

## PRELIMINARY REPORT ON THE FIRST SEASON OF EXCAVATIONS OF THE ITALIAN-PALESTINIAN EXPEDITION AT TELL ES-SULTAN/JERICHO, APRIL-MAY 1997

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The Palestinian Department of Antiquities and the University of Rome 'La Sapienza' resumed excavations on the site of Tell es-Sultan/Jericho in April-May 1997. The Italian-Palestinian Expedition is directed by Nicolò Marchetti, Lorenzo Nigro and Issa Sarie\*, under the coordination of Paolo Matthiae and Hamdan Taha, Director of the Department of Antiquities.<sup>1</sup>

The main historical and archaeological goals of the Expedition are the following: 1. To investigate the urban development of the site during the Bronze Age and the topography of the Early and Middle Bronze Age town; 2. To establish the precise chronology of the fortification systems on the site and their building technique, including the position of gateways; 3. To carry out a series of rescue excavations and restorations at eroded spots on the tell.

A complete stratigraphic periodization of the site has been put forward, taking into account the results of old and new excavations; it is shown in Table 1. The archaeological chronology of Palestine during the Bronze Age has been the subject of considerable debate. The subdivisions adopted here are based upon differences in material culture, shared at a general level with the whole Syro-Palestinian area.

TABLE 1: Periodization of Tell es-Sultan (Kenyon's terminology in square brackets, Albright's chronological scheme in round brackets)

ARCHAEOLOGICAL PERIOD	YEARS B.C.	TELL ES-SULTAN PERIOD	KENYON'S TOMB GROUPS
Natufian [Proto-Neolithic]	10500-8500	Ia	
PPNA	8500-7500	Ib	
PPNB	7500-6000	Ic	
PNA	6000-5000	IIa	
PNB	5000-4300	IIb	
EB I [Proto-Urban]	3200-2900	IIIa	
EB II	2900-2600	IIIb	
EB III	2600-2300	IIIc	
EB IV [Intermediate]	2300-2000	IIId	
MB I (IIA)	2000-1800	IVa	
MB II (IIB)	1800-1650	IVb	Tomb Groups I-III
MB III (IIC)	1650-1550	IVc	Tomb Groups IV-V
LB	1550-1200	V	
Iron	1200-530	VI	
Hellenistic	330-30	VII	
Roman	1st-3rd cent. A.D.	VIII	
Byzantine	4th-7th cent. A.D.	IX	
Islamic	7th-19th cent. A.D.	X	

The fortification system was deemed the most significant feature for studying the urban development of the site during the Early Bronze Age II–III (2900–2300 B.C.) and the Middle Bronze Age (2000–1550 B.C.), within a refined chronological and historical setting. The city-walls and ramparts were also the most diagnostic evidence for checking the general stratigraphy established by K. M. Kenyon.<sup>2</sup>

Four areas have therefore been opened (Fig. 1). The results will be presented in chronological order.

#### AREA B

Area B is located across the EB city-walls at the southern edge of the *tell* (Fig. 1). Five squares (ApIV<sub>4</sub>, ApIV<sub>5</sub>, AqIV<sub>5</sub>, ArIV<sub>5</sub>, AsIV<sub>5</sub>) were opened along the impressive mudbrick inner city-wall, which was excavated by removing the dump from the trench cut by Sellin along its inner face (Sellin and Watzinger 1913, 31–33, figs. 14, 21), cleaning the top (north end) of Kenyon's Trench III (Site N), and digging previously unexcavated strata (Fig. 2).

#### Stratigraphy

The stratigraphy of Area B can be summarized as follows. Below the topsoil, which yielded mixed materials since the area had been previously excavated and is badly eroded, there is a thick layer of rubble, mainly containing Middle Bronze II sherds, which is part of the latest rampart (Period IVc, Middle Bronze III, 1650–1550 B.C.). This stratum covers the emerging mudbrick structures and fortifications of the Early Bronze Age, while Iron Age II pits were dug near the northern limits of the excavation (P.31). The EB city-wall and the remains of related buildings were either filled by the collapsed structures of the same period, or were cut or sealed by later deposits dating from the Middle Bronze. In many spots, erosion has directly exposed the EB layers and structures, for example, on top of the mudbrick city-wall, as well as on both flanks of Sellin's trench. The latter is V-shaped and runs along the inner face of the city-wall, but has cut the mudbrick structure down to a deep level,<sup>3</sup> so that it was necessary to remove its fill completely to identify the northern face of the wall.

#### Period IIIc City-Wall (Early Bronze III, 2600–2300 B.C.)

The massive mudbrick city-wall, called W.2, has been brought to light for a 30 metre-long curving stretch, where it forms the south-west corner of the town. According to Kenyon, this structure had undergone several reconstructions. Namely, she distinguished several superimposed walls at the same elevation in two facing sections of Site N (Square ArIV<sub>5</sub>), where one actually would expect a unique structure cut by Trench III.<sup>4</sup> A careful re-examination of this wall in Areas B and C (Wall H: Kenyon 1981, pl. 236),<sup>5</sup> in Kenyon's Site M (1981, pls. 289–92) and in her Trench II (Kenyon 1981, pls. 100b, 101, 102b, 103–104) has in fact made it possible to ascribe these and other reconstructions identified by Kenyon to W.2, and to distinguish three main building phases, each represented by a course of large stones with a mudbrick superstructure, which were the foundations of three superimposed city-walls.<sup>6</sup>

The first city-wall, which was protected by rounded towers (Kenyon 1981, pls. 79, 101b), was built during the Early Bronze II (Period IIb, 2900–2600 B.C.), while its successive reconstructions can be dated to the Early Bronze IIIA (Period IIIc1, 2600–2450 B.C.) and IIIB (Period IIIc2, 2450–2300 B.C.). In Area B (Trench III) the EB II city-wall (NEV) was not raised again at the beginning of the Early Bronze III, since the line of fortification was moved to the

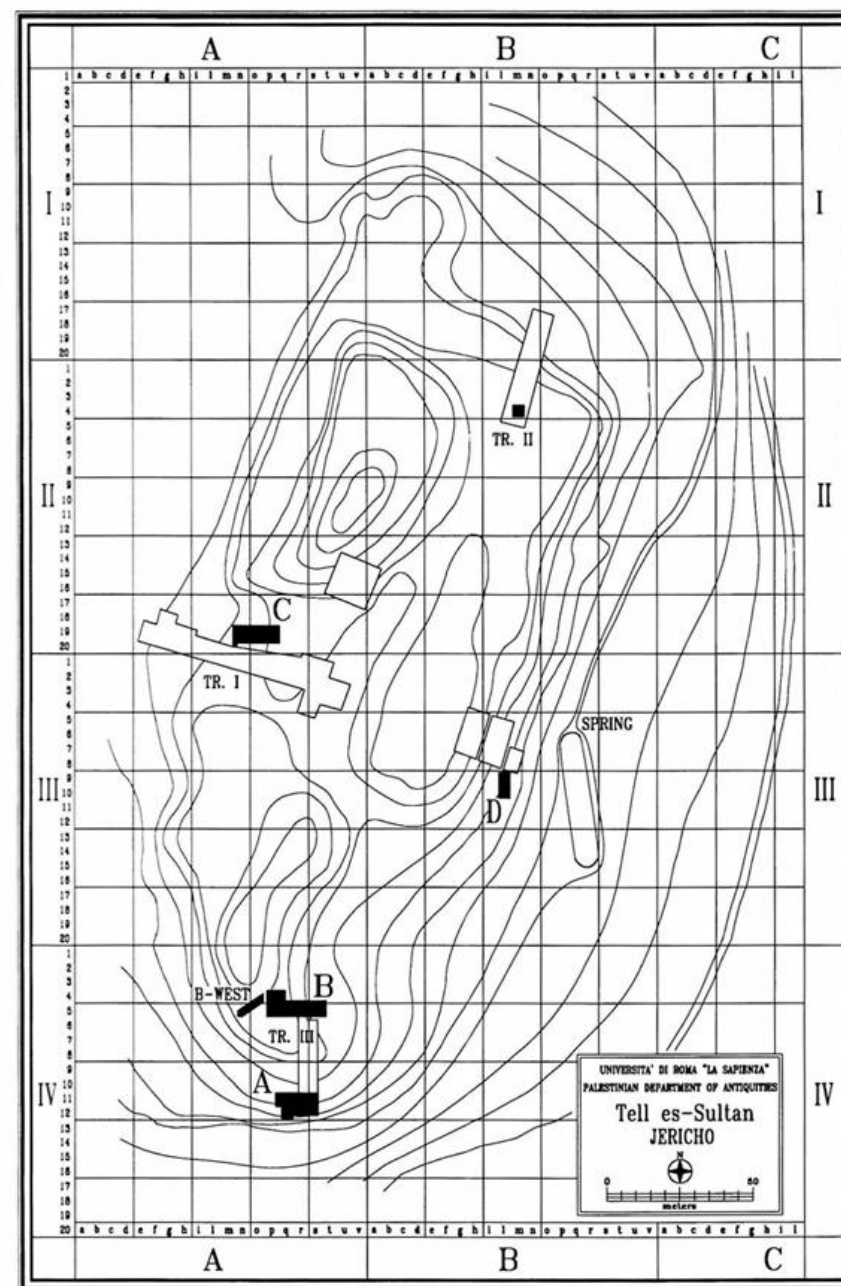


Fig. 1. Contour plan of Tell es-Sultan (contour interval 2 m.) with 1997 excavation areas (black) and Kenyon's areas (blank).

