The excavations at Qasr el-Sagha in the northern part of the Fayum depression were dedicated to an interesting architectural complex which functioned during the Middle Kingdom and the Second Intermediate Period\(^1\). The said complex comprised a modest temple constructed under the 12th Dynasty\(^2\), which overlooked two urban structures (Fig. 1). One of them, the so-called Eastern Settlement (Fig. 1:C) has survived only fragmentarily\(^3\), and therefore the excavations were focused on the area of the so-called Western Settlement. It is located some 250—300 m to SW of the temple (cf. Fig. 1:B).

The hitherto conducted research proved that probably the so-called workers’ settlement is here in question, additionally provided with a system of


\(^2\) Dieter and Dorothea Arnold, *Der Tempel Qasr el-Sagha* (Archäologische Veröffentlichungen 27), Mainz 1979.

1. Qasr el-Sagha. Topographical situation. A — the Middle Kingdom temple; B — Western Settlement; C — Eastern Settlement; D — cemetery; E, F — stone paved ramparts

reliable fortifications (a brick wall surrounding the whole complex and a ramp reinforced with stone blocks, protecting the town from the side of Lake Qarun, cf. Fig. 1:E).

The existence of the settlement was connected with that of the temple nearby, and also with the presence of a vast cemetery from the Middle Kingdom, bordering the town almost directly from the west (Fig. 1:D)⁴. Also important in this context were rich mineral deposits in the neighbourhood (the inhabitants of the settlement could have been employed at their exploration and processing)⁵.

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This complex was most probably typical and established in accordance with a carefully considered plan, matching the current needs. However, for the first time we deal here with the so well-explored object (Fig. 2), having full architectural and archaeological documentation. The results obtained so far enable an entire reconstruction of the architectural system of the Western Settlement at Qasr el-Sagha (its eastern part was strongly destroyed due to erosion, whereas its NE corner has not yet been excavated).

The whole architectural complex that is taken under consideration, is planned out as an elongated rectangle measuring 113.9 × 80.3 m (217 × 153 cubits), and surrounded by massive defence walls 2.1 m (4 cubits) thick. The building material is a dried sand brick, reinforced at the structure’s corners with adequate limestone blocks. The entire complex is orientated exactly along the NS and EW axes (Figs. 2 and 3).

The town had an excellently planned communication system, consisting of a street 3.15 m wide (6 cubits), encircling the defence walls from inside, and of three streets planned along the NS axis, of which the middle one was a symmetry axis of the whole complex (moreover, it directly connected the north gate with that of the south 6).

Below the level of the street running along the defence wall from the west, the existence of the so-called sinusoidal wall, probably associated with some foundation ritual still unclear to us, has been ascertained (Fig. 4) 7.

As a result of the excavations conducted at Qasr el-Sagha, a precise plan has been obtained of the whole urban development of the Western Settlement (Fig. 3). It became evident that its inner structure comprised 30 regular units grouped along the streets running along the North-South axis. The whole was surrounded, as has already been mentioned, by a street encircling this system and constituting an artery providing communication inside the defences walls and at the same time linking the “vertical” streets into a unified system.

Each of the aforementioned 30 housing units consisted of a rectangular yard (Fig. 5) with the following dimensions 12.90 × 5.25 m (24.5 × 10 cubits) and five narrow rooms adjacent to the latter, measuring 7.90 × 2.10 m each (15 × 4 cubits) 8.

These narrow rooms were most probably confined to serve only as bedrooms, whereas in the yards (Figs. 5 and 6) other activities took place,
15. Qasr el-Sagha, Western Settlement 1987. Flint implements. 1 — a knife from the room No. 3, unit D I; 2 — an axe from the room No. 5, unit D II

16. Qasr el-Sagha, Western Settlement 1988. Fragment of a limestone stela found in room No. 1, unit C IV
3. Qasr el-Sagha. Reconstructed plan of the Western Settlement

4. Qasr el-Sagha. Part of the so-called sinusoidal wall discovered in the Western Settlement, 1983
6. Qasr el-Sagha, Western Settlement 1988. General view of the courtyard belonging to the unit C I (in the background, right, the Middle Kingdom temple is visible)

among others those connected with the preparing of food. This is testified to by round baking ovens 1.20—1.50 m in diameter, situated normally in the northern part of each yard (cf. Figs. 5 and 6). They could have served for both bread-baking and the preparing of food, which is evidenced by the finds of broken bread moulds⁹ and very numerous fish and mammal bones¹⁰, for instance appearing in the oven in the yard of unit D I. Since only lower parts of these round ovens are preserved, it is difficult to establish their constructional details at present.

