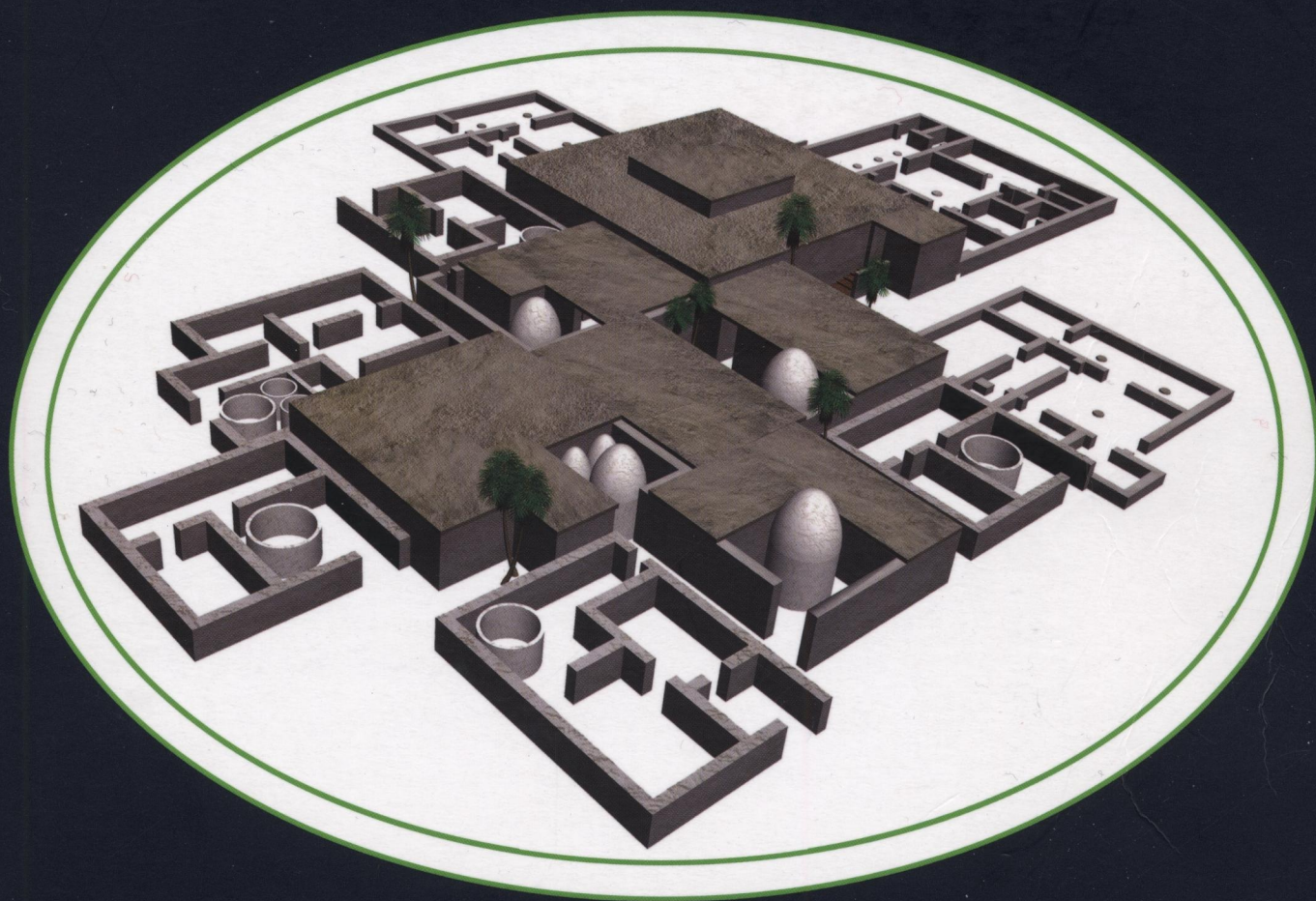


MANFRED BIETAK, ERNST CZERNY, IRENE FORSTNER-MÜLLER (Eds.)