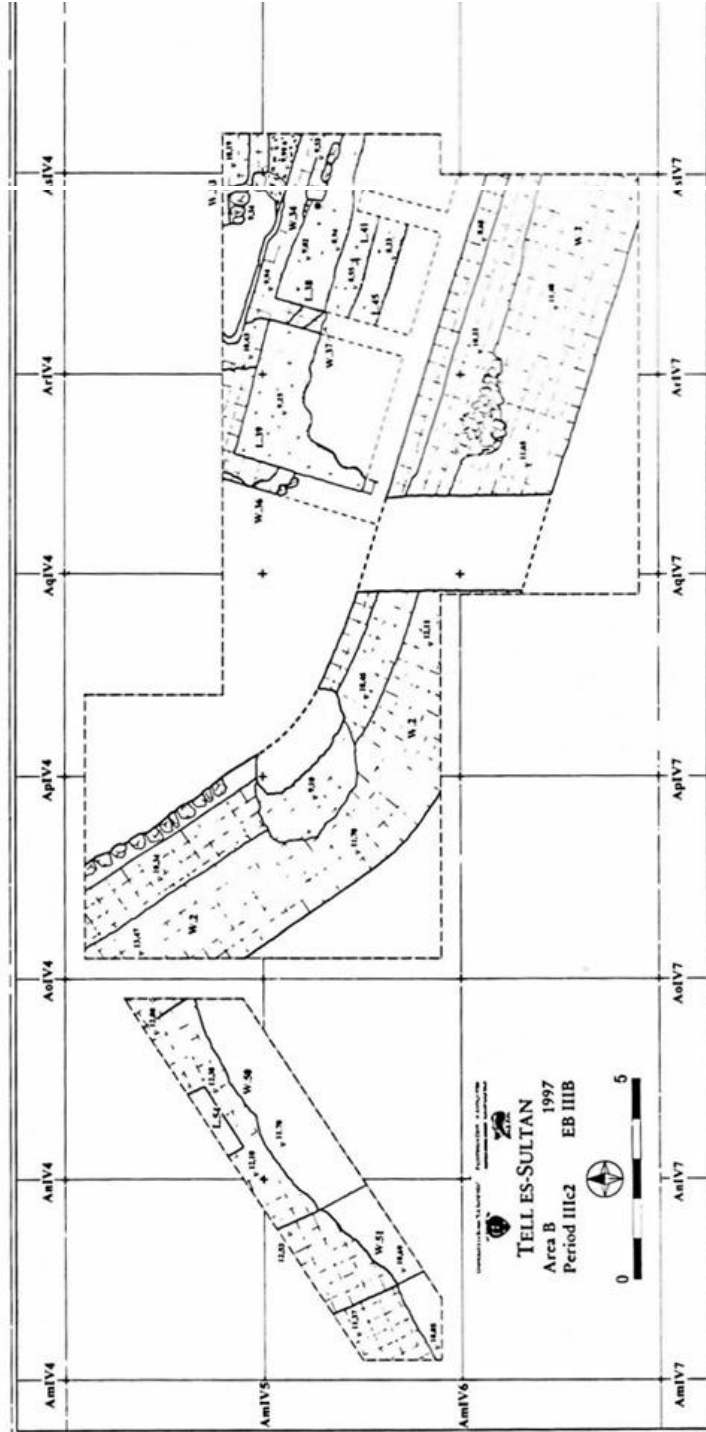


Fig. 2. Detailed plan of Period IIIc2 structures in Areas B and B-West, EB IIIB, 2450-2300 B.C.

reconstructions, until the end of EB III. It is 4.5 m. thick and has a massive stone foundation. It was preserved to a height of almost 5 m. The mudbricks have a standard format of  $36 \times 42 \times 16$  cm., but their shapes are quite irregular, especially in the lower part of the wall. Wooden beams 0.1 m. in diameter are inserted into the body of the wall every 2 m. in height as linking chains through the structure. Two rows of burnt beams have been found in W.2 in AsIV4. The latest reconstruction of the wall was in fact marked by the insertion of an additional row of wooden posts inside its body, to strengthen the rebuilt upper part (Fig. 5).

In Square AnIV4, the eastern half of W.2 was badly trimmed by the Sellin trench, but the row of stones which formed its foundations remained *in situ* at the bottom of the trench (W.44) and provides the alignment of the inner face of the city-wall. There is a striking difference in elevation between the foundations of W.2 as visible in Square AsIV6 and in Square AnIV4, as the town on the west side was much higher (c. 3 m.) than on the south, a datum also confirmed by excavations in the nearby Area B-West.

#### *Building B1 (Period IIIc2, EB IIIB, 2450-2300 B.C.)*

Starting from W.2, excavations to the north, in a previously unexplored area beyond the limits of Kenyon's and Sellin's trenches, have revealed the presence of a large building, called Building B1 (Fig. 3).

The main feature identified is a 12 metre-long wall (W.34) running parallel to the city-wall, which delimits a row of rectangular rooms.<sup>7</sup> W.34 is made of buff mudbricks  $36 \times 48 \times 12$  cm., and is 1.1 m. wide. Its counterpart was a wall built against the inner face of the city-wall, the presence of which has been detected on the basis of very scanty remains identified at the north-eastern limit of Kenyon's Trench III, in Square ArIV5. This second wall was almost completely dug away by Sellin's cut and subsequent erosion. The rooms were bounded by rib-walls (W.36, W.37), built on stone foundations and two or three courses of mudbricks thick, linking the two main east west structures. The elevations of W.34 and its counterpart indicate that they date back to the first foundation of Building B1, which seemingly occurred at the time of the last reconstruction of W.2 at the beginning of Period IIIc2 (EB IIIB, c. 2450 B.C.).

The north-south walls were re-built three times, as the various raisings and refurbishings of the floors of the rooms also testify, and thus W.36<sup>8</sup> and W.37 should belong to the last phase of utilization of Building B1, when floors L.39 and L.38 were also in use. L.38 was bounded to the east by a third wall, unfortunately almost completely lost, the existence of which is indicated by the offset of W.34, where a door socket is placed (Fig. 4). Hence, the circulation in this wing of Building B1 was east-west oriented, even though there is no evidence available for a direct connection between L.38 and L.39. Both rooms were sealed by a 1 m. thick destruction layer, with ashes and collapsed mudbricks, as a result of a fierce fire.

In L.39, which has been only partially examined, a shallow bench has been identified in the north-western corner of the room. The floor is made of beaten earth and finely crushed limestone; it slopes slightly south-east. On the floor, below a great mass of collapsed mudbricks, is a layer of ashes and carbonized reeds, possibly belonging to the ceiling of the room (Fig. 6).

In L.38 excavations were extended to investigate previous building phases: three superimposed floors of beaten earth, each one refurbished many times, were brought to light.<sup>9</sup> The north-west corner of the room was occupied by a hearth, paved with basalt stones (T.40), and flanked by a bench where a stone-lined circular installation was sunk in (Fig. 4). Here, a



Fig. 3. View of Building B1 from west.



Fig. 4. Area B, Building B1, room L.38: in the foreground the door socket of the entrance and the fire-place T.40 in the north-west corner of the room, from east, Period IIIc2, EB IIIB, 2450-2300 B.C.

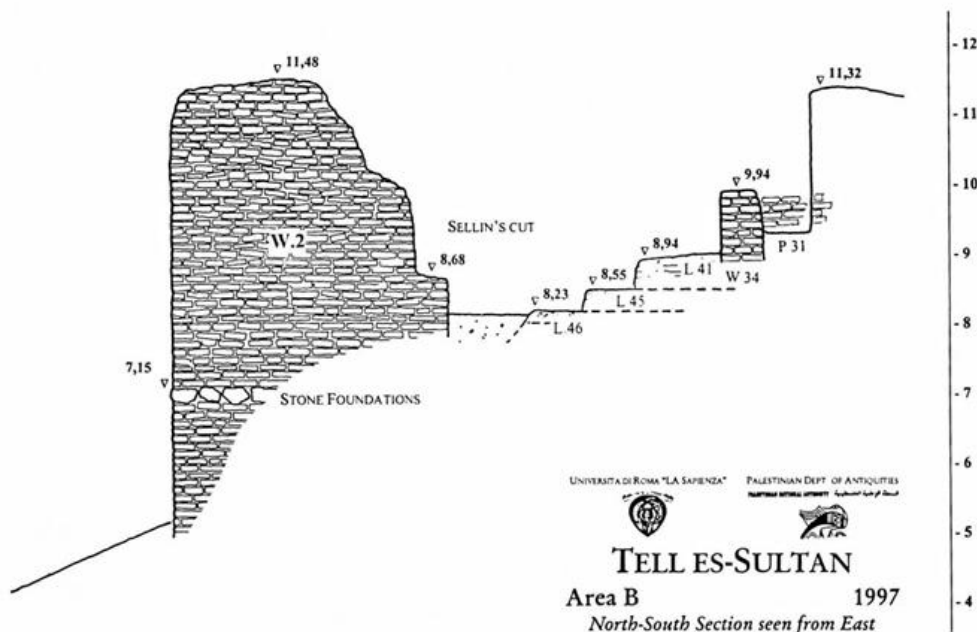


Fig. 5. Schematic east-west section through Building B1, Period IIIc2, EB IIIB, 2450-2300 B.C.

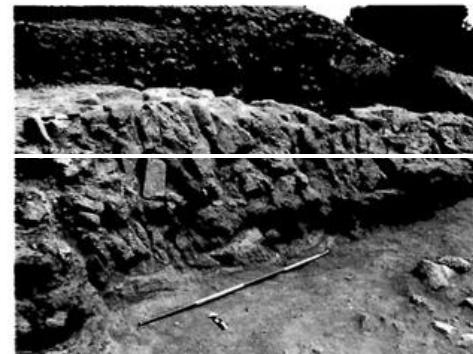


Fig. 6. Area B, Building B1, Period IIIc2, EB IIIB, 2450-2300 B.C.: collapsed mudbricks sealing the floor of L.39; on the left W.36, cut by Kenyon's Trench III, on the right W.37, cut by Sellin's trench.

