# BUILDING G IN NAQLUN: MATERIAL, CONSTRUCTION, FURNISHING 

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Building $G$ was discovered in the 2003 season and the western part was explored at the time. ${ }^{1}$ In the next season, the rooms by the south wall of the complex were excavated ${ }^{2}$ and in 2005 it was possible to complete the examinations and interpret the layout and nature of Building G (for the
plan and general view of the building after explorations, see above, Figs 1 and 2 on pp. 196-197 in this volume). ${ }^{3}$ Barring a few exceptions, this report concerns walls uncovered in seasons 2004 and 2005. With regard to the other structures, the report covers finds from seasons 2003-2005.

## THE W ALLS

## MATERIAL

The remains of walls (long sections of which are preserved as mere negatives of foundations) and the material from the rubble prove that the newly uncovered parts of Building G were constructed of virtually nothing but dark grey mud brick with chaff as temper ( $22-23.5 \times 11-12 \times 5-5.5 \mathrm{~cm}$ ). ${ }^{4}$ Some of the baked bricks (24-25.5 x 11-12 $x 5.5-7.5 \mathrm{~cm}$ ) found in the fill in the central and northern parts of the complex could have come from the collapsed walls. ${ }^{5}$ The lower parts of the east wall of room G. 6
were made partly of baked brick. In the southeastern corner of room G.6, the lower parts of the wall had irregular chunks of yellow dressed limestone in their construction.

It is not clear, however, what the white limestone cubes with four or five dressed sides were used for. They came in two sizes: $10 \times 9 \times 7 \mathrm{~cm}$ (from room G. 9 and G.10) and $22-27 \times 11.5-12 \times 6.5-12 \mathrm{~cm}$ (from room G.8). They have been found along the outer building walls, indicating that they were most likely part of the construction.

[^0]They could have reinforced the upper parts of the walls around the setting of the roof beams or else they could have held in place the wooden elements of window frames.
Gray mud mortar, often a shade lighter than the bricks in color, was used invariably as binding material. ${ }^{6}$ Temper other than chaff included lime, gravel and yellow desert clay, either separately or in combination. Horizontal joints between bricks had a thickness of 0.3-1.5 cm.

In the newly uncovered rooms most of the walls were coated with mud plaster
containing organic temper. A very fine coating of such plaster was found in rooms G. 4 and G.6, where the floor was made of the same material and passed smoothly into the walls. Fragments of hard grayish lime plaster ( $0.4-1.2 \mathrm{~cm}$ thick) were found scattered in the fill of room G.8a above yellow desert clay (with chaff). Since not one piece was detected on the walls of the room, it is reasonable to think that the plaster was found here accidentally and originated rather from the nearby Building D.


Fig. 1. Room G.8a, view from the south. Example of wall bond consisting of alternating courses of headers on edge and stretchers (Photo W. Godlewski)

## CONSTRUCTION ${ }^{7}$

Building $G$ was built in at least two stages. This is indicated foremost by the rounded outer, northeastern corner of room G. 7 (on the street side) and the higher foundation level of the new part of the building. The older part of Building G encompassed rooms G.1-G. 7 and G.9. The walls were built onto the already standing structure to the west of it (Building E and Structure 100, which was
perhaps the northeastern corner of Building E). The newer part of Building G, attached to the existing complex, consisted of rooms G. 8 and G.10-G.11.

Building $G$ being so extensive, its walls, even in the original part, were not all founded on the same ground. The south wall of room G. 2 and G. 9 was erected, at least in part, on bedrock. ${ }^{8}$ The rest stood on tamped ground (east wall of rooms G. 9 and G.7, possibly also G. 4 and


Fig. 2. Model examples of wall bondwork (Drawing S. Maślak)

[^1]G.6) or a layer of broken eroded rock (north wall of G. 7 in the latter case). The foundation courses consisted mostly of bricks laid as headers, more seldom as headers on edge and headers on edge passing into headers. ${ }^{9}$

The bottom parts of these walls (0.580.63 m thick) were erected in a highly characteristic bond [Fig. 2a\}, which changed at about 0.85 m from the base of the foundation, where the walls narrowed to 0.54 m . This is exceptionally well observed on the west face of the east wall of room G.7, where the upper part of the wall was even slightly recessed at this point [Fig. 3]. The uniqueness of this construction can be observed only in crosssection; the face was both in the lower and upper parts made exclusively of alternating courses of stretchers and headers on edge [cf. Fig. 2a].

