



Perspectives on the Ramesside Military System

Proceedings of the International Conference
Held at the Institute for Egyptology and Coptology
of Ludwig-Maximilians-Universität,
Munich, 10–11 December, 2021

Edited by Mohamed Raafat Abbas
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Illustration on the cover: Ramesses II's fighting the Hittites at the Battle of Kadesh.
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Defensive Constructions of the Twentieth Dynasty at Tell el-Retaba

Jozef Hudec

Archaeological research at Tell el-Retaba is more than 135 years old, with several long breaks. During this period the extent and surface of the tell has significantly changed and shrunk. Floods, weather factors, sabbakhins, demographic and infrastructural development have had a serious impact on today's shape of the tell. Important information was lost due to several infrastructural projects carried out at the tell. Therefore, each item of knowledge, even if it is more than hundred years old, should be thoroughly considered. The older excavation reports might have some limitations in terms of the accuracy of their methodology, descriptions and interpretations, but they must not be summarily dismissed, but rather analysed – the older a report, the closer the scrutiny to which it should be subjected.

Édouard Naville

The first known excavation on the site was carried out by Naville in 1885. He wrote: “*The enclosed area is about 400 meters long and 150 wide*”.¹ However, on a schematic plan (Fig. 1) the enclosed area is, according to its scale, ca 433 m long and ca 182/192 m wide. The reliability of Naville's plan was questioned by Petrie twenty years later.² It seems, however, that the plan reflects some aspects of the situation on the ground – nowadays, the dimensions of the enclosed area are measured as ca 435 × 200 m.

Naville excavated three cross-sections into the defence walls on the southern (A–B), eastern (C–D) and western (E–F) sides.³ The trench (section E–F), which he cut into the body of the migdol's northern tower, was criticised by Petrie.⁴ Naville did not identify three phases of defence walls at the tell. He recognised only the defence walls of Ramesses III's fortress, later designated by Petrie as walls 2 and 3.⁵ Naville's “*first/old wall*”⁶ corresponds to Petrie's wall 2 and his “*second wall*”⁷ corresponds to Petrie's wall 3. Naville ascribed their date to the Eighteenth and Nineteenth Dynasties, according to mudbrick lengths (published, incidentally, by Petrie).⁸

Naville presumed that the reason why wall 3 was built above and inside wall 2 was due to “*the ground having risen inside*”.⁹ This reason for the construction of wall 3 might be well-founded, e.g., if a huge flood had destroyed Petrie's wall 2 fortress and raised the ground inside. His description of “*the old wall, which is still perfect, and where one sees a recessing of the brick-work*”¹⁰ does not seem to indicate a destruction of the flood horizon. However, the external side of wall 2 in cross-section A–B, on both sand and clay mudbricks, seems to be a bit eroded.

Naville's observations and drawings of the relations between the walls 2 and 3 in cross-sections in A–B and C–D as well as his remarks on the character and dimensions of the bricks on the eastern and southern

1 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24.

2 The previous plan of the town (Naville, *The shrine of Saft el Henneh and the land of Goshen*, pl. XI) is largely drawn by guess work; Petrie / Duncan, *Hyksos and Israelite Cities*, 28.

3 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24, pl. 11.

4 The very thick wall at the west of it is really the thickness of the gateway bastions, one of which was cut through instead of tracing the face of it. See Petrie / Duncan, *Hyksos and Israelite Cities*, 28.

5 Petrie / Duncan, *Hyksos and Israelite Cities*, 30.

6 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 25.

7 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 25.

8 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 25.

9 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 25.

10 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 25.

sides are useful for comparison with the results of recent excavations. However, it is not clear, whether defence walls are placed in a sand-bed in cross-sections A–B and C–D; such a situation was not confirmed in cross-section E–F by recent excavation, despite E–F having the same visual display in Naville's publication as cross-sections A–B and C–D. It seems that the visual display does not differentiate between deposits of yellow sand, silty sand and silt.

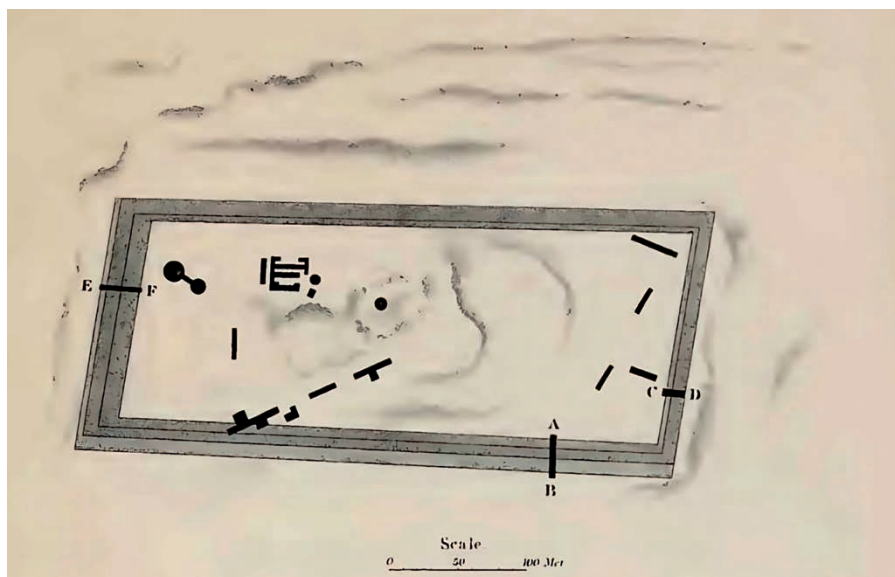


Fig. 1: Naville's schematic plan (Naville, *The shrine of Saft el Henneh and the land of Goshen*, pl. 11).

As mentioned above, the dimensions of the enclosure on the ground plan drawing do not match Naville's written information on the dimensions. However, it is quite surprising that after the combination of both (Naville and Petrie's) ground plans by the same scale (Fig. 2), the maximal west-east dimensions of both fort plans differ by less than 1% (Naville 433 m versus Petrie 429 m). Even Naville's E-F cross-section cuts the migdol's northern tower on Petrie's map in the positions given by the measurements produced in excavations. Also the outlines of both walls on the southern and eastern sides basically overlap. This means that the dimensions drawn by Naville are not erroneous in general.

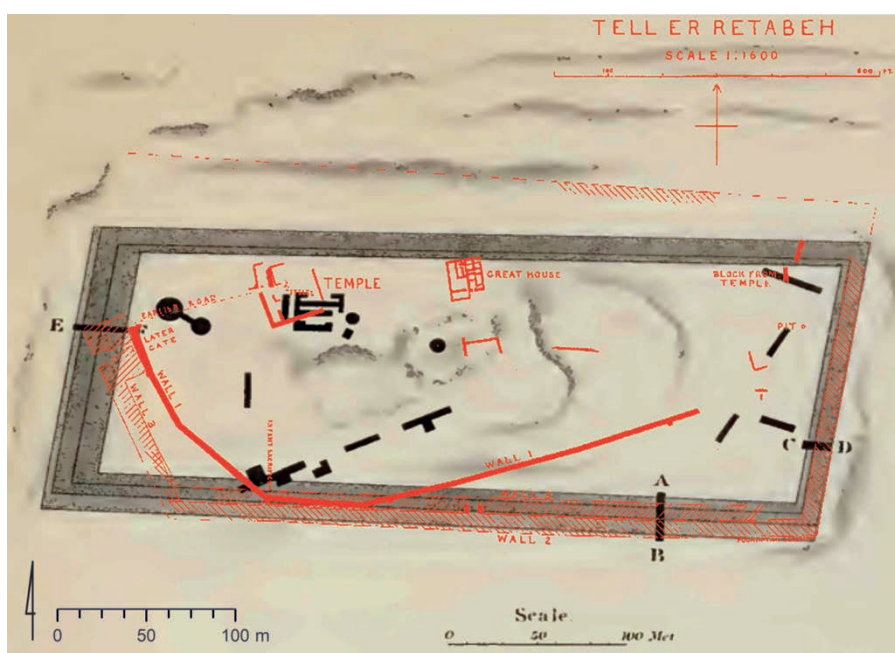


Fig. 2: Combination of Naville and Petrie's ground plans (Figure by Tibor Lieskovský).

