CHAPTER EIGHT

THE CENTRAL AREA B/C/I/R BUILDINGS AND STRATIGRAPHY OF PERIODS 1 & 2

In order to make it easier to follow the description of the middle area of Borgo NW, each house (Houses B and C) and Areas I and R will be presented under separate headings. Each area will then contain descriptions of the buildings, the walls and the stratigraphy (*Fig. 101* with all periods indicated).

The middle area is bordered in the north by Drain L and in the south by Lane K, in the east by the high rock area I1/R/TRe (*uf.* 1.30 m) and in the west by the low area of terrace wall/fortification Mc (*uf.* 5.91 m). The difference in level between the eastern and the western areas is as much as 4.60 m. The sloping rock can be divided into three parts: (a) the low, western part of Area B is very steep; (b) the central part, Area B/C, is less steep, and (c) the highest eastern area I1 is closest to the rock TRe. This means that, in the eastern, upper part, the Etruscans had to create a flat surface for the buildings, just as in Area A. On the other hand, in the western, lower part, they had to fill up the area by means of a terrace wall. In the neighbouring Area A, the most demanding construction work was in the eastern rock area TRe. However, in this Area B/C/I/R, the first activity was to handle the lowest, western walls Mc/N1 and the Great Fill. While the higher and flatter Area D/F in the south was in use by the late 8th century BC, the rocky and sloping Areas A/B/C were apparently not used before about 600 BC.

In 1957–1958 the excavators interpreted the walls in Area B/C as part of a construction called "the eastern tower". In 1961, when excavation work was resumed, the "eastern tower" seemed instead to be two houses, which are now called Houses B and C. The houses were of modest size and contained two rooms and a courtyard each. During the renewed work in 1998, we managed to present the correct development of the B/C-area (*Figs. 101–105*):

Pre-House Periods I–II. Cut surface of the rock (under Mc, Ba, Cb/Ib, and canals Q1 and Q8).[113]

The Great Fill Project, which included the terrace wall/fortification Mc and N1/Drain L1 and the shaping of the bedrock area Ca/Cb/I1 (see further Chapter 5).

In Period 1, there was originally only one House B with three rooms, viz. the centre, main room Ba, and the two, side rooms Bb and Bc (= later Ca). In addition there was the large yard area Bd/Be, Well P1 and the entrance Ka from Lane K.

In Period 2 important changes were introduced. The original House B was now changed into the two, separate Houses B and C, each of two rooms, and with two separate yards Bc and Cc. Also the area I1.1 was shaped in this period.

In Period 3, after the earthquake, the area was completely reorganized by the construction of the new, higher walls K, by Well P2, alley Z and area I1.2.

PRE-HOUSE PERIODS I AND II

Canal Q1 (*Figs. 41–43*)

Canal Q1 was cut into the sloping rock in a north-east–south-western direction. It is 12 m long, 0.30–0.44 m wide and 0.15–0.30 m deep and seemed to be the earliest construction in the area. It was clearly cut before the huge fill stratum 11/10 under House B/C was deposited. We believe that canal Q1 was cut in

[113] Levels. Bedrock 1 (west): wall Mc: *uf.* 5.91 m – N1.9/Bb: *uf.* 4.64 m – B4/B5: *uf.* 3.41 m – Rock entrance Ba: *uf.* 3.01 m = difference in level Mc – Ba = *c.* 3 metres;
Bedrock 2 (centre): Rock floor Ba: *uf.* 2.90/3.01 m – Rock-floor Bc/Ca: *uf.* 2.57 m – Rock entrance Bc/Ca: *uf.* 2.08 m – Rock Cb/P1: *uf.* 1.91 m = different level Ba – Cc = *c.* 1 metre;
Bedrock 3 (east): Ia: *uf.* 1.30 m.
Point 0 = Masl 171.17 (Metres above sea level)
Rock at I1 = *uf.* 1.30 m.
Rock close P1 = *uf.* 1.91 m.
Rock at C9/Ca-= *uf.* 2.24 m.
Rock at C8 = *uf.* 2.80 m.
Rock at B8 = *uf.* 2.94 m.
Rock at entrance Ba = *uf.* 3.01 m.
Rock at Bc/Ba = *uf.* 3.05 m.
Rock at B1/D3 = *uf.* 3.31 m.
Rock at N1 = *uf.* 4.62 m.
Rock at Mc = *uf.* 5.56–5.91 m.
From rock at I1 to rock Mc = difference 4.61 metres.

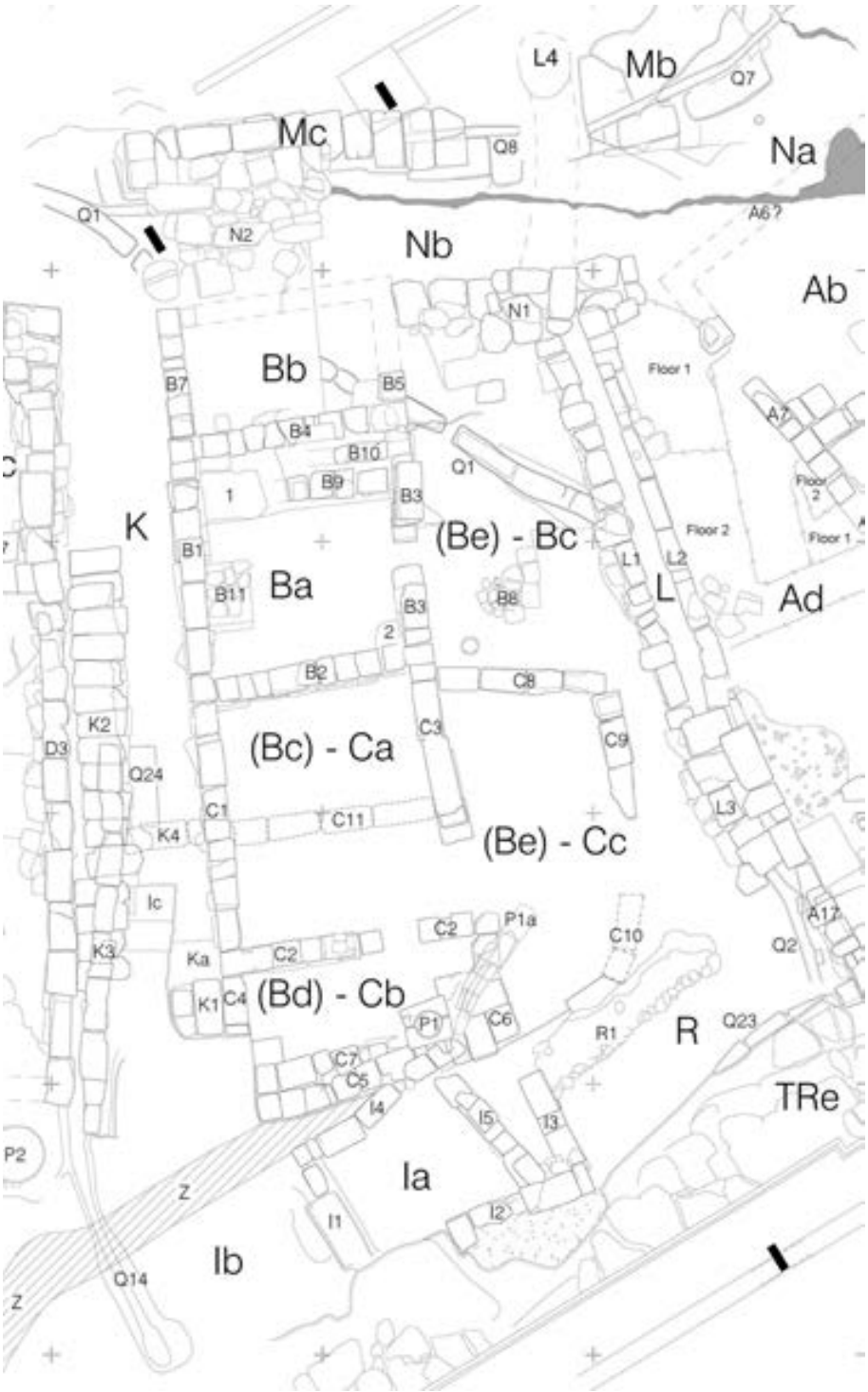

Fig. 101. Plan of House B/C with all architectural elements marked from both Periods 1 and 2. Drawing by B. Blomé, A. Bizzarro and G. Tilia. North is towards the upper right-hand corner.

order to function as an early palisade canal, before the palisade was extended towards the north. Finds: 3 fragments of very early Buccheroid Impasto, including of a miniature *kyatos* and fragments of a Faliscanizing *amphoriskos*; one fragment of Transitional Impasto.[114]

PERIOD 1 (*Fig. 105*)

Terrace wall/fortification Mc (*Pl. 6*)[115]

In this period the entire rock area was reorganized into a strong wall and a huge fill. The entire construction is clear: First, the construction of wall Mc. The first course was laid as headers and

[114] Find group 62-113; *San Giovenale* V:2, 70, cat. nos. 1–4. A sherd of the *amphoriskos* joins a fragment from Find group 63-124e of fill stratum 11 in yard Be (*San Giovenale* V:2, 84, cat. no. 6).

[115] For this section, see also discussion in Karlsson 1999.

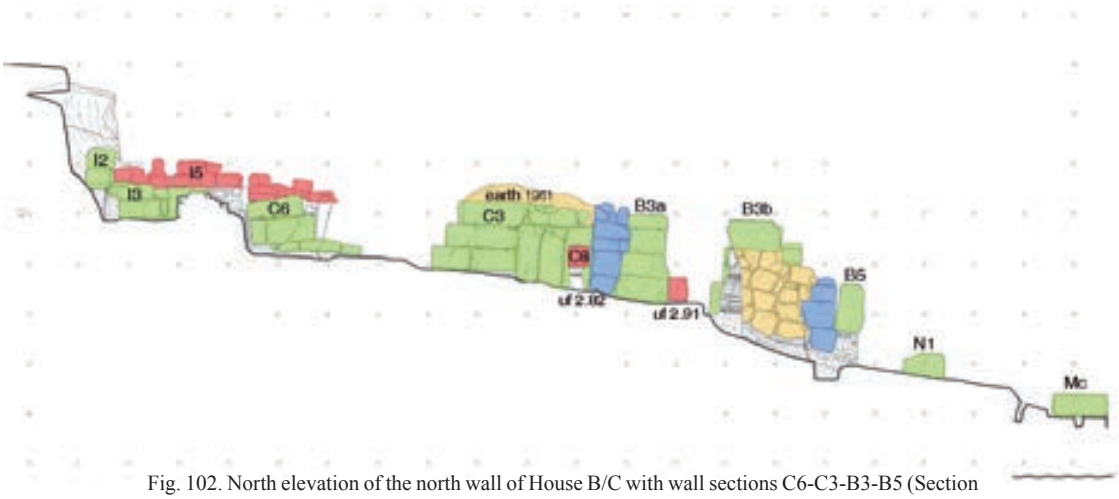

Fig. 102. North elevation of the north wall of House B/C with wall sections C6-C3-B3-B5 (Section T19 = *Pl. 34*). Drawing by B. Blomé, A. Bizzarro and G. Tilia.

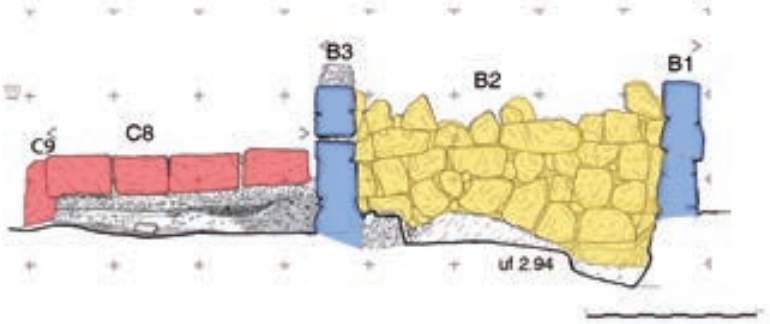

Fig. 103a. West elevation of the middle interior walls of House B/C with wall sections C8-B2 (Section L16 = *Pl. 11*). Drawing by B. Blomé, A. Bizzarro and G. Tilia.

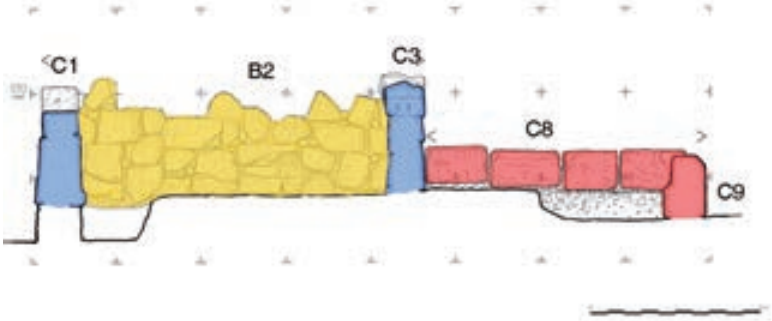

Fig. 103b. East elevation of the middle interior walls of House B/C with wall sections B2-C8 (Section L17 = *Pl. 12*). Drawing by B. Blomé, A. Bizzarro and G. Tilia.

the second as stretchers; secondly, the filling of smaller stones behind and between wall Mc and further blocks inside, all in order to stabilize the fill; finally, the dark earth was brought in place.

The rather complex terrace wall/fortification Mc is only partly preserved: three courses of huge blocks can still be seen *in situ* and two additional courses behind it higher up on the slope.[116] This solid construction with a height of 1.60 m was built into the slope by means of huge blocks. Course I consists of a row of seven big ashlar headers (0.45 × 0.90 × 0.45/0.60 m), partly resting on ledges in the rock and partly on a thin earth fill on the uneven rock. Course II consists of huge stretchers in front and of headers at the back placed in setting beds cut into the rock. Only two blocks are preserved in course III. Behind courses I and II, there is a mixture of soil and tufa stones of varying sizes, obviously intended as a kind of strengthening fill. It seems clear that stratum 10 and, to some extent, 11 abut this Mc-complex. There is no clear building trench to indicate that stratum 10 antedates the construction of wall Mc. Instead, the characteristic grey material of the stratum is mixed with the material behind the wall

[116] The photographic plan of 1963 shows a number of blocks that have since disappeared. However, numerous bed cuttings in the rock allow a fairly safe reconstruction of the lowest course of the entire system.

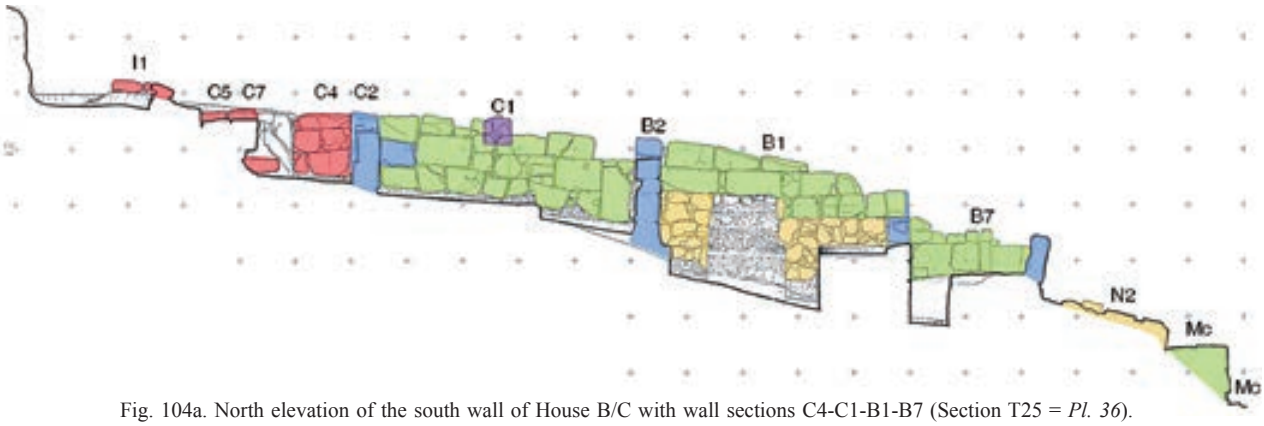

Fig. 104a. North elevation of the south wall of House B/C with wall sections C4-C1-B1-B7 (Section T25 = *Pl. 36*). Drawing by B. Blomé, A. Bizzarro and G. Tilia.

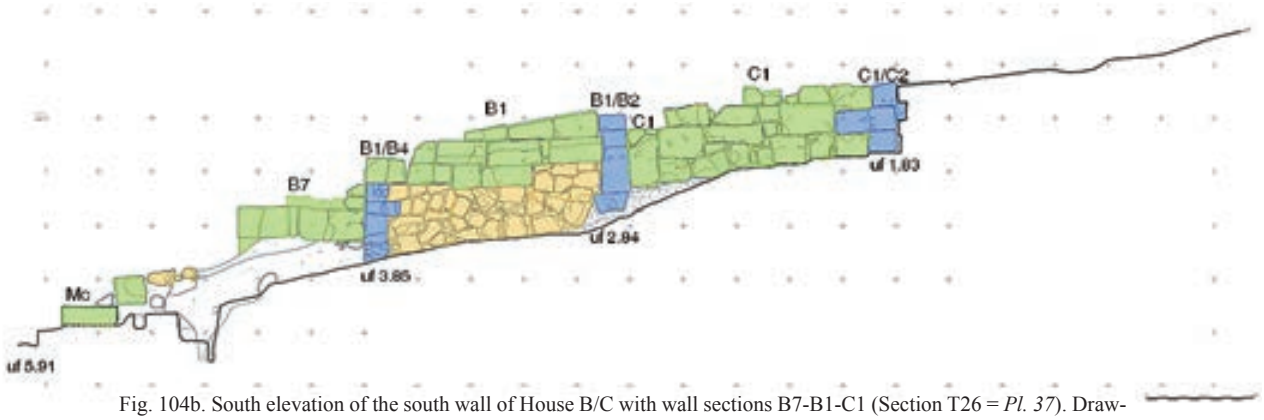

Fig. 104b. South elevation of the south wall of House B/C with wall sections B7-B1-C1 (Section T26 = *Pl. 37*). Drawing by B. Blomé, A. Bizzarro and G. Tilia.