Assuming that each of the narrow chambers 7.90 m long adjoining the yards could have provided overnight accommodation for four people at each of it walls, we get sleeping space for eight persons in each "room" of this sort. So, the capacity of the whole unit comprising five "rooms" and a yard could have accommodated up to forty people¹¹. Since the entire Western Settlement was composed of thirty regularly planned units like this, it can be concluded that in its prime the number of inhabitants was 1200 people.

It seems, that this is the number reflecting an average quantity of possible dwellers, since there could have been more of them in the times of greater

⁹ On the said type of pottery at Qasr el-Sagha, cf. J. Śliwa, Qasr el-Sagha. Studies... 1979—1985, p. 201 (Fig. 20 on p. 202) and p. 210 (with more extensive bibliography given there).

¹⁰ Concerning earlier material see A. Von den Driesch, Tierknochenfunde aus Qasr el-Sagha/Fayum (Neolithikum und Mittleres Reich), MDAIK 42, 1986, pp. 1—8.

¹¹ It gives the figure of 3.76 m² per 1 person (excluding the possibility of the yard, although for instance in unit C I next to the southern wall of the yard a brick seat-bench was constructed, providing an additional space for at least 2 people).
density, whereas in the final years of the settlement's existence, their number was considerably smaller, which is testified to by the blocked entrances to some rooms, or the filling of others (as in room No. 1 in unit D I) with ashes coming from the ovens situated in the yard. This is also supported by the use of the bricks from dismantled floors of some rooms (in fact uninhabited at the time) for different purposes, the alterations of the yards and their division by means of additional weak partition walls, the building of additional ovens or the construction of the ovens and hearths in other places (after abandoning the old hearths, as was the case in the courtyard of unit D II).

A well-preserved example of a dwelling yard with narrow "rooms" adjoining it is unit C I, unearthed in the course of the 1988 campaign (cf. Fig. 6)\(^\text{12}\). The dimensions of the yard are typical, i.e. 12.90 × 5.25 m (24.5 × 10 cubits). Its south side was delimited with a specially shaped brick bench (Fig. 5), yet not too high to enable comfortable sitting or even reclining\(^\text{13}\).

The entrances to the five narrow dwelling rooms are situated on the west side of the yard and lead through carefully constructed doorways 1.05 m wide (2 cubits). They contain a distinctly formed threshold constructed of three rows of bricks: situated in two narrower lines forming the border, and those arranged transversely (Figs. 7 and 8).

On the right side of the doorway aperture each threshold had a special "bed" or "socket" made of limestone (Fig. 7), enabling a pivot of a single-leaf wooden door to be set\(^\text{14}\). Such a "bed" has survived in situ in the threshold leading to room No. 3 from the adjoining yard of unit C I (Fig. 8), which renders possible the establishment of the purpose of analogous limestone elements encountered rather in force as surface finds within the settlement (Fig. 9)\(^\text{15}\).

Both dwelling rooms, the yards and all of the streets were lined with typical bricks, laid flatwise. On the so carefully laid "pavement" there was a layer of hard mortar 2—3 cm thick, protecting the surface of the not very durable sand

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\(^{12}\) J. Śliwa, *Die Siedlung...,* MDAIK 48, 1991, Fig. 2 and Pls. 38—39. The yards belonging to units D I and D II (cf. above, Fig. 2), were also relatively well-preserved.

\(^{13}\) J. Śliwa, *Die Siedlung...,* MDAIK 48, 1991, Fig. 2 and Pl. 38a.