On the other hand, the northern and western walls now have differently set directions and corner angles. Naville probably figured out the orientation and width of the western wall, based on the extrapolated orientation of the E–F cross-section in the northern migdol tower. His extrapolation might be falsified by the position of the northern tower, in the slightly “V-form” shaped migdol gate¹¹. He speculated that the older enclosure (Petrie’s wall 2) had been destroyed, and the later wall (Petrie’s wall 3) was of great thickness (i.e. 22 m thickness of the migdol tower) on the western side. However, wall 3 was neither traced clearly on this side by Petrie, 20 years after Naville’s work, nor by recent excavations.

From Naville’s observations: “*they merely took the old bricks and put them roughly together*”¹² and “*The large bricks with which the enclosure is built, ... seem to have been piled over one another in great haste, at least in that part of the enclosure which is above the sand*”¹³ and from his drawings of the A–B (Fig. 4) and C–D cross-sections it is possible to conclude that wall 3 was already considerably weathered 135 years ago.

Naville did not identify masonry and the meaning of the western migdol gate of the Twentieth Dynasty and did not distinguish its masonry from the wall 1 of the Nineteenth Dynasty on the drawing of the eastern/right side of his E–F cross-section/trench (Fig. 3).

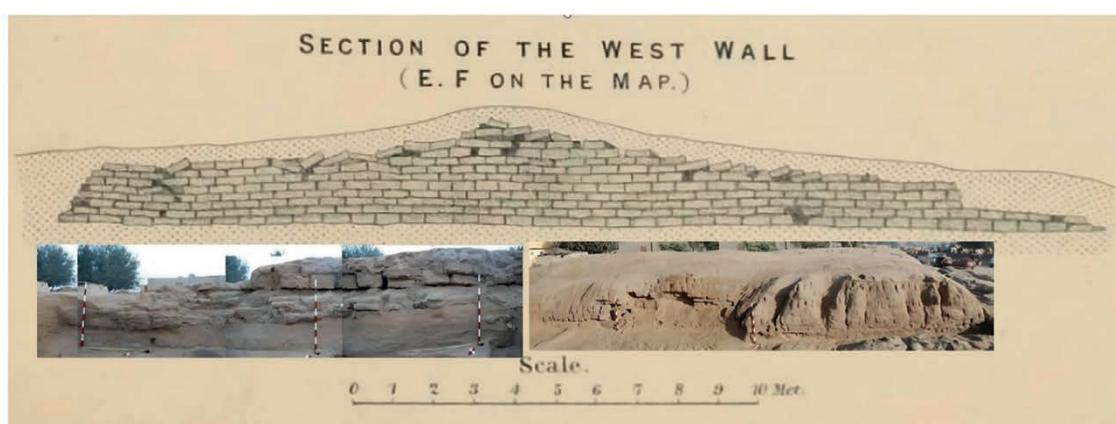


Fig. 3: Drawing of Naville’s cross-section E–F and recent photography (Drawing: Naville, *The shrine of Saft el Henneh and the land of Goshen*, pl. 11; Photo: Jozef Hudec).

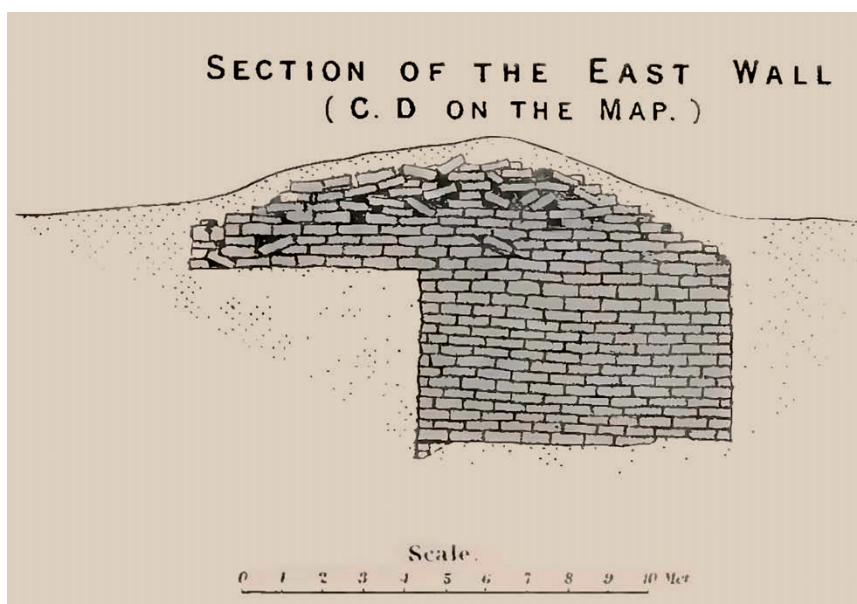


Fig. 4: Drawing of Naville’s cross-section C–D of eastern defence walls 2 and 3 (Naville, *The shrine of Saft el Henneh and the land of Goshen*, pl. 11).

11 Rzepka et al., *ÄgLev* 21 (2011), 139–141, fig. 16.

12 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 25.

13 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24.

It is a mystery as to how Naville extrapolated the position and course of the northern wall, as it was entirely covered by mudbrick houses¹⁴. The position of the northern wall might have been set northwards of the most northern excavation trench in the north-eastern part of the research area (Fig. 1) and according to ruins of the aforementioned houses in the northern (NW?) part of the tell.

The recent cross-section of defence walls in Area 9 (Fig. 5c) uncovered a sand rampart on the internal side of the southern wall 2.¹⁵ Residues of such a sand rampart were also traced on the western wall 2 in Area 4.¹⁶ Based also on Naville's information, according to which the wall 3 was built partly on/over wall 2 and partly on clean sand on the eastern side and on the sand inside the wall 2 on the southern side¹⁷, it would be plausible to suppose the existence of the internal sand rampart/buttress on wall 2 also on the eastern side of the fortress. The combination of the southern wall's cross-sections done by Naville, Goedicke/Fuller¹⁸ and recent excavations (Fig. 5 a–c) confirms the sand rampart along the whole internal length of the southern wall 2.