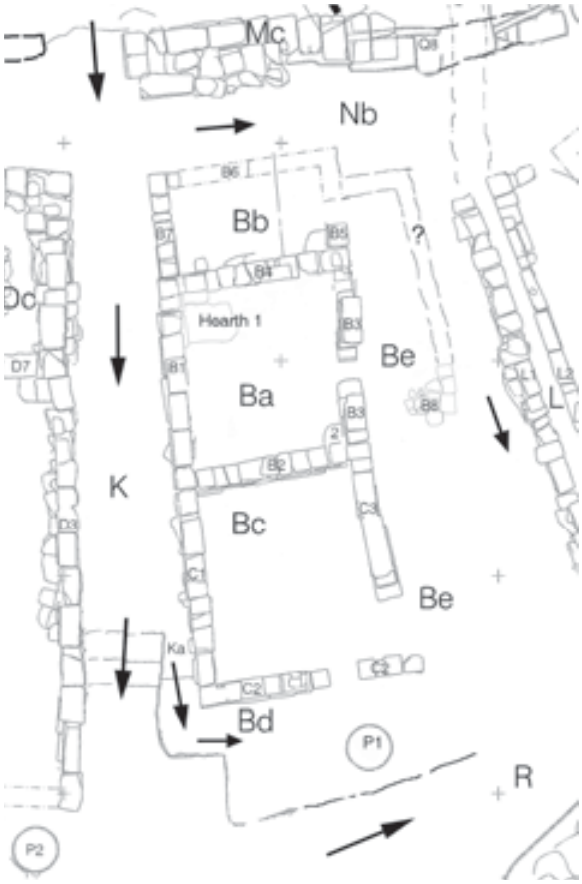

Fig. 105. House B, Period 1. Drawing by B. Blomé, A. Bizzarro and G. Tilia.

blocks and, at times, covers part of them. There can hardly be any doubt that one of the functions of wall Mc was to provide a solid support for the huge fill represented by strata 10/11, and probably also stratum 9b.[117] This confirms an early date for the impressively built Mc. It also formed a part of the fortification system, running along the edges of the Borgo plateau.[118]

The Great Fill Project

Areas A and B sloped down towards the solid construction Mb-Mc, which hold both the fills A/B/C in the northern Area A and fill strata 10/11 in this Area B. Strata 10/11 is especially deep under House B/C. The area was almost entirely excavated in 1961–1965. Due to numerous separating walls, it was natural to analyse the areas, rooms and finds separately. It turned out, however, that the lowest strata 10/11 (and the eastern Bc/Ca strata 5/6) were the same for the entire slope, stretching from the eastern room Bc/Ca (*uf.* 2.57 m), down to the western wall Mc (*uf.* 5.20–5.91 m). The fill was very clear: a rather thin brownish earth with above a very characteristic thick dark grey earth. This huge and wide fill was excavated from the low wall Mc upwards for about 12 m, just under the higher area of Floor level 1 of room Bc/Ca. It was clearly one, unified filling operation covering the entire, east–west bedrock area. The Great Fill Project can be traced at the following sections:

[117] A few of the N2 blocks is so deeply in the fill that they should belong to it rather than be interpreted as fallen parts of the collapsed wall B6.
[118] See further Karlsson 1999.

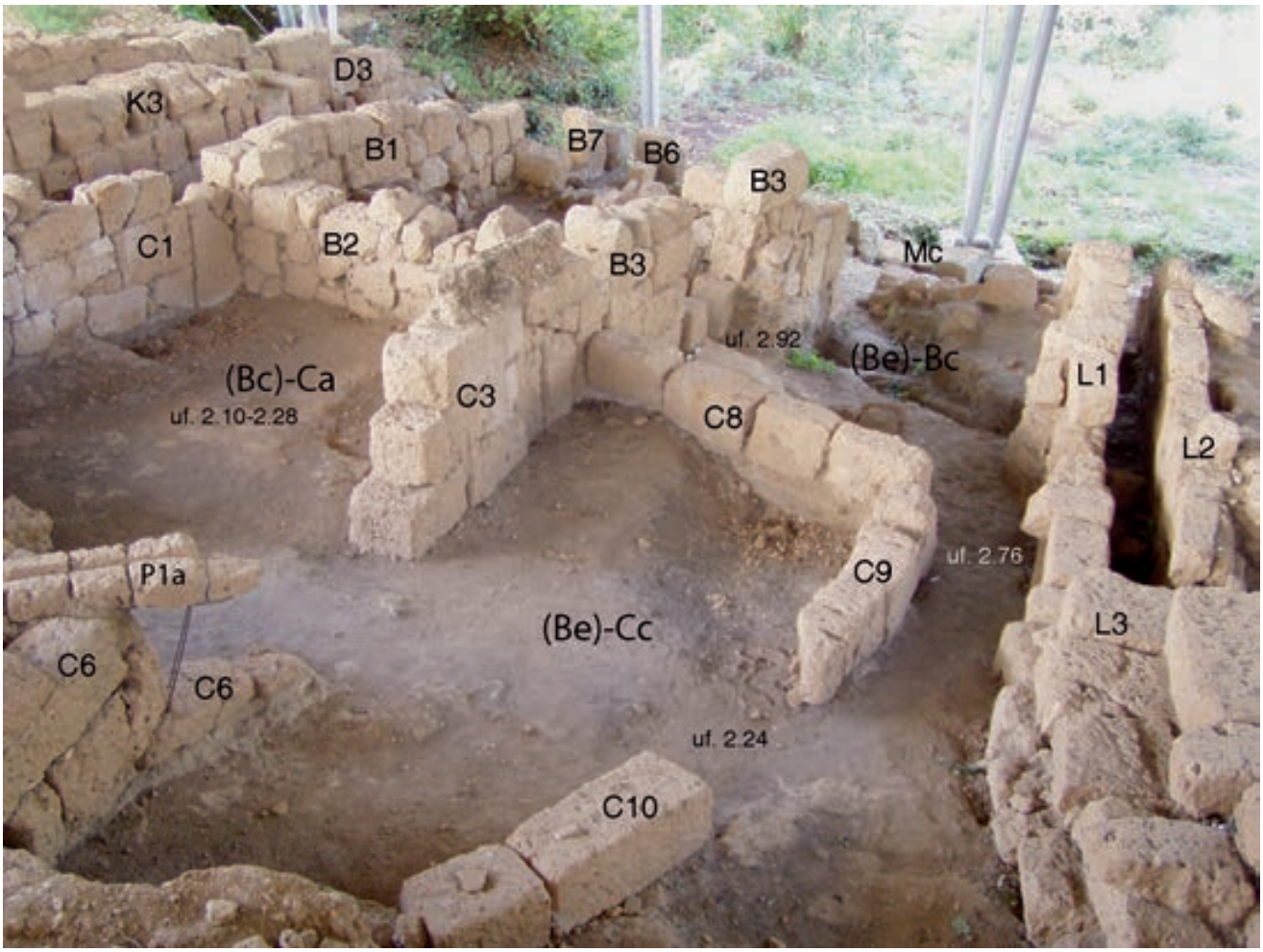

Fig. 106. View from the north-east towards House B/C. Photograph by J. Sigurdsson.

A. The fill from west of Room Bb down to wall Mc

On one or several occasions, the strong wall Mc and the huge fill behind were demolished (by the earthquake?). Thus much stone and earth had fallen down the slope. Finds: the "Slide strata" pottery with 21 fragments, early and late, and a spindle whorl.[119]

B. Fill under Room Bb

Strata 10/11. The dark grey fill (*uf*. 3.51–3.95 m) strata extending from the drop of the rock surface in Ba and yard Be down to wall Mc.[120]

C. Fill under Room Ba

Stratum 10 (Pohl str. 7). This was a fill laid there to compensate for the sloping rock surface and it was held in place by wall Mc in the lower part of the slope west of House B. It was a dark, rather homogeneous stratum, rich in *pozzolana* with few stones. Finds: Fine Buccheroid Impasto (incl. 3 spiral amphorae), Fine Brown Impasto (incl. carinated cups), Faliscan Impasto *oinochoai* (one almost complete) and Painted Impasto, Red-slip, Kitchen ware fragments and two bobbins.[121]

D. Fill on yard Be

Stratum 9. Brownish fill of *tufetti*, increasingly thick towards the slope and the west. Finds.[122]

Stratum 10. This stratum is different in the eastern and the western parts. On the uneven rock surface in the eastern, upper part of the yard Bc/Cc (Be), it consists of a very hard, thin layer just above the rock (*uf*. 2.82–3.06 m). In the western part where the rock slopes, it consists of a thick, darkish fill. Find groups of mostly early, Pre-House pottery.[123] There were some joinings with sherds of Find group 62-113 from the deepest level and foundations of Drain L.

[119] Find group 61-127 and ind. no. 61-118; *San Giovenale* V:2, 82f., cat. nos. 1–22.
[120] Find groups 61-173 and 63-156–157; *San Giovenale* V:2, 75–77, cat. nos. 1–32. This group is handled together with the material from the same fill found in the Ba and Bc areas.
[121] Find group 63-134f and ind. nos. 63-135–137; *San Giovenale* V:2, 74f., cat. nos. 1–39.
[122] Find group 63-124d; *San Giovenale* V:2, 84f., cat. nos. 3, 18, 24, 35.
[123] Find groups 63-124e, 62-101, 62-114, 62-121, 62-170d and 62-174d; *San Giovenale* V:2, 84f., cat. nos. 1–2, 4–17, 19–23, 25–34, 36.

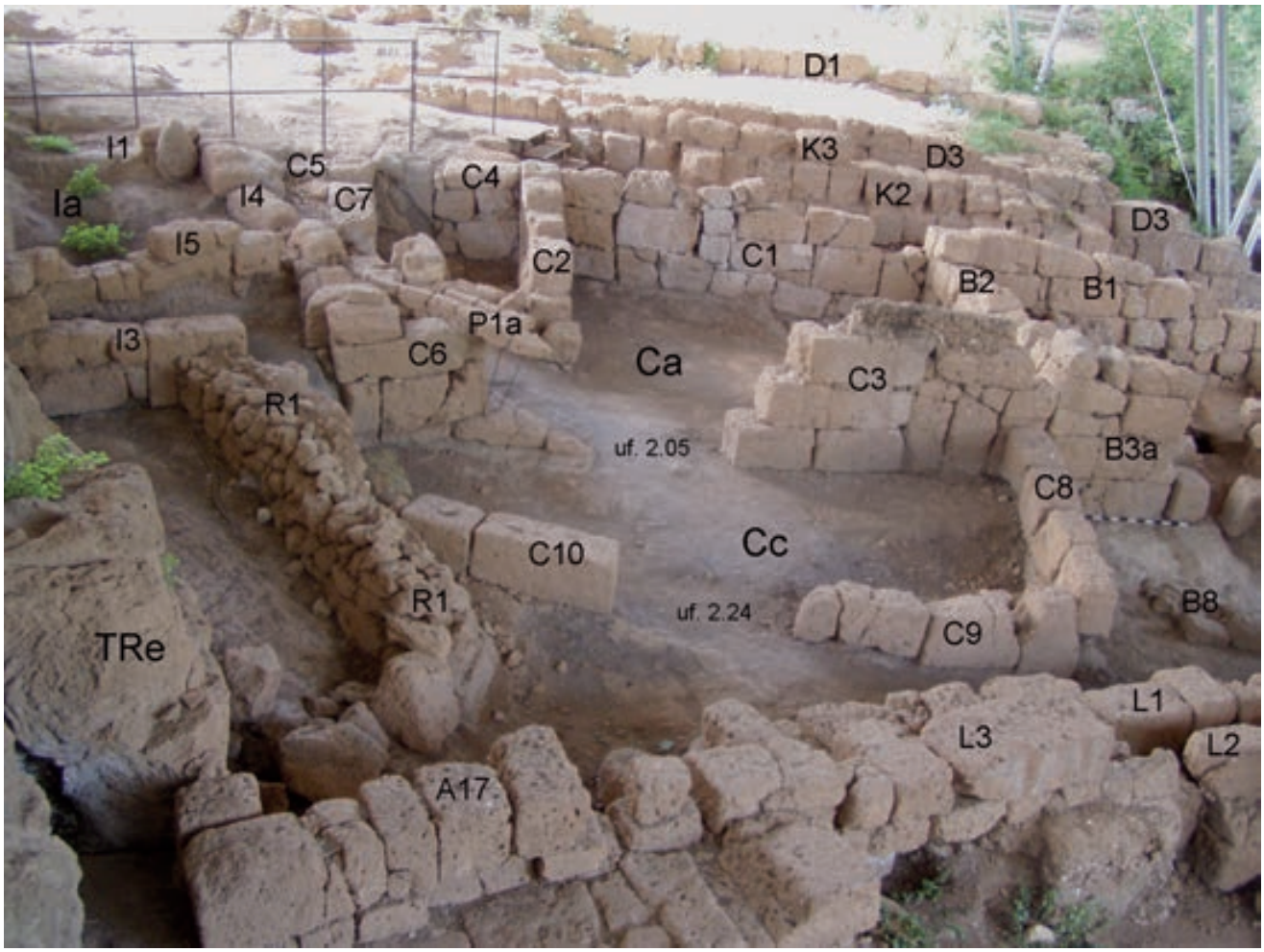

Fig. 107. View of Drain L and House C from the north-east. Photograph by J. Sigurdsson.

Stratum 11 is a thin, brownish layer on the rock surface under the fill in the west. The sherds were collected together with stratum 10 material.

E. Fill on Room Bc/Ca

Stratum 5 = Floor 1. Very hard, thin layer, not preserved over the whole area, but clearly to be interpreted as Floor 1. Very few and undiagnostic sherds were found here. In addition there were about ten very small fragments of bronze.

Stratum 6 is the earliest, thin stratum above the rock surface, preserved only sporadically. However, in the south-west corner of room Ca, the rock begins to slope down creating a more substantial deposit of the dark-greyish earth. Finds: Here a few, probably early sherds were saved from this dark layer.[124]

Finds and dating

The brown and dark/black-grey fills of strata 10/11 and stratum 6 (under Floor 1 of the different rooms) gave 74 (32+39+3) pottery fragments, mainly very early: Fine Buccheroid Impasto (12), Fine Brown Impasto (9), Faliscan Impasto (5), Italo-Geometric/Italo-Protocorinthian ware (2), dated by Pohl to around the middle of the 7th century. In addition, the apparent absence of Bucchero and tiles in this fill under the first floors of House B/C seemed a further argument for an early date. It was thus thought, for a while, that this early fill of strata 10/11 indicated an approximate date for all the first constructions. However, a wider understanding of all the first construction (Q1-Ma/Mb/Mc-N1/L-D3/D4 and also fills A-B-C) seemed to argue for a later date. The arguments are briefly the following: (a) all the construction blocks were extracted from the rock and (b), these included several reused blocks (e.g. L1, block 6) as well as three fragments of terracotta tiles fixed into foundation N1 (hardly earlier than late 7th century); (c) the fill of strata 10/11 was laid *after* and *onto* the Mc and N1 constructions; (d) the later pottery was found in the related fill C (cf. Chapter Five). This meant that fill of strata 10/11 was, most probably, taken from elsewhere (most probably from the early Area D/F). The general date of construction and the Great Fills of strata 10/11 and A/B/C thus seems to be the late 7th century or about 600 BC.

[124] Find group 63-113; *San Giovenale* V:2, 96f., cat. nos. 20, 23 and 43.

House B and Yard B (*Figs. 101, 103–111*)[125]

The Borgo NW has seven long and sloping, east–west walls. House B's southern wall B1 and the northern wall B3 furnish good information of stone construction in a slope of more than two metres difference in level. However, the two long and impressive walls B1 and B3 each consist of three separate and independent walls: C1+B1+B7 and C3+B3+B5. They are firmly bonded with the north–south walls C2, B2, B4, and B6. With such construction with three separate walls the Etruscans may have thought to more easily facilitate building on a rock-slope. From C1 at *uf*. 1.91 m to B1/B4 at *uf*. 3.90 m, there is a difference in level of almost two metres. A further problem is that while walls on the bedrock remain unchanged, the walls and floors on the deep fills were slowly compressed and sank from pressure and rain. This is probably the reason for the frequent raising of floors and changes in the walls (especially in rooms Ba and yard Be (Bc)). Under House B and yard B, the thick soil fill was compressed and sank, probably due to the rainwater.