CITIES AND URBANISM in Ancient Egypt



Papers from a Workshop in November 2006
at the Austrian Academy of Sciences

Verlag der
Österreichischen Akademie
der Wissenschaften



OAW

ÖSTERREICHISCHE AKADEMIE DER WISSENSCHAFTEN
DENKSCHRIFTEN DER GESAMTAKADEMIE, BAND LX

UNTERSUCHUNGEN DER ZWEIGSTELLE KAIRO
DES ÖSTERREICHISCHEN ARCHÄOLOGISCHEN INSTITUTES

HERAUSGEGEBEN IN VERBINDUNG MIT DER KOMMISSION FÜR ÄGYPTEN UND
LEVANTE DER ÖSTERREICHISCHEN AKADEMIE DER WISSENSCHAFTEN
VON MANFRED BIETAK

BAND XXXV

Verlag der
Österreichischen Akademie
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Wien 2010

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Vorgelegt von w. M. MANFRED BIETAK in der Sitzung am 12. Dezember 2008

Gedruckt mit Unterstützung durch
das Holzhausen-Legat der Österreichischen Akademie der Wissenschaften

British Library Cataloguing in Publication data.
A Catalogue record of this book is available from the British Library.

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ISBN: 978-3-7001-6591-0

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Österreichische Akademie der Wissenschaften
Wien

Grafik, Satz, Layout: Angela Schwab
Druck: Wograndl Druck GmbH, 7210 Mattersburg

<http://hw.oeaw.ac.at/6591-0>
<http://verlag.oeaw.ac.at>

Printed and bound in Austria

INHALT

Contents	5
Bibliographical Abbreviations	7
MANFRED BIETAK, ERNST CZERNY and IRENE FORSTNER-MÜLLER	
Preface by the Editors	9
MANFRED BIETAK	
Houses, Palaces and Development of Social Structure in Avaris	11
ERNST CZERNY	
Fragments of Information. Observations Concerning the Architectural Layout of the Middle Kingdom Settlement at ‘Ezbet Rushdi	69
FLORENCE DOYEN	
La résidence d’élite: un type de stucture dans l’organisation spatiale urbaine du Moyen Empire	81
IRENE FORSTNER-MÜLLER	
Settlement Patterns at Avaris. A Study on Two Cases	103
ANGUS GRAHAM	
Islands in the Nile: A Geoarchaeological Approach to Settlement Location in the Egyptian Nile Valley and the Case of Karnak	125
STAN HENDRICKX, DIRK HUYGE and CLAIRE NEWTON	
The Walls of Elkab	145
MARK LEHNER and ANA TAVARES	
Walls, Ways and Stratigraphy: Signs of Social Control in an Urban Footprint at Giza	171
WOLFGANG MÜLLER	
Urbanism in Graeco-Roman Egypt	217
CORNELIUS VON PILGRIM	
Elephantine – (Festungs-)Stadt am Ersten Katarakt	257
STEVEN SNAPE	
Vor der Kaserne: External Supply and Self-Sufficiency at Zawiyet Umm el-Rakham	271
KATE SPENCE	
Settlement Structure and Social Interaction at El-Amarna	289
CAROLA VOGEL	
Storming the Gates? Entrance Protection in the Military Architecture of Middle Kingdom Nubia	299
JOCHEM KAHL	
Frauen aus Nilschlamm – ein Beitrag zur Anthropologie der Stadt	321

WALLS, WAYS AND STRATIGRAPHY: SIGNS OF SOCIAL CONTROL IN AN URBAN FOOTPRINT AT GIZA

Mark Lehner and Ana Tavares

The Giza Plateau Mapping Project has surveyed the broad outlines and major structures of an urban installation covering about 7 hectares 400 meters south of the Sphinx and south-southeast of the large stonewall called *Heit el-Ghurob*, the Wall of the Crow (LEHNER and WETTERSTROM 2007; LEHNER 2002). Over recent decades men and boys from the nearby riding stables removed sand from the site, hereafter named HeG. The clean sand derived from a long period of deposition by wind. The stable hands spread the sand on the floors of the stables. After they cleaned the stables they returned the sand to the site with its new inclusions. When we cleared this material, other modern refuse, Selim Hassan's dumps from his excavations near the Sphinx in the late 1930s, and remaining aeolian clean sand, we exposed what is essentially a broad horizontal section through the mud brick and fieldstone ruins of a 4th dynasty settlement. The horizontal section results from powerful forces of erosion cutting the ruins of the abandoned settlement, most probably within the time frame of the Old Kingdom (and therefore evidential, we believe, of major climate change). Most of the architecture that shows in the surface of the ruin field belongs to a phase of the settlement that dates from the middle to the late 4th dynasty (Khafre to Menkaure). Our excavations have exposed parts of an older, underlying, architectural layout with a different arrangement, but also dating to the 4th dynasty.