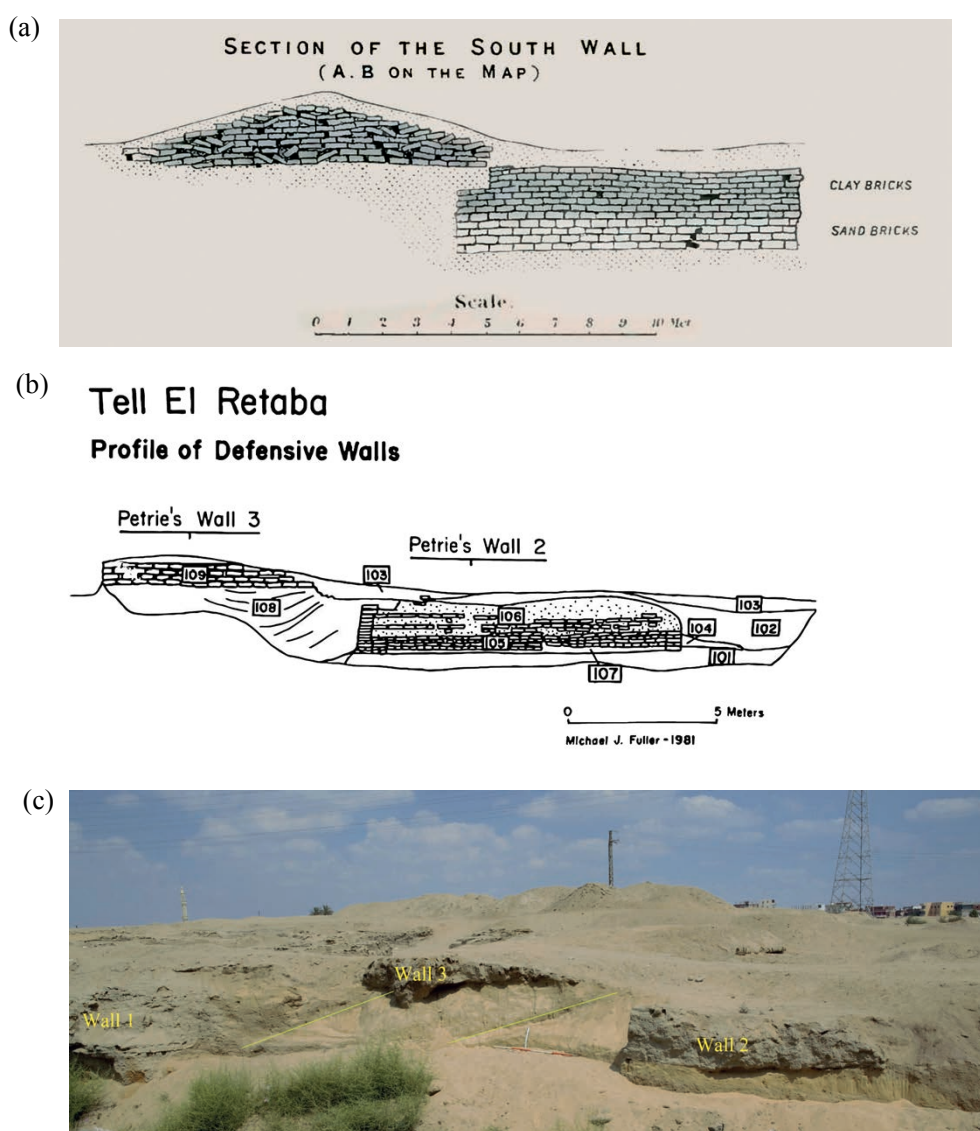


Fig. 5 a–c: The cross-sections of southern walls 2 and 3 by a) Naville (A–B), b) Goedicke/Fuller, and c) excavation in Area 9 (Figures: a) Drawing by Naville, *The shrine of Saft el Henneh*, pl. 11; b) Drawing after Michael J. Fuller, Hudáková / Hudec, AAS 26/2 (2017), 382, fig. 3; c) Photo by Jozef Hudec).

14 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24.

15 Hudec et al., AAS 27/1 (2018), 21–49, figs 21–22.

16 Hudec et al., AAS 27/1 (2018), 42.

17 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 25.

18 Hudáková / Hudec, AAS 26/2 (2017), 173–174.

Naville did not indicate the slight elevation of the internal face of wall 2 in cross-section A-B, which was, however, recorded by Goedicke's team¹⁹ and by recent excavations.²⁰ He dug into an accumulation of more than 30 feet/9.1 meters of "artificial soil"²¹ at an unspecified spot inside the enclosure. His test pit might be connected either with the twin round pits close to the north-western corner or the pit in the centre of the enclosure (Fig. 1). Goedicke's mission made a test pit on one of the highest central points of the site (ca 20 m south and 45 m west of Petrie's Great House, i.e. ca 25 m westward of Naville's pit in the centre) and reached "the gezira sand" 7.5 meters below the surface.²² It seems that the tell might have been much more rugged in the past or it lost at least 1.5 meters of its height (on some places?) between 1885 and 1978.²³

William M. Flinders Petrie

Petrie's excavation in 1905²⁴ identified the directions of defence walls 2 and 3 in the southwest and north differently from Naville (Fig. 6). Wall 2²⁵, the western migdol gate²⁶, wall 3, the later western gate in wall 3, and the southern gate in wall 3²⁷ were identified by Petrie's excavation. The wall 2 was dated to the reign of Ramesses III by the foundation deposit discovered by Petrie at the south-eastern corner of the fortress.²⁸

The migdol gate should be a part of the defence wall 2 because a western wall 3, if any on the western side, has not been attested so far (by recent excavations). However, Petrie wrote: "... *this wall of the XXth dynasty [i.e. wall 2] was greatly denuded, down to within a few feet of its base, and the west gate had almost vanished, when a third wall was built ...; this was ... upon the line [of the older wall] and the gateway at the west, and there overlapped the old first wall ... The third wall is rather open in the building, with spaces between the bricks in some parts; but they are regular and even, not tilted as has been represented [by Naville?]*",²⁹ and "*The gateway [migdol] axis was blocked across, and it led only to a narrow passage along the face of the first wall. This passage was 50 inches [1.27 m] wide, and then was narrowed by a block to 22 inches [0.56 m] wide. Thus there was a narrow entrance for persons in single file*".³⁰

Petrie's remarks "*I worked more at the north-west region, where the natives repeatedly said that there were large stones. We tried for weeks in every place that was pointed out to us, ..., but in vain*",³¹ allow to assume that once there were large stones in the migdol area. They were not mentioned by Naville in this part of the tell³² and had disappeared before Petrie's excavation.

Petrie described correctly the directions of the western, southern and eastern walls. He was not able to work in the north-western part of the fortress due to the low ruins of the walls and deep sand drifts. Therefore, he was probably unable to discover the rather spike-like shape of the north-western side of the fortress, which is now indicated by excavations, a geophysical survey and indirectly also by Goedicke/Fuller's³³ mapping (Fig. 7).

19 Hudáková / Hudec, AAS 26/2 (2017), 173, fig. 3.

20 Černý / Hudec, AAS 25/2 (2016), 117–144, pls 10, 11b.

21 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24.

22 Hudáková / Hudec, AAS 26/1 (2017), 9.

23 It is not thought that Naville dug deeper, into the gravel of the Second Intermediate Period's layers, which might probably have been considered the gezira sand by Goedicke's team. See Hudáková / Hudec, AAS 26/1 (2017), 12.

24 Petrie / Duncan, *Hyksos and Israelite Cities*, 28–34.

25 Petrie / Duncan, *Hyksos and Israelite Cities*, 30.

26 Petrie / Duncan, *Hyksos and Israelite Cities*, 29–30.

27 Petrie / Duncan, *Hyksos and Israelite Cities*, 30.

28 Petrie / Duncan, *Hyksos and Israelite Cities*, 30.

29 Petrie / Duncan, *Hyksos and Israelite Cities*, 30.

30 Petrie / Duncan, *Hyksos and Israelite Cities*, 30.

31 "... *gateway between massive brick bastions ... I was much attracted by a massive brick wall with a great gateway in it [a gateway to the Nineteenth Dynasty fort?], and a large jamb of brick down the north side of the entrance*". See Petrie / Duncan, *Hyksos and Israelite Cities*, 29–30.

32 Although he mentioned "... *the great number of fragments of hard stone bestrew the mound, ... and the large granite block, ...*" with no specific location. See Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24.

33 Hudáková / Hudec, AAS 26/2 (2017), 182, fig. 2.

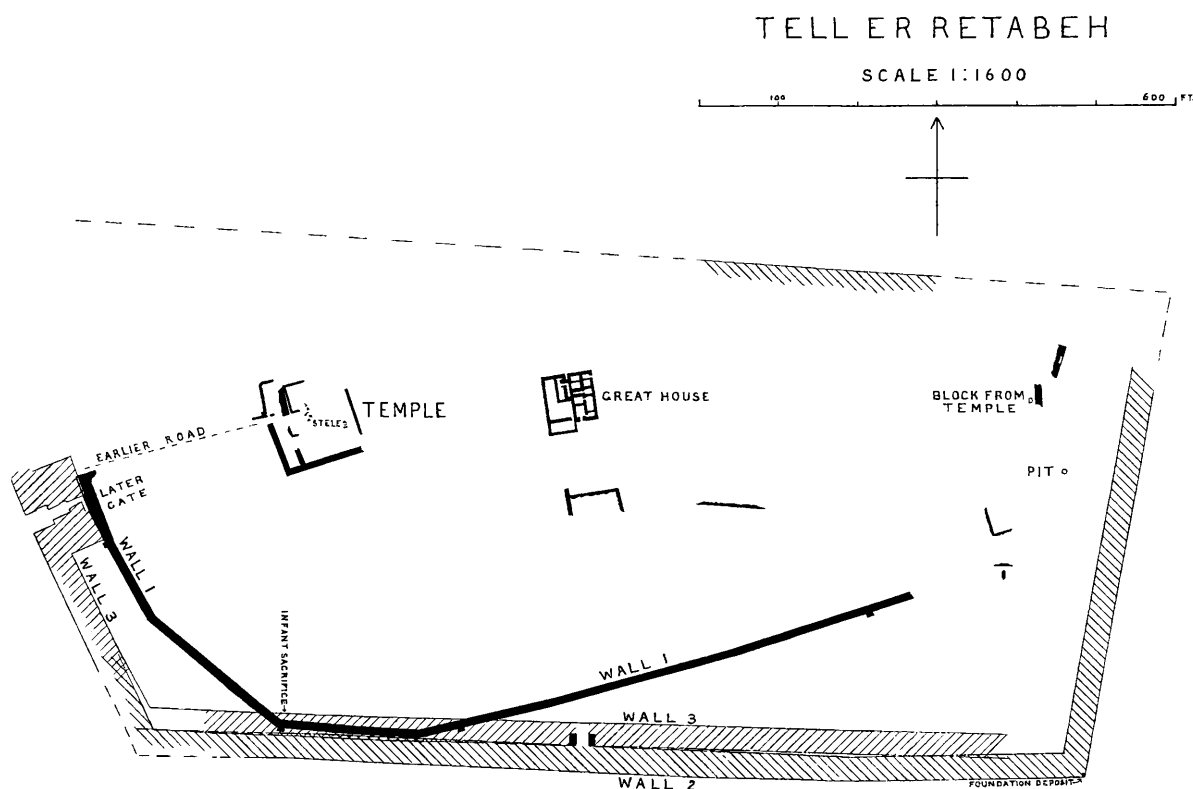


Fig. 6: Petrie's excavations in 1905 (Petrie / Duncan, *Hyksos and Israelite Cities*, pl. XXXV).