The first building, House B was partly built on the sloping bedrock and partly on and the deep strata 10/11. The central room Ba was clearly the main construction with a surface area of 14 m² (*uf*. 2.94–3.05 m). It is still surrounded by the four almost two-metre high, carefully bonded walls: B1, B2, and B3a/b with the entrance in-between, and wall B4. The western, lower room Bb, with a surface area of 7 m² (*uf*. 3.41 m), had three walls B5, B6 and B7 and was entirely built on a lower level of the fill strata 10/11. Walls B5 and B7 were added to the central room's wall B4, but are not bonded. Due to the later destruction of wall Mc and the fill, walls B5 and B6 have partly disappeared. The eastern room Bc, with a surface area of 16 m² (later room Ca in Period 2, *uf*. 2.17 m) had three walls B/C1, B/C2 and B/C3. These walls were added and do not bond the central wall B2. The yard Bd/Be was located in the sloping area at the Ka entrance/Bd-area, between canal L and House B.

Room Ba (bedrock/first floor level uf. 2.87–2.94–3.03 m) (Fig. 108)

This is the only room with four preserved walls and it was originally the central room. It measures 14 m². The technical features of the walls are the following: (a) Four bonded block-corners of B1/B2 (*uf*. 2.84 m), of B2/B3a (*uf*. 2.91 m), of B3b/B4 (*uf*. 3.77 m) and of B4/B1 (*uf*. 3.85 m) were set on the sloping rock; (b) Between the four corners were set irregularly shaped stones, less carefully cut, but united more efficiently in the slope. A few of these stones were reused material; (c) When a horizontal level had been laid out with irregular stones, it was possible to place the huge, square blocks in the upper part of the wall. The blocks are of different lengths, but always have a width of 0.45 m.

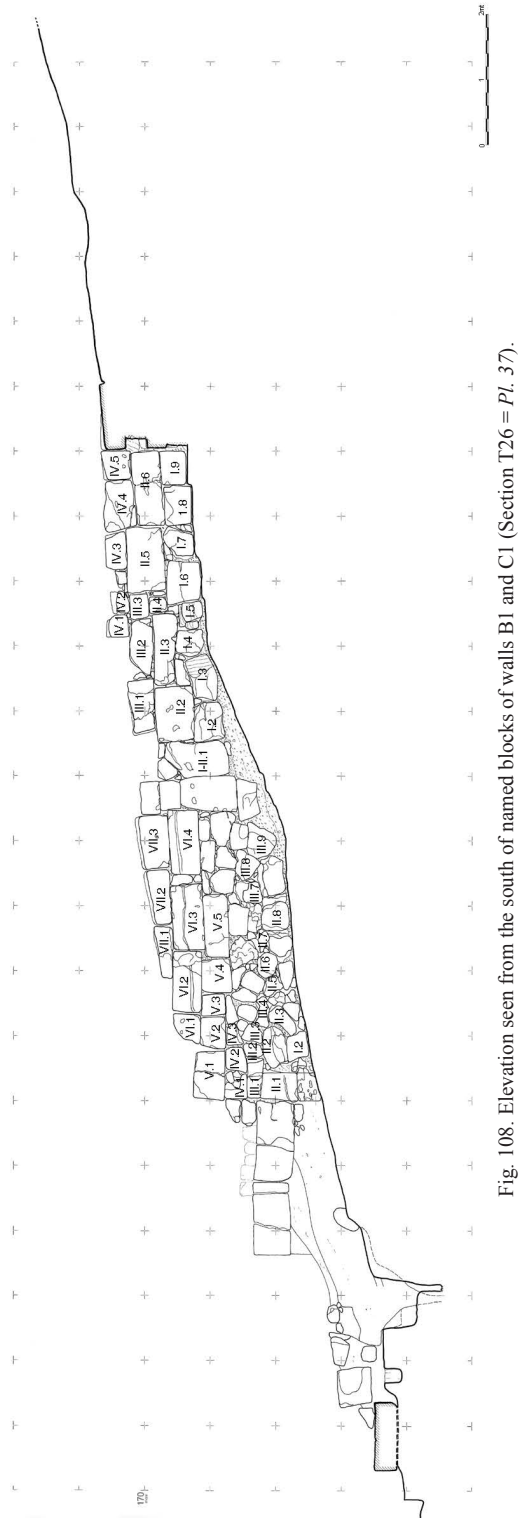

Fig. 108. Elevation seen from the south of named blocks of walls B1 and C1 (Section T26 = *Pl. 37*).

Wall B1 has a length of 4.90 m (exterior side) and 4 m (interior side) (*Figs. 104a–b*, *108* & *Pls. 36–37*). It still stands to a height of 2 m and rests on the sloping rock. It has a complex structure, which reflects more than one construction period. The corner B1/B4 is strongly built with five courses of big blocks alternatively

[125] Levels: Bedrock/level 1: P1 *uf*. 1.91 m – Cc rock *uf*. 2.24 m – C8 rock *uf*. 2.88 m – L1 rock *uf*. 2.95 m – B8 rock/clay/stone *uf*. 2.98–2.86 m – Ba entrance *uf*. 2.97–3.03 m – Ba Floor 1 of *uf*. 3.03–3.08 m; Bedrock/Cb/P1: *uf*. 1.91 m; C9/Bc/Ca: *uf*. 2.24 m; C8: bedrock/floor: *uf*. 2.82 m – "Floor" 2: *uf*. 2.57–2.45 m – "Floor" 3: *uf*. 2.35 m – C8: *uf*. 1.83–2.28 m; L1-place: bedrock: *uf*. 2.95 m (8) – Floor 1: *uf*. 2.77 m (7) – wall 2 (6): *uf*. 2.64 m – wall 3 (4): *uf*. 2.43 m – Store stone (2): *uf*. 2.12–2.27 m; B3: "Floor 1": *uf*. 2.85 m (8/7) – "Floor 2" (6): *uf*. 2.64 m – "Floor 3" (4): *uf*. 2.39 m – Store stone (2): *uf*. 2.23 m; L1 west: grey fill B: *uf*. 3.54 m – L1/17: *uf*. 3.43 m; N1: bedrock: *uf*. 4.70 m – block 9: *uf*. 3.99–4.49 m – L1, block 22: *uf*. 3.68 m; Ba: rock: *uf*. 3.05 m – Floor 1: *uf*. 3.01 m (9) – Floor 2: *uf*. 2.63 m (6) – Floor 3: *uf*. 2.34 m (4) – Floor 4: *uf*. 2.25 m (2) – "Floor 5": *uf*. 2.0–2.23 m; Bb: bedrock: *uf*. 3.95 m (11/10) – Floor 1: *uf*. 3.42 m (9) – Floor 2 (?): *uf*. 3.25 m (7); Bc/Ca: rock-entrance: *uf*. 2.08 m; Cb: rock-P1: *uf*. 1.91 m.

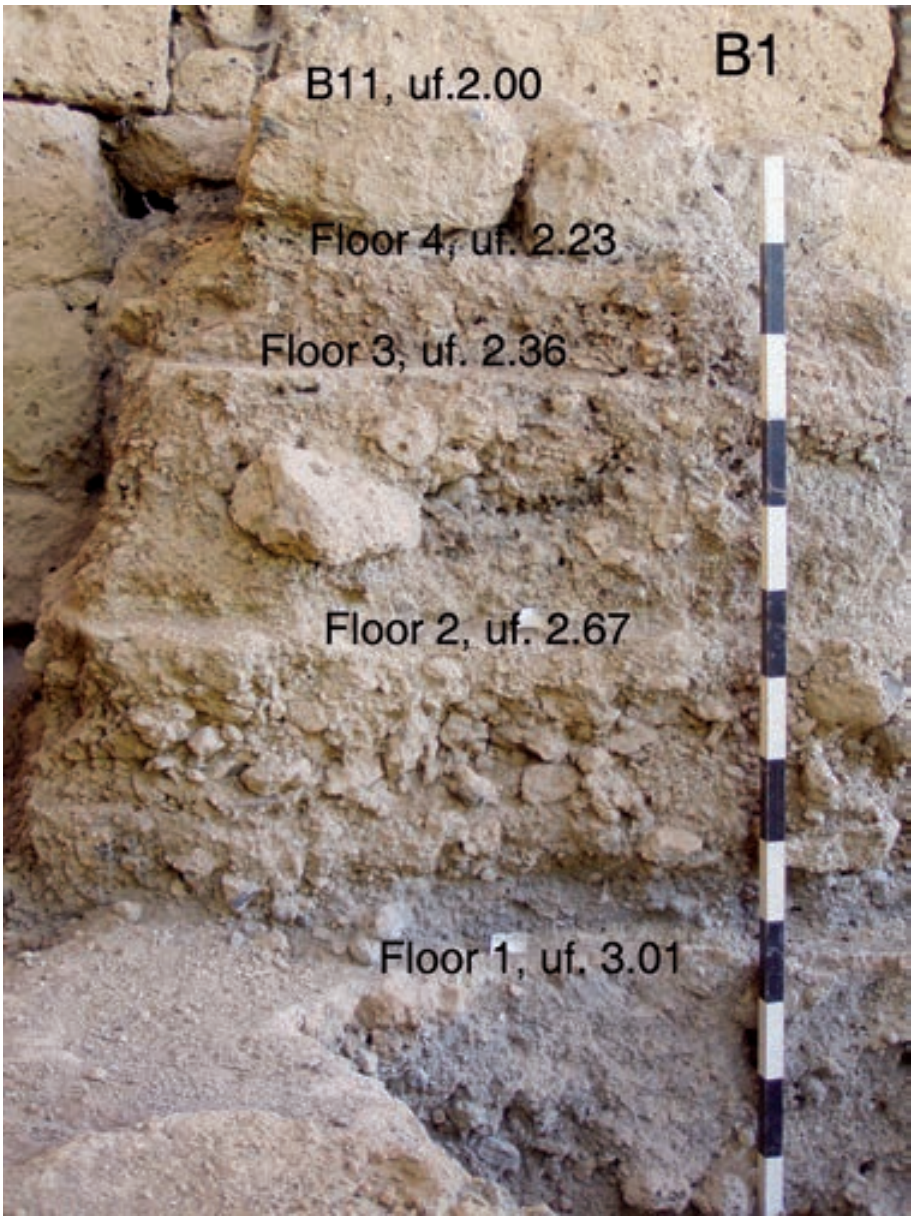

Fig. 109. House B, room Ba with stratigraphy. Photograph by J. Sigurdsson.

bonded. The corner B1/B2 has 4 courses, including a big vertically set block. The angle has the appearance of being part of wall B2. Between these corners, the lower part of wall B1 consists of irregular, rather large stones, roughly organized in 3–4 courses and with small stones in between. On top of these there are three courses of huge, horizontally laid blocks. The blocks measure (*Fig. 108*): Course II: (1) 0.55 × 0.45 × 0.45 m. Course V: (1) 0.75 × 0.44 × 0.45 m; (2): 0.50 × 0.38 × 0.45 m; (3) 0.37 × 0.35 × 0.45 m; (4) 0.53 × 0.45 × 0.45 m; (5) 0.97 × 0.38 × 0.45 m; (6) 0.50 × 0.90 × 0.45 m. Course VI: (2) 0.96 × 0.45 × 0.45 m; (3) 1 × 0.50 × 0.45 m; (4) 1.04 × 0.45 × 0.45 m.

Wall B2 has a length of 4.50 m (*Fig. 103a–b*, *Pls. 11–12*). It rests on the bedrock, which also constitutes an element of the wall and partly determines the run of the courses. The four well-shaped blocks of corner B1/B2, one of which is set vertically, are partly bonded with wall B2. The rest of wall B2 consists of irregular blocks, with smaller rocks in between. The courses are conditioned by the irregular ground of the bedrock. Corner B2/B3 is well built with squared blocks in five courses alternately bonded with walls B2 and B3. The inner corner of the second and third blocks has been worked off so as to form an angular corner stone.

Wall B3 has an external length of 4.90 m (*Pl. 34*). Wall B3a has a length of 2.10 m, rests on bedrock, and is built with big, horizontally laid blocks in four and five courses. A third block in the lowest course must have been part of the entrance to the room. The last block of wall B3a is clearly a later addition: in the opening is found a threshold which continues underneath the block. The original, broader opening then corresponds very well to the threshold area of courtyard Bd/Be. Wall B3b has a length of 2.10 m and lies to a great extent on the grey-black fill and consists of well-cut ashlars blocks at both ends with irregular rocks in between. Corner B3b/B4 is not visible. The blocks measure: Course I: (1) 0.50 × 0.35 × 0.50 m; (2) 1 × 0.45 × 0.50 m; (3) 0.37 × 0.44 × 0.45 m; (4) 0.48 × 0.64 × 0.56 m; and irregular blocks (5) 0.50 × 0.50 m. Course II: (1) 0.58 × 0.45 × 0.45 m; (2) 0.98 × 0.45 × 0.45 m; and irregular blocks; (3) 0.68 × 0.52 × 0.45 m.

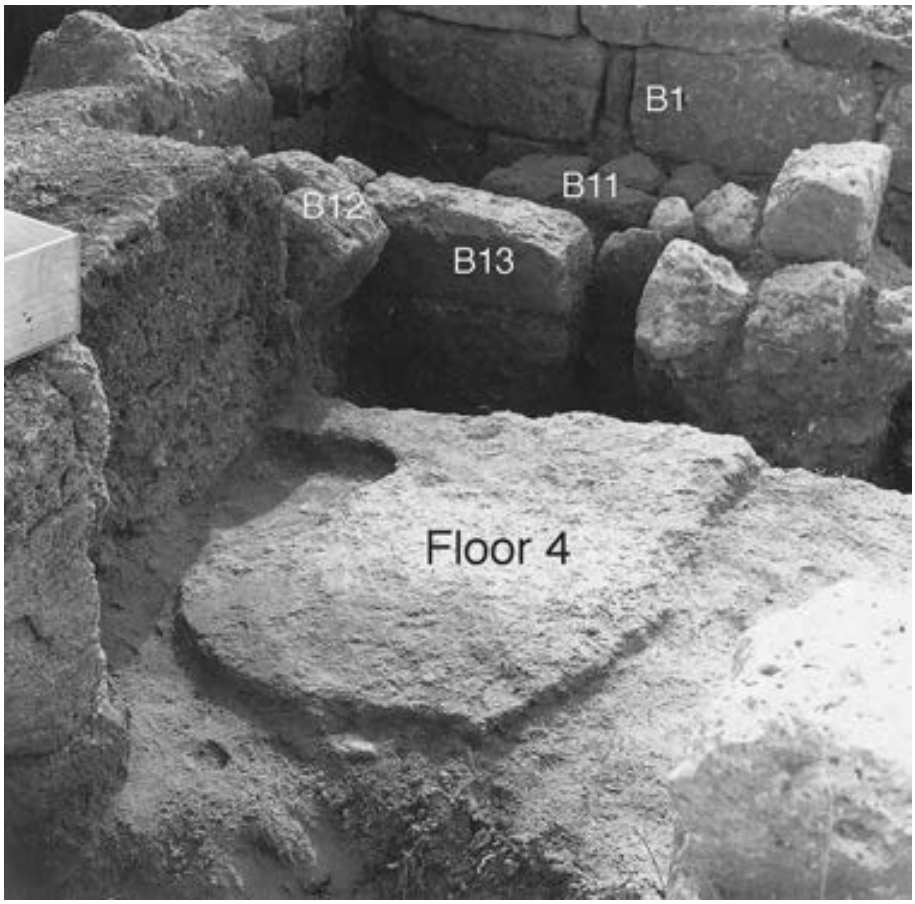

Fig. 110. Room Ba with Floor 4 of House B. Photograph by B. Blomé.

Course III: (1) 0.28 × 0.53 × 0.45 m; (2) 0.73 × 0.52 × 0.45 m; and irregular blocks (3) 0.52 × 0.30 × 0.65 m. Course IV: (2) 0.81 × 0.28 × 0.45 m; (3) 1.04 × 0.52 × 0.48 m.

Wall B4 has a length of 4.50 m. It is preserved with only its lowest courses, which are set deep into the grey-black fill. These, however, are to a great extent invisible due to the floor of room Bb, in front of the wall. This wall employs irregular blocks between two strongly built corners. Corner B4/B1 is firmly set on the sloping bedrock and has five bonded courses of well-cut and large ashlar blocks. Wall B4 will be replaced, on higher levels, first by wall B9 (connected with Floor 3) and then by wall B10 (Floor 2).

Stratigraphy of all periods (*Fig. 109*)

If building construction reflects the activity of man, stratigraphy, on the other hand, at least in part, also reflects nature. This is certainly the case in the slope of the Borgo, where many activities can be seen, such as fallen rock pieces, rain channels and the moving of soil. Therefore, the stratigraphy is not recorded in the architecture but rather in larger soil areas. The stratigraphy of the different Borgo excavations turned out to be identical or very similar, especially when it comes strata 1 to 10/11 in the western area of Ba, Bb and Bc.

In the east part of the rock area the number of strata (1–6) is not as many, or as thick, as are those of the sloping area in the west with more and often thicker fills and strata (1–11). The excavations of 1961–1963 and, the new investigations of 1994–1995 in the preserved baulks, have established a general sequence of the area's strata 1–10/11. The stratigraphy in room Ba was characterized by a sequence of four or five distinct floors (not always traced over the entire room), with fills in between, which provide a "back bone" for an understanding of the building's history.[126] In the damaged room Bb there are remains of one or, possibly, two floors.