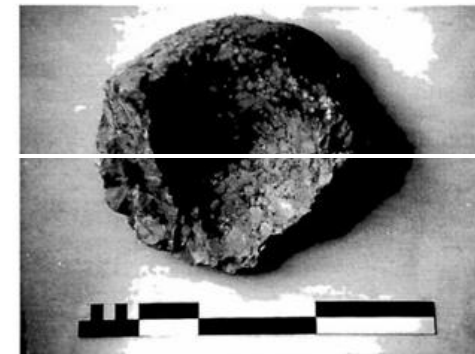


Fig. 7. Fragmentary marble stone mortar from L.38, Period IIIc2, EB IIIB, 2450-2300 B.C.

smashed pot was found, testifying to the utilization of the bench for the cooking of food. Flotation of associated soil has provided shells, burnt seeds of cereals, lentils and a few olives. A series of stone tools, among which were a marble mortar (TS.97.B.43, Fig. 7) and three flint blades (TS.97.B.26, TS.97.B.30, TS.97.B.31), found on the floors of the room, can also be related to the processing of food.

The lowest floor of the room so far identified (L.46) lies at an elevation of 8.23 m. and is made of beaten earth and chalk. Also here the corner of the room was occupied by a stone-paved fire-place, which has not yet been exposed, since it was decided to preserve T.40. The eastern limit of L.46 was beyond the line of the door indicated by the socket inserted in L.38, showing that the earlier room had a different shape.

Building B1 extends further north, as is demonstrated by W.33, a massive mudbrick structure discovered in the north-east corner of the excavated area, and by some parallel structures brought to light by Sellin in a trench dug 5 m. northwards, recorded in his plans (Sellin and Watzinger 1913, 43, figs. 21, 24). In the next season the area between Sellin's excavation and W.33 will be excavated in order to complete the plan of Building B1.

### Pottery Materials

Apart from two almost complete cooking pots and other fragments of kitchen ware retrieved on the floor of L.38, sealed by the collapsed mudbricks of W.34, the rest of the pottery assemblage furnished by L.41, L.45 and their refurbishings is constituted by fragmentary sherds, which testify to the continuous utilization of Building B1 during Period IIIc2.

The most frequent vessels are hole-mouth cooking pots (Fig. 8: 9-14) and hole-mouth jars (Fig. 8: 15-18), sometimes with a thick white slip; a red-slip radially burnished dish (Fig. 8: 1), and a series of typical EB III ledge handles (Fig. 8: 5-8), which confirm the dating of Period IIIc2 in the time span 2450-2300 B.C. Of particular interest is a miniature hole mouth jar (Fig. 8: 4), a replica of common size specimens.



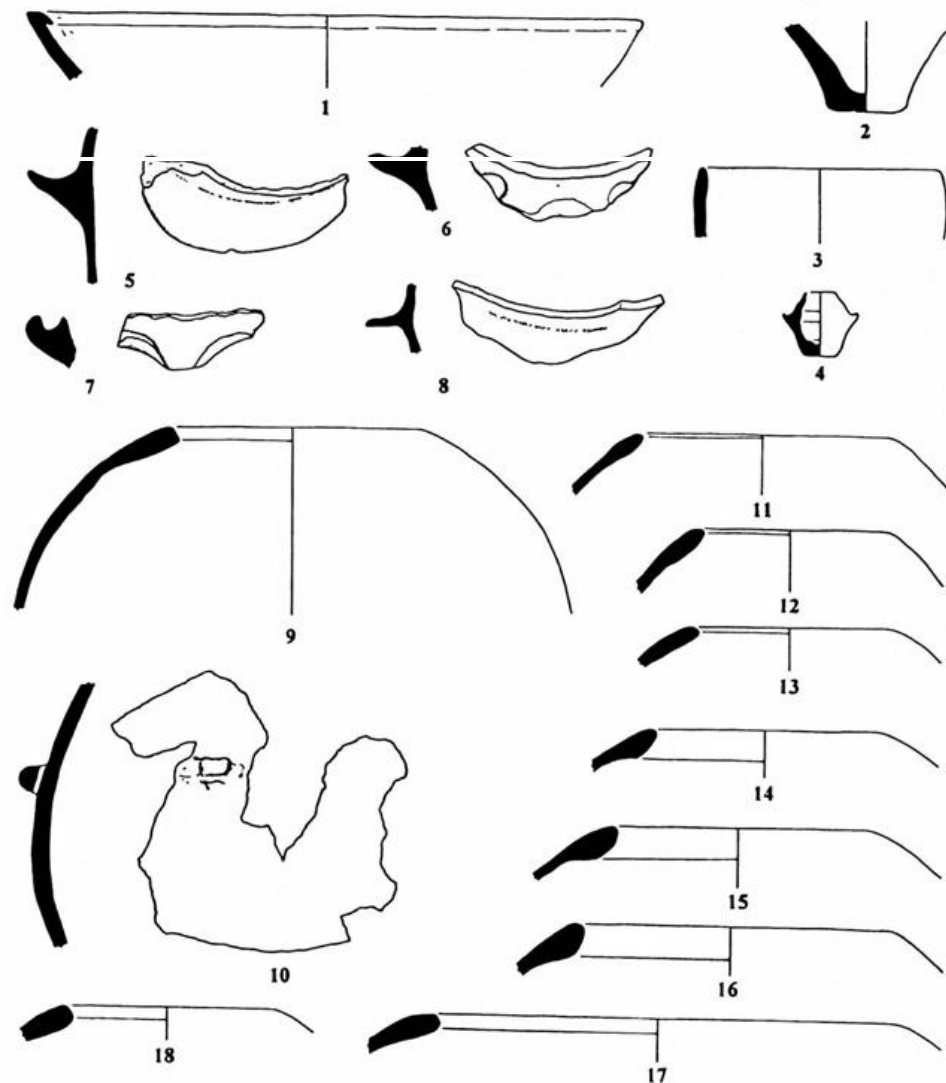


Fig. 8. Period IIIc2 pottery from L.38, L.41 and L.45, EB IIIB, 2450-2300 B.C.

### Dating

As stated above, Building B1, like W.2, the last EB III mudbrick fortification of Tell es-Sultan, was destroyed by the fierce conflagration which brought to a sudden end the flourishing town of Period IIIc, leaving everywhere a thick layer of burnt and collapsed structures. The

TABLE 2: Pottery Descriptions

Fig. 8

NO	REFERENCE	SHAPE	CLASS	F. COLOUR	TEMPER	FIRING	LOCUS
1	TS.97.B.56/8	dish	SW	5YR5/4	Mineral	High	L.32
2	TS.97.B.56/4	jug stump base	SW	7.5YR7/6	Mineral	Medium	L.32
3	TS.97.B.67/3	bowl	SW	10YR6/3	Mineral	M.High	P.55
4	TS.97.B.54/34	small	MinW	7.5YR7/3	Mineral	Medium	L.38
5	TS.97.B.54/10	ledge handle	PW	7.5YR6/3	Mineral	Medium	L.38
6	TS.97.B.56/7	ledge handle	PW	2.5YR5/2	Mineral	Medium	L.32
7	TS.97.B.54/9	ledge handle	PW	7.5YR7/1	Mineral	M.High	L.38
8	TS.97.B.67/4	ledge handle	PW	2.5YR5/4	Mineral	M.High	P.55
9	TS.97.B.59/1	cooking pot	KW	5YR7/4	Min./Veg.	Medium	L.38
10	TS.97.B.59/2	cooking pot	KW	7.5YR6/4	Min./Veg.	M.Low	L.38
11	TS.97.B.61/5	cooking pot	KW	7.5YR5/2	Min./Veg.	M.High	L.38
12	TS.97.B.54/6	cooking pot	KW	5YR7/4	Mineral	Medium	L.38
13	TS.97.B.54/4	cooking pot	KW	7.5YR6/2	Mineral	M.High	L.38
14	TS.97.B.54/8	cooking pot	KW	5YR7/4	Mineral	M.High	L.38
15	TS.97.B.54/5	hole-mouth jar	PW	7.5YR7/2	Mineral	M.High	L.38
16	TS.97.B.54/7	hole-mouth jar	PW	7.5YR7/2	Mineral	M.High	L.38
17	TS.97.B.56/1	hole-mouth jar	PW	2.5YR6/6	Mineral	High	L.32
18	TS.97.B.67/2	hole-mouth pot	KW	7.5YR7/4	Mineral	M.High	P.55

chronological setting of this event, as far as it can be established by stratigraphy and pottery analysis, is around 2300-2250 B.C. Hence, a general correspondence of Tell es-Sultan Period IIIc with the Early Bronze III can be stated.

### AREA B-WEST

The topography of Tell es-Sultan at the end of the Early Bronze Age, and especially the south-west corner of the town, has been further investigated by re-excavating an unpublished trench dug by Garstang (1932, pl. IX, square L.4) in Squares AoIV<sub>4</sub>, AnIV<sub>5</sub> (Fig. 2). The area so far re-explored is a rectangular trench (13 × 3 m.), which due to its placement permits the recovery of the double fortification line of Period IIIc.

