept burning, resulting in the midden. In all rooms the artefacts were found mainly in the fill below the roof imprints, while in the rooms with multiple levels of roofing material they were below and amidst both layers.

7 Discussion and conclusions: burning down the house

In view of the above, we may conclude, first, that the T-shaped building at Tell Sabi Abyad was intentionally burnt down, given the fact that the amount of fuel needed to burn the house so intensely would not be present in a regular house inventory. Second, the reason for the building's intentional destruction by fire may be that it was part of a ritual associated with the burial of a young woman, prior to the fire, on the floor of the building. Third, the unusually large quantity of objects found in the building as well as their location in the burnt fill of the building instead of on its floor may suggest that the objects do not represent a 'normal' household inventory, but an unusual assemblage perhaps deposited in the building as part of the burning event. Finally, it seems that many of the artefacts deposited inside the building during this event were not complete, but already very fragmented.

How then may we reconstruct the events that may have resulted in the unusual archaeological context discussed here? The following scenario seems most likely given the evidence presented above. It appears that somewhere between 6050 and 6020 BC a young woman died at Tell Sabi Abyad. We assume that her death was of natural causes, perhaps related to an infectious disease as suggested by the dental hypoplasia. In any case, her bones showed no evidence of a violent death. Her body was laid on the floor of the T-shaped building, with one half of a mace head placed in her hand, and covered with soil. It remains unclear what the relation of the woman was to the building. The relative scarcity of objects found on the floor of the building may suggest that by the time of the woman's burial the building was relatively empty, although it is possible that goods were stored on shelves or hanging from the walls and ceilings.

At some point after the internment, the building was set on fire, which burnt the walls throughout and left behind thick deposits of ash and burnt debris. Although it is uncertain how much fuel, temperature and burning time was needed to achieve the degree of burning attested in the T-shaped building, these must have been considerable. It is likely that the building was literally crammed with fuel, resulting in a fire that reached very high temperatures once the fuel was set alight and that burnt for many hours, if not days. It is possible that more fuel was added to keep the fire going, although there is no direct evidence to support this. The distribution of clay roof imprints in several rooms of the building suggests that when the fire was lit, the roof of the building was still in place in those areas, but that it gradually collapsed as a result of the intense fire.

It is unlikely that the hundreds of objects found in the ashes and burnt debris inside the building were all deposited there in the same manner. The distribution of some objects along the walls of the building, especially in room 5, may suggest that these objects were hanging from the walls or had been placed on shelves there – perhaps as part of the original inventory – and that they fell down when touched by the fire. However, this is much less likely for the large number of objects that were found in the centres and much higher up in the fills of the rooms. Alternatively, we propose that these objects, most of them broken, were placed within the fuel stacked up inside the building. Objects that were found superimposing the roof material either may have been placed on top of the roof originally and fallen down after the roof collapsed, or were thrown into the fire during the burning event.

Why a large number of objects was placed inside the building either prior or during the burning event is difficult to determine. If the burning event was indeed a ritual act, the objects placed inside must have been of significance to the ritual in some way. What is striking in this respect is that the entire artefact corpus normally found at Tell Sabi Abyad is represented in the T-shaped building. All material categories, such as ground-stone tools, bone tools, clay objects, administrative objects, pottery containers, objects of personal adornment, and so on, were found. Some of these were only fragments, while others were complete and still usable. It appeared that most of the objects were distributed more or less randomly over the rooms, with the exception of only a few clusters. Therefore there is no clear association between any material category and the proposed ritual act. What might have been the meaning then of the deposition of these objects? A conclusive answer to this question cannot be

given, although Chapman has proposed, for burnt-house contexts associated with the dead in southeast Europe, that the occurrence of both complete and fragmentary objects may reflect a ritual in which "(a) individual objects which form part of artifact sets of other households, or (b) fragments of objects whose other parts would be kept outside the burnt house" (Chapman 1999, 121) were deposited inside the house with the deceased.