I. FOOTPRINT OF THE PYRAMID BUILDING STATE

People have long wondered about how the ancient Egyptians organized labor for building their largest structures, the giant pyramids of the early Old Kingdom. How did the royal house mobilize labor for the task? Modern imagination ranges from slave labor to people happily engaged in sacred service for their god kings. The footprint of the settlement created for housing personnel and infrastructure should reveal something about how the early state in Egypt marshaled and controlled people and resources for the very special task at Giza. Our intensive retrieval and

analysis of material culture, and the ability to see patterns of distributions across the site, help us make inferences about the social organization behind early pyramid building.

I. A. The Gallery Complex

The Gallery Complex, consisting of four large blocks of galleries separated by thick mudbrick walls, forms the centerpiece of the settlement, flanked east, west and south by fieldstone structures, for production, including bakeries (Fig. 1). A fieldstone wall, 2 m wide, encloses this ensemble on the west and south. Another large enclosure (RAB) off the southeastern corner of the Gallery Complex contains a sunken court of silos, probably for storing grain. Sealings that we retrieved from excavating a complex of rooms in the NW corner of the RAB bear the royal names of Khafre and Menkaure. These and mud tokens suggest that people were engaged in accounting and administration in the RAB. To the east of the Gallery Complex and the RAB, a series of small chambers and courts form the "Eastern Town." To the south of the Gallery Complex and west of the RAB we found a series of large enclosures containing courts and magazines, probably functional extensions of the RAB. Farther southwest a maze of walls that shows in the surface of the ruin field includes a series of large houses of the "Western Town."

I. B. Material Culture: Intensified Production

Our systemic, intensive retrieval and analysis of ancient objects, plant remains, animal bone, ceramics, sealings, lithics (chipped and ground stone), and charcoal have provided a great deal of evidence about life in the distinct parts of this settlement (LEHNER 2003). We work with the hypothesis that the galleries were barracks. The surrounding fieldstone structures, including bakeries, processed foodstuff for those ensconced in the Gallery Complex, perhaps temporarily in a rotation of service. The distribution of grinding stones and archaeobotanical evidence suggests that those who

¹ We would like to thank Wilma Wetterstrom and Farrah Brown for preparing the maps and plans we use in this article. All photographs are by Mark Lehner.