In the last phase of the Early Bronze Age a second encircling wall was built between 4 and 10 m. outside the main one. This second line of fortification is constituted by a mudbrick wall on stone foundations almost 3 m. wide. It was already traced by Sellin and Watzinger (they called it the *Vormauer*), Garstang (who thought it was a LB addition) and Kenyon, but its precise stratigraphic position with respect to the main EB fortification (the Inner Wall), was not completely clarified. Area B-West thus appeared an extremely favourable place for investigating this point. Garstang had in fact abandoned the large trench due to the finding of a platform of mudbricks, which he was not able to associate with the main wall. The excavation has allowed us to distinguish both the Inner (W.2) and the Outer Wall (W.51), and also a third mudbrick structure (W.50) linking the previous ones, strictly comparable with a rib-wall dug by Kenyon in Trench III (Wall NFF, Kenyon 1981, pl. 269c). W.50 has a perpendicular orientation with respect to the two main fortification walls, has a width of at least 2 m., and surrounds a small casemate room (L.54). This room was found filled with a thick layer of white ashes, identical to that excavated by Kenyon in Trench III inside Wall NFD, which she convincingly interpreted

as the the final destruction of the EB III town. It can thus be concluded that the Period IIIc town was regularly enlarged along its perimeter, by the addition of the Outer Wall. The latter wall, as is shown in Area D-West (W.51), as well as in Trench I (Wall K and Wall M) had two main phases ascribable to EB IIIA and EB IIIB.

#### AREA D

The investigation of the topography of the EB III town has been extended in Area D, a severely eroded area, immediately to the south of Kenyon's Square H VI, in front of the spring, where a long stretch of a massive wall cut by the modern road was noted. The evidence collected by previous excavations had already shown that there was a gradual slope of the settlement on its eastern flank, evidently in relation to the spring. Since to the west the remains of the Neolithic village rose 8 m. above the level of the spring, the EB II-III town was built on sloping terraces, gradually overcoming this difference. The lower step of this slope was marked by the city-wall, built of mudbricks on a stone foundation with a width of 4.5 m.

This structure (W.7), visible in the cut of the modern road, has been brought to light in five squares (BiII9-10, BiII9-10, BiIII11), and has been considered part of the EB III city-walls from its orientation, building technique and the few associated ceramic materials.<sup>10</sup> To the south W.7 was unfortunately largely worn away, due to Garstang's previous digging, which had traced it as far as a huge tower, called the East Tower (Garstang 1932, 15-17, pl. ix). This is a rectangular building excavated in 1931, which the British archaeologist wrongly attributed to the Middle Bronze Age. Though no reliable plans of the East Tower are available, the massive walls excavated by Garstang on both the north and south sides of it may be identified as parts of the city wall bounding the site on the eastern side, excavated in Area D. If this is the case, the Tower would be an important building along the EB III fortification line, which can be interpreted, on the basis of its plan, as a gateway (as already suggested by Vincent 1935, pl. xxiv, and Helms 1977).

Excavations in Area D have thus provided the exact limit of the Period IIIc town on the eastern side, confirming that the spring was outside it, as well as giving a hint at the identification of the gateway, which gave access to the oasis.

#### AREA C

Area C is located in the middle of the northern side of Kenyon's Trench I. It has been selected in order both to investigate the MBA fortification system and to prevent the collapse of the north section of Trench I, where deep cracks were visible; heavy pressure on the section edge was in fact represented by a 1.5 m. high dump from previous excavations. Three squares (AnII19, AoII19, ApII19) were therefore opened and the dump was removed down to the original surface of the *tell*; immediately below it, the top of the earliest line of Middle Bronze fortifications was uncovered.

#### Stratigraphy

The stratigraphy of the area is as follows (Fig. 9). Below the topsoil, a layer of fill (F.83) was accumulated above the MBA fortifications in later periods and it also covers a child burial (D.103) near a wall (W.82). The last rampart of the MBA (W.113) covers an earlier fortification system formed by a glacis (L.111), a retaining wall (W.93) and a large wall on the top (W.84), previously unidentified.<sup>11</sup>

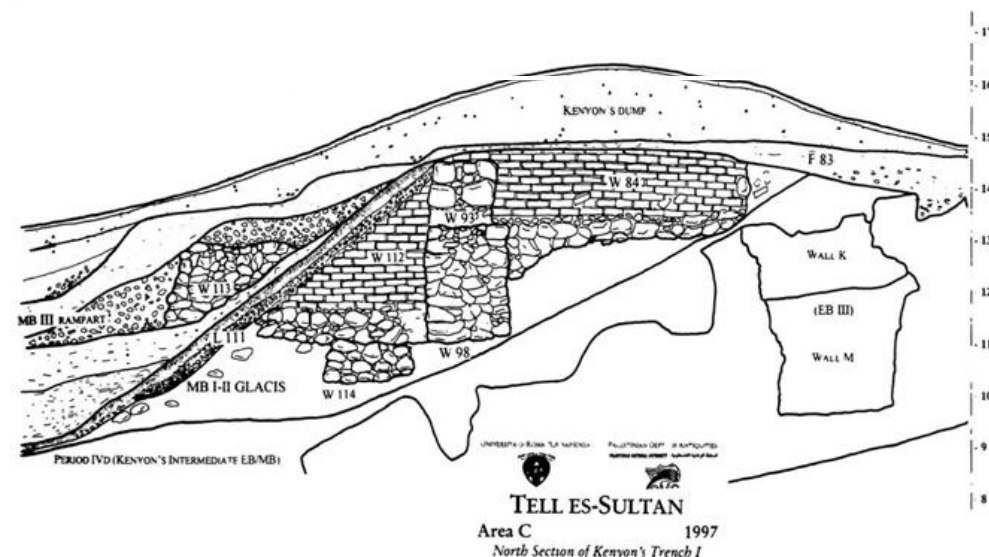


Fig. 9. Archaeological section of the north side of Kenyon's Trench I.

#### Period IVa-b City-wall and glacis (Middle Bronze I-II, 1850-1650 B.C.)

The fortification (Figs. 10-11) is formed by: a) a compacted glacis of crushed limestone (L.111), sloping steeply to the west; b) a massive stone wall 4 m. high (W.93 + W.98), also visible in the section; c) a retaining wall made of mudbricks (W.112) protecting the outer face of the stone wall (W.93 + W.98) and the top of the glacis; d) a large mudbrick wall on stone foundations (W.84), built against the inner face of the stone wall (W.93 + W.98) as an upper defensive structure on top of the fortification system. The latter feature testifies to the presence of a wall encircling the town on top of the rampart, built to crown the defensive works (Fig. 12). This fortification system was seemingly built during the last phase of MB I (1850-1800 B.C.) and lasted until the end of MB II (1800-1650 B.C.).

#### Period IVc Rampart (Middle Bronze III, 1650-1550 B.C.)

A rampart made of layers of rubble sustained by three stone terrace-walls triangular in section (W.113 in Fig. 9; see also Wall KB in Kenyon 1981, pl. 236) was built in MB III (1650-1550 B.C.). In ApII19 some rubble layers to the east of W.84 are probably part of the top of such a rampart, covering all previous features and sloping towards the Inner Town (as in Area B, see above). This rampart seems to be the same as the one explored in Area A (W.4, see below).<sup>12</sup>

#### Period IX (Roman, 2nd-3rd cent. A.D.)

A stone wall (W.82) founded in two courses, stretching east-west in the centre of the area, was later built on the top of the fortification system (W.84 is cut by it); the collapsed mudbricks of its superstructure sealed a floor of beaten earth. The burial of a child (D.103), about four years

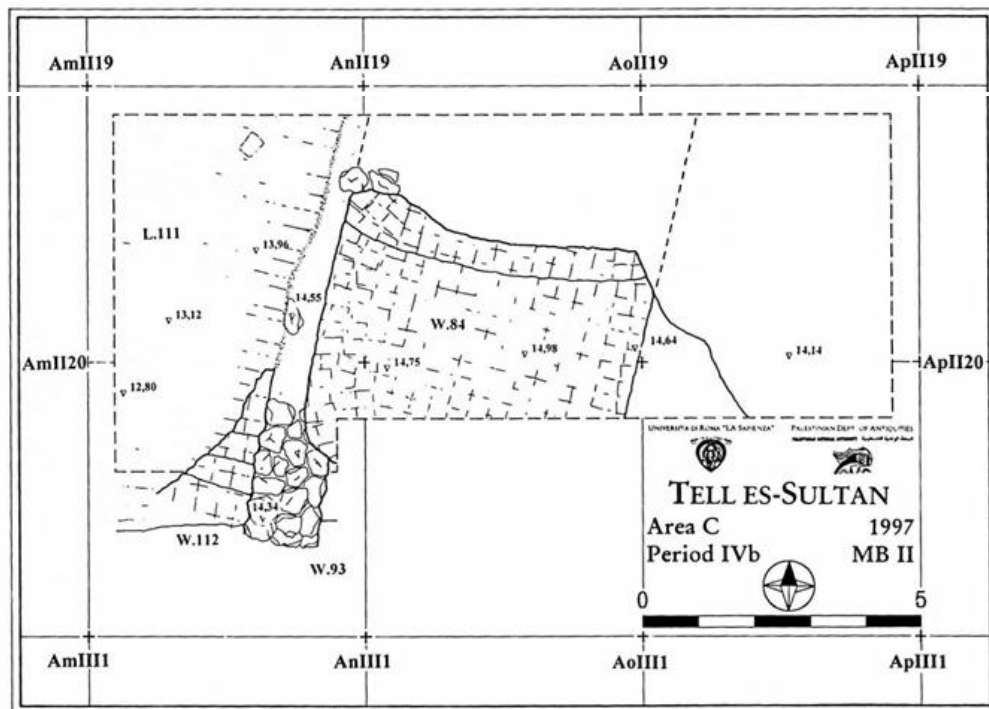


Fig. 10. Detailed plan of mudbrick wall on top of the Period IVa-b glacis in Area C, Periods IVa-b, MB I-II, 1850-1650 B.C.

old, was discovered below the stone wall with the same alignment, pointing to a close relationship between the structure and the burial. The burial shape and the way it was plastered by fine clay mortar indicate that it was dug after the wall has been built. The anatomical position of the child bones, flexed on the left side, speaks for a secondary burial; only the left side of the skeleton is complete. The right side of the skull, the mandible, the vertebral column and the ribs are missing, without any sign of deterioration *in situ*. Two other infant burials were dug by Kenyon (1981, 113, pl. 96) a few metres to the south and show the existence of a burial area for infants in a period which can only be dated later than the first century A.D., as Kenyon states, since no pottery was associated. A filling with mixed sherds then accumulated (F.83).