Stratum 1. Due to the work in 1957–1958, very little remained of the original surface stratum. Instead, most of the upper stratum belonged to a fill about 0.90 m thick. It contained large stones, but also smaller stones in a mostly brown-yellowish earth, as well as pottery and tile fragments. In the southern part of the room, the fill was removed down to a tight packing of tufa stones and blocks of wall B11, much of which seemed to lie on the same level and be part of a pavement or foundation. In other parts of the room this "pavement" was not traced (though the late wall B10 may have something to do with it), but here the fill stopped at a hard, red pavement (Floor 1), only partly preserved (but well preserved

[126] There is some discrepancy between the writer's interpretation of the stratigraphy and that of Ingrid Pohl. The main difference is that Dr Pohl prefers regarding a floor + (fill)-stratum beneath, as one stratum, while Carl Nylander prefers to separate the two, particularly when the floor is clearly distinguishable. In addition, historically or chronologically speaking, a "fill" under a "floor" need not be a homogeneous part of the floor-laying process. Furthermore, the "fill" may contain material completely different from that contained in the floor itself. This means that the numbering of the strata in this volume differs somewhat from that of Dr Pohl's: Pohl (P) stratum 3 = Nylander (N) strata 2+3; P stratum 4 = N strata 4+5; P stratum 5 = N strata 6+7; P stratum 6 = N strata 8+9; P stratum 7 = N strata 10/11.

under the stone foundation B11 just mentioned). This somewhat unclear stratigraphic situation is the reason for Pohl's catalogue "strata 1–3 mixed" with its chronologically varied material, including an Attic *kylix* foot.[127] The stone blocks of wall B11 in the southern part of the room had been laid out rather regularly as if to provide a foundation of some kind. Several stones were reused from other contexts. The blocks lay more or less directly on Floor 1 or on soil above it. As a part of this pavement was found a big worked tufa block with bevelled edges and two hole-like cuttings on one side, having had an earlier architectural function.

Stratum 2 = Floor 4 (*Fig. 110*). The stones of stratum 1 lay more or less directly on a hard grey-red pavement, Floor 4 (*uf.* 2.27 m), 2–3 cm thick and well preserved. There were no finds.

Stratum 3. A brown-greyish fill, 12–15 cm thick, consisting of earth and small stones. A modest amount of pottery was found.[128]

Stratum 4 = Floor 3 (*uf.* 2.40 m), hard and 5 cm thick. Only one sherd of Ordinary Bucchero and a few animal bones were found.[129]

Stratum 5. Underneath Floor 3 there was a stratum, 20–25 cm thick, with earth, many stones of various sizes and, in its lower part, yellowish clay.[130] As in many other sub-floor fills, there were very few finds: some Transitional Bucchero, Faliscan Impasto and Red-slip wares. To this stratum most probably belong also the fragments of a Fine/Transitional Bucchero *amphoriskos* found in 1962, in the fill under the late wall B10.[131]

Stratum 6 = Floor 2 (*uf.* 2.65 m) and hearth 2 (*uf.* 2.55 m) is about 6–7 cm thick and contains clay and stone at surface level. A few, undiagnostic sherds were found in 1961.[132] On this floor a hearth of irregular stones was found in the room's north-east corner with remains of charred lamb bones. In this area were also found sheep/goat bones and a pig tooth. To this Floor 2 (and to the preceding fill stratum 7) belonged wall B9, parallel to wall B4, which, for some reason, reduced the length of the room by *c*.1 m.

Stratum 7. A fill stratum, brown-greyish, about 0.30 m thick and full of stones of various sizes. There were no finds.

Stratum 8. Dark grey and blackish stratum of *pozzolana*, partly disintegrated into a powder-like consistency, consisting of *pozzolana* stones and other volcanic material. This stratum varied in thickness and was not seen everywhere.

Stratum 9 = Floor 1 (*uf.* 3.01 m), hard and well preserved, was partly a continuation of the rock surface. This is the first floor of House B. It seemed to be a floor in two phases: a lower, thicker floor with several traces of a thin yellowish clay, then covered by another red floor surface. A hearth was found on this floor in the south-west corner of the room. Eleven sherds were recovered: Red-slip ware; handmade Impasto and a fragment of a large, wheel-made vase.[133]

Stratum 10. This was a Pre-House fill laid there to compensate for the sloping of the rock ground and held in place by terrace wall/fortification Mc in the lower part of the slope, west of House B. Dark, rather homogeneous stratum, rich in *pozzolana* with very few stones. A fair amount of pottery was discovered: Fine Buccheroid Impasto (incl. 3 spiral amphoras), Fine Brown Impasto (incl. carinated cups), Faliscan Impasto, incl. *oinochoai* (one almost complete, ind. no. 63-135) and Painted Impasto, Red-slip, and Kitchen ware fragments.[134]

Room Bb (bedrock/fill level uf. 3.95 m; first floor level uf. 3.42–3.56 m)

The secondary, small room Bb, measuring 7 m^2, was bordered by the fairly well-preserved wall B7, and by the two fragmentary walls B5 and B6. The walls B5 and B7 meet at, but are not bonded with, wall B4. There were (probably) two floors (Floor 1 at *uf.* 3.10 m and Floor 2 at *uf.* 3.40 m). This room was built entirely on the earth fill of strata 10/11 and suffered from erosion and destruction. Only parts of the lower courses of its three walls B5, B6 and B7 still remain *in situ*, and the north-west corner of the room has disappeared. However, the remains of one or perhaps two floors could be noted. No entrance was visible; it had most probably been from yard Be and had disappeared with wall B5.

The small room Bb, measuring about 2 × 4.5 m, uses the well-built and rather deeply founded wall B4 as its back wall. Walls B5 and B7 are built on a higher level without a foundation directly on the fill strata 10/11. Of wall B5 only one block remains *in situ*; of wall B6 the four southernmost blocks were found. The entire north-west corner is thus missing, including the probable entrance from the courtyard Be in wall B5. The Bb hearth, with a bone fragment, in the corner of walls B4/B5, indicates a kitchen function.

Room Bb consists of wall B4 and walls B5–7. The latter three walls were set against wall B4, but on a higher level and without foundation.

Wall B5 has a length of 2.20 m. It preserves only one block (0.53 × 0.97 × 0.45 m) which is set, in a surprisingly unstable way, without foundation high up *on* the fill (*uf.* 3.51 m). This wall had an entrance to room Bb from yard Be.

Wall B6 has a length of 4.50 m. It is also badly preserved due to its very superficial position without foundation. Four blocks were found, no longer *in situ*, but their original position could be ascertained. Corner B6/B7 is lost.

Wall B7 has a length of 2.20 m with the same superficial position without foundation. It is partly destroyed with only a few blocks *in situ*. In terms of construction it is clear that room Ba, with its well-built, deeply founded and bonded walls, constitutes the nucleus of the house and that room Bb is a secondary addition (cf. walls in House A: rooms Aa and Ab). The lack of bedrock foundations for its walls meant a dependence on the strength of the Great Fill held in place by the strong terrace wall/fortification Mc.

[127] Find groups 61-125, 61-147, ind. nos. 61-119 and 62-120; *San Giovenale* V:2, 79–81, cat. nos. 1–50. Find group 63-134 should also belong to the fill, see *San Giovenale* V:2, 79, cat. nos. 1–3.
[128] Find groups 61-148 and 63-134b, *San Giovenale* V:2, 78, cat. nos. 2–8. Most probably Find group 63-134a also belongs to this stratum; it was recorded as just above Floor 2 and in the destroyed areas of Floor 1, see *San Giovenale* V:2, 78f., cat. nos. 1–5, incl. a fragment of a tile.
[129] Find group 63-134c; *San Giovenale* V:2, 78, cat. no. 1.
[130] This thick clay horizon was visible in much of the room and could well have been taken as a separate stratum.
[131] Find groups 61-149 and 63-134d; *San Giovenale* V:2, 77f., cat. nos. 1–9.
[132] Find group 61-150; *San Giovenale* V:2, 77, cat. nos. 1–3.
[133] Find group 63-134e; *San Giovenale* V:2, 77, cat. nos. 1–11.
[134] Find group 63-134f and ind. nos. 63-135–137; *San Giovenale* V:2, 74f., cat. nos. 1–39 (incl. 2 bobbins).

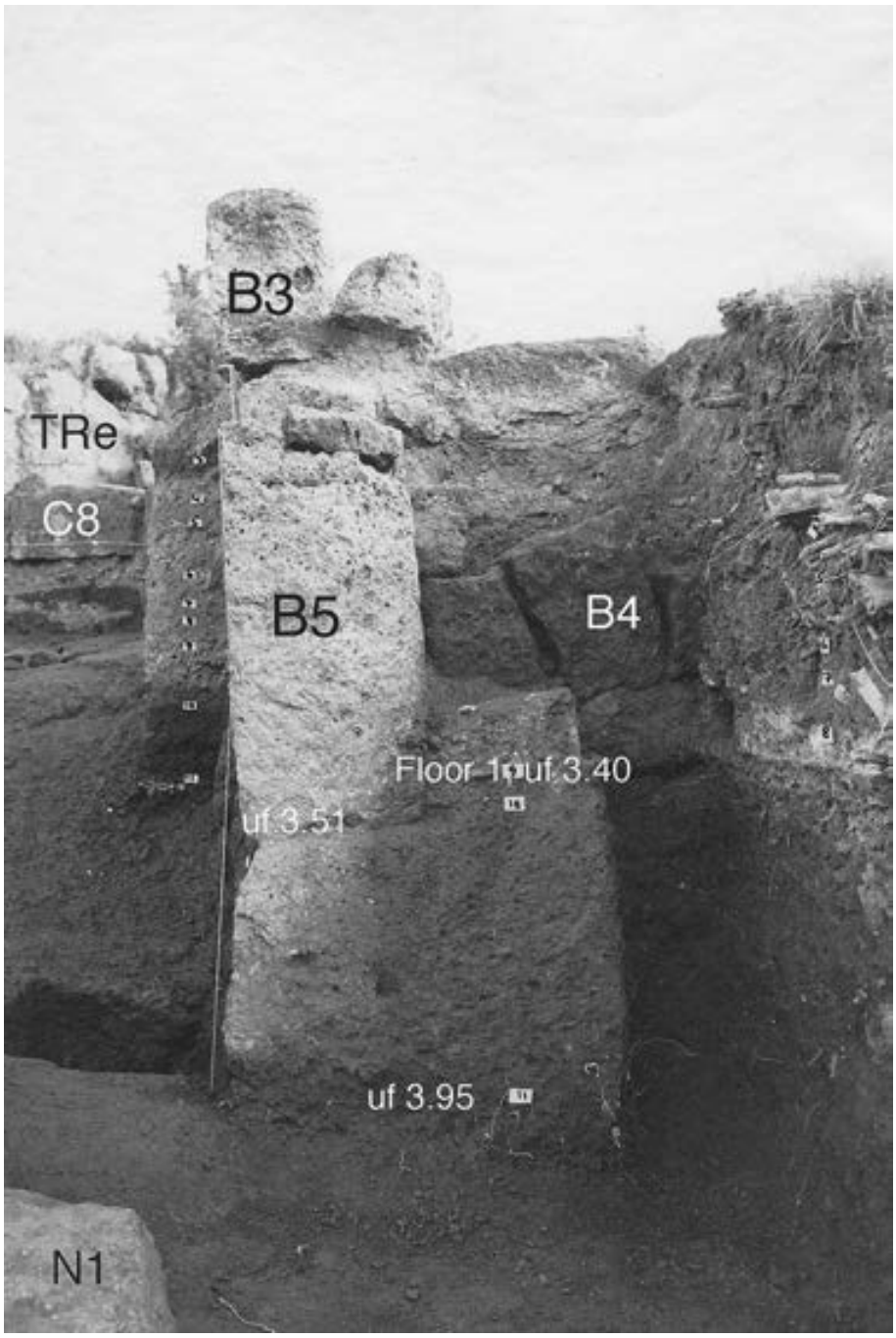

Fig. 111. House B, room Bb, wall B5 with stratigraphy. Photograph by B. Blomé.

Stratigraphy of all periods

The stratigraphy of the area was complicated by the sloping strata and by the disappearance of the north-western corner of the room Bb. Find group 61-127 and ind. no. 61-118, collected in part from the "slide strata" in the lower part of the area in front of room Bb, thus contain mixed material from strata 1–9, possibly even some from stratum 10.[135] In addition, the lower strata 6–9 were preserved only partly in room Bb.

Strata 1–2. Greyish earth and a somewhat more brown-greyish stratum with *tufetti* material. These strata extended beyond the area of room Bb down to the remains of terrace wall/fortification Mc. There were a few tile fragments, undiagnostic coarse ware sherds and a handle fragment from a brown-glazed jug.[136]

Stratum 3. Dense grey earth stratum extending down to terrace wall/fortification Mc. No finds ascribed to this stratum.

Strata 4–5. Brownish and grey strata with inclusions of small stones and clay. Parts of Find group 61-171 should belong to these strata.[137]

[135] *San Giovenale* V:2, 82f., cat. nos. 1–22.

[136] *San Giovenale* V:2, 83, cat. no. 21.

[137] *San Giovenale* V:2, 82, cat. nos. 1–7.

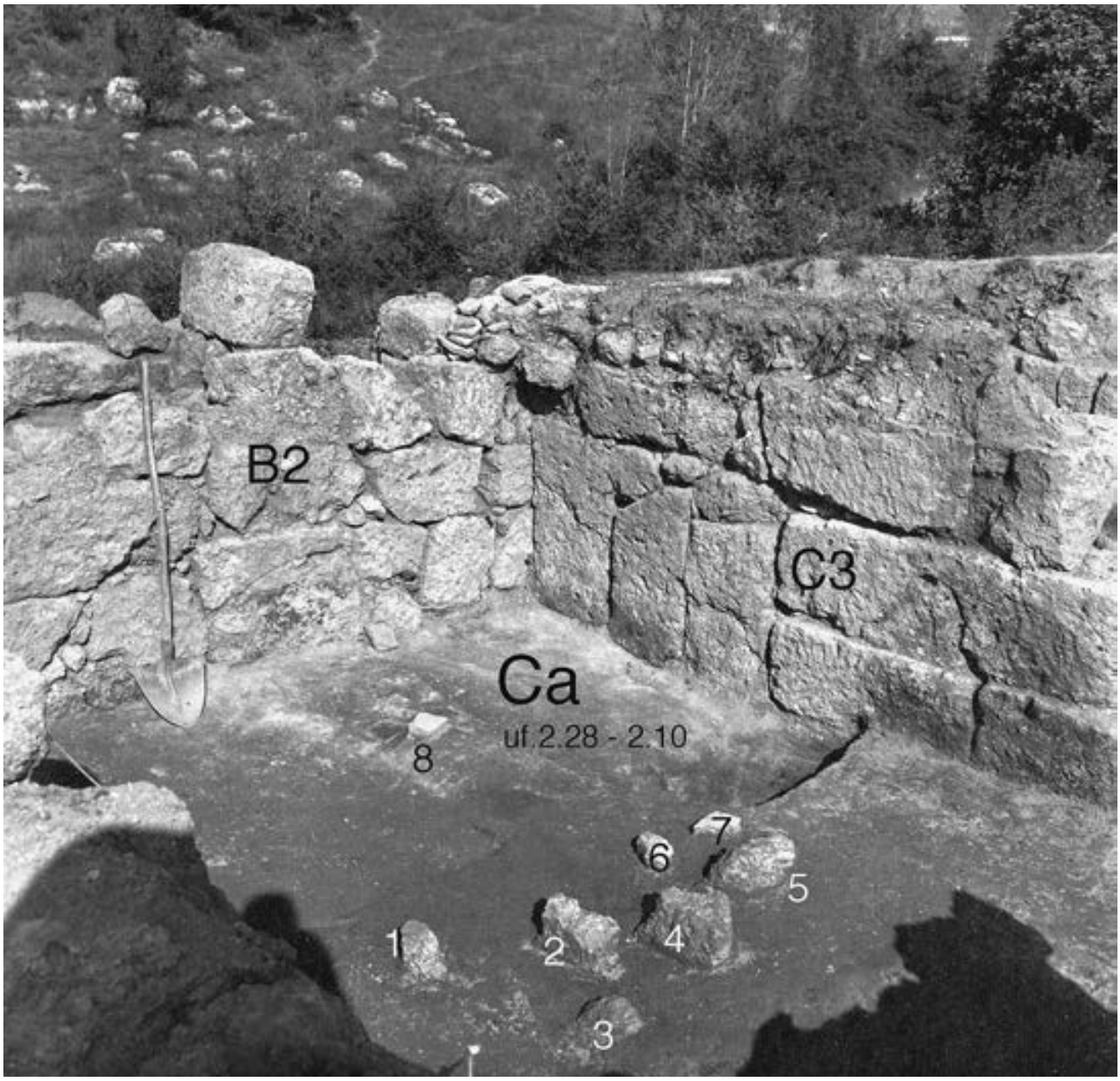

Fig. 112. House C, room Ca with walls B2 and C3. Photograph by B. Blomé.

Stratum 6. Dark grey *pozzolana* with stones. Some of the few sherds of Find group 61-171 just mentioned, may belong here.

Stratum 7 = Floor 2 (?): a brown stratum with clay inclusions.

Stratum 8. White-yellowish, very compact clay stratum with *tufetti*. In this clay, just above *Stratum 9a* were found, in 1994, several hard fragments of a Fine Bucchero bowl.[138]

Stratum 9a & b = Floor 1 (*uf.* 3.40–3.45 m) (*Fig. 111*), contained a partly preserved hard red pavement. This floor had been disturbed over much of its surface, possibly through the collapse of wall B4. Underneath, there is a brown *tufetti* layer (about 10–20 cm thick).