When the fire had died, there was no attempt to rescue any of the valuables inside the building, nor to restore the house to a habitable condition. Although new architecture was raised around it, the V6 building, it seems, was entirely left in its final state of destruction, barred from any possible future utilitarian use for dwelling or storage. The burnt building thus stood out as a conspicuous landmark within the village as it continued to develop. This may well have been deliberate, as a means to extend social memory. Tringham (2005, 106ff) discusses the useful terms domicide and domithanasia for this process of the deliberate destruction – the 'killing' - of the house by fire as a means to enhance or disrupt the continuity of place. Although the actors and purposes differ, domicide and domithanasia "hold in common important results for social memory and community that are accentuated by the process and meaning of fire" (Tringham 2005, 107). While we cannot reconstruct with any certainty what the significance of this landmark may have been to the inhabitants of the village, or even for how long it served as such, we believe that the deliberate, violent destruction of the building by fire had an important symbolic meaning to the villagers.

Fascinatingly, this newly found burnt building and its ritual connotation proposed here closely resemble the Burnt Village at Tell Sabi Abyad, where architecture destroyed by fire, their fills of ashes and burnt debris packed with artefacts, and human skeletal remains were found as well. Marc Verhoeven proposed a ritual involving death and fire as well as the abandonment of the village for the Burnt Village (Verhoeven 1999; see also, for example, Stevanović 1997; Chapman 1999; Tringham 2005; Verhoeven 2010 on the social and ritual aspects of house burnings). This suggests that the burnt building in trench V6 was not an isolated incident, but perhaps reflects established symbolic practices.

Some reservations, however, should be made before proposing a direct parallel between the two cases. Although more burnt architecture may be buried in the unexcavated areas around the T-shaped structure, for the moment our case consists of a single burnt building, hardly comparable to the scale of the Burnt Village. Furthermore, it was proposed that the objects found in the Burnt Village either reflected the original inventories of the buildings, or refuse left there prior to the abandonment of the village (Verhoeven 1999, 201), whereas we suggest that many if not most of the objects found in the T-shaped structure were placed there on purpose as part of the ritual act. Nevertheless, proposing a parallel between the Burnt Village and the burnt T-shaped V6 building in more general terms seems warranted: a ritual dealing with the burial of people inside architecture or, in the case of the Burnt Village, on top of architecture, and the destruction of the architecture by fire, creating socially meaningful and decisive landmarks of some kind.

Notes

1 This article is a result of the 2011-2012 Research Master Class entitled *The Archaeology of a Neolithic Community* at Leiden University's Faculty of Archaeology, under the guidance of the first author. The co-authors all participated in the class activities. Our thanks go to Ries Slappendel for useful advice. Sincere thanks are also due to Daniella Vos, Beatrijs de Groot and Elisabeth de Campenhout, who contributed significantly to the class project at an earlier stage. Laurence Astruc kindly provided some first results from her study of the lithic material recovered from the burnt building V6.

2 A situation identical to the finds in the so-called Burnt Village on the southeastern mound; see Akkermans and Verhoeven 1995, 11.

3 This holds in particular for rooms 1 (southwest corner) and 5 (northwest corner). Alternatively the piles may represent ashes blown into sheltered corners and in the lee of walls in the building by the draught during the fire.

4 There is some uncertainty as to the precise position of the north wall of the room, but the body was probably resting with its back against it. During excavation, the skeleton protruded from the northern section; the back wall had not yet been exposed.

5 Only four mace heads or parts thereof have been recovered in the past 25 years of extensive excavation in different phases of settlements at Tell Sabi Abyad.

6 Sincere thanks are due to Dr. Elisabeth Smits (University of Amsterdam) for providing the physical-anthropological data.

7 In addition to the artefactual material, there were large numbers of animal bones inside the Burnt building. This bone material has not yet been studied.

8 For example, the many ground-stone tools may have served predominantly in the preparation of food, while spindle whorls, bone implements and, perhaps, pierced discs were associated with the processing of textiles or hides. The clay sling bolts probably served in the hunt. The few beads and labrets point towards body adornment.

9 In the form of imprints of basketry containers in so-called white ware and impressions on the reverse of clay sealings, Tell Sabi Abyad has yielded evidence of many hundreds of baskets in the late seventh millennium settlements at the site, cf. Duistermaat 1996; Akkermans *et al*. 2006.

10 It is very unlikely that significant parts of fragmented objects were lost during excavation. In the field all room contexts were

carefully sampled to reassemble broken artefacts as much as possible.

11 During the find processing a thorough search was made for fitting sherds. Several fits were indeed found. However, these yielded larger sherds but not a single complete vessel. Fits were found only with sherds from the same room, never with sherds coming from different rooms.

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