#### AREA A

Area A is located at the southern end of Kenyon's Trench III at the foot of the tell (Fig. 13).<sup>13</sup> The British excavations terminated at the back of the large stone wall belonging to the last line of MBA fortifications, which was previously traced on the surface by Ernst Sellin. Three squares were opened to the south of this structure, with some adaptations to the topography of the area, in order to recover new data concerning its chronology and the building technique of the related rampart.<sup>14</sup>

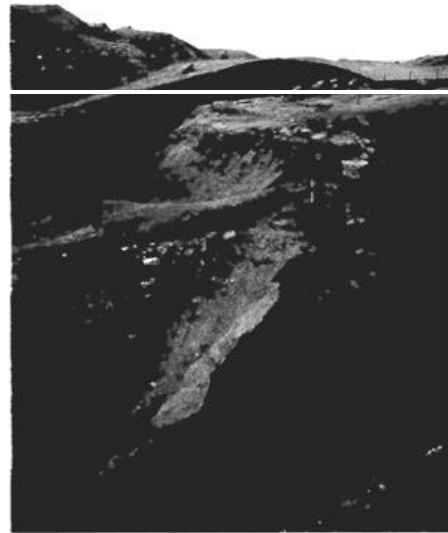


Fig. 11. View of Area C from south-west. Note the MB I-II glacis and the MB III terrace wall.

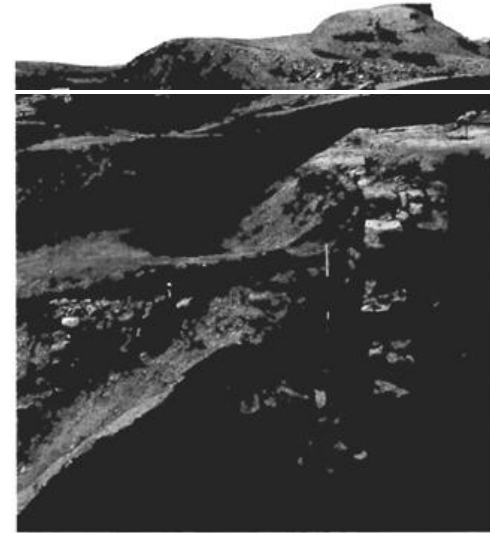


Fig. 12. View of the north section of Kenyon's Trench I in Area C: note the supporting walls of the MB I-II glacis (W.93 and W.112), and the terrace wall for the MB III rampart (W.113).



Fig. 13. View of Area A from the north-east; in foreground W.4, behind which is Building A1, Periods IVb-c, MB II-III, 1800-1550 B.C.



## Stratigraphy

The main stratigraphic sequence of Area A has been interpreted as follows (Fig. 14). Sellin's cut along the top and the first two courses of W.4 has been identified and called P.q.<sup>15</sup> The top layers (cut by P.9) slope towards the south and represent the various fills (F.13a-c) of which the last rampart was made, as the strata of crushed limestone (F.13a) also make clear. They cover a deep foundation trench, which narrows from top to bottom, dug for the building of W.4. This trench has a top layer (P.10), which seals a lower fill (P.14) thrown from the north (as the inclination of the lower rubble strata shows), covering a similar deposit (P.17) accumulated from the opposite direction.<sup>16</sup> The foundation trench had cut through the ruins of a substantial building (called Building A1), which had two main building phases (W.25 and W.26 belong to the last one).

*Period IVa-b Defensive system (Middle Bronze I-II, 1850-1650 B.C.)*

The most ancient phase thus far detected in Area A is represented by W.5 in ApIV10 (Fig. 15): the exposure of this wall was obtained by enlarging by c. 1 m. the limit of the west extension of Trench III. In Kenyon's excavations, a stone revetment wall was identified (Kenyon 1981, 216-217, pls. 127b, 271a, 272a-b, Wall NFP, now called W.3). Although it is presently collapsed, it is clear that W.3 was connected to the massive corner of a structure (W.5), which seems to be different in function from a revetment wall and to be a tower, possibly connected to a city gate, since it is set within the glacis (Fig. 16).<sup>17</sup> The presence of two large door sockets (Fig. 17) in the dump thrown by Sellin to the south may be a hint in this respect. This fortification system represents the foot of the glacis exposed in Area C and can thus be assigned the same date (end of MB I-MB II).<sup>18</sup>

*Period IVb Building A1 (Middle Bronze II, 1800-1650 B.C.)*

A large building was excavated to the south of W.3 + W.5 and called Building A1 (Figs. 15 and 18). Two main building periods were distinguished. In the first phase, two thick walls, still preserved to a height of almost 2 m. on the south, were built (W.19 and W.15). A stone cobbled floor (L.21; N-S elev. +0.03/-0.22 m.) extended in between; the floor sloped gently to the south, while to the west of W.19 a surface of beaten earth, with a few collapsed mudbricks to the north, was exposed (F.23, elev. +0.14 m.; F.23 and L.21 are visible in Fig. 14). In the second building period (Fig. 15) the courtyard was restricted through the addition of W.22 and to the east W.25 + W.26 were built; their stone foundations rested upon L.21. L.21 was sealed by means of an irregular fill of mudbricks, containing almost no pottery. On the outside of Building A1, a grayish fill (F.16) was accumulated against the west face of W.19, probably deriving from the emptying of wells, as the numerous jug fragments and lumps of clay suggest. To the east of W.22 the floor was raised, again with a sloping cobbled surface, although less regular than L.21. Walls were all covered by a thin whitish plaster, including also the newly built W.25.<sup>19</sup> In L.20, a circular oven (T.24) was erected against W.22 (Fig. 18): samples from it have only revealed that the thick ashes were of burnt wood, but bread was probably baked there. The smoke had blackened the plaster of W.15 and of W.22 near the corner. Nearby to the north were found a limestone grinding stone and a basalt grinder (Fig. 19), while another smaller grinder was lying on the floor. Among soil samples from L.20, cereals, grapes and olives were provisionally identified. In the two building periods, both L.21 and L.20 seem to have been a courtyard; in the later phase there was an open working area for the preparation of food.

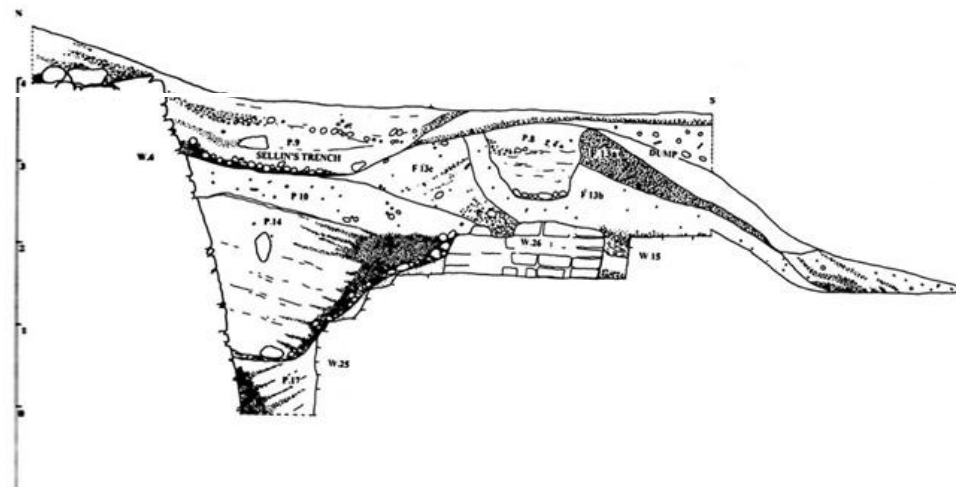


Fig. 14. Archaeological north-south section of the east baulk of AsIV11 + AsIV12, with some layers followed to the south of the excavated area.

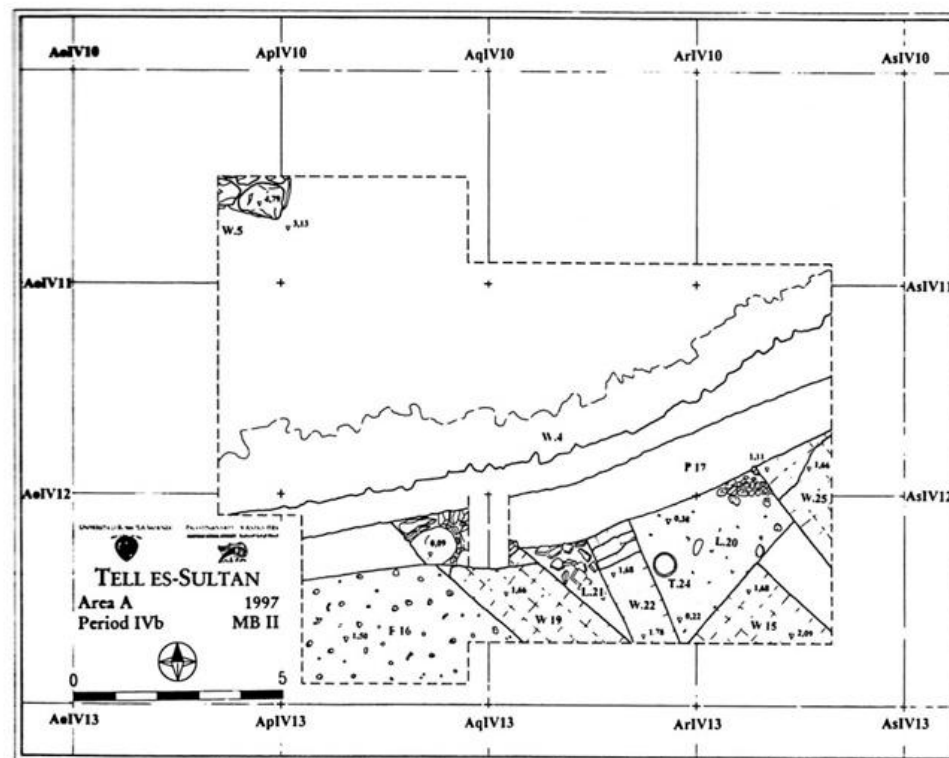


Fig. 15. Detailed plan of Period IVb remains in Area A (second building period), MB II, 1800-1650 B.C.