He was not able to discover the course of the northern walls, and identified only one (thus not doubled), unlike the walls on the other sides of the fortress. He described the northern wall as *consolidated by rains*,³⁴ therefore its bricks were unrecognisable. Petrie did not mention any houses covering the northern side, as mentioned by Naville, thus the houses might have been removed by *sabbakhins* (their diggings were attested by the Polish-Slovak mission)³⁵ or/and weather/floods, so that only consolidated masonry was left. Or, Petrie might have extrapolated the routing of the northern wall 2 on its western azimuth based on the consolidated masonry of other structures which were not part of wall 2, because he did not excavate the NW part of the wall 2 and focused instead on the area around the north-eastern corner of the fortress(es).

Petrie complained about the earthy marl and humidity of the lower walls,³⁶ i.e. wall 2, which complicated its differentiation from the silty layers. Information on the earthy marl might correspond to remarks from Goedicke/Fuller's excavation, that the outer face and core of wall 2 were made of puddled mud.³⁷ Petrie did not mention the differences between sand and clay mudbricks in the southern wall 2 mentioned by Naville³⁸.

Like Naville, Petrie also mentioned that wall 3 is rather open in the building, with regular and not tilted spaces between the bricks in some parts. According to Petrie, wall 3 was built upon the line of wall 2 at the west and the gateway overlapped there wall 1.³⁹ However, the plan drawn by Petrie (Fig. 6) shows a rather confusing superposition in the south-western corner of the fortress and on its western side.

Petrie probably considered the platform of wall 2, which also runs below the *migdol*⁴⁰, as the last traces of wall 2 and the *migdol* as a part of wall 3 fortification. This is, however, unattested, because a western gate as "a predecessor" of the *migdol*, would be completely missing in this concept and Petrie's understanding of the "pseudo-corridor's"⁴¹ purpose contradicts the stratigraphy on the ground.

34 Petrie / Duncan, *Hyksos and Israelite Cities*, 28.

35 Rzepka / Wodzińska / Hudec / Herbich, *ÄgLev* 19 (2009), 250.

36 Petrie / Duncan, *Hyksos and Israelite Cities*, 28.

37 Hudáková / Hudec, *AAS* 26/2 (2017), 173.

38 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 25.

39 Petrie / Duncan, *Hyksos and Israelite Cities*, 30.

40 Černý / Hudec, *AAS* 25/2 (2016), 128, pl. 16 (a–b).

41 Rzepka et al., *ÄgLev* 21 (2011), 141–142, fig. 18.

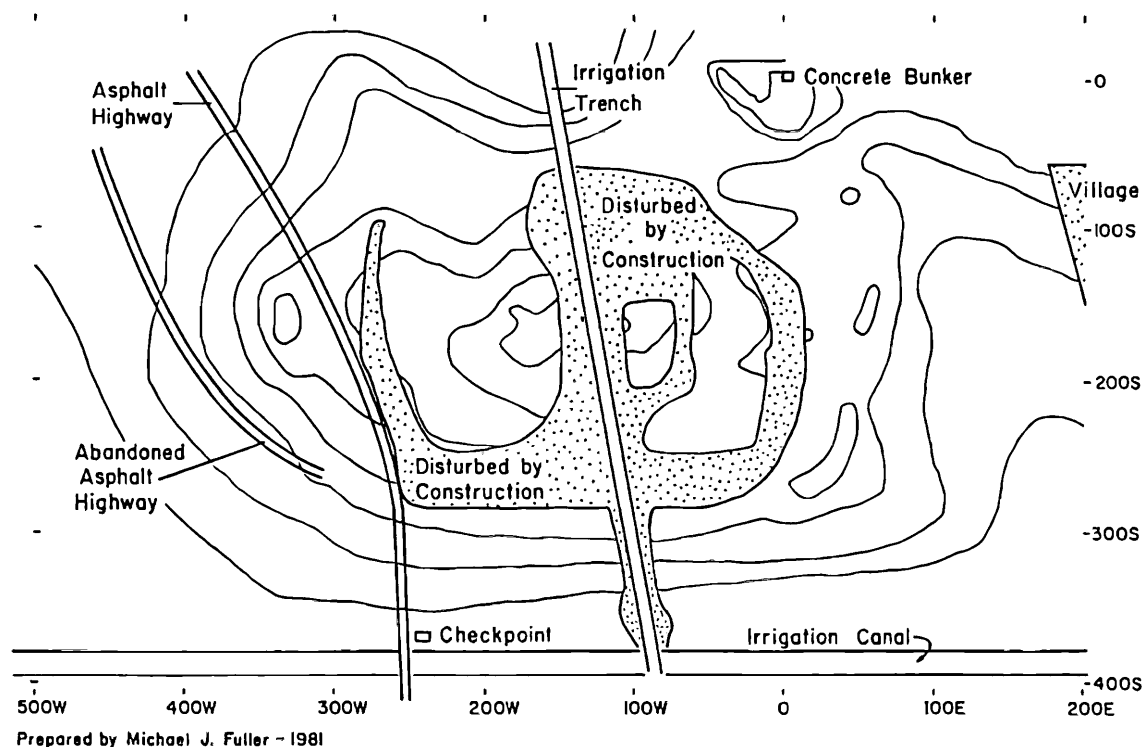


Fig. 7: Goedicke/Fuller's mapping (Drawing: Michael J. Fuller).

Decades after Petrie's research, neither the contour map of the tell from 1978 by Goedicke/Fuller (Fig. 7) nor the excavations by the Polish-Slovak mission revealed any traces of wall 3 on the western side of the fortress. Wall 3, if it had existed, has been completely abraded on the western side in such a way that the recent excavations unearthed merely the last mudbrick rows of wall 2 (platform) south- and northwards of the migdol. From the original width of 10.4 m of wall 2 only about 6–7 m width survived southwards of the migdol; on the internal side to a height of 2 or 3 rows of mudbricks (Fig. 8), on the external side it has been completely abraded little by little, because of its standing on a slope exposed to floods coming from the west for centuries.



Fig. 8: A part of wall 2 southwards of the migdol; internal side (Photo: Jozef Hudec).

Wall 3 was neither discovered in the migdol perimeter nor did it overlap wall 1. From the preserved torso of the migdol it has not been possible so far to assume two phases in its construction. Petrie had been able to see mudbricks in the higher rows ($43.4 \times 21 \times 14$ cm) and lower rows ($46 \text{ cm} \times 22.1 \times ?$ cm) of the migdol towers⁴², but they could also reflect different mud bricks used in fundamentals and in the bodies of the towers. The gateway sloped down slightly from the wall 1 at the eastern end towards the gate threshold and the western end.

Petrie also might not have interpreted properly the unearthed structures as he dug along the walls. He wrote that the migdol axis was blocked up, its gateway led only to a 1.27 m wide passage along the face of wall 1 and the passage was narrowed by a block to 0.56 m wide.⁴³ He did not specify where the cross-blockade of the wall 3 fortress was placed. As he neither drew the mudbrick threshold base⁴⁴ in his plan (Fig. 9), nor wrote about it, this structure was probably not considered to be the cross-blockade; from the description of the passage it would be logical to expect the cross-blockade somewhere in the eastern end of the gateway. Because Petrie properly identified the older wall 1, he should not have interpreted it as a cross-blockade to a later gateway (although, without considering the walkable level of the Twentieth Dynasty, including possible stone paving [?] in the gateway and depth of the migdol tower's fundamentals, it might look like that).