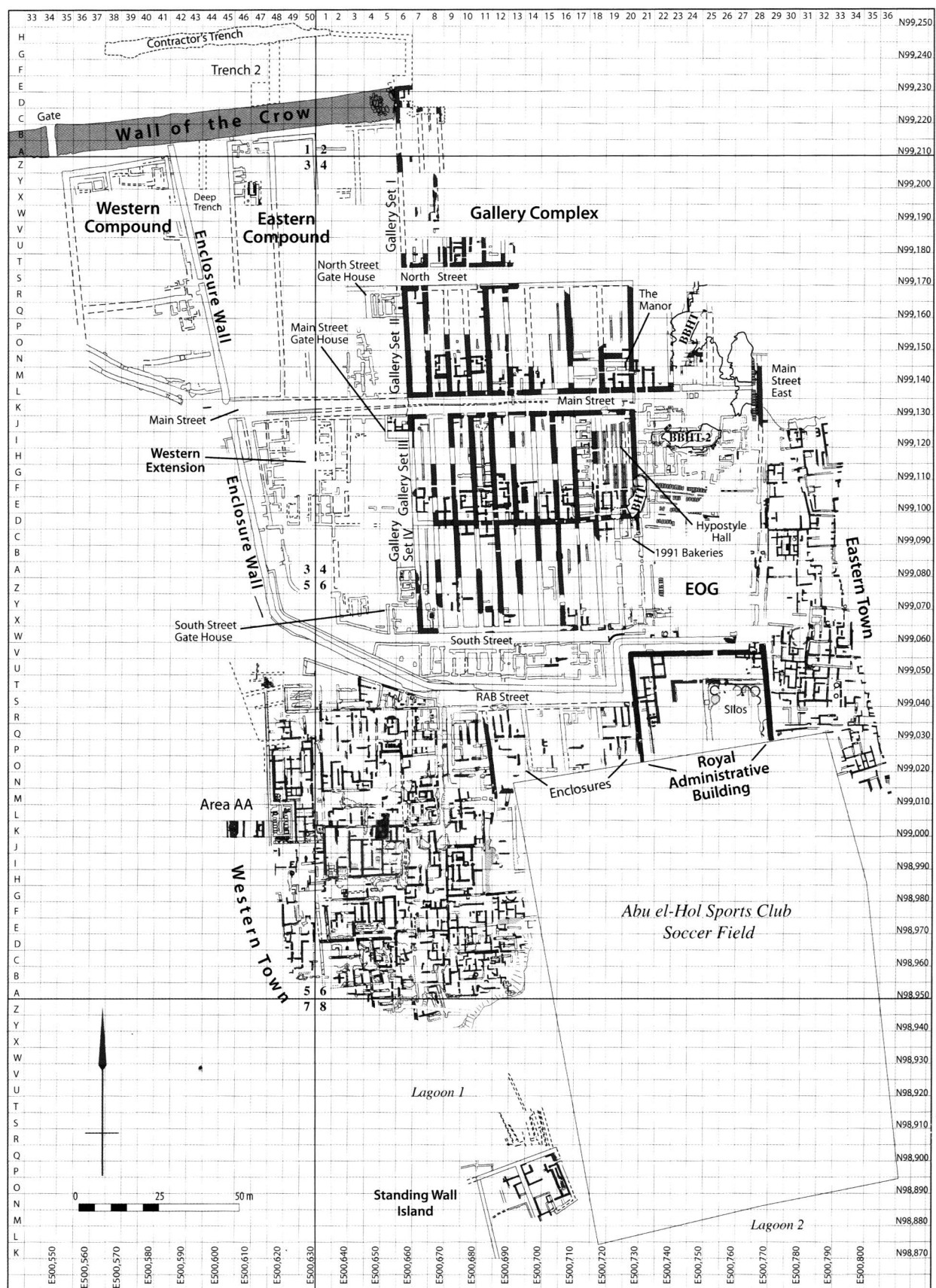


Fig. 1 Map of the 4th Dynasty HeG settlement S-SE of the Wall of the Crow

lived in the Eastern Town were responsible for processing raw materials and foodstuff for consumption. We further hypothesize that the RAB was dedicated to centralized storage and administration (LEHNER 2002, 68–74). Sealings from the Western Town support the hypothesis that high-ranking administrators lived and worked in this part of the site.

The architectural layout and the distribution patterns of the material culture indicate a high degree of

control of production and of movement within and between the distinct components of the settlement. The pathways between the distinct parts of the site, the constrictions along these pathways, and the locations of certain house-like structures, suggest that people of different status occupied the Gallery Complex, the RAB, and the Western Town. Bed platforms across or beside critical doorways hint that particular chambers and doorways within the major structures were guard-