Fig. 16. West section of Area A from east; on the right the collapsed remains of NFP/W.3 and the stone tower W.5, Period IVb, MB II, 1800-1650 B.C.



Fig. 18. View of Building A1 from north-east; in foreground courtyard L.20 and oven T.24; W.4 on the right.



Fig. 17. Limestone door-socket from Sellin's dump to the south of Area A.

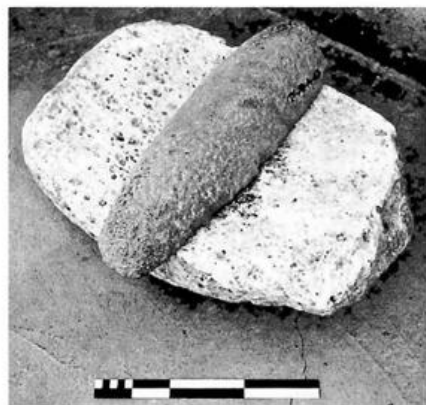


Fig. 19. Limestone grinding stone and basalt grinder from courtyard L.20, Period IVb, MB II, 1800-1600 B.C.

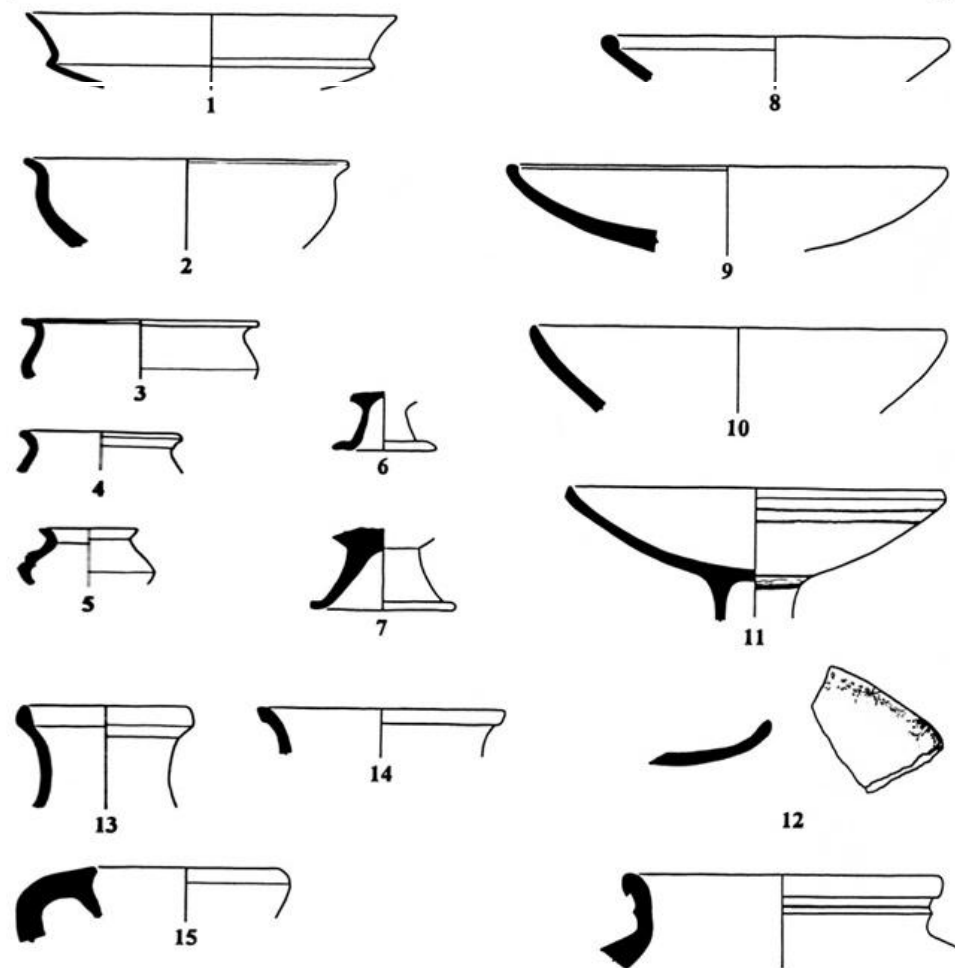


Fig. 20. Period IVb Simple Ware pottery from L.20, MB II, 1800-1650 B.C..

#### *Pottery from L.20*

A rich pottery repertoire was retrieved from L.20. The main feature is the notable presence of Simple Ware bowls and of Kitchen Ware pots (which is consistent with the functional interpretation of L.20 as an open working area). Bowls are either deep carinated (Fig. 20: 2-4) or open with slightly rounded walls (Fig. 20: 8-10). A single bowl has a sharp carination, and is probably a chalice; the latter form is attested by a painted specimen (in white with grey horizontal bands and a red wavy motive; Fig. 20: 11) and a few bases (Fig. 20: 6-7), some also having a circular depression on the inner bottom, another typical trait of MB II. One lamp (Fig. 20: 12) and a few jars and jugs (Fig. 20: 13-16) were also found. The Kitchen Ware

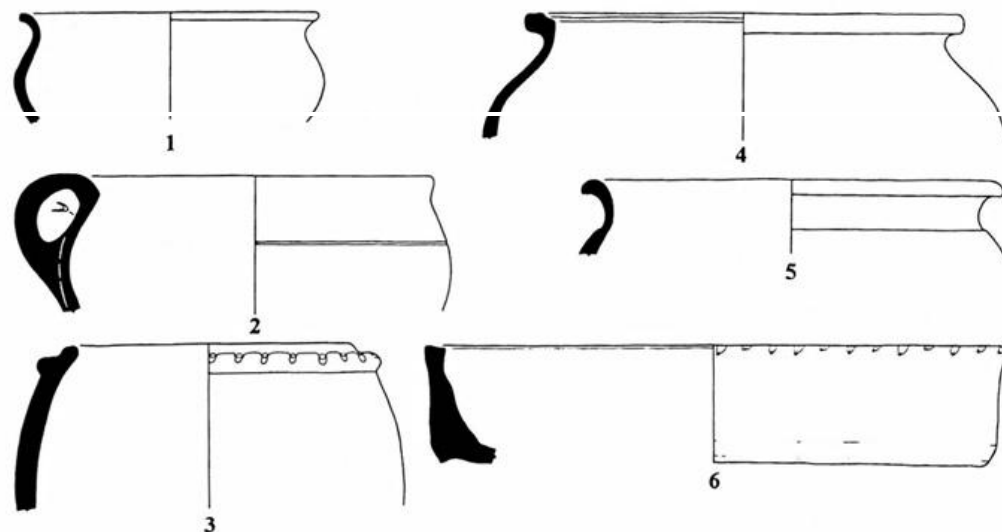


Fig. 21. Period IVb Kitchen Ware pottery from L.20, MB II, 1800-1650 B.C..

assemblage is mainly represented by pots with everted rim (Fig. 21: 1, 4-5); among other forms there are one pot with handle and simple grooves (Fig. 21: 2), a hole-mouth pot with applied rope designs (Fig. 21: 3) and a small platter with incisions on the rim (Fig. 21: 6). The pottery horizon belongs to the developed MB II period (MB IIB in the terminology of the Albright school) and represents a firm point for the dating of Building A1 to Period IVb2.

#### *Stratigraphy and interpretation of Building A1*

A few considerations are necessary here to correlate W.5, Building A1 and Kenyon's results (not all adequately published), since no direct stratigraphic link can be obtained for them, although they are all cut by W.4 of MB III date. A thick layer of plaster excavated in Trench III, certainly belonging to the first rampart, covers some structures which Kenyon interpreted as later than the building of the first glacis.<sup>20</sup> They represent at least two phases of rooms with ovens. Since only very few associated materials are known (Kenyon and Holland 1983, figs 106, 13-14, 108, 32-36), one wonders whether they can be ascribed to the first part of MB I (MB IIA), thus preceding the construction of the rampart,<sup>21</sup> although they cover stabilizing rib-walls similar to those exposed in Trench II, which are thus seemingly related to the building of the first rampart.<sup>22</sup> The elevation of these structures runs against a direct relationship with Building A1, which is 3 m. lower. At present, the most convincing solution is to correlate W.5, the plaster revetment and Building A1, although it is unknown how near the foot of the rampart was to the northern limit of Building A1.