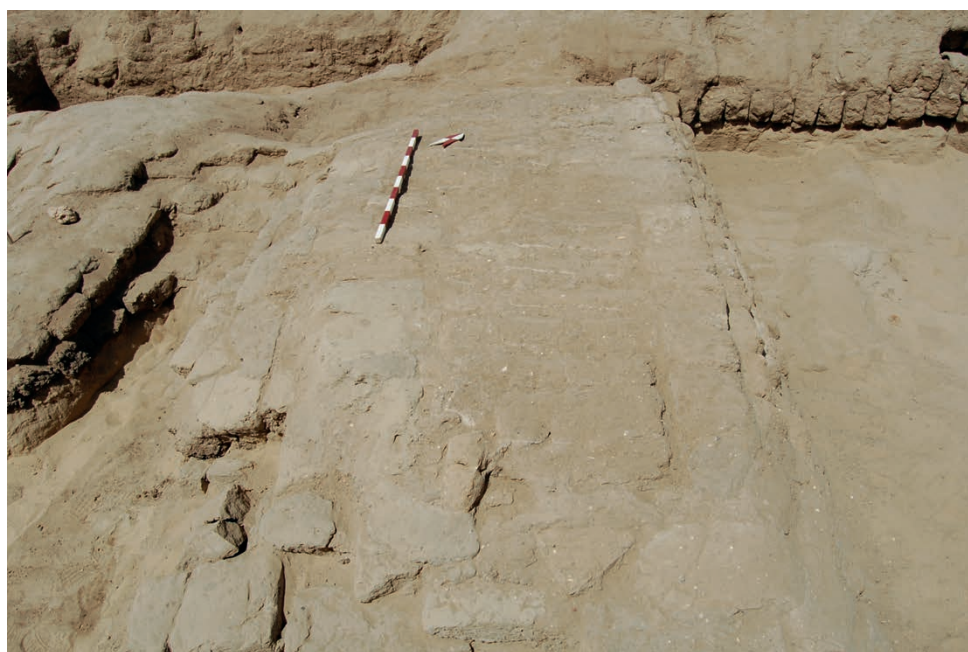


Fig. 9: Body of the gateway's mudbrick threshold (Photo: Jozef Hudec).

Maybe there was some later construction on top of wall 1, as there was debris excavated on its outer side, in the migdol gateway. However, the situation of the passage was probably not interpreted correctly. The recent excavations have confirmed a "passage" or rather a pseudo-corridor (Fig. 10), between wall 1 and the fundamentals of the southern migdol tower, approximately 120 cm wide and 90 cm high.⁴⁵ However, the passage was unable to be used in the Twentieth Dynasty. Both migdol towers overlapped slightly the wall 1 at about walkable level in the Twentieth Dynasty.⁴⁶ This overlapping made the ceiling of the pseudo-corridor below the walkable level and therefore the pseudo-corridor could not be used for passing through, either at the full or narrowed width. Moreover, there is no passage through wall 1 southwards of the gateway's eastern mouth, used as an entrance from the passage, and above the aforementioned debris

42 Petrie / Duncan, *Hyksos and Israelite Cities*, 30.

43 Petrie / Duncan, *Hyksos and Israelite Cities*, 30.

44 Rzepka et al., *ÄgLev 21* (2011), 140–141.

45 Rzepka et al., *ÄgLev 21* (2011), 141–142, fig. 18.

46 Some Nineteenth Dynasty structures were still in use during the Twentieth Dynasty. Barracks and silos were levelled to prepare ground for the Twentieth Dynasty fortress. Architects planning the new fortress had to take into consideration the presence of older, still-standing structures. See Rzepka et al., *ÄgLev 27* (2017), 54.

considerably blocked the pseudo-corridor from the gateway's side. Recent excavations did not confirm any block narrowing the width inside the pseudo-corridor.



Fig. 10: A “passage” or rather a pseudo-corridor beneath the southern tower of migdol – a view southwards; wall 1 on the left side (Photo: Jozef Hudec).

It seems that the north-eastern corner of the southern migdol tower might be built over an older structure (Fig. 11), which created the western side of the pseudo-corridor, and was utilised and overbuilt at its preserved height by the southern tower. However, if there was an older structure, it would have a relation to wall 1 or its gate more northwards rather than to an older phase of the migdol. Thus a later phase of the western migdol gate, synchronous with wall 3, was not confirmed by the recent excavations.

A stone gateway had been reported by Petrie in the southern side of wall 3. Foundation hollows of the gateway and stone chips were seen here by Petrie.⁴⁷ He did not mention the kind of stone used. Unfortunately, this gateway has not so far been rediscovered.



Fig. 11: Western side of the pseudo-corridor, below the north-eastern part of the southern migdol's tower (Photo: Jozef Hudec).

47 Petrie / Duncan, *Hyksos and Israelite Cities*, 30.

Hans Goedicke and Michael Fuller

The work in May and June 1978 resulted in a contour map of the tell, with indications of wall 2 traces of which were visible on the surface (Fig. 7).⁴⁸ The research confirmed that the frontal western wall of the temenos had the same orientation as the walls 1 and 2 in the western part of the tell.⁴⁹

In the 1981 season the mission made rescue documentation of a cut through walls 2 and 3 in a pipeline trench in the central-southern part of the tell. Nine courses of wall 2 mudbricks were preserved laid in a header bond (locus 106). The wall 2 foundation consisted of five courses of mudbricks (locus 105) that rested on a 10 cm layer of grey sand (locus 107). The wall thickness was 10.52 m. The preserved height of the wall and its foundation was 1.8 m. The inner face sloped at an angle of 3 degrees inward from vertical. The outer face was made of puddled mud and the same material was also used in the core of the wall. The bricks used in the main body of the wall as well as along the inner face were sandy.⁵⁰

Wall 3 was much disturbed and its preserved width was only 7.46 m (locus 109), whereas Petrie recorded the width in three different areas as 8.8–8.9 m. Only four courses of bricks of the inner face were preserved, the height of which was 0.8 m. The mudbricks were brown with straw inclusions. They rested upon very pale brown cross-bedded sand (locus 108). The foundation of wall 3 was 1.8 m higher than the foundation of wall 2.⁵¹

The northern defence wall was not mentioned in the documentation of Goedicke's mission. The length of the described cross-section covered only the area from the centre of the site to its southern edge.⁵² Because of the different levels of the foundations of walls 2 and 3, Fuller assumed that wall 3 was built in the Third Intermediate Period.⁵³

Goedicke/Fuller's data and measurements of walls 2 and 3 match the results of the Polish-Slovak mission. A unique sand rampart or buttress, which was discovered supporting the internal side of wall 2, so far on its western and south-western part⁵⁴, has also its pendant in locus 108. Wall 3 was constructed on grey sand, i.e. the upper layer of the buttress of wall 2, and on several thin layers, which filled the space above the abutment of the buttress and wall 1.⁵⁵

Recent excavations indicate, based on pottery from an associated building in Area 9, that wall 3 was built in the first half of the Twentieth Dynasty.⁵⁶ Wall 3 is thus only slightly later than wall 2. Due to the debatable constructional and chronological relations between walls 2 and 3, discussion has arisen about a function of wall 2 as a revetment or defence wall.⁵⁷ The relation might be further specified, especially after excavations of eastern walls (see below).

Recent Results

The discovery of several walls on the north-western side of the fortress(es) changed its interpretation in the 2021 season (Fig. 15). Previously it was assumed that wall 2 very probably enclosed the entire Twentieth Dynasty fortress and wall 3 was attested by older excavations on the southern and eastern sides only and presumed on the western side by Petrie. Wall 2 was attested by the Polish-Slovak mission along the western side (Areas 4, 7, 8) and on the southern side (Area 9). Test pits and sections in Area 1 and Area 2 and Egyptian work seem to identify the wall alongside the northern side of the tell⁵⁸ (Fig. 13).

Geophysical surveys also indicated a northern wall and the eastern walls of the Twentieth Dynasty's fortress(es).⁵⁹ Two walls were also indicated by Naville and Petrie on the eastern side of the tell (Fig. 2). According to geophysical surveys it seems that a northern wall has at least two bends (Fig. 14). However,

48 Hudáková / Hudec, AAS 26/1 (2017), 3.

49 Hudáková / Hudec, AAS 26/1 (2017), 7.

50 Hudáková / Hudec, AAS 26/2 (2017), 172–174.

51 Hudáková / Hudec, AAS 26/2 (2017), 173.

52 Hudáková / Hudec, AAS 26/2 (2017), 175.

53 Hudáková / Hudec, AAS 26/2 (2017), 173.

54 Rzepka et al., *ÄgLev* 25 (2015), 126–127.

55 Rzepka et al., *ÄgLev* 25 (2015), 126–127; Černý / Hudec, AAS 25/2 (2016), 117–144.

56 Rzepka et al., *ÄgLev* 24 (2014), 73.

57 Rzepka et al., *ÄgLev* 24 (2014), 74–75; Rzepka et al., *ÄgLev* 25 (2015), 126–127.

58 Rzepka et al., *ÄgLev* 19 (2009), 252; Hudec et al., AAS 27/1 (2018), 41–42.

59 Rzepka et al., *ÄgLev* 19 (2009), 249, fig. 7.

after the 2021 season it seems that more walls might overlap on this side (Fig. 15). The expected north-western corners of these walls are very probably situated on private land, outside the area of the tell nowadays protected by the antiquities authorities (Fig 16).