In the north-east corner of walls B4 & 5 were found the remains of hearth 1 of red-burned clay with a small fragment of animal bone. Parts of the small Find group 61-172 may belong to this floor.

Strata 10/11. This dark grey fill (*uf.* 3.51–3.95 m) of Pre-House Period strata extending from the drop of the bedrock in room Ba and yard Be down to the terrace wall/fortification Mc.[139]

Room Bc (later Ca, Figs. 112–113)

Room Bc is partly built on the sloping bedrock (at *uf.* 2.17 m) and partly on the dark fill at its south-western end. It was bordered by the strong walls C1, C2 and C3. There was at least one floor. Its

[138] Some of the sherds of Find group 61-172 may belong here; *San Giovenale* V:2, 81f., cat. nos. 1–6.

[139] Find groups 61-173 and 63-156–157. This group is reported together with the material from the same fill found in the Ba and Bc-areas: *San Giovenale* V:2, 75–77, cat. nos. 1–32.

walls C1 and C3 abut the wall B2 of room Ba. It is worth noting that wall B2 is built very differently from the C walls. Its walls are among the best preserved of the entire excavated area and merit close description and analysis. They inform us of stone working and building techniques as well as illustrating efforts of using available stone material in a rational and economic way. There is thus evidence of a reuse of stones originally made for other contexts on the Borgo. The walls of room Bc/Ca have an average thickness of 0.42–0.47 m. The blocks vary in length between a normal 0.90–1 m and a, more rarely, 1.20–1.50 m. A few blocks of unusual size and thickness appear to be reused. North of House B/C is the courtyard Bd/Be, partly standing on bedrock and partly on fill strata 10/11 and contains the early stone floor B8.

Walls C1-2. These two walls are bonded together and should be seen as one and the same constructional unit.

Wall C1 (see *Fig. 108* & *Pls. 36–37*). The first stone of C1 to be put in place was the huge, vertically placed block 1 in courses I–II. It abuts the corner of walls B1–B2 and is set in the fill above the sloping bedrock. Against block 1 of courses I–II is laid the lowest CI course, somewhat sloping towards north-west, consisting of blocks 2–8 in course I and, turning the corner C1–C2, of blocks 9–14 in course I of wall C2. The course-I blocks are medium sized and often somewhat irregular. Small tufa stones and medium-sized river pebbles are used to fill out the irregularities. Measurements of the blocks: Courses I–II: (1) 0.54 × 0.98 × 0.45 m; (2) five irregular blocks; (6) 0.68 × 0.46 × 0.45 m; (7) irregular block; (7) 0.50 × 0.42 × 0.45 m; (8) 0.50 × 0.40 × 0.45 m.

Wall C2 most probably had a continuation towards the north, of which two low-lying blocks were found.

Wall C3 (*Pl. 34*). This wall is the most solidly built of all the C-walls. Three big, vertically placed blocks in courses I–II with fillers compensate for the sloping ground. They were apparently not cut fresh for their present function, their upper sides being uneven and in need of filling stones to achieve an even level. The remaining five blocks are placed horizontally and have bigger dimensions. Their different dimensions and various cuttings (partly filled in with river pebbles), indicate that they were probably reused from some other context. Measurements of the blocks: Course I (1) 0.75 × 0.45 × 0.57 m; (2) 0.89 × 0.45 × 0.55 m; (3) 0.45 × 1.06 × 0.50 m; (4) 0.45 × 1.14 × 0.45 m; (5) 0.50 × 1.22 × 0.50 m. Course II (1) 1.45 × 0.45 × 0.45 m. Course III (1) 1.45 × 0.45 × 0.45 m; (2) 1.03 × 0.37 × 0.45 m.

Wall C11 (and its continuation K4) was built on top of the later fill of stratum 2 (probably after the earthquake) between walls C1 and C3 in room Ca (*Figs. 113*, *116*). It consisted of four blocks (1.20 × 0.40 × 0.45 m; 1 × 0.40 × 0.45 m; 0.90 × 0.40 × 0.45 m; 0.65 × 0.40 × 0.45 m). It was part of a major reorganization of the C-area after the earthquake and the resulting filling operation. Wall C11 (together with K4) was dismantled in 1962 to allow further study of room Ca and of Lane K).

Stratigraphy of all periods (*Fig. 113*)

This room was in part excavated in 1957, in 1961 and again in 1963, when baulks left in 1961 were carefully checked. The irregular bedrock sloped considerably between east and west with a difference in level of 0.60 m between the parallel walls C2 and B2. Consequently the strata sloped with the rock ground, and in the south-east, higher part of the room not all strata were found as the rock occasionally may have served as a floor.[140] In addition, a huge filling operation had complicated the stratigraphy. It was thus not always easy to distinguish the lower strata and initially they were interpreted and dug as only one stratum with a thickness of 10–25 cm.[141] This means that pottery belonging to the lower strata under the fill stratum 2 became grouped together, except for those noted as coming from the very deepest part, just above the rock, of the accumulation beneath the fill of stratum 2.[142] Checks in 1963, however, allowed a more precise stratigraphic determination.

Stratum 1. Due to the 1957 trenches, the preserved parts of the surface stratum (*c*. 0.50 m) were of limited extent. It contained soil with fragments of tiles and some pottery, including fragments of Etrusco-Corinthian ware, Ordinary and Grey Bucchero, Red-slip and Kitchen ware.[143] In this stratum and on top of a fill stratum (stratum 2) was laid out one course of the north–south walls C11/K4 (see *Fig. 113*). These walls were part of a later reconstruction of the area.

Stratum 2. Dense accumulation of numerous worked and tufa stones, earth, tile fragments and some pottery (*c*. 1 m). This stratum was clearly part of a major filling operation and reorganization of the area. The sherd material of this fill is mostly indistinct but the latest identifiable sherds seem to belong to the second part of 6th-century Ordinary and Fine Bucchero, Etrusco-Corinthian ware and cooking ware of the Internal Red-slip and of the Sant'Omobono types. There were also a limited number of tile fragments.[144]

Stratum 3. The layer with a thickness of 20–25 cm, consisted of sandy soil and *tufetti* plus a number of inclusions of clay, either in chunks or as dissolved patches. Pottery dates from the first half and middle of the 6th century BC: Fine black and Grey Bucchero, Ordinary Bucchero, Buccheroid Impasto, Red-slip and Kitchen ware, including numerous fragments of a cooking pot.[145]

[140] Assuming that man always "lives horizontally" is often belied by excavators. The publications from Troy (*Troy* III, 1963, 135) and Sardis (*BASOR* 174, 1964, 8) show considerable variations in the horizontality of floor levels even in rather small rooms.

[141] This can be partly explained, if not excused, by the fact that these trenches in Room Ca constituted the very first archaeological field activity in the Mediterranean by the rather inexperienced excavator, hitherto exposed only to the mudbrick archaeology of the Near East. It should be pointed out, in addition, that a number of pottery joinings were later established between material from strata 2/3 and 3/4, indicating the basically homogeneous character of the accumulation (cf. *San Giovenale* V:2).

[142] Cf. *San Giovenale* V:2, 98–101, "Mixed strata 2–3" (77 items). As from the lowest strata, cf. infra.

[143] Find group 61-117; cf. *San Giovenale* V:2, 101f., recording 21 fragments.

[144] *San Giovenale* V:2, 95 (Find group 63-139), and pp. 98–101 (Find groups 61-114 & 61-122 + ind. nos. 61-104–106, 61-124, 63-109 and 63-138); Wikander 1981, pan-tiles Type 1, fig. 2:2. Pohl considers that the upper part of stratum 3 was contemporaneous with, or even part of the same major filling operation as that betokened by the stone fill of stratum 2 and that much or most of the ceramic material recovered belongs to the upper part of stratum 3. This assumption can be strengthened by the fact that two sherds of a characteristic Faliscan plate (61-102), later found in stratum 3, were found in stratum 2. It was often the case at the Borgo with its great fill operations that the observed "archaeological" strata did not necessarily correspond to "historical" strata. Thus it was often only through the study of the pottery (establishing joinings between sherds from different strata) and analysis of the building history that the true, "historical" nature of a stratification could be understood.

[145] Find group 63-139b and "mixed strata" of Find groups 61-114, 61-122 and 61-123; cf. *San Giovenale* V:2, 94–97 and 98–101.

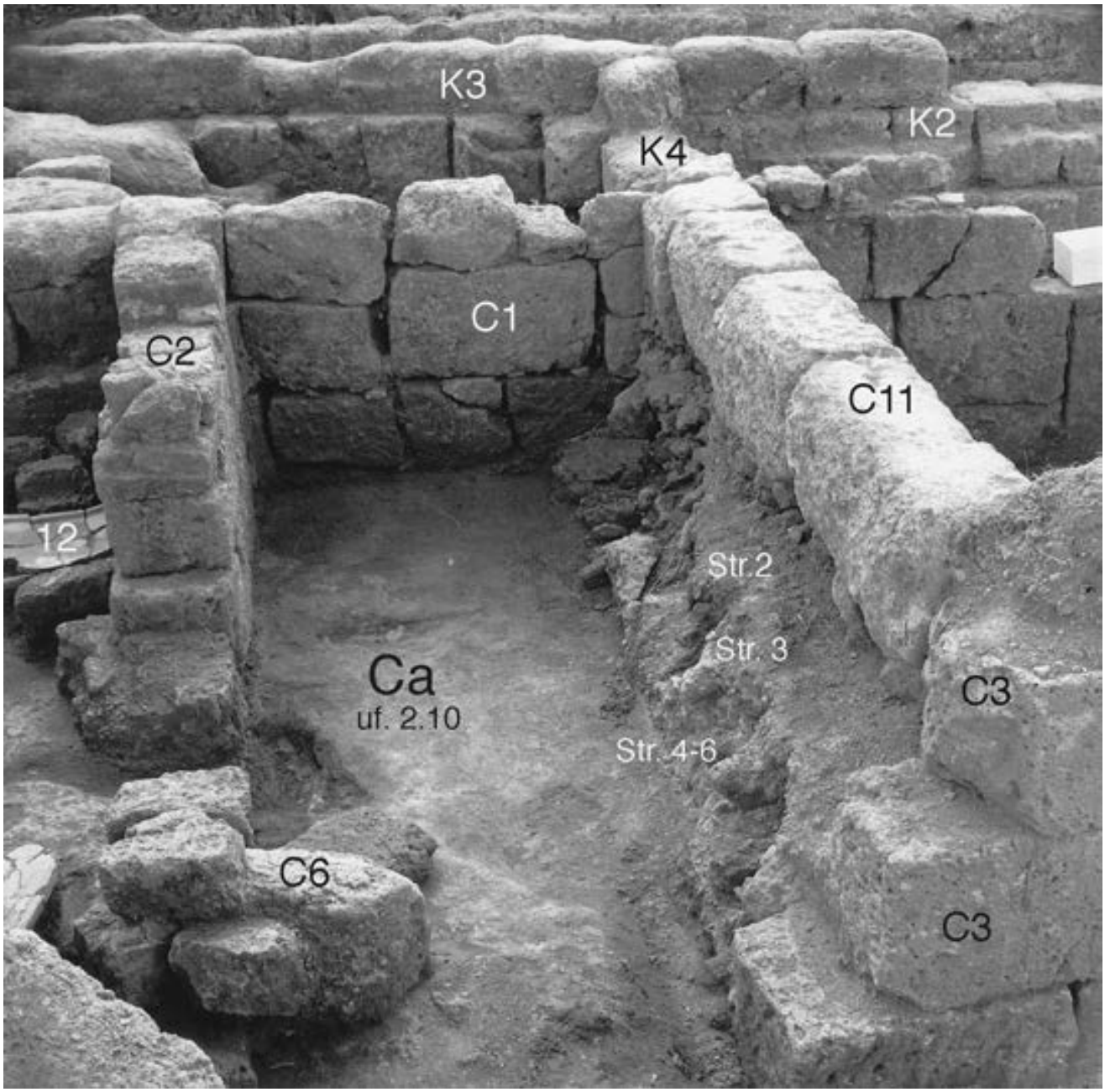

Fig. 113. House C, room Ca towards the south-west. Photograph by B. Blomé.

Numerous (34) fragments of a red-polished plate with incised decoration (ind. no. 61-102), with parallels in Faliscan Narce, were found in this and/or the above stratum.[146] A small fragment of a bronze band (?),[147] a Bucchero spindle whorl (ind. no. 63-140) and a grey Impasto bobbin also belonged to this stratum.[148] The stratum had an irregular configuration and, as pointed out, the 1961 finds may include some material from the stratum 2 fill as well as from the thin stratum 4 and even stratum 5 which were not in evidence or seen in the parts dug in 1961. A characteristic feature of the stratum 3 were a number of clay chunks (green-yellow or bluish and some 9–13 cm thick) on different levels above stratum 4. It is tempting to see these as the remains of fallen mudbricks. It is possible to interpret this stratum as an accumulation over time of various kinds of detritus, including remains of decayed mudbrick walls and broken tiles, hinting at a collapse and a temporary abandonment of the building.

Stratum 4. Very thin layer above a partly preserved floor (= Stratum 5), consisting of dark, fat, clayish earth with inclusions of much charcoal. There were chunks of clay and fragments of tiles

[146] The great majority (some 30) of the fragments of the Faliscan plate were found in the earth beneath the stratum 2 stone fill. According to her interpretation of stratum 2 and the upper part of stratum 3 as basically one and the same stratum (2), Pohl ascribes the plate to stratum 2, i.e. the fill (*San Giovenale* V:2, 96, cat. no. 24).
[147] *San Giovenale* V:2, 95, cat. no. 20.
[148] *San Giovenale* V:2, 94f., cat. nos. 18–19.

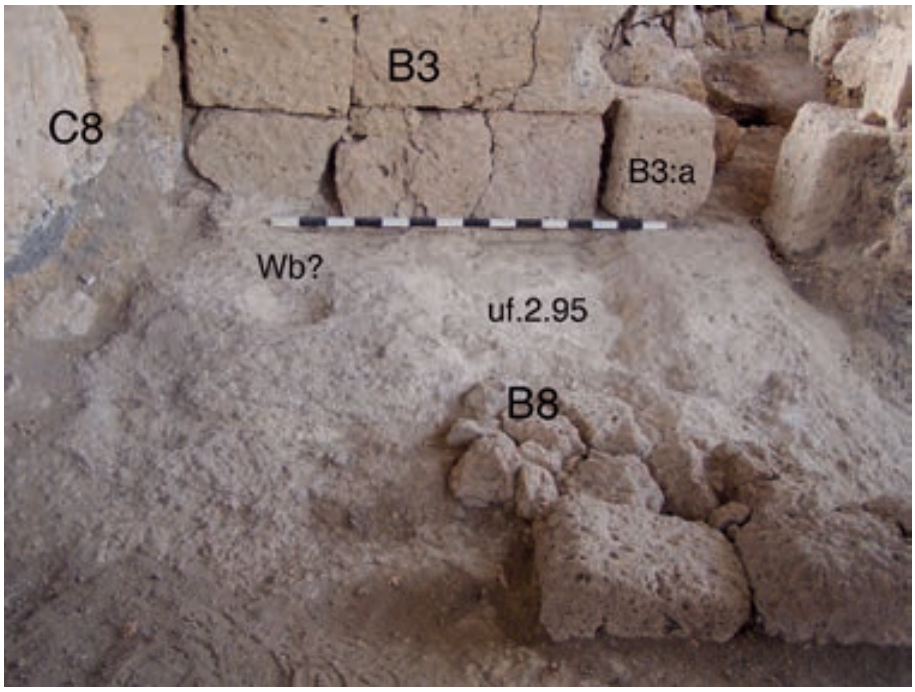

Fig. 114. House B, yard Be-Bc and walls B3 and C8. Photograph by J. Sigurdsson.

on top of it and, sometimes, *in* it.[149] A limited amount of pottery was found, datable to the second half of the 7th to the first half of the 6th century, among which was a well-preserved cooking pot (ind. no. 61-136). [150]

Stratum 5. Very hard, thin layer, not well preserved, clearly to be interpreted as a floor. Very few and indistinct sherds (perhaps due to initial difficulty of distinguishing this badly preserved stratum from stratum 4) were found here. In addition, there were ten minute fragments of bronze.

Stratum 6. Earliest, varyingly thin stratum above rock, preserved only sporadically. However, in the SW corner of room Ca the rock begins to slope down, creating a more substantial deposit of black-greyish earth. A few, early sherds were recorded from this earth (63-113). Stratum 6, however, is to be understood as related to the similar but more extensive fill strata 10/11 discovered on the sloping rock close by in rooms Ba/Bb of House B, rich in pottery of the 7th century BC and constituting an accumulation or fill preceding the construction of House B/C (see above under the Great Fill Project B–C).

[149] A careful study of the limited area represented by this stratum available in 1963 revealed that three joining fragments (one of them upside-down) of the same tile lay dispersed on the black, thick stratum together with two chunks of clay. More such clay chunks lay only slightly higher on a thin brownish stratum (1–3 cm) above the black one. These differently coloured clay chunks, with an average thickness of some 9–13 cm, were thus not deposited contemporaneously.

[150] Find groups 63-113, 63-139c and ind. no. 61-108; *San Giovenale* V:2, 93, cat. nos. 1–3; p. 94, cat. no. 14; pp. 96f., cat. nos. 20, 23, 43, 48 (bobbin). The cooking pot no. 61-136 (*San Giovenale* V:2, 97, cat. no. 36), found in many fragments but easily restored with very little missing, was found late in the 1961 season deep down in the strata under the stratum 2/3 fill. Its good preservation and the fact that it was no doubt broken on the spot seem to indicate its belonging to the floor + thin accumulation stratum 4. It does not seem probable that the material in this layer "belongs all to str. 3 infiltrated from above" (*pace* Pohl, *San Giovenale* V:2, 93).