#### *Period IVc Rampart (Middle Bronze III, 1650-1550 B.C.)*

The latest phase of occupation in the area is represented by the construction of a new rampart during MB III (Fig. 22). Building A1 went out of use and was cut by the deep foundation trench

TABLE 3: Pottery Descriptions

Fig. 20

No	REFERENCE	SHAPE	CLASS	F. COLOUR	TEMPER	FIRING	LOCUS
1	TS.97.A.29/6	Bowl	SW	7.5YR6/4	Mineral	High	L.20
2	TS.97.A.29/12	Bowl	SW	7.5YR7/4	Mineral	M.High	L.20
3	TS.97.A.29/22	Bowl	SW	2.5YR6/6	Mineral	Medium	L.20
4	TS.97.A.29/17	Bowl	SW	5YR7/1	Mineral	Medium	L.20
5	TS.97.A.29/35	Bowl	SW	5YR6/6	Mineral	M.High	L.20
6	TS.97.A.29/49	Pedestal	SW	5YR7/6	Mineral	M.High	L.20
7	TS.97.A.29/48	Pedestal	SW	10YR6/1	Mineral	Medium	L.20
8	TS.97.A.29/10	Bowl	SW	10YR7/3	Mineral	Medium	L.20
9	TS.97.A.29/2	Bowl	SW	10YR7/3	Mineral	Medium	L.20
10	TS.97.A.29/4	Bowl	SW	10YR7/3	Mineral	Medium	L.20
11	TS.97.A.29/1	Chalice	SW	10YR7/3	Mineral	Medium	L.20
12	TS.97.A.29/27	Lamp	SW	7.5YR6/4	Mineral	Medium	L.20
13	TS.97.A.29/28	Jar	SW	10YR7/2	Mineral	M.High	L.20
14	TS.97.A.29/33	Jar	SW	2.5Y8/3	Mineral	M.High	L.20
15	TS.97.A.29/38	Jug	SW	0.7.5YR7/4 i. 10YR6/3	Mineral	M.High	L.20
16	TS.97.A.29/30	Jar	PW	5YR6/6	Mineral	Medium	L.20

TABLE 4: Pottery Descriptions

Fig. 21

No	REFERENCE	SHAPE	CLASS	F. COLOUR	TEMPER	FIRING	LOCUS
1	TS.97.A.26/19	Pot	KW	5YR6/6	Mineral	Medium	L.20
2	TS.97.A.26/16	Pot	KW	5YR5/6	Mineral	M.High	L.20
3	TS.97.A.26/3	Pot	KW	0. 10YR6/4 i. 5YR5/6	Mineral	Medium	L.20
4	TS.97.A.26/7	Pot	KW	10YR6/4	Mineral	Medium	L.20
5	TS.97.A.26/12	Pot	KW	7.5YR4/4	Mineral	Medium	L.20
6	TS.97.A.26/2	Platter	KW	5YR5/6	Mineral	Medium	L.20

(P.17 + P.14) for W.4. The wall is built of large boulders laid in rows sloping to the west, as the alignment of some huge blocks (two in ArIV12 and one in ApIV12) shows (Fig. 23); on the basis of the elevations, it can be deduced that these blocks were rolled over a hard sterile stratum sealing the top of P.17 and put in place. W.4 has a battered face (the difference between top and bottom is of 1 m. on the east, where it is preserved to a height of 4 m.) and a curvilinear plan, following the contour of the site (Fig. 22). The foundation trench was covered by layers of earth and of crushed limestone, sloping to the south and identified also to the south of the excavated area: the regular inclination of these layers and the stratigraphy attest to the fact that the rampart covered W.4. The wall is thus to be interpreted as a retaining structure for the MB III earthen rampart. The need of structural stability for the rampart, which was simply laid upon the surface of the older one, is also indicated by two triangular walls built halfway up (cf. W.113 in Area C).<sup>23</sup> The pottery material from the foundation trench of W.4 represents a homogeneous horizon which can be dated to MB II-III, although more specific dating indicators are lacking, since a majority of the sherds come from Building A1 or are stray pieces.



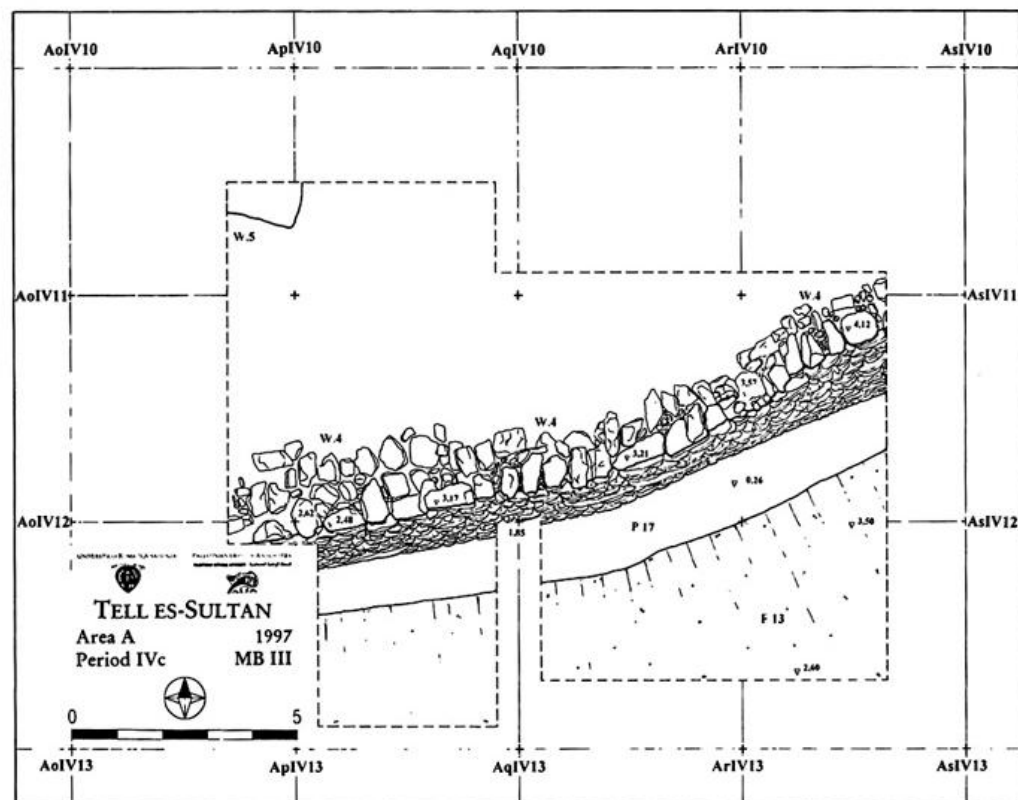


Fig. 22. Detailed plan of Period IVc remains in Area A, Middle Bronze III, 1650-1550 B.C.

As stated above, the top of W.4 had already been exposed by Sellin and Kenyon. In fact, this wall encircles the whole tell to the south, west and north according to the surface tracing of Sellin. Along the northern side, he dug down to virgin soil and the photos and sections published show a situation exactly similar to that of Area A, both for the height and for the battered face. At some points a mudbrick superstructure was present on the top of the wall, since its upper part emerged to strengthen the upper rubbly layers.<sup>24</sup> Kenyon identified the same features in Trenches I and II.<sup>25</sup> In Trench I she also excavated the layers outside of the wall, but interpreted them as a wash derived from the erosion of brick structures uphill: however, it is now evident that they were the base of the last rampart and Sellin's sections can also now be interpreted in this way (for a detailed discussion see Marchetti and Nigro 1998, 145-54, figs 4:39, 44-45).<sup>26</sup>

#### CONCLUSION

The 1997 excavations at Tell es-Sultan have obtained the following results:

1. As far as the EB III city walls (Period IIIc) are concerned, the chronology of W.2 has been established in Area B in relation to the last building phase of the town, where Building B1, destroyed towards 2300 B.C., may also be correlated to presumably contemporary structures



Fig. 23. View of W.4 from south-west, Period IVc, MB III, 1650-1550 B.C..

excavated by Sellin and Kenyon in other areas. In Area D the identification of another stretch of the city wall has allowed the completion of the town plan during this period, confirming the identification of a gateway.

2. The chronology of the first defensive complex of the MBA (late Period IVa and IVb) has been fixed in Area C with greater precision than in the past, as well as its technique: the discovery of a mudbrick wall on top of the glacis represents an important key for the understanding of the structure and functioning of this kind of fortification. A tower identified in the western part of Area A has been interpreted as possibly connected to a city gate.

3. The last line of fortification (Period IVc) has been investigated under both the chronological and the technical profile: the 4 m. high stone wall brought to light in Area A has been dated to MB III and interpreted as the retaining wall for the rampart itself, which extended beyond it.

4. The presence of Building A1 of Period IVb outside the contemporary rampart suggests the existence of a Lower Town.<sup>27</sup> A preliminary survey conducted in the oasis east of the tell, the only point where there have been no levelling and building operations in modern times, has revealed the presence of a regular 3 m. step c. 150 m. east of the tell (see the topographic map, Fig. 1, for the relevant contours). If it is confirmed that the occupation of this area dates from the second millennium B.C., as seems likely, during Period IV Tell es-Sultan would then have covered more than seven hectares, being one-third larger than previously thought. Another

consequence would be that the spring of 'Ain es-Sultan was included in the town during the MBA, as at Tell el-Qadi (Dan), el-Kabri and al-Mishrife (Qatna) in central Syria.

One of the main goals of the Palestinian Department of Antiquities is the conservation of the site. In the southern part of the tell the Joint Expedition has already begun the removal of dumps resulting from previous excavations, the creation of tourist paths at the top and the base of the rampart, and the restoration and consolidation of the newly excavated mudbrick structures by means of ethylsilicates; the cleaning and regularization of Trenches I and III has made it possible to read the stratigraphy again in relation to the fortifications of the town. Drainage and protection have also been provided at the foot of walls by traditional techniques, particularly for the EB III town wall in Trenches II and III (cf. Margueron, Vitoux and Bendakir 1997 for similar measures).