Room G.8a in the northwestern corner of Building $G$ had walls varying in thickness from 0.27 to 0.56 m . It was erected with relatively little care, using many fragments of bricks. The faces present alternating courses of headers on edge and stretchers, in some areas replaced respectively by stretchers on edge or headers [Fig. 2b]. The foundation course of stretchers, as well as headers on edge passing into headers, was erected on crushed rock and earth mixed with substantial quantities of potsherds for absorbing damp. The lower part of the wall in the northwestern corner of the room had a small opening built into it, its top worked into an arched vault of baked brick (23-24 x 11-12 x 7 cm ). ${ }^{10}$

At some point, Building $G$ was developed, absorbing into it parts of streets E. 1 to the east and N. 2 to the north. The outer walls of rooms G. 8 and G. 10 were erected on tamped earth which was the street surface, at a level one step higher than the original complex [cf. Fig. 3]. They were $53-58 \mathrm{~cm}$ thick and presented standard bondwork of alternating courses of headers on edge and stretchers, ${ }^{11}$ but the foundation courses constituted an interesting case of headers on edge, followed higher up by stretchers and headers in the southern section and solely stretchers in the northern end.

A staircase was added inside room G.10, at the same time as its east and south walls were built or perhaps as a second thought, founded on leaning headers on edge which were laid on tamped earth. The thickness of the staircase walls ( $35-36 \mathrm{~cm}$ ) and the bondwork (alternating headers on edge and two courses of stretchers) corresponded ideally with the walls of room G. $11^{12}$ and the wall between rooms G. 2 and G. 9 (this being $0.37-0.39 \mathrm{~m}$ wide), suggesting contemporaneous construction. This stage of the construction was connected with a new arrangement of the intersection of streets E. 1 and N.1. The narrowed section created by the introduction of room G. 11 was transformed into a narrow corridor by the addition of a large rectangular room AE. 1 (east of Building A) and related walls. All of these walls were like the new walls in the eastern part of Building G built on tamped earth or on tamped earth mixed with sebbakb. ${ }^{13}$

[^2]
Fig. 3. Section E-W through rooms G.8 and G.7 and street E.1: 1-3-sand and topsoil; 4-brown soil with building debris, sherds, charred plant remains; 5 - tightly packed rubble; 6-7-light brown sand; 9-dark brown soil with sebbakh. Note remains of brown whitewashed plaster on the face of the wall in G. 7 (Drawing S. Maslak)

## ROOFS AND VAULTS

Building G had a flat roof. Fragments of roofing beams have been preserved in the fill of rooms G. 9 and G.4. The beams were made of palm wood, partly dressed, the orientation of laying being E-W. ${ }^{14}$ Bundles of reed about 150 cm long rested directly on the beams and were tied with palmfiber ropes. No palm-leaf ribs (jarids) were observed in the fill and it should be presumed that none were used in the structure of the roof in these cases. ${ }^{15}$

Some rooms yielded such quantities of reeds that it is unlikely to imagine that all
were used as roofing. Perhaps this was fuel stored on a flat roof. ${ }^{16}$ To judge by reed impressions noted on pieces of mortar from the fill, a layer of mud mortar was plastered directly on top of the reeds, followed by mud bricks laid flat on top. The mortar together with the layer of bricks was $7-8 \mathrm{~cm}$ thick.

The sole surviving roof in Building $G$ is the construction under the steps in room G.10. Obliquely inclined mud bricks in the vaulting course lean toward the west wall of the staircase against which they are supported.

## FLOORS

Pugging of tamped grayish-brown earth was frequent in Building G, especially in the enlarged part of the complex, that is, in rooms G. 8 and G.10. Sequences of floors were discovered here, laid successively to match the rising walking level. Some of these floors could be identical with the surfaces of streets E. 1 and N. 1 before their inclusion into Building G. A variant of this kind of floor is a mud surface reinforced with mud-brick debris, e.g. floor in the western part of room G. 8 and by the passage to the north of room G.8a. Floors made of gray mud with straw chaff as temper, leveled with care and passing smoothly into wall plastering (as demonstrated by the rounded surfaces in the room
corners), appear to be more frequent in the older part of the complex. The best preserved examples come from room G.4, but for some reason the southern and southwestern parts of this room were covered with similar, but much more carelessly executed pugging. In the adjacent room G. 9 on the south, the floor has been preserved only in the southern part. Larger fragments of tamped mud floors have also been preserved in the corridors G.1-G.3-G.5. Small stretches of the floor were preserved along the walls in rooms G. 2 and G.7. Execution technique is well illustrated by the remnants of floor seen in section in the northern part of Room G.10: gray mud with chaff plastered

[^3]over mud bricks laid flat but rather irregularly. A similar substructure of mud brick can be seen under the mud floor in corridor G.1.