Yard Bd/Be (Fig. 114)

The area of yard Bd/Be was bordered on the north by wall L1 of Drain L. It is surrounded in the east by the higher area where the construction Ia was later built, and in the south by the higher area Ic and walls C3, B3 and B5. Its limits to the west are unclear, due to the erosion of the lower part of the slope. It is clear, though, that a row of huge blocks, foundation N1, had a terrace function for the fill of the yard Be (Bc) and, perhaps, for a wall, now lost. The surface of yard Bd/Be follows the general slope of the rock, which, from the Be (Bc)-area in the east to the bedrock at N1 in the west, drops about 2.70 m (*uf.* 1.89 m = 169.28 masl to *uf.* 4.64 m = 166.53 masl; see Section T19, *Pl. 34*). The sloping of the bedrock is, at first, gradual, but at a point where the north–south-south-west Sections L17/15/10 cut across the yard Be (Bc) and room Ba, the bedrock drops rather abruptly for almost 1 m. This means that to the east of this line the bedrock serves as a floor, while to the west, earth fills had to be made to achieve an even surface. The original House B/C was later divided into two separate buildings, B and C. This is visible in the dividing walls C8-C9-C10 between the now separate yards Bc and Cc. At an even later date, probably after the earthquake, the entire area was filled up and new walls, C11/K4 and K2/K3, were built.

Stratigraphy of all periods (*Fig. 115*)

Here was found a complex sequence of strata consisting of differently-coloured accumulations of earth and tufa material. Due to the sloping of the bedrock, the strata are uneven. In many cases, the very same stratum or floor may show differences in level of as much as 0.10–0.15 m. The fact that there were occasional joinings between sherds from different strata indicates that several of the strata were part of the same filling operation. A distinction should be made between the area to the east where the first floor level is directly located on the rock, and that to the west, where

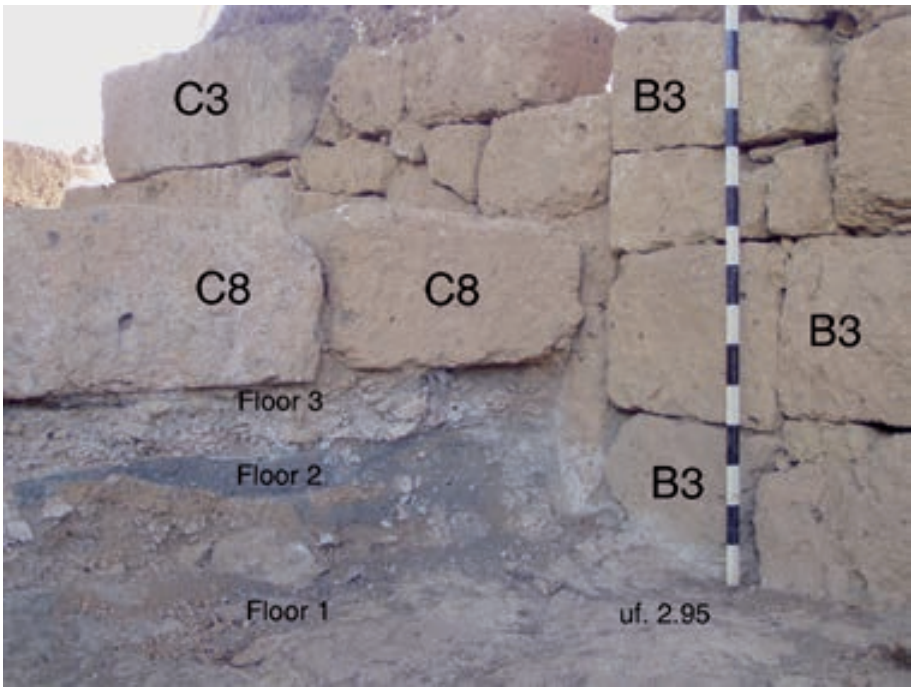

Fig. 115. Yard Be-Bc. Wall C8 abutting walls B3-C3 with stratigraphy. Photograph by J. Sigurdsson.

substantial fills had to be deposited to achieve an even surface. It should also be noted that strata are generally thicker above the fill to the west, possibly to compensate for a slow compression of the fill mass.

Yard Bd/Be (Bc) was excavated during different campaigns and the stratigraphy was not always clear. There are thus a number of "mixed strata groups" among the finds. However, the documentation and a number of baulks left (checked in 1994), allow a fairly precise reconstruction of the stratigraphic situation. It should be pointed out that "floors" in the yard are rather "floor levels" and not like the more distinct floors of rooms Ba, Bb and Bc/Ca of House B.[151] In the much and complicated excavated earth a number (3?) of floor-like levels could be established. This allowed a general correlation of the stratigraphy inside and outside House B, even though the sloping ground affected the level of the strata. The following general picture of developments in yard Bd/Be has emerged, starting with the earliest activities:

A. A line of long, narrow, discontinuous cuttings, Q1, in the tufa rock in a south-west–north-east direction was found. They seemed to continue in a south-western direction and reappear south of House B and area N2. The palisade canal Q1 has a different orientation and indicates earlier, Pre-House activities in the area.

B. Floor level 1. The slope to the west was made more level by a black fill, strata 10/11, rich in pottery and backed by the strong foundation N1 and the terrace/fortification system Mb-Mc further down the slope. The eastern part of the area had a stratum of yellow clay and a kind of pavement, B8, of irregular stones and clay borded by a line of small, squarish tufa blocks. This pavement may have begun further up, to the east, and continued down the slope as indicated by two similar blocks aligned with the border (one under the later wall C8 and the other close to N1). The pavement has left no other evidence. The bedrock and the pavement are to be correlated with Floor level 1, still visible in baulks B3 and L1 (*uf.* 2.78–2.91 m) (see *Fig. 114*). It is unclear how this Floor 1 level behaved further down the slope, with its drop of more than a metre. It is reasonable to connect this level in yard Bc with the bedrock (*uf.* 2.87–2.99 m) and the Floor 1 level (*uf.* 2.96–3.08 m) in room Ba of House B.

C. Floor level 2. An accumulation or fill (stratum 6), about 15–20 cm thick, consisting of earth and small stones, is laid above Floor level 1 to function as the substratum of Floor level 2 (*uf.* 2.50 m under wall C8; L1/B3 baulks *uf.* 2.65 m). This floor level functioned for both yard Bc and, at least partly, for yard Cc of House C, as it is clearly visible under the later dividing wall C8 (*Fig. 115*). This Floor level 2 (*uf.* 2.65 m) corresponds closely in level to Floor 3 (*uf.* 2.64–2.67 m) in room Ba of House B.

D. Floor level 3. A new accumulation or fill (stratum 5) is laid as a substratum for Floor level 3 (*uf.* 2.35–2.47 m). This floor corresponds well to Floor 2 (*uf.* 2.33–2.36 m) of room Ba of House B.

E. Just above Floor level 3 are laid the four blocks of wall C8 (*uf.* 2.24–2.31 m) (see *Fig. 115*), which now divides the once unified area Bc/Cc in two. In the other parts of the Bc-area heaps of formless stones and earth are deposited irregularly on a level corresponding to *uf.* 2.22–2.28 m. This level corresponds well to Floor 3 (*uf.* 2.16–2.23 m) in room Ba of House B. Immediately on top of Floor 3 an irregular stone pavement (upper surfaces *uf.* 1.96–2.04 m) of stratum 1 is laid out.

[151] There are some minor, though unimportant, differences in the writer's and Dr Pohl's interpretation of the strata.

The strata 1–11 here were very similar to those in Ba and Bb.

Stratum 1. Surface accumulation, of varying thickness up to some 0.40 m, consisting of soil and small stones with very few sherds and some tile fragments.[152]

Stratum 2. Accumulation of unshaped tufa and white river stones mixed with earth and gravel down to *c*. *uf*. 2.20–2.30 m. There were just a few sherds.[153]

Stratum 3. Yellowish-brown, more compact stratum with small stones (some 0.20 m) and some pottery.

Stratum 4. "Floor level 3". A markedly grey, rather hard stratum of varying thickness and constituting Floor level 3 (*uf*. 2.35–2.38–2.47 m). The grey material character of the stratum is less obvious close to Drain L. There were few finds.[154]

Stratum 5. Brown-yellowish *tufetti* stratum, *c*. 0.30 m thick. As the distinction between strata 5 and 6 was not always clear and as the possible "Floor level 2" was not clearly noted during the excavation, the pottery from strata 5 & 6 were kept together as part of a major fill.[155] This is also where, probably together with stratum 6, Find group 62-174c ("4–8 mixed") should go.

Stratum 6. "Floor level 2". Another greyish stratum, possibly topped by "Floor level 2", a harder surface partly consisting of small stones (*uf*. 2.50–2.62–2.65 m). For the finds, see remarks on stratum 5.

Stratum 7. Another markedly grey *pozzolana* stratum (not so over the entire area). There were rather few finds.[156]

Stratum 8. "Floor level 1". Hard red stratum in two thin layers, Floor 1 (*uf*. 2.76–2.90 m).

Stratum 9. Brownish fill of *tufetti*, increasingly thick towards the slope and the west.[157]

Stratum 10. This stratum is different in the eastern and the western parts. On the somewhat uneven bedrock in the eastern, upper part of the yard, it consists of a very hard, thin surface just above the rock. In the west part where the bedrock slopes it consists of a thick, darkish fill. Find groups of mostly early, Pre-House pottery.[158] There were some joinings with sherds of Find group 62-113 from the deepest level and foundations of Drain L.

Stratum 11. A thin, brownish stratum just on the rock surface under the fill in the west. The sherds have been taken together with the dark fill material of stratum 10.

[152] Find group 62-174a; *San Giovenale* V:2, 88f., cat. nos. 1–5.
[153] Find group 62-174b [mixed]; *San Giovenale* V:2, 88, cat. nos. 1–12.
[154] Find groups 62-170b and 63-124b; *San Giovenale* V:2, 86f., cat. nos. 1–6.
[155] Find group 62-169b, 62-174c and 63-124c; *San Giovenale* V:2, 86, cat. nos. 1–10; 87, cat. nos. 1–15.
[156] Find group 62-170c and ind. nos. 62-116 and 62-171; *San Giovenale* V:2, 85f., cat. nos. 1–4.
[157] Find group 63-124d; *San Giovenale* V:2, 84f., cat. nos. 3, 18, 24, 35. As pointed out by Pohl (*San Giovenale* V:2, 83f.), the chosen way is to present the sherds from strata 9–10 together.
[158] Find groups 63-124e, 62-101, 62-114, 62-121, 62-170d and 62-174d; *San Giovenale* V:2, 84f., cat. nos. 1–2, 4–17, 19–23, 25–34, 36.

Well P1 (Figs. 116–118)

Well P1 was discovered and dug during the campaigns of 1956–1957.[159] The Well is situated in the north-east part of room Cb and is partly built into wall C5. The upper part above ground, rising to about 1.40 m, is built with three irregular courses of respectively four, three and six blocks (possibly reused), each of which has been hollowed out on one side to form part of the finely worked circular well shaft.[160] The upper blocks show a circular mark of a well cover and three cuttings for a lifting system. The shaft has a total depth of 9.80 m. The well, in its present state, was clearly used in a period later than the creation and the first use of room Cb. The high position of the opening made it inaccessible from the floor level of room Cb, and the rough and irregular outer shape of the blocks in the upper part, can hardly have been intended to be visible. A further indication of its late use and higher level is the little drainage canal P1a starting from the mouth of the well in a northerly direction (cf. stratum 2) on top of the thick fill stratum 2 noted in the entire C-area. Another indication of its late use is the little road leading from the Borgo *Spina* directly to Well P1. This road needed the support of wall C7 which rests on the fill stratum 2.

Well P1, as now seen, can thus clearly be shown to belong to Period 3, the post-earthquake period, after 530 BC. Is it conceivable, that the present P1 is just a rebuilt, higher version of a well belonging to the first period of House C? (*Fig. 118*) Can part of its present structure, i.e. the lowest course of the blocks in the part above ground go back to Period 1? This seems impossible. The stratification of room Cb shows that the red-floor stratum 4 does not run against the lowest course of the well blocks but, instead, has been disturbed on both sides of the well. In addition, a block of wall 5 behind the well has been cut back to allow the huge block 1 of the lowest well course to be set in place. Thus, both wall 5 and floor stratum 4 were in place when the lowest well stones were laid. As this well course did not quite cover the well hole, loose stones were laid around the blocks to prevent earth from falling into the well. This situation was hardly possible when the floor level of room Cb was in use. It has to be concluded that the entire part above ground of Well P1 belongs to the third, post-fill period (Period 3). It is conceivable, though, that Well P1, then with a lower mouth, was used during the first period of room Cb. However, the early wells at San Giovenale all have well-shaped tufa blocks around the well mouth (cf. Acropolis, Area F East[161] and cuttings around the well mouths on the Borgo *Spina*). There are no traces of such blocks or related cuttings in the rock now visible on the ground around Well P1. The assumption that Well P1 was used during the first phase would mean that room Cb was an open area, not a covered one. If so, it is hard to understand why there is a clear distinction, by means of wall C6, between this unit and yard Cc. It should be noted that the pottery found in the lowest stratum of the well was of a later kind,

[159] "Il pozzo già scoperto l'anno precedente venne svuotato fino in fondo, giungendo sino alla profondità di m. 9.80. Si rinvennero soltanto frammenti di un grande *pithos* d'impasto rosso e pochi frammenti di un'olla d'impasto rosso a pareti sottili. Il pozzo ha la forma di un fiasco, con un diametro massimo di m. 1.90, e stretto collo cilindrico construito con blocchetti di tufo." (Berggren & Moretti 1960, 4). The excavation of this *pozzo*, then called *Pozzo* C, is briefly mentioned in E. Berggren's summary of the 1956 season's work. It is worthwhile to note that this *pozzo* did not contain any ashlar blocks, as did *pozzi A* and *B* on the somewhat higher Borgo *Spina* to the east. For the finds, cf. *San Giovenale* V:2, 102f.: The Well (P).
[160] The southern part of the upper course consisted of 2 × 3 thinner and smaller blocks, but the three upper ones are now missing.
[161] *San Giovenale* IV:1, fig. 9.

Fig. 116. House B/C seen from the north-east during excavation, 1961. Photograph by B. Blomé.

from Period 2 (late Red-slip ware), and that no earlier pottery was found there.[162] It seems reasonable to conclude that Well P1 belongs exclusively to the post-Great Fill Period 3.

PERIOD 2. HOUSE B WITH YARD Bc AND HOUSE C WITH YARD Cc (*Fig. 119*)

House B

The earliest strata 10/11 date to the Pre-House Period II of the area. Strata 8/9 belong to Period 1 as well as Floor 4 (Ba) and Floor 2 (Bb) of House B/C. The later strata 1–7 reflect the Floors 3, 2 and 1 and the replacement of wall B4 first with wall B9 and then with wall B10.

[162] Cf. *San Giovenale* V:2, 102f., P-stratum 2, cat. nos. 1–5; p. 103, P-stratum 1, cat. nos. 1–10.

House C

In Period 2 (first part of the 6th century BC) House B/C was transformed into the two separate Houses B and C. Room Ca (part of the "eastern tower" of 1956–57), is surrounded by walls C1-C2-C3-B2 (and crossed, at a higher level, by the later wall C11/K4). Room Cb is surrounded by walls C4-C5/C7-C6-C2. These rooms were investigated in 1961 and could be shown to constitute a "house" with two rooms (Ca & Cb) and an entrance from a small courtyard Cc to the north-east. Yard Cc is bordered by walls C8-C9-C10. Room Cb contained Well P1. Yard Cc had an entrance opening towards Area R in the north-east. The relationship of room Cb to the higher area Ia in the east, bordered by walls I1-I5, is unclear. It is possible that walls I1-I3 may have been part of an original extension of House C, though, if so, on a considerably higher level. House C was rebuilt at least once and had thus at least three phases.