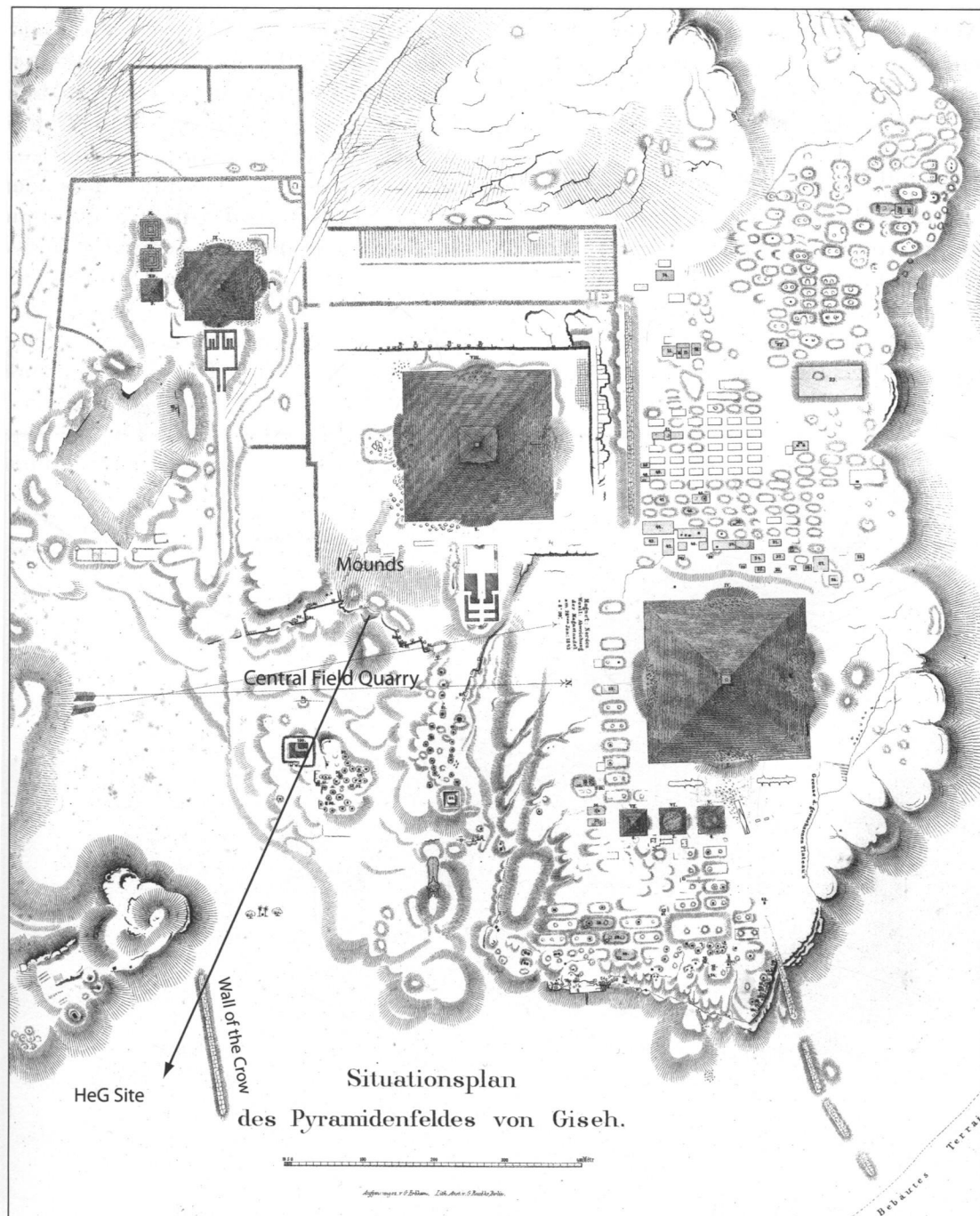


Fig. 2 Lepsuis's map of the Giza Necropolis with line of sight from NW corner of the Central Field quarries to the SE across the Wall of the Crow to the location of the HeG Settlement site. At the NW of the quarry the map shows three mounds that cover masonry structures

ed and monitored day and night. The Abu Sir Papyri document how critical doorways and pathways in the pyramid temple of Neferirkare were similarly guarded and monitored (LEHNER and SADARANGANI 2007).

II. CONTROL OF THE LANDSCAPE: SITE LOCATION

The location of the HeG site itself attests to strict control over the flow of people and material into the Giza pyramid construction site. The site is situated south of the Wall of the Crow on a tract of low desert on the southern flank of a wadi fan (Figs. 3, 7). The Sphinx and Khafre Valley temple occupy the opposite side of the wadi opening. This lowest area of the Giza Plateau must have long seen deliveries of people, supplies, and building materials (LEHNER 1985, 132–133).

II. A. Moqattam and Maadi Formations

Two limestone formations outcrop at Giza (Fig. 3). The pyramid plateau proper belongs to the Middle Eocene Moqattam Formation, which drops suddenly in stepped cliffs on the N-NW and slopes gently to the S-SE. The three pyramids and most of the Giza Necropolis occupy the surface of this gentle slope,

which disappears into the low desert on the south and SE. Today the pyramid plateau proper slopes from a high point west of the pyramids, 105.80 m above sea level, to 23 m above sea level about 200 m south of the Sphinx. The younger, Upper Eocene, Maadi Formation rises as a series of knolls on the south. The layers of the Maadi Formation can be seen in the quarried knoll that rises above the central wadi south of the Sphinx. Known locally in Arabic as the *Gebel el-Qibli* (the “Southern Mount”), the knoll is the end of the ridge running above our site on the west (LEHNER 2007a, 4–9).

Rising above the opening of the wadi, the *Gebel el-Qibli* offers a panoramic view of the Moqattam Formation sloping gently from NW to SE down into the wadi. From the *Gebel el-Qibli* one can see across the quarries created by the pyramid builders as they exploited the soft-hard sequence of the lower Moqattam Formation limestone beds.