The well-preserved floor in room G. 6 is different in many respects. The joining line crossing the room indicates that it was laid in at least two stages. The upper layer, about 3 cm thick, was executed of hard lime mortar called 'cement plaster', ${ }^{17}$ laid on a layer of baked brick about 8 cm thick
laid flat on a "bedding" of gray mud with chaff as temper. This clay bedding, directly on bedrock may have constituted the original floor of room G.6. The creamcolored coating of plaster made of desert clay can be seen to flow down smoothly onto it (especially on the east and west walls). The laying of the upper floor could have corresponded to a renovation of the room connected with whitewashing of the cream-plastered walls. ${ }^{18}$

## WINDOWS

The lighting and ventilation of Building $G$ remains a doubtful issue. In similarity to other buildings from different ages found in Fayum Oasis, it can be assumed that windows were placed fairly high on the walls (just under the ceiling). ${ }^{19}$ In Building $G$ they should be expected foremost in the walls coming out on streets N.1, E. 1 and N.2, first of all in the older and smaller part of the complex and then in the planned extension of the building incorporating the adjacent streets. The condition of walls preserved no higher than $1.20-1.30 \mathrm{~m}^{20}$ has unfortunately left no trace of any kind of
construction that could possibly be attributed to a window.

The fill of room G. 6 yielded two palmwood beams with evenly cut ends and more or less dressed surfaces, bearing remains of mud mortar. Their size ( $111 \times 12$ x 8.5 cm and $70 \times 18.5-19.5 \mathrm{x} 9 \mathrm{~cm}$ ) precludes their use as roof beams, but they could have framed a skylight, similar to those that can be observed in the architecture of the 20th-century monastery at Naqlun, or else formed part of a window in the original outer wall.

Doorways could have also supplied light and air to rooms in Building G.

## DOORS

Three entrances to Building G have been located: two from the south from street N. 1 and one from the north from street N.2, the latter preserved only at walking level. A door into the building from street E. 1 seems
unlikely. The eastern outer wall of the extended Building $G$ was dismantled down to the foundations in places, but a careful analysis of the street surfaces shows no evidence of an entrance here.

[^4]The doorway in the southwestern corner of the building, 0.67 m wide, was coated carefully with light-colored mud plaster [Fig. 4]. ${ }^{21}$ Measuring 0.22 m above the floor in corridor G.1, the threshold should be considered as relatively high. Just inside the doorway on the left, a door socket has survived and just above it, impressed in the plaster, traces of a turning vertical door pivot.

The second doorway from the south, $0.76-0.77 \mathrm{~m}$ wide, giving entry to room G.10, has both the jambs preserved in
good condition. They were built of baked bricks (23-25 x 12-13 x 7 cm ) laid flat. A wooden threshold and jamb have also been preserved. To the east of the doorway, the bondwork includes wooden elements of unknown function.

Inner doorways ${ }^{22}$ in the complex were furnished with either wood or brick thresholds. Beams of wood used as thresholds were laid on a layer of bricks arranged as headers on edge. The brick thresholds consisted of just the bricks, laid as headers on edge in most cases.


Fig. 4. Southwestern entrance to Building G (G.1), view from the north (Photo W. Godlewski)

21 Cf. Godlewski, PAM XV, op. cit., 147, Fig. 6.
22 Width of doors between rooms: G. 2 and G. $9,0.92 \mathrm{~m}$; G. 3 and G. $4,0.92 \mathrm{~m}$; G. 5 and G. $4,0.88 \mathrm{~m}$ : G. 5 and G.6, 0.88 m ; G. 5 and G. $7,0.82 \mathrm{~m}$; G. 4 and G. $9,0.87 \mathrm{~m}$.

## STAIRS

The staircase in room G. $10^{23}$ was entered from the north through a door 78 cm wide. A wooden beam in the threshold rested on a row of baked bricks ( $24-25 \times 10-11 \times 6-$ 6.5 cm ) set on edge [Fig. 5〕. The door socket on the inside of the threshold indicates that the door opened inside. The steps started directly to the right of the door, while the space under the steps could be accessed from behind a low wall opposite the entrance. The stairs were $0.70-0.73 \mathrm{~m}$ wide. Fragments of five steps and two landings have survived. Each step was $12-14 \mathrm{~cm}$ high, the edges reinforced with wooden beams. The staircase was likely connected with room G. 11 and
presumably with the entrance gate from street E. 1 into the space of street N.1.