\(^{14}\) In the missing upper parts of the building (in the lintel), an analogous element was placed (or an adequate socket was made in the lintel beam) for the upper door pivot. On the functioning of such "beds" or "sockets", cf. O. Königsberger, *Die Konstruktion der ägyptischen Tür* (Ägyptologische Forschungen 2), Glückstadt 1936, pp. 37—38 (type 3) and Fig. 43 (object from Illahun). In German, these stone elements are defined as "Drehpfannen" or "Türangeln". The "bed", of a type appearing at Qasr el-Saghra, is represented extremely faithfully in a limestone copy of a wooden door (5th Dynasty) from the Pelizaeus-Museum in Hildesheim, Inv. No. 1540. Cf. B. Schmitz, in: J. A. Eggebrecht, ed., *Das Alte Reich. Ägypten im Zeitalter der Pyramiden, Roemer- und Pelizaeus-Museum, Hildesheim, Mainz* 1986, p. 62.

\(^{15}\) Stone "beds" or "sockets" (as well as other stone elements) were removed from the settlement after its abandonment, having been meant to be reused; smaller or larger "bed" fragments are observable up to now on the settlement's surface (cf. D. Arnold, *Der Tempel Qasr el-Saghra,* Pl. 17 e-f and above, Fig. 9).
8. Qasr el-Sagha, Western Settlement 1988. Entrance leading to room No. 1 of unit C I (with the limestone "door-bed")
9. a-b. Qasr el-Sagha, Western Settlement 1988. Fragments of some limestone "door-beds" found on the surface of unit D III
bricks. It is simply striking that the four hitherto excavated yards are lined with bricks in such a careful and regular manner (cf. Figs. 5 and 6).

In the course of the investigations in the Western Settlement area, a considerable amount of archaeological material has been recorded in the rooms of the housing units and in the yards.

Of course, pottery prevails and that makes an important chronological criterion. In some dwelling rooms and in the yards, an enormous number of potsherds has been found, belonging basically to five principal technological groups (among others, products made of the Nile silt or marl clay, tempered with organic or mineral admixtures) 16.

The pottery includes, among others, large storage vessels, medium-sized wine and beer vessels, and a considerable quantity of characteristic thin-walled drinking bowls. Also, typical conical bread moulds, should be mentioned. On some potsherds, the presence of incised signs (the so-called pot marks), and of hieroglyphs (Fig. 10) has been ascertained. Many potsherds of this type appeared, among others, in room No. 3 within D I unit [also characteristic fragments of Tell el-Yahudiye ware (Fig. 11) and "pan graves" pottery (Fig. 12) have been found] 17.

As far as other finds are concerned, some small alabaster vessels should be mentioned (Fig. 13) as well as those made of different kinds of stone (and their fragments), a stone axe model with an engraved sign on one of its surfaces (Fig. 14:1), a limestone seal (Fig. 14:2), a flint axe and a large knife (Fig. 15) 18, a limestone stela fragment from the nearby cemetery found in unit C IV (Fig. 16), or a bone rattle composed of a pair of miniature hands (Fig. 17:1).

A great number of finds can be associated with cosmetic needs of the inhabitants (the aforementioned stone vessels for oils and kohl, pins, grinders and palettes). In some units, ostrich egg shells used to occur in considerable quantity 19.

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16 Cf. information comprised in excavation reports quoted above and J. Śliwa, Qasr el-Sagha. Studies... 1979—1983, pp. 201—202, Figs. 18—20 (apart from the typology, also the data on the frequency of a particular ware group). Of great importance for the knowledge about the pottery from Qasr el-Sagha were the conclusions reached by Dr Dorothea Arnold on the basis of the sounding made in 1977 (cf. D. and D. Arnold, Der Tempel Qasr el-Sagha, pp. 32—39).


19 Among others, in room No. 1 of unit D I (cf. J. Śliwa, Die Siedlung..., MDAIK 42, 1986, p. 179).
10. Qasr el-Sagha, Western Settlement 1987 and 1988. Fragments of pottery with incised hieroglyphic signs and the so-called pot marks (unit D I)
11. Qasr el-Sagha, Western Settlement 1987 and 1988. Fragments of "Tell el-Yahudie" pottery found in units D I and D II.

The richest finds have been yielded by room No. 4 belonging to dwelling unit D II, among them two fayence bracelets (Fig. 17:2, 3), rectangular cosmetic palette with a grinder (Fig. 18), fragment of a bone pin (Fig. 14:3), amethyst beads and a scarab of the same material (Fig. 19), or a limestone slab fragment with an engraved image of a simplified human figure (Fig. 20).