II. B. Quarry Control

A large basin quarry takes up the western part of the Central Field at Giza. The volume of missing stone

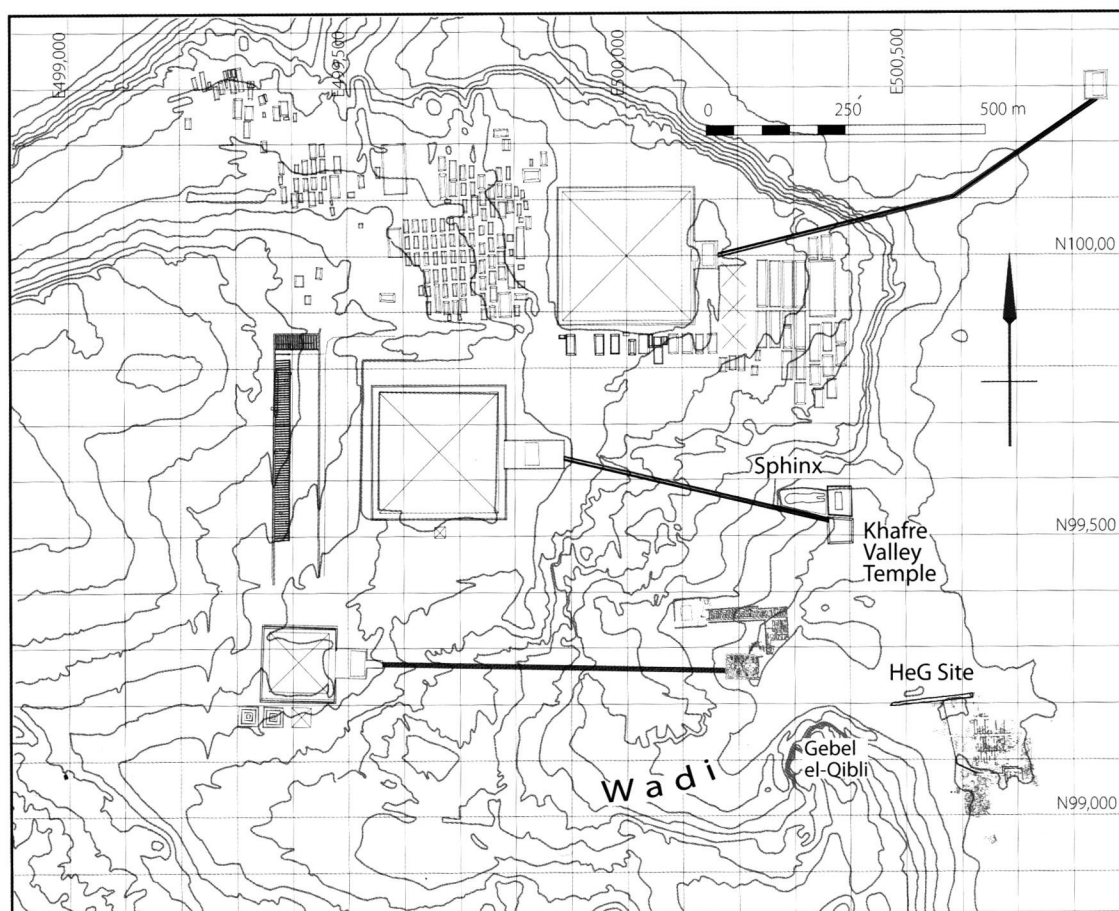


Fig. 3 The HeG settlement lies south of the opening of the central wadi to the east. Deliveries probably entered Giza in the area north of the Wall of the Crow and east of the Sphinx and Khafre Valley Temple

can be compared to the volume of stone in the Khufu Pyramid, which lies directly to the north and occupies about the same width as the quarry. The suggestion is that this is the “hole” corresponding to the “pile” of the Khufu Pyramid (LEHNER 1985, 121–22).

A series of three, low, unexcavated sandy mounds rise along the upper edge of the NW corner of the Central Field quarry. These mounds show clearly in Lepsius’s map of the Giza Necropolis (Fig. 2; LEPSIUS 1849, pl. 14). In the sloping sides of these mounds we have observed masonry structures composed of small limestone blocks set in rows and courses. The tops of these mounds offer excellent views to the SE, toward the *Gebel el-Qibli*. From here one can look beyond the east face of the *Gebel el-Qibli* and over the Wall of the Crow to the broad expanse of the HeG site. We hypothesize that the mounds hide the remains of control towers for monitoring work in the CFW quarry. It is possible the mounds mask unexcavated mastaba tombs, but we think this unlikely given their location at the upper edge of the deep quarry.