Fig. 12: Wall 2 built over the geminated Nineteenth Dynasty's moat in Area 4 northwards of the migdol (Photo: Jozef Hudec).



Fig. 13: Sections of northern wall 2 built over the Nineteenth Dynasty's moat as documented in the 2017 season (Photo: Jozef Hudec).

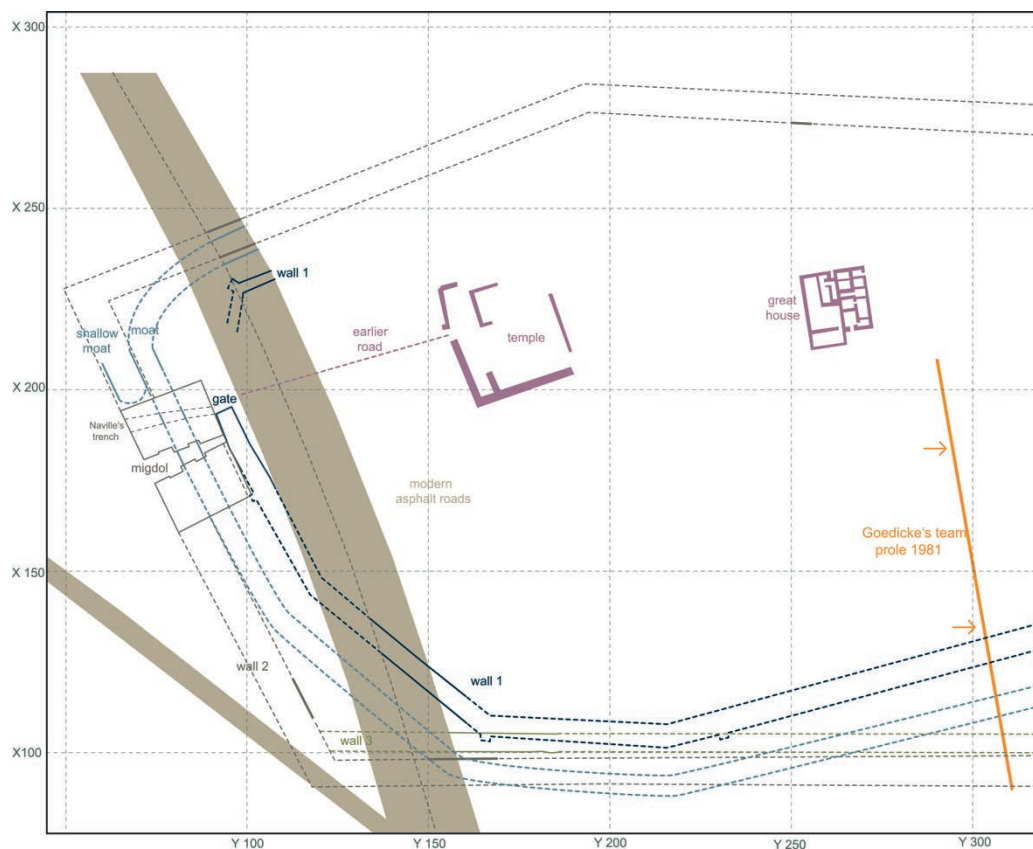


Fig. 14: Map of the northern wall route after the 2017 season (Drawing: Lucia Hulková).



Fig. 15: Other northern walls excavated in the 2021 season (Photo and drawing: Jozef Hudec).

Wall 2 was mostly constructed atop a moat or moats from the Nineteenth Dynasty (Phase E) attested so far in Areas 2, 4 and 9. A deeper moat related to wall 1 was dug out in the older Eighteenth Dynasty and the Second Intermediate Period's layers. The moats were mostly naturally fully filled by Aeolian sand and gravel, or by dumped earth and artefacts,⁶⁰ probably in a period when the fort and moat of the Nineteenth Dynasty had lost their defensive function and were not maintained.⁶¹ Therefore it was probably not necessary to add any substantial additional filling into the moat(s) to support the fundamentals of wall 2.⁶²

The map of wall 2 route shows the spike-like shape of the corner between the western and north-western wall 2 (Fig. 14) and maybe also of wall 3. The shape might be intended to divide and divert the waters of sporadic high floods coming from the (north-)west.⁶³

The stones, mentioned by Petrie⁶⁴, might have been useful to protect the mudbrick walls of the north-western corner from a first onslaught by high floods. Unfortunately, it is impossible to reconstruct the original position of the stones. They might be on the external side of western wall 2 and/or the migdol(?), if at all. It is less probable that they were applied on the internal side of wall 2, because of the sand ramparts constructed there. Stone casing has so far been discovered neither in the above-mentioned areas nor in their perimeter. Based on the gateway dimensions, massive stone casing would not fit into the side door niches of the double-wing door at least. If there were any, the stones might therefore be expected rather at the gateway's paving, and/or on the frontal/external side of the wall 2 and migdol towers.

Unfortunately, Petrie did not elaborate on the kind of stone from which the alleged blocks announced to him by local people were made. Based on stone fragments usually occurring on the site, they could have been made of limestone, quartzite or granite. Limestone and quartzite would have been easier to bring to Retaba by waterway from Tura and Ma'sara⁶⁵ or Gebel el-Ahmar⁶⁶ respectively; granites⁶⁷ could have had a more distant supply chain.

The position of the western and northern walls and shape of their corners, together with the position of river aggradation deposits⁶⁸, might indicate that the ancient branch of the Nile, subsequently reused in several pharaonic canal constructions, streamed in from the north-west. The canal, which now bypasses the tell on its southern side, might be a successor of the ancient flow.⁶⁹

Part of the floodwater could have been diverted by the terrain and walls to the northern side of the fort, where both the soil survey⁷⁰ and the geological survey⁷¹ discovered mud deposits covered by thick strata of yellow sand. It is presumed, that a wetland or a marsh and/or a lake was on the northern side of the fort, as a residuum of a flood pond. It is also possible that there was another canal on the northern side of the Ramesside forts. If the southern and northern canals were contemporary, the fort would actually stand on an island(?). More research should be undertaken to find satisfactory answers for these uncertainties as well as the location of a cemetery about 400 m north of the fort.⁷²

Recent research in Naville's trench (cross-section E–F) revealed the construction procedure of wall 2. This wall was built on a mudbrick platform, which was ca 10.4 m wide and up to half a metre high and most probably also ran below both migdol towers and included also the threshold of the gate. The platform supported the western bottom of the northern tower, where the tower could be in a superposition over the entrance/gate to the older Nineteenth Dynasty fortress. The cores of the northern and southern migdol towers stand on deposits of fine yellow sand – a fill of the Nineteenth Dynasty deeper moat.

60 Cf. profile 3 in Hudec et al., AAS 27/1 (2018), 38.

61 Hudec et al., AAS 27/1 (2018), 38.

62 Hudec et al., AAS 27/1 (2018), 40. Cf. "Any pit in this region is quickly filled up with sand from the desert, and the holes made in one year are levelled up again in the next", in Petrie / Duncan, Hyksos and Israelite Cities, 28.

63 Hudec / Fulajtár / Stopková, AAS 24/2 (2015), 250.

64 Petrie / Duncan, Hyksos and Israelite Cities, 29–30.

65 Lucas, Ancient Egyptian Materials and Industries, 66.

66 Lucas, Ancient Egyptian Materials and Industries, 79.

67 Lucas, Ancient Egyptian Materials and Industries, 74.

68 Hudec / Fulajtár / Stopková, AAS 24/2 (2015), 251.

69 Hudec / Fulajtár / Stopková, AAS 24/2 (2015), 250.

70 Hudec / Fulajtár / Stopková, AAS 24/2 (2015), 272.

71 Rzepka et al., ÄgLev 25 (2015), 160, 150, fig. 84.

72 Hudáková / Hudec, AAS 26/2 (2017), 175–176.

The western edge of the northern migdol tower seems not to fully correspond to the western edge of the platform – the platform seems to be wider.⁷³ The mudbrick platform was also unearthed north of the migdol; here it was 10.4 m, i.e. about 20 Egyptian cubits, wide. The internal side of this northern platform is in a straight line with both, the internal side of the platform's section in Naville's trench and the internal side of the gateway's threshold⁷⁴.