In the course of the excavations conducted within the precincts of the Western Settlement at Qasr el-Sagha, particularly interesting materials have been obtained that enable the ascertainment of the architectural and urban form of a modest workers' village, probably connected with the functioning of the temple and cemetery nearby.


21 The participation of inhabitants in the exploitation of the aforementioned mineral resources in the vicinity (see above, note 5) wasn’t probably of little importance.
12. Qasr el-Sagha, Western Settlement 1987. "Pan graves" pottery found in room No. 3, unit D I

14. Qasr el-Sagha, Western Settlement 1987 and 1988. 1 — limestone axe found in room No. 1, unit D II; 2 — limestone stamp found on the surface of the courtyard of unit C I; 3 — fragment of bone pin, found in room No. 4, unit D II
17. Qasr el-Sagha, Western Settlement 1987 and 1988. 1 — a bone rattler found in room No. 3, unit D II; 2, 3 — faience bracelets found in room No. 4, unit D II

18. Qasr el-Sagha, Western Settlement 1985. Small finds from room No. 1, unit D I
19. Qasr el-Sagha, Western Settlement 1988. Amethyst scarab found in room No. 4, unit D II

20. Qasr el-Sagha, Western Settlement 1988. Fragment of limestone slab with incised human figure found in room No. 4, unit D II

The clear division visible in the settlement plan, resulted in the existence of the aforesaid 30 dwelling units, which could also have been connected with their inhabitants having been affiliated with specialized professional groups of which each, as has been remarked above, could have numbered up to 40 people. It cannot be excluded that the people concentrated at Qasr el-Sagha performed their duties under supervision or simply under pressure.

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22 In general, however, such gangs were considerably smaller. On the division and organization of workers' gangs, together with extensive bibliography, cf. W. Heck, Arbeiterabteilungen un- organisationen, [in:] Lexikon der Ägyptologie, Vol. I, 1975, col. 371—374.

23 According to the suggestion of Prof. Ulrich Luft (Budapest), such an urban complex as the one that is being dealt with here, could eventually be associated with the name ḫnrt, known from Egyptian texts (cf. Wörterbuch der ägyptischen Sprache, Vol. III, Berlin 1957, p. 296), also with
This is the only hitherto known, unique example of such a complex being in whole precisely planned, and dating back to the Middle Kingdom and later used during the Second Intermediate Period. It substantially complements the knowledge of the problems posed for the Old Kingdom by the constructions serving the workmen building the pyramids, or by recently discovered structures used by the workers erecting the Sadd el-Kafara dam (also from the Old Kingdom). On the other hand, as far as the Middle Kingdom is concerned, a much larger and more diversified settlement at Kahun not very far away from Qasr el-Sagha should be recalled (it was explored in the end of the last century by W. M. F. Petrie).

The object discussed here, proves to be still yet another variant, entirely homogenous, of a carefully planned structure displaying interesting architectural and constructional features. This fortified dwelling complex that was dealt with here, was based upon a primary design, precisely prepared, undoubtedly typical and probably adjusted to a required scale. The results of our investigations thus cast some more light on the hitherto so poorly recognized architecture of the Middle Kingdom in Egypt.

the meaning of settlement for seasonal work. According to Dr Stephen Quirke (London) the settlement at Qasr el-Sagha is a government housing scheme for workers involved in manual labour for the state (corvee); the late Middle Kingdom ḫnrt for workers, specifically perhaps for the lḥw-inrw “stone-haulers”, may develop out of early Middle Kingdom ḫnrt for military campaigns (letter from 29th October 1992).

The whole site is very well dated not only by means of pottery and other finds, but also based on some C¹⁴ samples, analysed at the laboratories of Berlin and Gliwice. Cf. M. F. Pazdur, [in:] Qasr el-Sagha. Contributions..., pp. 114—117.


The whole complex, being rather a temporary residence of the king Sesosti II, possesses in its western part only a clearly separated quarter, in which a kind of workers’ village is to be seen. Cf. W. M. F. Petrie, Kahun, Gurob, Hawara, London 1890, p. 21 sq., Pl. XV.