II. C. Wadi Control

The broad and low wadi where the Moqattam Formation slopes under the Maadi Formation was the perfect conduit for bringing in materials from out-

side Giza – fine limestone from the quarries on the east bank for pyramid casing, granite from Aswan, basalt and gypsum from the Fayum, and alabaster, wood, people and produce to feed the people. We should expect a harbor or docking facility somewhere to the east of the wadi mouth (LEHNER 1985, 132–133). There is evidence of a quay or revetment of some kind just a little farther north in front of the Sphinx and Khafre Valley Temple (HAWASS 1997; DASH 2004). Monitors on the *Gebel el-Qibli* could observe anything flowing through the wadi and into the area of the down slope quarries.

III. WALLS

Just as authorities have done at Giza in recent years, those in charge of the HeG site controlled people architecturally by means of walls, which reveal and conceal and separate people of different status.

In the description that follows we often give the stratigraphic context numbers of the walls and other features of the HeG settlement. We give unique context numbers to any result of a depositional event (layers, hearths, plasters, floors, dumps), including walls. We offer these numbers to be clear about the walls to which we refer, and so that future commentators may refer to walls with a high degree of specificity.



Fig. 4 View to the SW to the eastern end of the Wall of the Crow where it attached to the NW corner of the Gallery Complex, with the 2006 trenches around the “Masons’ Mound” construction embankment in the foreground

III. A. The Wall of the Crow

The *Heit el-Ghurob*, “Wall of the Crow,” is the most ostentatious wall on this site. Until our recovery of the footprint of the HeG settlement, the colossal stone Wall of the Crow (*Heit el-Ghurob*) appeared to stand alone, truncated on its eastern end (Fig. 4). Erosion left this gigantic wall standing alone after reducing the mudbrick and fieldstone walls that attach to it on the east and south. The large locally quarried limestone blocks resisted the forces of erosion that took down the walls of the Gallery Complex.

The Wall of the Crow [3200] extends 200 m from the southern side of the wadi. Our excavations at the eastern end of the wall in 2002 and 2006, and in the gate in 2001, established that the Wall is about 10 meters wide at the base and 10 meters tall. The sides have a batter or slope up to the top, and the 1:1 ratio of base width to height gives it a dike-like cross section (LEHNER 1993, 59, Fig. 4). The fact that the builders left the bank of masons’ debris against the southern side, and the remains of a massive ramp, “Masons’ Mound,” against the northern side, makes the Wall even more like a dike.

The gate that opens through the approximate center of the wall rises seven meters high and opens 2.60 meters (5 cubits) wide (Fig. 5). The path through the gate slopes down 2.30 meters from south to north upon limestone debris that the builders left banked along the southern side of the wall. (The higher ground on the south actually begins 5 m south of the gate, and if taken into account, the total vertical difference is 2.94 m.) On the north the builders dumped limestone debris to create a nearly level terrace at elevation 16.30 m above sea level (asl). The Wall of the Crow rises 8.80 meters above the compact Old Kingdom surface west of Mason’s Mound, whereas on the south side the Wall rises about 7 meters above the compact surface.

The area north of the Wall of the Crow, east of the valley temples of Khafre and Menkaure, must have been a zone of delivery during the time the Egyptians were building the pyramids, and after the pyramids were complete and their temples were functioning. The Wall of the Crow formed the southern boundary of the pyramid construction and delivery area and separated the HeG settlement from the building activities on the necropolis to the north.

In the last century people of the nearby communities, Nazlet es-Semman, Kafr Batran, and Kafr Gebel built tombs around, up and over the buried western end of the Wall. From old maps and what from we have been able to map and observe, the ancient builders do not seem to have completed the