The steps in room G. 2 were connected with the basin found there. Three steps, each c. $0.20-0.25 \mathrm{~m}$ high, led to a platform above the basin. They took on the form of a massive mud-brick structure. The treads alone were laid with baked brick ( $25 \times 12-13 \times 7-8 \mathrm{~cm}$ ).

More but poorly preserved steps were located in the northeastern corner of room G.6. It was likely from here that room G. 8 was entered after the complex was extended. Nothing but the side walls of these steps has been preserved, coupled with the substructure of the steps of mud brick and numerous baked bricks ( $23-23.5 \times 10.5-11 \times 7 \mathrm{~cm}$ ) in the fill.


Fig. 5. Staircase in room G.10, view from the east (Photo W. Godlewski)

Fig. 6. Section looking south through the basin in G. 2 and doorway to G1
(Photo W. Godlewski)

## BASINS

The basin in room G. $2^{24}$ took on trapezoid shape, measuring 1.10 by 1.80 m . The side walls were from 0.13 to 0.16 m thick. The floor sloped away slightly toward a round depression ( 0.36 m in diameter; 0.24 m deep) in the northwestern corner [Figs 6,7]. The walls and floor of the basin were constructed of baked brick laid flat and coated with a thick layer of hard white lime mortar. A much thinner, 0.6 cm thick coating of lime plaster on a mud-plaster ground was used for the walls around the basin. ${ }^{25}$

Another basin connected with fragments of a small round stone vat was discovered in the northeastern corner of room G. 8 [Fig. 8]. Only the eastern part was preserved with sections of the floor and two sills. When complete, the basin measured 1.14 x 2.24 cm . It was constructed of baked brick (24-25 x 11$12 \times 6.5-7 \mathrm{~cm}$ ) laid flat in a dark gray lime-ash mortar seldom encountered in Naqlun. The surface plaster consisted of a hard lime mortar, more or less 2 cm thick and grayish in color.


Fig. 7. Basin in G.2, note round depression at top left
(Photo W. Godlewski)

24 Loc. cit.
25 Maślak, PAM XV, op. cit., 153, where the upper parts of the basin were referred to mistakenly as "the niche under the stairs".


Fig. 8. Plan of basin in room G. 8
(Drawing S. Maslak)

## CONCLUSIONS

The material used in the walls and other constructions inside Building G is characteristically homogeneous. Dark gray river mud is the principal raw material, often with straw chaff added as temper, less often with lime, gravel or yellow desert clay. At all stages of the development of Building G, the bricks were of the same general size and were made with few exceptions of the said river mud. This and the relatively insignificant differences in the foundation levels of old and new walls prove that the principal building activities in this complex were carried out within a relatively short period of time. The 10th century is a likely date for this construction. ${ }^{26}$

Nevertheless, the interior of Building G reveals evidence of a number of renovations and functional alterations over the course of its existence.

It is difficult to trace the stages of abandonment and destruction of the complex. The first to be put out of use was room G. 9 when its roof collapsed. The adjacent rooms G. 2 and G. 4 appear to have been operational after this event. Some time later the entrance to the building from street N. 1 was blocked. Corridor G. 3 lost its original function then, making it possible for a round brick-lined hearth to appear in its northern end. The blocking of both doors from the south should be connected with the church cemetery (developing around Building A) which encroached also on street N.1. From this point on, the only access to Building G was from the north and this entrance remained in use until the very end. At this time, the
complex could have already been partly in ruin.

A conflagration consumed at some point the area to the north of the complex. ${ }^{27}$ It must have spread to the north wall of Structure 100 as well as Building $G$ and room D.8. These walls, and presumably the whole buildings were not rebuilt and the walls started to collapse, falling in stages toward the north. Between successive phases of collapse, windblown sand and dry vegetation drifted in, accumulating on the surface of street N.2. The south wall of D. 8 was still standing at this time, although it was shortly to fall prey to plunderers of building material.

A similar fate met most of the walls of Building G. Some were meticulously dismantled down to the foundations [cf. Fig. 3, east wall of room G.8]. Regular dismantling alternating with natural decline led to rubble fill forming in particular rooms of the complex, consisting (as excavations in 2005 have proved) mostly of mud brick, some baked brick, stones, wall plaster and mortar. Evidence of the roof in the form of bundles of reeds, mortar and pieces of palm beams were also recorded. The archaeological material from the fill included quantities of pottery, some broken glass and small wooden elements (pieces of furniture, keys etc.).