The construction of wall 2 and its platform over the moat of the Nineteenth Dynasty fort has so far been examined in Areas 9 and 2. In Area 4 wall 2 was built over a geminated moat (Fig. 12), mainly over its shallower part, with some section of the wall's internal side over the deeper moat.⁷⁵ A structure (2360) consisting of a stretch of mud mortar about two meters wide and about 20 cm thick was uncovered here. It ran along the inner side of wall 2, two meters away from it. The mud mortar was reinforced with pieces of irregular greenish mud bricks (Fig. 17). An irregularly high and wide, mud-stone mixed layer had been discovered earlier alongside the internal side of wall 2, but its function at the time was ambiguous. The inner side of wall 2 was aligned with the deeper moat underneath, which had been filled with drifting sand. Since walking on this windblown sand surface is difficult, it is assumed that the discovered structure (2360) constitutes the remains of a purpose-built transport route/walkway enabling workers and/or soldiers to deliver and distribute building materials.⁷⁶

The part of the northern tower of the migdol's northwards of Naville's trench has had its western edge considerably eroded.⁷⁷ Older mudbrick architecture was uncovered at the mouth of Naville's trench, below the eastern edge of the tower. The dimensions of the northern tower were measured as ca 22.5 × 14 m, despite the erosion of the masonry. The southern tower⁷⁸ was probably a "mirror image" of the northern tower, in a slightly V-shaped symmetry.

It seems that the further east the wall 2 was examined, the greater was the height of its preserved masonry. In the section of southern wall 2, documented by Fuller, its width was 10.5 m and its height 1.8 m;⁷⁹ in the section of the southern wall 2 documented by Naville its width was 10.4 m and height ca 2.5 m;⁸⁰ in the section of the eastern wall 2 documented by Naville its width was 6.1 m, its height ca 3.8 m.⁸¹

Assessment of the constructional relations between walls 2 and 3 could not be carried out properly on the eroded destruction in the south-western and western parts of these walls, where especially the external portions of walls were considerably damaged (probably by later activities, flooding erosion and archaeological work). Because of the decreasingly preserved height of wall 2 towards the west it seems that flooding might be one of the most significant erosion factors.

On the basis of older research it is possible to suppose that (southern) wall 3 was not built against the inner face of southern wall 2 to enlarge its width⁸² and wall 2 was not 15 m (or more) high⁸³ during the construction of wall 3.

The originally high defence wall 2 was probably damaged and replaced or supplemented by wall 3 after a period of time. Thus, wall 2 was not originally planned as a revetment wall, due to its width (9–10.5 m) and height, which was supported approximately up to a height of 2 m by a sand rampart/buttress on the internal side. It seems there was a step in the internal face of wall 2 in the above-mentioned height.⁸⁴ Due to the construction of the casemates discovered⁸⁵ in the higher preserved SE parts of wall 2 it could be supposed that the higher levels of wall 2 need not have been built of massive masonry and might therefore collapse more easily.

73 Rzepka et al., *ÄgLev* 24 (2014), 70–71.

74 Rzepka et al., *ÄgLev* 24 (2014), 71.

75 Hudec et al., *AAS* 27/1 (2018), 41.

76 Hudec et al., *AAS* 27/1 (2018), 41.

77 Rzepka et al., *ÄgLev* 24 (2014), 70.

78 Rzepka et al., *ÄgLev* 21 (2011), 139.

79 Hudáková / Hudec, *AAS* 26/2 (2017), 173.

80 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24, pl. 11.

81 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24, pl. 11.

82 Morris, *The Architecture of Imperialism*, 741.

83 For the supposed height of the defence walls built during the reign of Ramesses III, cf. the quotation from P. Harris I by Morris, *The Architecture of Imperialism*, 719.

84 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24, pl. 11, section A–B.

85 Rzepka et al., *ÄgLev* 19 (2009), 247.

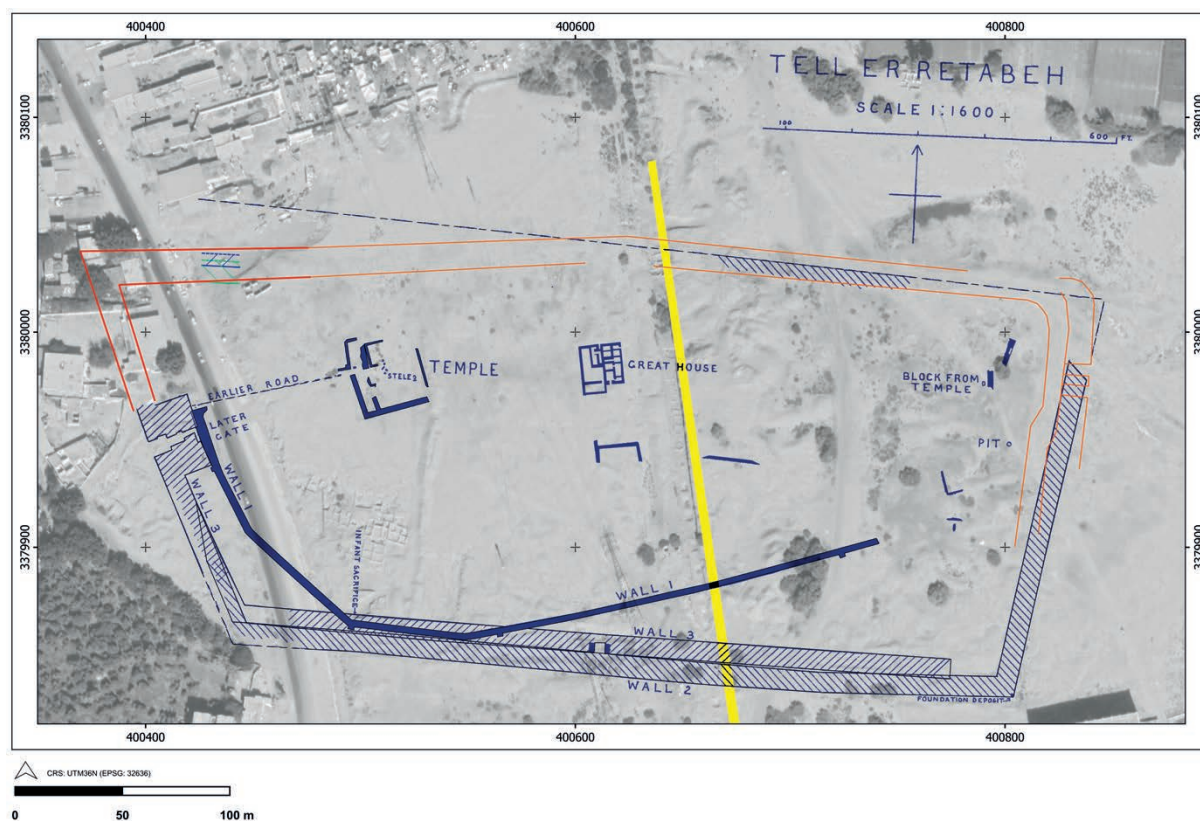


Fig. 16: Map of the north-western side of the Twentieth Dynasty fortress with the walls discovered in the 2021 season (Figure: Google maps, Petrie / Duncan, Hyksos and Israelite Cities, pl. XXXV, drawing: Laura Pénzešová, Jozef Hudec).



Fig. 17: Section of the structure (2360) – probably the remains of a purpose-built transport route or walkway (Photo: Jozef Hudec).

A sand rampart/embankment/buttress was discovered on the internal sides of the western, southern and eastern(?) wall 2.⁸⁶ According to recent research⁸⁷, the rampart was a result of building activity and not an accidental aeolic dune. The ramparts at wall 2 could have been up to 2.15 m high.⁸⁸ Naville's drawing of the cross-section A-B shows a step in the internal side of southern wall 2, which was about 2 m above its base⁸⁹ (Fig. 5a). The wall base/fundaments were probably not built into a trench, but on a sand surface of the Nineteenth Dynasty moat. Thus, the fundaments could have been rather open, supported evidently by a rampart on the internal side of the wall and maybe using another support (stone blocks?) on the external side.