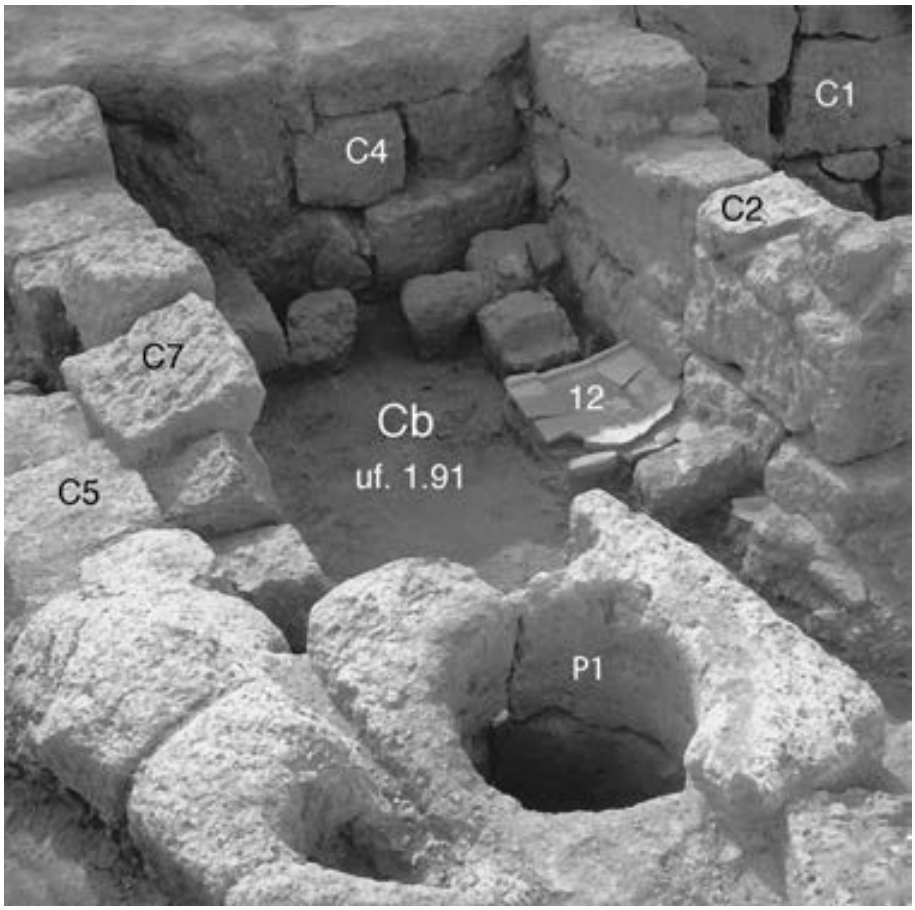

Fig. 117. Room Cb. Photograph by B. Blomé.

Room Ca (Periods 2–3) (see Figs. 112–113)

The walls of room Ca have an average thickness of 0.42–0.47 m and the block length varies between a normal 0.90–1 m and, more rarely, 1.20–1.50 m. A few blocks of unusual size and thickness appear to be reused (wall C3, course I, 4–5; course II, 5 and course III, 4). Wall C11 (and its continuation K4) was built on top of the Great Fill between walls C1 and C3 in room Ca. It consists of four blocks measuring (1) 1.20 × 0.40 × ? m; (2) 1 × 0.40 × ? m; (3) 0.90 × 0.40 × ? m; (4) 0.65 × 0.40 × ? m. It was part of a major reorganization of Area C after the earthquake (?) and the resulting filling operation. Wall C11 (together with K4) was dismantled in 1962 to allow further study of room Ca.

Room Cb (Periods 2–3) (Fig. 117)

This room was excavated in 1961–1963. It is surrounded by walls C2, C4, C5/C7 and C6 and by the tufa rock Ic between C4 and C5/C7. In the north-east corner of the room was Well P1 (excavated in 1957). The stratigraphy of room Cb corresponds closely to that of the levelling strata of room Ca. It is a floor with a thin accumulation on the floor of earth, clay and tiles and then, the huge stone fill. The irregular surface of the bedrock and the fact that a part of the room had been cut into the bedrock complicated the excavation. However, remaining stratification under later constructions in the room Cb has allowed checks on the strata. The small room Cb, at first, was dug like Ca according to the sequence of the thick stone fill stratum and of those beneath it which were then seen as one main accumulation with little clear distinctions. It was thus not possible to ascribe the finds to precise strata. There may therefore be some confusion within the stratum under the stone fill, the upper parts of which may belong to the same filling operation and the lower part may be an accumulation of decay and refuse preceding the filling operation. The chronological development is as follows, starting with the earliest activities:

A. First comes the cutting away of "rock C" in the south-west part of area Cb and the establishment of the perimeter of "rock C" for room Cb.

B. The construction of wall C4 and wall K1. Wall C4 was built against *and* after wall C2. Alternatively, walls C4/K1 are later and closed an opening towards Lane K, giving access to the Cb-area.

C. The lowest course of wall C6 seems to have been laid in a setting bed cut into the sloping bedrock, together with some soil, to even out the differences in level and the irregularities of the bedrock, in particular the north-eastern section of yard Cc. This "soil" is the same as the lowest stratum 7 on the bedrock south of the well. On the other hand, the thin red stratum 6, just above the dark stratum 7, runs against the wall. Thus the lowest course of wall C6 is laid on ground to constitute the northern limit of room Cb.

Fig. 118. The raised level of Well P1 from the west.

D. The accumulation of various strata (6 and 5) in the area.

E. The accumulation of strata 5–7 was broken through for the creation of Well P1 and the laying of the three block layers constituting its upper part. The lower part of the well opening is surrounded by smaller stones, probably to prevent earth from falling into the well.

F. Wall C5 was built on top of strata 5–7 but, apparently, after the placing of a huge block in the lowest well course. Arguments: on both sides of the lowest course of Well P1, a kind of building trench has disturbed strata 5–7 and earth and various smaller stones have been placed there (partly to prevent earth from falling into the well). Some of these stones are located underneath the southernmost block of wall C5 and thus antedate its placing. Further, this block has been partly cut back to adapt itself to the huge block already in position (rather than the contrary). Wall C5 is thus part of the entire "well project" and not a pre-existing feature.

G. Wall C7, less well built, was added on top of the thin fill of stratum 3 and is thus, at construction, slightly later than wall C5. Its function seems to be to provide a foundation for an access road to the Well P1 from the Borgo *Spina*.

H. After the construction of Well P1, walls C5 and C7 the area was filled in with the dense, huge fill of stratum 2.

I. A small, covered water channel was built on the fill in a northerly direction from the mouth of Well P1.[163]

Stratigraphy of all periods

Stratum 1. Surface layer only partly preserved.

Stratum 2. Dense accumulation of big and small tufa stones in brownish soil, obviously the same fill stratum as that in Ca. Fragments of tiles, numerous Bucchero fragments and coarse pottery pieces (Find group 61-114).[164] Two rim fragments of a brazier with an impressed bird and 15 letters were found (ind. no. 61-104), the bottom of another brazier (ind. no. 61-105) and a well-preserved small bowl in coarse black ware (ind. no. 61-106).[165] There was also a loom weight (ind. no. 61-119) and, at some depth, a terracotta bobbin (ind. no. 61-108). Somewhere in this fill was also found half of a grey-black Bucchero bowl on a low foot (ind. no. 61-124).[166] Resting on this fill stratum was found a series of rather thin blocks (P1a), originating from the mouth of Well P1 with the function of a kind of water channel running in

[163] See Sections L16–L17 (*Pls. 11–12*), L25 (*Pl. 15*), L29 (*Pl. 16*), T19 (*Pl. 34*), T24–T26 (*Pls. 35–37*).
[164] *San Giovenale* V:2, 98–101, cat. nos. 5–7, 9–10, 12, 14, 16, 19–24, 29, 31–32, 34–42, 48–49, 51–66, 69–71, 74.
[165] *San Giovenale* V:2, 99f., cat. no. 45, Pohl 1982, pl. 4:1; cat. nos. 46 and 67.
[166] *San Giovenale* V:2, 81, cat. no. 50; 97, cat. no. 48; 98, cat. no. 14.

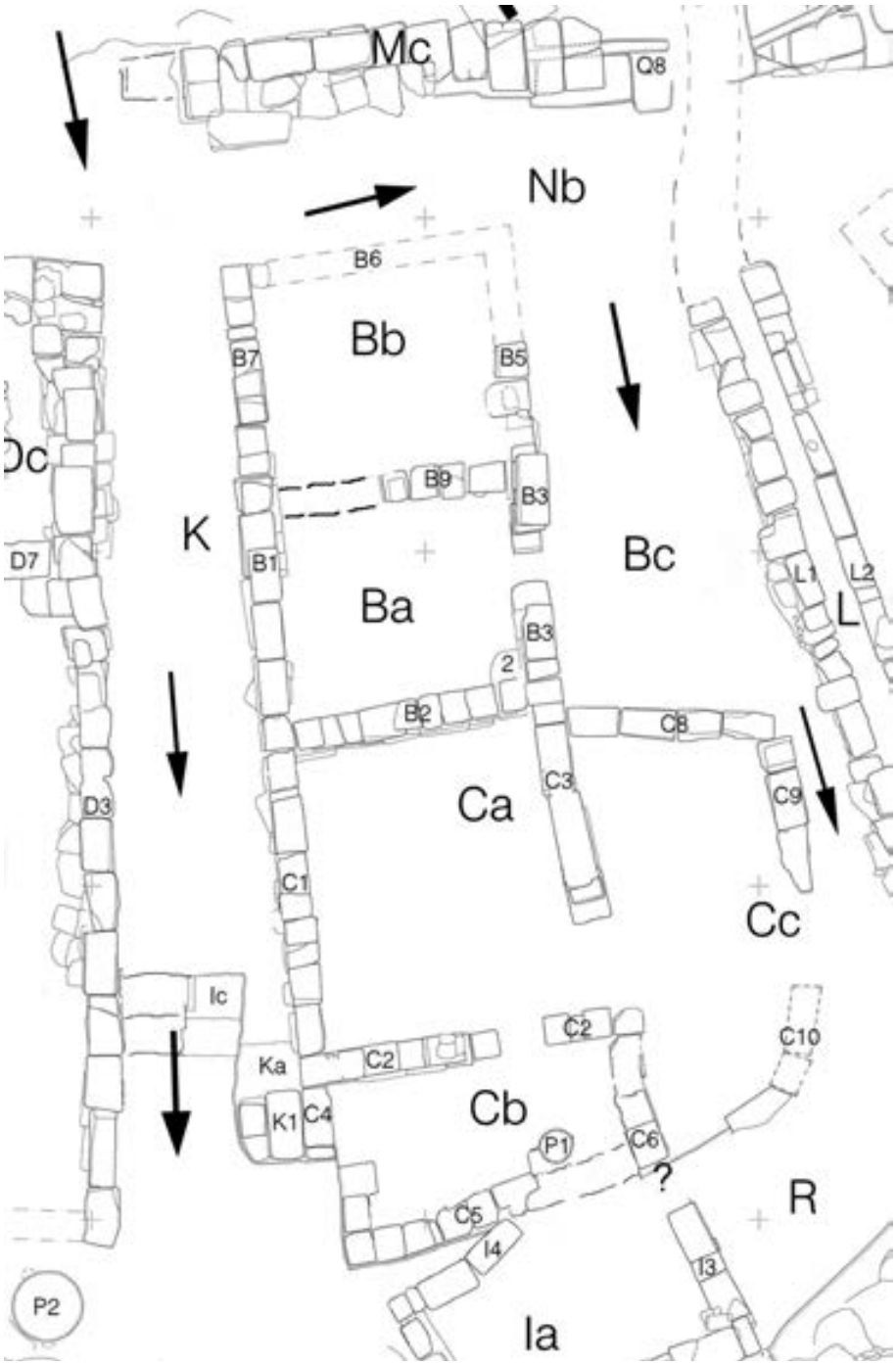

Fig. 119. Houses B and C, Period 2. Drawing by B. Blomé, A. Bizzarro and G. Tilia.

a northerly direction.

Stratum 3. This stratum was similar to stratum 3 in room Ca and consisted of earth, clay and small stones. Due to the sloping bedrock it was variously thick in different parts of the room. Modest finds of pottery: Italo-Geometric ware, Fine and Ordinary Buccheroid Impasto, Internal Red-slip ware, Variously slipped ware, Wheel-made Impasto and a loom weight with an impressed cross.[167] In the south-west corner of the room and at some depth in stratum 3 or on loose earth (if so in stratum 2) about 10–15 cm above the tufa rock were also found a fragmentary but almost complete tile (in many fragments), other tile fragments and some larger tufa stones and fragments of a *dolium*.

Stratum 4. This stratum and the other ones (often with a depth

[167] Find groups 61-116 (?), 61-168 and ind no. 61-120; *San Giovenale* V:2, 97f., cat. nos. 1–6; 101, cat. nos. 1–7.

of only 1–7 cm) documented in the profile from under wall C7 and between wall C6 and Well P1 were not seen in all parts of the room Cb (see Sections L29, *Pl. 16* and T24, *Pl. 35*). They were not distinguished and separately documented in 1961. As in room Ca, the strata under the stone fill of Stratum 2 were dug uniformly. It was only in 1962–1963 that stratum 4 was isolated: a rather thin, reddish layer with a hard surface, no doubt to be interpreted as a floor. A very thin black layer on top of this floor was visible in a few places (stratum 3a).

Strata 5–7. Thin, levelling strata (on the bedrock sloping towards the north, (see Section L29, *Pl. 16*), alternatively blackish-grey *pozzolana* stratum 5, red dissolved tufa and streaks of green-yellowish clay stratum 6, and dark earth stratum 7. To these strata belongs a fragment of an Italo-Geometric plate in light ware with painted red decoration (ind. no. 65-117) and Find group 61-116 (with fragments of a red pitcher).[168]

Yard Cc and Area R West (*Fig. 106*)

Part of the area north of House C was excavated down to the bedrock in 1957, and the one-course wall C8 and a few blocks of wall L1 of Drain L had been discovered. However, no record exists of stratigraphy or finds in this area from this period of excavation. In 1961–1962, the excavation was extended towards the north, in order to uncover the entire area between House C and wall L1. The area was shown to consist of three main parts: yard Cc, Area R West and Area R East. This activity resulted in the discovery of the one-course walls C9 and C10 (the latter partly destroyed but possible to reconstruct by means of cuttings in the rock). These walls, together with wall C8, surrounded a small area in front of the entrance to House C and the opening towards Area R West. It was called yard Cc.

Wall C10 consisted once of three blocks, only one of which was left *in situ*. However, cuttings in the ground have allowed the precise reconstruction of the two missing blocks (which were copied in a nearby quarry and reinserted in the old positions) (*Pl. 32*). Block 1 was partly set into a cutting in the soft tufa rock to the east. Its northern end was cut obliquely to allow a more westerly direction for the next two blocks and thus form a curve in the wall. The block's somewhat irregular dimensions are: front length 0.85 m, front height(s) 0.38–0.30 m; depth *c.* 0.40 m and back length *c*. 1 m. The present blocks 2 and 3 (measuring 0.55 × 0.40 × 0.40 m and 1 × 0.40 × 0.40 m) are modern, but correspond to the dimensions of the missing blocks. This wall should antedate activities in the nearby, higher Areas I and R East as the pavement-like layer of the Areas I and R East also partly covers block 1 of wall C10.

Wall C9, after what was no doubt an entrance opening towards yard Cc, is a continuation of C10 and consists of three fairly large blocks, all partly eroded and broken, set on the sloping rock (*Pl. 32*). The two first blocks are laid horizontally while the third is set vertically in a rock cut, as was often done when the slope of the rock increases. Block 1 lies on a very thin and hard brown earth stratum. Its dimensions are 1 × 0.42 × 0.40 m and the west end is cut slightly obliquely (as if continuing the curve of wall C10). Block 2 also lies on thin earth and is cut slightly obliquely at its east end and thus continues the very slight curve hinted at by block 1. The length is 0.85 m on the outside and 0.78 m on the inside and the height is *c*. 0.44–0.48 m. The width of its upper part is 0.40 m, while that of the lower is 0.50 m. The explanation for this difference is that on both sides the upper part of the block has been chiselled off, in order to produce a horizontally cut ledge, indicating a once existing pavement or floor level. Block 3 is set vertically in a setting bed cut in the sloping rock. It measures 0.50 m in length and 0.73 m in height. The lower width is 0.47 m and its upper width 0.40 m. On the inside, it has the same ledge indicating a floor/pavement level as block 2, though not on the outside.

Wall C8 creates a division between the Bc and Cc yards (*Fig. 106*, *Pls. 11–12*). It consists of four blocks, horizontally laid on an earth accumulation (strata 5–8) containing, probably, at least two floor-like levels (best documented in the Bc-area with its deeper stratification). Wall C8 consists of four blocks laid horizontally on an earth with a depth of 0.50 m. Their lower edge corresponds roughly to the levels indicated by the ledges on wall C9, blocks 2 and 3. Block 1 measures 0.80 × 0.44 × 0.37–0.44 m. This block is obliquely cut off at both ends; block 2 measures 0.63 × 0.44 × 0.34–0.44 m. Its southern end is slightly oblique. Block 3 is 0.80 × 0.44 × 0.40 m; block 4 is 0.76 × 0.40 × 0.42 m and is slightly obliquely cut at both ends.

It is quite clear that walls C9 and C10 are earlier than wall C8. While C9/C10 should belong to the area's earliest phase, the earth accumulation, the indications of a pavement/floor level on C9, and the fact that blocks 2 and 3 correspond to the lower part of C8 should indicate some chronological difference. The two floor levels visible in the accumulation underneath C8 strengthen this observation. It is further confirmed by the correspondence of the levels of wall C8 and that of Floor 1 in House B, room Ba. What this fact says on the previous relations of yards Bc and Cc is hard to figure out. Wall C8 does not seem to have had a predecessor; if so, the two constituted one single area without differentiation. It is clear, though, that wall C8 makes a point of distinguishing between the two Houses B and C, as it takes off exactly at the meeting point of the two house walls B3/C3.

Stratigraphy

The entire area between House C and Drain L had a fairly homogeneous stratification, especially in the upper part, characterized by sloping (fill) strata following the sloping ground. In the lower part, however, there seemed to be a difference between the accumulation inside and yard Cc on the outside.

Stratum 1. Surface stratum of soil, 0.20 m thick, containing small fragments of tiles and of indistinct coarse pottery.

Stratum 2. A brown-yellowish earth and *tufetti* stratum, 0.60 m thick, containing fragments of various types of roof-tiles, two small fragments of Black-figure pottery, a piece of a bronze needle with a loop[169] and fragments of indistinct pottery.