In the 13 th century the ruined and partly filled in complex stood on the fringes of the cemetery developing around the church (Building A). Two graves from this burial ground were explored in room G.2. ${ }^{28}$

[^5]
[^0]:    1 Rooms G.1, G. 3 and G.5, partly G.2, G.4, G.6, G.7, G. 8 and G.11: see W. Godlewski, PAM XV, Reports 2003 (2004), 144, 146-149; S. Maślak, PAM XV, op.cit., 152-158.
    2 G.2, G.9, G. 10 (with staircase), G. 11 and additionally G.7: see W. Godlewski, PAM XVI, Reports 2004 (2005), 187189.

    3 Cf. W. Godlewski, PAM I, Reports 1988-1989 (1990), 33; W. Godlewski, T. Derda, T. Górecki, "Deir el Naqlun (Nekloni), 1988-1989: Second Preliminary Report", Nubica III/1 (1994), 213-216, Fig. 9; Maślak, PAM XV, op. cit., 152-158.
    4 The only bricks with little or no chaff were the ones in the lower parts of the south and east walls of rooms G. 10 and the east and north walls of room G.8. They contained some lime or lumps of yellow desert clay instead, this giving them a specific brownish or yellowish color. On the size and kinds of bricks in other parts of Building $G$ and the neighboring Building E to the west, cf. W. Godlewski, PAM XI, Reports 1999 (2000), 130; Maślak, PAM XV, op. cit., 152-153.
    5 Cf. Maślak, PAM XV, op. cit., 153.

[^1]:    7 For the construction of other walls of Building G, see Maślak, PAM XV, op. cit., 154-158.
    8 Cf. Maślak, PAM XV, op. cit., 158.

[^2]:    9 Cf. Maślak, PAM XV, op. cit., 158.
    10 For a discussion of the pottery deposit found in room G.8a, see contribution by M. Żurek in this volume.
    11 Cf. Maślak, PAM XV, op. cit., 156, Fig. 2F.
    12 Cf. Maślak, PAM XV, op. cit., 156, Fig. 2G, 158.
    13 Cf. Maślak, PAM XV, op. cit., 158.

[^3]:    $14 \quad 15-20 \times 20-23 \mathrm{~cm}$ in section; preserved length between 1.10 and 1.93 m . Actual length can be reconstructed based on room width at least as $3.40-4.10 \mathrm{~m}$ (beam of similar size, i.e., $407 \times 25 \times 7 \mathrm{~cm}$, unquestionably from the roofing, was excavated in House X at Tebtynis and dated to the second half of the 9th century, cf. M.-O. Rousset, S. Marchand, "Secteur nord de Tebtynis (Fayyoum). Mission de 1999", AnIsl 34 (2000), 424).
    15 Cf. B.P. Grenfell, A.S. Hunt, D.G. Hogarth, Fayum Towns and their Papyri (London 1900), 23-24; E. Husselman, Karanis. Excavations of the University of Michigan in Egypt 1928-1935. Topography and Architecture (Ann Arbor 1979), 37.

    16 Cf. Godlewski, Derda, Górecki, op. cit., 212-214. There are other purposes for which bundles of reeds could be used, cf. Husselman, op. cit., 37, Pl. 28a.

[^4]:    17 Also used for part of the floor in room G.5, cf. Maślak, PAM XV, op.cit., 153.
    18 Cf. Maślak, PAM XV, op. cit., 154, where the "whitewashed plaster" was erroneously attributed to room G. 5 instead of G.6.
    19 Cf. A.E.R. Boak, E.E. Peterson, Karanis. Topographical and Architectural Report of Excavations During the Seasons 1924-28 (Ann Arbor 1931), 15, 28, Pls XX-Fig. 39, XXXII-Fig. 63; Husselman, op. cit., 44-46, Pls 59-60a.
    20 Godlewski, PAM XV, op. cit., 147; Godlewski, PAM XVI, op. cit., 187.

[^5]:    26 W. Godlewski, PAM XIV, Reports 2002 (2003), 165; Godlewski, PAM XVI, op. cit., 187.
    27 Cf. Godlewski, Derda, Górecki, op. cit., 212.
    28 Godlewski, PAM XV, op. cit., 148; Godlewski, PAM XVI, op. cit., 183, 187.