In historical perspective, the renewed Italian-Palestinian excavations at Tell es-Sultan have begun to reveal more of the urban history of the most important site in the Lower Jordan Valley during the Bronze Age. The third/second millennia B.C. urban cultures of Syria-Palestine share a strong cultural unity, within which the results of the Jericho 1997 excavations are to be framed and interpreted in order to reach a vision of the archaeology of the region that is historically well founded.

## NOTES

<sup>1</sup> The following participated in the 1997 season, in addition to the directors: the archaeologists B. Panciroli, M. Ramazzotti; H. Nureddin, W. H. Hamamreh, N. Barakat; architect F. Nigro, draughtsman C. M. Putti, restorer S. Tricoli, palaeobotanist N. Abu Khalil.

<sup>2</sup> As far as the elevations are concerned, Kenyon used a mixed system: relative elevations in each area starting from bedrock and an absolute system starting from the north-west end of the water reservoir in 'Ain es-Sultan (Kenyon 1981, fig. 1, square H7). The elevations of the new excavations were taken from the top of the Neolithic Tower in Trench I (Kenyon 1981, pl. 244) and correspond approximately to Kenyon's absolute datum system. As a key for the text and figures here, *loci* numbers of the stratigraphical units are preceded by a siglum: L. = Locus, floor; W. = Wall; F. = Fill; P. = Pit; D. = Deposition; T. = *Tannur/tabun*/oven.

<sup>3</sup> The top of the mudbrick inner city wall reaches 12.11 m., while the sector where the face is preserved is at 8.68 m.

<sup>4</sup> Walls NEV and NFA on the West section of Trench III, successively incorporated within Wall NFB. Since both Walls NEV and NFA do not appear in the east section of Trench III (Kenyon 1981, pl. 274), it is possible that Kenyon erroneously distinguished different structures within the same wall (NFB, W.2) in the west section of the same Trench. Moreover, she also identified on top of Wall NFB two successive reconstructions, Wall NFG and Wall NFC, which again are attested only in the west section but the renewed horizontal excavations have failed to distinguish them. These two structures, with no foundations, seem to be, more convincingly, partial reconstructions of Wall NFB, which mainly affected its outer and inner curtains at irregular spots.

<sup>5</sup> In Kenyon's Trench I it is called Wall G + F + E and Wall H in its later reconstruction, ascribable to Period IIIc2, EB IIIB, 2450-2300 B.C. (Kenyon 1981, pl. 236).

<sup>6</sup> This situation is exemplified by the north and west sections of Site M (Kenyon 1981, pls. 142-43, 296), where the latest EB city-wall, named M.TW IV, can be considered the northern extension of Wall H in Trench I and W.2 in Area B.

<sup>7</sup> The plan of these rooms and their location in respect of the city-wall clearly recalls those of a building excavated by Kenyon in Site M along Wall TW. IV (Kenyon 1981, pls. 289-90, 292).

<sup>8</sup> W.36 was partly excavated by Kenyon (who called it Wall NFF, phases *lxxv-lxxvi*, of Trench III, Kenyon 1981, 210-12, pl. 269c).

<sup>9</sup> L.41 at an elevation of almost 8.55 m.; L.45 at an elevation of 8.23, which is perhaps the original floor of the room.

<sup>10</sup> Kenyon identified W.7 (which she called HAH) in the north-eastern corner of Square H VI, but she was unable to date it. She tentatively ascribed it to an earliest MB phase, although she also considered the possibility of an EB dating, admitting that she did not reach its base (Kenyon 1981, 347, pls. 328a, 339). Sherds found in the foundation of the wall further south all date back to EB II-III.

<sup>11</sup> It is not recorded in Kenyon's north section of Trench I (Kenyon 1981, pl. 236).

<sup>12</sup> According to Kenyon (1981, 110, pls. 90b, 92a, 236, phase *lx*), there was an intermediate rampart between the two, but it was not recognized in Trench III and in Trench II it is very doubtful (Kenyon 1981, pl. 259); see note 20 below. Mazar (1992, 202) thinks that the three ramparts identified by Kenyon are part of a single feature, but the discoveries in Area C disprove this theory

## JERICHO EXCAVATIONS

(along with his chronology for its building, which is too low), although as far as the 'second' rampart is concerned he might be right.

<sup>13</sup> Trench III was 6 m. wide at its south end in addition to a 4 m. wide extension which was made to the west of it, leaving a baulk which has since completely disappeared (Kenyon 1981, pls. 271-72).

<sup>14</sup> AqIV12 and ArIV12, with halves of AsIV11 and AsIV12. The large stone wall, which was called by Kenyon NGK (1981, 219, pl. 272c), has been called in our excavations W.4. Kenyon distinguished several building phases (Walls NFK + NFQ + NGJ + NGK) when observing the back part of W.4, but the 1997 discoveries have revealed that it was a single structure, as was evident also from Kenyon's Trench I (Kenyon 1981, pls. 92b, 236, Wall KD) and Sellin's trenches (Sellin and Watzinger 1913, figs. 34-35, pls. 11-13).

<sup>15</sup> Sellin and Watzinger 1913, pl. I, M4; in fact, when Kenyon cleaned up the area, she reexposed the first two courses of W.4 to the east only approximately as far as the baulk AsIV11/ArIV11 (Kenyon 1981, 219, pls. 125, 272c), not reaching the limit drawn in Fig. 22.

<sup>16</sup> A few medium-sized stones were found in P.14 and P.17, having probably been discarded during the construction of W.4.

<sup>17</sup> The north-south section is similar to that already known 6 m. to the east (Kenyon 1981, pl. 273; see phases *lxxx*, *lxxxii*, *lxxxv* to the south of Wall NFP). The precise relation between W.3/Wall NFP and the plastered surfaces identified by Kenyon (Kenyon 1981, 218, pls. 125b, 126b, 274c, phase *lxxxvi*) is not yet clear, although they must have been at least partly contemporary.

<sup>18</sup> No MBA city gates have been identified thus far at Tell es-Sultan: a possible exception is a large tower in Squares IIII, VI, which Kenyon thought could have been a gate near the spring (Kenyon 1981, 351-52, pl. 329a).

<sup>19</sup> In a later phase, the space between the latter and W.15 was filled up and a bench of two rows of single mud bricks was built against it, while the floor at some points had patches of beaten earth.

<sup>20</sup> Kenyon's interpretation (1981, 177-178) was that the plastering (for which see *ibid.*, p. 218, pls. 125b, 126b in section, 272c, 274c) of the rampart was introduced in a subsequent phase, after a simple earthen revetment did not prove functional enough. The evidence of Trench III seems to support only two major constructions of ramparts. In fact, in Trench I the so-called 'second rampart' and its phase *lx* surface can be an inner fill of the 'third

rampart' (Kenyon 1981, pls. 90b, 92a, 236 Wall KC); see note 12 above. Also in Trench II, the former may just be part of the 'third rampart' (Kenyon 1981, pl. 259, phases *lxx* + *lxxi*).

<sup>21</sup> Kenyon (1981, 216-17, pls. 126b, 127a, 128a, 271a, 272a-b) thought that these structures were built on a berm like that exposed in Trench I and II (Kenyon 1981, pls. 236, 255, 259 Wall OEM), but the evidence for such a berm is scanty in Trench III. Just as a term of comparison, in Squares H II-III-VI a MBA sequence earlier than the rampart was excavated (Kenyon 1981, 340, 346-52, pls. 328-29).

<sup>22</sup> Kenyon 1981, 215-16, pls. 126a, 271b, 274f, 275a-b; another rib-wall is actually visible in the east section; for Trench II cf. pls. 106b, 108a, 255b, 260b 'wall in M.B. bank'.

<sup>23</sup> Two walls of this kind are in fact present in the west section of Trench III, unrecorded in the section published by Kenyon (1981, pl. 273), and may belong to the last rampart: their top course is located respectively at the elevations 8.16 m. and 14.14 m.

<sup>24</sup> Sellin and Watzinger 1913, 56-62 (*Boschungsmauer*); for the mudbricks on top see *ibid.*, figs. 34-35.4-5, pls. 11-13. In Area A no mudbricks on top of W.4 were identified in the 1997 excavations (although in the west section of ApIV11 some decayed mudbricks were present), but no detailed account has been published of Sellin's tracing in this sector.

<sup>25</sup> Trench I: Kenyon 1981, 110, pls. 92a, 93a; Trench II: *ibid.*, 169-170, pls. 109-110a, 255b. Concerning the building technique of the stone wall, towards the bottom there are the largest stones and in front of them there is a sloping layer, different from the main fill, which is probably a sort of ramp for rolling such large stones (Kenyon 1981, pl. 236). Sellin and Watzinger recorded the same thing in the sections (1913, fig. 35.1-2) and in one case identified also a mudbrick ramp (*ibid.*, fig. 35.6, pl. 12b). This feature is reminiscent of the bottom of P.14 against W.4 in Area A.

<sup>26</sup> Cf. the 'gravelly' layer of phase *lxv* in Trench I (Kenyon 1981, pl. 236) and the limestone scales layer F.13a in Area A (Fig. 14): they both represent the surface of the base of the rampart; thus, Wall KE in Trench I seems to be a boundary for such a fill. In Sellin's excavations the same thing was noted: a gravel layer sealing a rubble fill covering the stone wall (Sellin and Watzinger 1913, figs. 34-35.1.4).

<sup>27</sup> Looking at Kenyon 1981, pl. 1b, one can see a step to the south of Trench III, near the modern parking area: it possibly marks the southern limit of the Lower Town

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