The now-missing sand rampart on the northern walls might be a result of either another construction method (e.g. due to the slightly different/more silty fill of the moat or more humid conditions), or by local conditions where the research was carried out, where the sand may have been removed by later occupation activities.⁹⁰ Due to the state of preservation of wall 3 it is not certain as to whether a similar rampart was used on the internal side of this later wall as well; the space along the internal face of wall 3, interpreted as a street 3.6 m wide, could be extensive enough for a sand rampart.⁹¹

The Polish-Slovak mission attested wall 3 in Area 9 only; earlier the wall had been attested along southern side of the tell and on the eastern side, near the SE corner of the fortresses.⁹² The geophysical survey seems to indicate the wall along the whole of the eastern side of the fortresses.⁹³ Its occurrence on the northern side of the Twentieth Dynasty fortress might be indicated by recent archaeological research in the 2021 season (Fig. 16). It is missing, however, on the western side.

The date of wall 3 was less evident than the date of wall 2 (see above), though recent excavations have helped to date wall 3 in Area 9. Along the inner (i.e. northern) face of the wall runs a street (or a rampart?) 3.6 m wide. On its northern side a long building [834/838] was unearthed, contemporary with wall 3, as both structures have the same orientation and are founded at the same level (i.e. in D3). Pottery confirms the construction of wall 3 to be in the first half of the Twentieth Dynasty and slightly later than wall 2 (i.e. D4). The building and wall 3 were probably built according to a uniform plan: a 17 cubits (8.8 m) strong wall 3; a 7 cubits (3.6 m) wide street (or rampart?) and a 17 cubits wide building.⁹⁴ Bricks of the building (834/838) were, however, smaller than the bricks of wall 3 (and wall 2).⁹⁵ The building had also two later occupation phases (D2 and D1).⁹⁶ It might not contain offices and also military equipment was not discovered in it. The housing was obviously state commissioned and probably inhabited by a population of rather low social status.⁹⁷ Rooms of another building (1654) of phase D3 were used for food preparation, consumption and as a craft/workshop. A small limestone seal with an inscription was discovered here and a fragment of a jar stopper with cartouches without royal names was found nearby.⁹⁸

The results of the geophysical survey indicate that there is another massive gate (or even gates?) on the eastern side of the Twentieth Dynasty fortress.⁹⁹ The eastern gate(s) cannot so far be associated with a specific fortress/wall.¹⁰⁰

86 Černý / Hudec, AAS 25/2 (2016), 125, fig. 17.

87 Hudec et al., AAS 27/1 (2018), 41.

88 Hudec et al., AAS 27/1 (2018), 42.

89 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24, pl. 11, section A–B.

90 Rzepka et al., *ÄgLev* 19 (2009), 251–255, fig. 9.

91 Rzepka et al., *ÄgLev* 25 (2015), 118–119, figs 36, 37.

92 Naville, *The shrine of Saft el Henneh and the land of Goshen*, 24, pl. 11; Hudáková / Hudec, AAS 26/2 (2017), 163–184, fig. 3.

93 Rzepka et al., *ÄgLev* 19 (2009), 249, fig. 7.

94 Rzepka et al., *ÄgLev* 25 (2015), 118–119, figs 36, 37.

95 Rzepka et al., *ÄgLev* 25 (2015), 117–118.

96 Rzepka et al., *ÄgLev* 25 (2015), 124–126.

97 Rzepka et al., *ÄgLev* 25 (2015), 123–125. The dwellings of 30 m² could have belonged to a lower class, cf. Tietze, *ZÄS* 112 (1985), 48–84.

98 Rzepka et al., *ÄgLev* 25 (2015), 123–125.

99 Rzepka et al., *ÄgLev* 19 (2009), 277, fig. 33.

100 Hudec et al., AAS 27/1 (2018), 43.

Conclusions

Recent Polish-Slovak and Egyptian excavations at Tell el-Retaba have contributed to a better understanding of the construction techniques of the Twentieth Dynasty's fortification in the second line of the ancient Egyptian defence system against menaces from the north-east or east on the periphery of the eastern Nile Delta.

Both Naville¹⁰¹ and Petrie¹⁰² considered that Tell el-Retaba was not a fortress or fortified town, but rather a camp or a fortified camping ground. However, there is a contradiction in Naville's conclusion, as he dated the walls of "enclosure" to the Eighteenth and Nineteenth Dynasties, based on brick dimensions¹⁰³ and not to the late Roman period, linked to a camp. He might rather have meant the date of the tell's surface occupancy, which might provide some signs related to Roman times. Roman roads drawn from Babylon towards Wadi Tumilat on the Tabula Peutingeriana¹⁰⁴ might indicate such relations as well as some discovered pottery indicates.¹⁰⁵ Petrie's conclusion might be influenced by Naville and by his disappointment about the quality and quantity of the finds.

According to recent excavations and surveys, the area inside the fortress(es) is filled by various kinds of mudbrick architectures – buildings, storerooms, silos, ovens, etc.¹⁰⁶ It would be very ineffective and extremely improbable practice to build massive defence walls to protect an empty space, on which some troops camped from time to time, around a putative temple of Atum. Even after the Nineteenth Dynasty fortress might have been abandoned and its defensive (and administrative?) functions downgraded, some form of permanent occupancy might have been maintained here before the occupation revival in the Twentieth Dynasty.¹⁰⁷ Moreover, a simple camp would mean the refutation of Tell el-Retaba's strategic function.¹⁰⁸ A flint sickle blade of the second phase of wall 3 fortress suggests that the fortress was not (or at least not fully) supplied with grain from the Nile valley, but some fields were cropped and harvested by the inhabitants and therefore it would not have been a temporary camp only.¹⁰⁹ Fishing was here an important occupation,¹¹⁰ crafts and trade were also among the inhabitants' activities.¹¹¹

The fortresses of Tell el-Retaba were an integral part of the defence lines whose origin might have been probably traced to the Walls of the Ruler¹¹². According to the author's interpretation it seems that the first or main line of Egyptian defence *vis a vis* Asia was in the isthmus of Suez. The defence used the lakes in the isthmus, irregularly fed by Nile floods and/or by pharaonic canals. The sills between the lakes might serve as bases for long walls (Walls of Ruler), probably similar to the Middle Kingdom's long walls identified in Aswan¹¹³ and Semna.¹¹⁴

The second line of defence, in Wadi Tumilat, might have comprised "Lake/Marsh Tumilat"¹¹⁵, and old Nile branch/canal to Crocodile/Timsah Lake¹¹⁶, and maybe a possible local part of the Walls of the Ruler, both ends of which could have been the predecessors of the later fortresses of Tell el-Retaba and Tell el-Maskhuta. If the first line of defence in the isthmus of Suez (from the Ways of Horus to Timsah Lake and further southwards) were conquered, the line of defence in Wadi Tumilat would hinder the adversary's free campaign via the desert from the north/north-east towards the south/southwest, to the important metropolitan areas of Heliopolis and Memphis. The Retaba fortresses controlled, probably from

101 Naville, The shrine of Saft el Henneh and the land of Goshen, 25.

102 Petrie / Duncan, Hyksos and Israelite Cities, 28.

103 Naville, The shrine of Saft el Henneh and the land of Goshen, 25.

104 Hudec / Fulajtár / Stopková, AAS 24/2 (2015), 259.

105 Hudec et al., AAS 27/1 (2018), 40.

106 Rzepka et al., PAM 25 (2016), 193–225.

107 Hudec et al., AAS 27/1 (2018), 38.

108 Hudec et al., AAS 27/1 (2018), 44.

109 Rzepka et al., PAM 24/1 (2015), 152.

110 Rzepka et al., PAM 24/1 (2015), 153.

111 Rzepka et al., PAM 24/1 (2015), 153.

112 Hoffmeier, BASOR 343 (2006), 1.

113 Jaritz, MDAIK 49 (1993), 108–132; Vogel, Ägyptische Festungen, 269, Abb. 37.

114 Mills, Kush 15 (1973), 206, pl. XXXVIIIb; Vogel, Ägyptische Festungen, 271, Abb. 38.

115 Bietak, in: Levy / Schneider / Propp (eds), Israel's Exodus in Transdisciplinary Perspective, 21, 23, fig. 2.2.

116 Hudec et al., AAS 27/1 (2018), 31.

the northern(?) side of the old Tumilat Nile branch/canal or on an island, the strategic point in the line between the eastern end of Lake/Marsh Tumilat and the supposed western end (or area) of Tumilat's Walls of the Ruler, where there might have been a guarded passage (ferry, bridge or dike?) over the canal¹¹⁷.

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117 Hudec / Fulajtár / Stopková, AAS 24/2 (2015), 257–258.