Strata 3 and 4. A stratum, 0.60 m thick, containing partly a sloping layer of stones and *tufetti*, partly earth and loose stones with an increasing density of stones in the lower part. The stratum has a clear fill character with rocks and sand and produced a few finds, such as small bronze fragments and a small Black-figure sherd with a decoration of dots.[170] In the lower part there were a couple of sherds, some good Bucchero fragments. In this stratum were found the blocks of wall C9 and the bed cuttings for two,

[168] *San Giovenale* V:2, 95, cat. no. 1; 97f., cat. nos. 1–6.

[169] *San Giovenale* V:1, 190f., cat. nos. 4–5, 20.

[170] *San Giovenale* V:1, 106, cat. no. 10.

now missing, blocks of wall C10. In the higher, eastern part of the area, the rock functioned as a floor level, not so, however, in the sloping, western part, where an additional layer could be established.

Strata 5 and 6. A brownish stratum of increasing thickness (*c*. 0.20 m under wall C8) topped by a hard surface, possibly a kind of floor (if so Floor 2) just underlying wall C8 (cf. the situation at the same level in room Ba: stone pavement and underlying hard Floor 1). The existence of such a floor is indicated also by horizontal cuttings on the inside of two blocks of wall C9.

Strata 7 and 8. This is a layer on the sloping bedrock, consisting of a brown stratum, 0.20 m thick, rich in *tufetti* and covered by a hard surface, Floor 1. This somewhat undulating floor surface has been levelled (or repaired) by a partial filling of black-grey tufa powder.

Area I. Periods 1 & 2 (*Fig. 101*)

Area I is located east of room Cb and Well P1. The rock rises *c*. 1 m above the C floor level and has been partly worked off to form an irregular ledge, on which the walls of Area I can be found. Part of the area was uncovered in the 1957 excavations.[171] The uneven Area I, measuring about 5 × 3 m and sloping towards the north-east, is bordered by walls I1–I5.

The walls of Area I are of two different kinds. Walls I1, I4 and to some extent I5 are built of blocks with a maximum thickness of 0.40 m, while walls I2 and I3 consist of huge blocks with thicknesses varying between 0.65–0.48 m (Find groups: 61-126, 61-145, 61-167, 61-170, 61-175, 62-123, ind. nos. 61-111, 61-112, 61-131, 62-104.)[172]

Wall I1 has a length of 2.10 m (*Pl. 36*). It has an east–west direction and consists of only two, partly eroded, blocks of modest dimensions (both 0.65 × 0.30 × 0.25 m).[173] The corner block of walls I1/I4 is missing but its dimensions can be calculated as *c*. 0.37 × 0.28 × 0.25 m. The rest of this southern part of Area I consists of a broad threshold or step (1.30 m long and 0.50/0.55 m deep), cut into the slowly rising rock to the south.

Wall I2 has a length of 4.90 m, and a roughly north–south direction. It is partly cut into the tufa rock of the Borgo *Spina*. It preserves two courses of very substantial blocks: Course I: (1) 20 × 0.48 × 0.58 m; (2) 1.01 × 0.48 × 0.52 m; (3) 0.51 × 0.48 × 0.57 m. Course II: (1) 0.40 × 0.37 × 0.65 m; (2) 1.02 × 0.34 × 0.42 m; (3) 1.02 × 0.38 × 0.52 m; (4) 0.25 × 0.38 × 0.57 m. The wall rests on ledges in the rock and on a substantial fill on the uneven rock surface of Area I. Wall I2 served as a retaining wall for an earth fill between the steep, uneven rock of the Borgo *Spina* and Area I. Its last block towards the north rests directly on the easternmost block of wall I3.

Wall I3 is 3 m long and is firmly set in a foundation trench cut into the rock and consists of five blocks in two courses (*Fig. 102*, *Pl. 34*). Two of the blocks have substantial dimensions (0.83 × 0.65 × 0.48 m and 1.25 × 0.34 × 0.48 m). The wall ends 0.40 m from the rising tufa rock in the east, leaving an earth-filled pocket between the rock and the end of its easternmost block.[174] It should be noted that I3 has a rough, irregular inside towards the south and, in spite of the earth pocket at its eastern end, a somewhat more carefully treated front towards the north. A first impression is that a block may be missing at the west end of wall I3, which once connected it to wall C6, which runs in the same east–west direction, aligned with the main wall system C3-B3-B5. This seems contradicted, however, by the discontinuation of the carefully cut foundation trench for the huge western block of I3. Instead, the cutting turns the corner of the block. Furthermore, there are pavement-like traces on the rock surface between walls I3 and C6 which continues towards the north. We must then assume that, for some reason there was no block here, but a fairly small opening communicating with the contiguous Area R.[175] Wall I3 is clearly the earliest of the group I3-I4-I5, but it is not possible to establish a clear constructional relationship with walls I1 and I4.

Wall I4 consists of one course of five blocks (0.21 × 0.18 × 0.40 m; 0.84 × 0.40 × 0.40 m; 0.93 × 0.30 × 0.38 m). The fifth block, now fragmentary, has a hole through it. It had a function in connection with the mouth of Well P1. This wall had either been rather sloppily built at a late moment or was changed to take on a function in connection with Well P1 of Period 3 blocks 3–5 seem to have been dislocated from their original positions. They now make a bend and encroach upon wall C5. This, however, may have been intentional: the southern end of block 3 has been obliquely (re-)cut, as if to fit it to the new, slightly different orientation. If wall I4 had an earlier phase with a more straight course and orientation, it is possible to assume that its function was to mark the edge of Area I against the drop of the rock (of more than 1 m) towards the west and room Cb. It should be noted, on the other hand, that the orientation of the two first blocks corresponds exactly to the east edge of the road from the *Spina* to the Well P1 of Period 3 It is more probable that the wall respected the road, than the other way around. If so, the entire wall I4 should be late.

Wall I5 is 2.70 m long and built on an earth and stone fill. It consists of two courses against wall I2 and has an east–west orientation (*Pl. 35*).[176] The blocks have somewhat smaller dimensions than those of walls I2 and I3 and vary between 0.80–0.60 × 0.30 × 0.45–0.40 m. A cutting in one of the blocks of Well P1 may have been an adaptation for the now missing end the last block of wall I5.

Stratigraphy

Due to the sloping ground, with a difference in level of 0.75 m between the south and north ends, a clear stratigraphic record could not be established. The main points, however, are clear, particularly as sufficient stratigraphic evidence remained to be checked in 1995.

Stratum 1. At some later moment in time Area I served, like other parts of the Borgo NW area, as a dumping place for material from the higher Borgo *Spina*. Considerable amounts of tufa blocks, *tufetti* and roof-tile fragments were found in the upper levels. Deeper down came more tiles and pottery as part of soil accumu-

[171] This is the find place of the enigmatic ram's head and the fragmentary antefix (*Figs. 14–15*); *San Giovenale* V:2, 191, cat. nos. 25–26; also illustrated in Berggren & Moretti 1960, figs. 1–2 and in *Etruscan culture* 1962, fig. 282.

[172] *San Giovenale* V:2, 103–106, 106–122, 189, cat. no. 2.

[173] According to photographs of 1961, the corner block was fragmentary and partly missing. The block presently there is a reconstruction from 1965.

[174] In this earth, sealed by the blocks of walls I3 and I2, was found (in 1995) a sherd which is important for the dating of the entire system; see n. 179.

[175] Cf. the surprisingly small opening of House B.

[176] The I2 block seems to have had its surface retouched to facilitate the joint with the first block of wall I5.

lations and fills. It was not possible to distinguish clearly between the different fills, especially as materials of varying composition were found at the same level of the area. This rather formless mass may, however, be partly separated from the next stratum, which also has a fill character.

Stratum 2. This is a series of layers or unevenly distributed assemblages of various kinds of material: tufa stones, brownish *tufetti*, dark *pozzolana*, greyish earth with small stones, some tile fragments and little pottery, all constituting a more or less homogeneous filling operation, partly acting as a foundation for Walls I2 and I5.

Stratum 3a. This stratum consisted of a hard and compact, brown-yellowish pavement-like layer of *tufetti*, apparently a kind of floor on top of the uneven tufa rock. It could be observed in all the remaining stratigraphic profiles and on part of the rock surface.

Stratum 3b. In a few deep pockets of the sloping and uneven tufa rock, there was some black, dense soil and a few medium-sized stones.

Chronological development of Area I

The walls and changes in Area I should not obscure what must have been its original function: that of providing access from the higher-lying *Spina* to the lower area to the north, which was otherwise very difficult to reach due to the considerable changes in level and the construction of Houses B and C.[177] This function of passage way was later changed by the construction of walls and fills in Area I, most probably connected with the new conditions caused by the great (post-earthquake) filling operations in the C- and neighbouring areas. The stratification assists in establishing the sequence of constructional developments in the area, and the relations of walls I3-I5, which are keys to understanding this development. As mentioned, it is difficult to define the relative position of walls I1 and I4.

A. The earliest feature of Area I was the I1 threshold and, the pavement-like floor level, which was meant to protect the very fragile tufa rock. The rock dissolves easily into grey powder, when walked upon. This layer apparently covered the main parts of Areas I and R and is still partly well preserved (particularly beneath rubble wall R1).

B. An important change in the passage function of Area I/R was the construction of wall I3, the first of the wall system I3/4/5. Wall I3 is solidly built and is set in the tufa rock by a rock-cut foundation trench on its south and west sides. The *tufetti* layer of stratum 3 was cut through for the laying of the wall.[178] The fact that wall I3 is aligned with walls C6 and C3 of House C may make us think that a block of wall I3 is missing. This, however, can hardly be the case. It is reasonable to assume that the huge block I3/3 (0.83 × 0.64 × 0.48 m) was laid first as the corner point of wall I3: it is the only block that occupies two courses and is firmly set in two rock-cut trenches. The other blocks lie partly on or in earth, as if block I3/3 had a retaining function, and there is a pocket of earth (measuring 0.30 × 0.40 m), between the rock in the east and first blocks of courses I and II. This, again, indicates a function of wall I3 that is different from that of an assumed I3/C6/C3-wall system, which, by the way, in part belongs to another "period". The "missing" block or, rather the opening left, may indicate a temporary need still to communicate with the Area R during the on-going construction activities in Area I. A further key to an understanding of the activities in Area I may be found in the information provided by the sherd found in the sealed pocket of earth between wall I3 and the tufa rock in the east.[179] It is dated in the late 6th century, which thus precludes a dating of walls I3 and I2 to the Period 1 of the 7th century BC.

Thus, for a while wall I3 and the preceding *massicciata* floor were the dominant features of Area I. The function of wall I3, as indicated by the remains of a fill (stratum 2) of stones, tiles and pottery still partly in evidence, was a kind of retaining construction for this fill to create a more even surface on the irregular, sloping rock.

Walls I2 and I5 are later. However, both are *built* on top of the stone-rich fill of stratum 2 and thus belong to the same stratigraphic level. This, however, does not *per se* prove contemporaneity. While I2 should have some constructional relationship to I3 with one block resting on the upmost block of wall I3, wall I5 may well be somewhat later.[180] There are faint traces of another, slightly higher pavement-like level in the remaining profiles of the accumulation underneath wall I5. This may indicate some chronological/constructional difference between walls I2 and I5. This would seem reasonable as it is otherwise hard to see how they relate to wall I3.

The function of I2 is quite clear: that of a retaining wall for a fill for the space between the *Spina* rock to the east and Area I. The reason for this should be the fact that here the tufa rock changes character and takes on the very fragile, powdery character which made the local builders take some precautions to protect Area I from disintegrating tufa. This fact had become clear to them at an early stage when working off the entire western side of the *Spina* towards the Borgo NW area. The function of wall I5 would then be that of taking over the task of retaining additional earth fills from wall I3 which is now hidden by the later fills.

Assigning relative positions in this sequence to walls I1 and I4 is difficult. They may well both be part of Period 2 changes. I4, at least in its present state, lies on the secondary wall C5 and interacts with Well P1, both belonging to the post-fill phase. It is possible, though, to see the orientation of blocks 1 and 2 as indicating an original, low wall along the edge of the tufa rock towards room Cb in House C, which was later changed and incorporated in the *Spina* road/Well P1-system of Period 3.

In summary then, Area I was in the early period an open area that provided access to the lower-lying parts of Borgo NW, i.e. to Houses B & C and the area around House A. At a later moment,

[177] This function is hinted at by the considerable work devoted to shaping the rock, vertically and horizontally, in the nearby Area R, clearly to provide communication space between the higher parts to the south and the lower-lying constructions to the north. Such a function is hinted at also by the broad threshold or step in wall I1 to the south.

[178] A limited number of very small stones are found between the pavement-like level and the westernmost block of wall I3 and there seem to be traces of this layer in the earth pocket between the tufa rock and the first block of course 1. On the other hand, this layer appears to run across the cut trench for block 3 and against the southern side of course I.

[179] Pohl identified the sherd as part of a late Red-slip jar, the heavy, applied and slightly undercut lip of which was comparable to the rims of other Red-slip and Kitchen ware jars in Period 2 contexts. This means a rough date in the later part of the 6th century, or even later.

[180] Cf. the cutting on top of a block in the Well P1 area, possibly for the last block of wall I5. On the other hand, when seen from above, the two sturdy I2 and I3 walls at right angles give a clear impression of being part of one constructional operation.

probably at the great post-earthquake fill and reconstruction activities, a number of low walls were erected to retain the rising fills necessary to create a useful working level for Period 3. Their complex relative sequences do not preclude a fairly short chronological span for the, no doubt, rather demanding reorganization of the area.

Area R. Periods 1 & 2

The amorphous Area R is located north of wall I3, between rubble wall R1 in the west and the rising tufa rock in the east. It extends northward to the beginning of the big drainage canal Drain L. The area measures in length 6 m and the width is 1.60–1.70 m. It slopes some 20%, i.e. 0.80 m over a length of 4 m. Area R was excavated initially together with Area I and was distinguished from the latter only when constructions began to appear. An irregular configuration of stones just under the surface extended over both areas and may have been a kind of rough, late pavement.

Area R originally had a function of passage, providing access to the lower parts of Borgo NW, in particular to yard Be (Cc/Bc). It was thus a continuation of Area I. When Area I was restructured by means of walls I3-I4-I5 and the fills, there was obviously some need to keep the northern part of the original I/R passage open for a while. Rubble wall R1 was thus built to retain, temporarily, the fill in the C-area.

Wall R1 runs from wall I3 roughly north for 3.50 m. Except for the last 0.50 m (where the rock dips and the wall lies on earth), it is built on the rock floor of the passage (*Pl. 17*). It should be noted, though, that a very thin layer of hard earth and clay separates the wall from the rock proper. This seems to be the preserved remains of the same (protective) pavement-like layer noted in and around Area I. It seems to confirm the theory of a pre-wall passage function for the Areas I and R.

Wall R1 has a thickness of 0.70–0.90 m and is built with about 60 tufa stones of different sizes: seven stones of medium sizes are laid on the rocky ground, as well as a number of somewhat smaller stones. It is clearly a functional construction with no ambition of creating a neat façade. The back of the wall abuts the big fill in the Cc-area. The rock floor and the rising rock towards the east have preserved numerous traces of pick-axe work. It allows an insight into the ancient process of shaping the rock and cutting the original I/R passage. Marks of various pick-axes can be detected, such as a straight-edged (3.5–5 cm) and smaller ones with rounded edges (2–3 cm). The distribution of the marks shows that work has proceeded not only from the lower north towards the south, but in both directions, and that the work must clearly have been performed before the construction of wall I3.[181]

Stratigraphy

The stratigraphy of Area R was dominated by later, more or less sloping, fills of earth and stones, with some 500 fragments of roof-tiles and pottery.[182] Only in its lower, northern part were there traces of an earlier layer to create an even ground on the irregular rock surface. The fairly homogeneous fill had no particular stratigraphy: as noted by Pohl, there were joinings between pottery fragments from the lowest and the highest levels of the fill.[183]

As could be expected from a passage kept open for a considerable period, there was little early material, the bulk of the pottery being of late 6th-century date or even later, corresponding to the post fill-period of the C/I/R-areas. The ceramic and other finds belong to the following categories, as established by Pohl: Etrusco-Corinthian ware (8); Uncertain painted (1); Attic Black figure (2 fragments of *kylikes*); Attic Red figure (1 fragment of *kylix*); Attic Black glaze (2); Etrusco-Archaic Black glaze B ware (5); Etrusco-Campanian Black glaze ware (1); Bucchero (Ordinary and Late Ordinary and Grey, 149); Buccheroid Impasto (2); Brown Impasto (1); Painted Impasto (3); Red-slip ware (mostly Late) (62); Internal Red-slip ware (107); Late Italo-Geometric ware (3); Variously slipped ware (38); Kitchen ware (wheel-made Impasto) (84); Large jars and *dolia* (11); cooking stands: Scheffer IIA (9), IIB (8), IIC (1); objects of uncertain form and function (4); other objects: spindle whorl (1), bobbin (1), loom weights (7); metal: 2 pieces of iron sheet; stone: 2 grinding stones; roof-tiles (9).

[181] Pick marks 0.70 m from wall I3 show that here an Etruscan had been at work in a northerly direction and with his back towards south. This would have been impossible if wall I3 had already been in place as the space available would not have been enough for a sufficiently forceful handling of the pick.

[182] For the finds, *San Giovenale* V:2, 106–122: "R. Area south of the rubble wall", cat. nos. 1–523.

[183] *San Giovenale* V:2, 106.