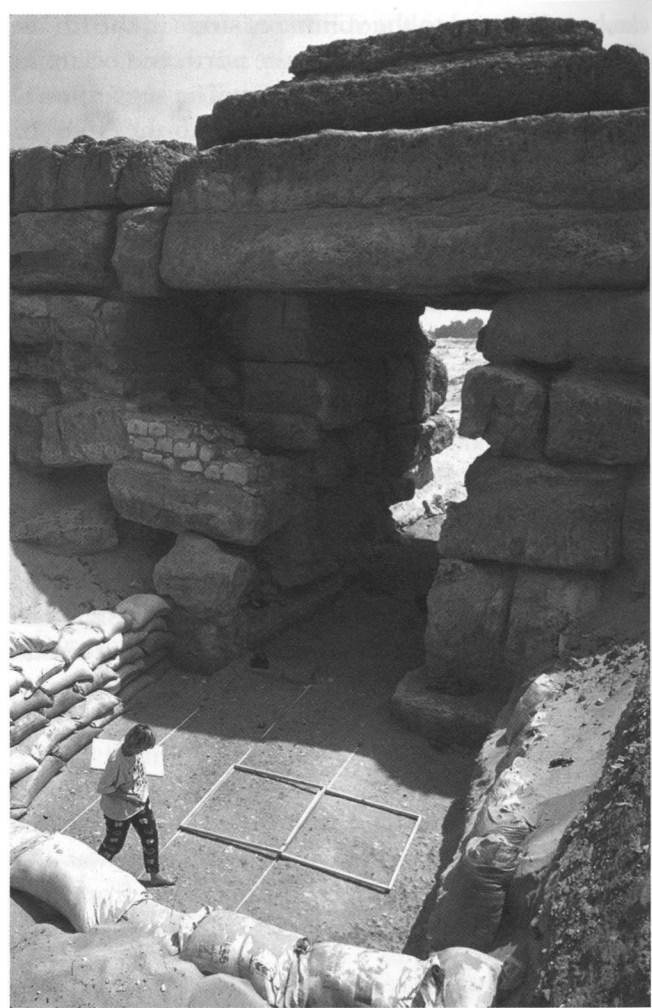


Fig. 5 The north side of the gate through the Wall of the Crow, cleared in 2001. View to the SE

wall all the way to the base of the *Gebel el-Qibli* to completely close off the southern flank of the Central Wadi. Several aspects of the Wall of the Crow give us the impression it is a work left incomplete.

In 2002 we excavated a trench perpendicular to the eastern end of the Wall of the Crow. At the western end of this trench we widened a Late Period burial pit that cut through the western mudbrick wall [6278] of Gallery Set I to the very eastern end of the Wall of the Crow. The builders had plastered the western face of the mudbrick wall [6278] with marl before they built the huge stonewall up against the mudbrick wall (LEHNER 2002). Furthermore this plaster “lipped” down onto a floor that run westward in and under the eastern end of Wall of the Crow itself. In this trench, we also found a deeper mudbrick wall [6400], some 85 cm farther east than wall [6278], which appears to be the western wall of Gallery Set I in an earlier period, founded at a lower level. The upper wall [6278] is partially built over what remains of the lower wall [6400].

The 2002 results made it clear that Gallery Set I is older than the Wall of the Crow, which was built up to it. Excavations at the NE corner of the Wall of the Crow, supervised by Lisa Yeomans in 2006, confirmed this conclusion (YEOMANS 2006).

III. A.1. Comparison of Trenches North and South of the Wall of the Crow

In 2001 Paul Sharman and Fiona Baker cleared and recorded a 15 × 75-meter stretch of the ancient ruin surface along the southern side of the Wall of the Crow. They found hearths and walls set upon the surface of a compact layer of yellowish, marl limestone debris banked against the southern side of the Wall (LEHNER 2001a, 9).

In 2001 Sharman continued to excavate “the WCS Deep trench” that Augusta McMahon began in 1991. This is a 2 m-wide trench perpendicular to the south side of the Wall of the Crow, 60 m west of its eastern end (LEHNER 1993, 58–60; 2001b). On the south the builders left banked against the Wall a higher shoulder consisting of 7 or 8 distinct layers of chips and finer dust from cutting and trimming stones. Under this debris, Sharman found the edge [3211] of the trench that the builders cut for laying

in the foundation blocks of the Wall of the Crow, about 8 to 18 centimeters from the edge of the trench. This is a rather subtle cut for such a colossal construction as the Wall of the Crow. The foundation trench [3211] cut through a layer of dense, black and lumpy alluvial mud [3736], 14 centimeters thick. Just under the alluvial mud layer runs a thinner paving of desert marl clay (*tafla*) [3208] similar to the floors on the well-maintained rooms within the Gallery Complex.

As mentioned, through the gate in the Wall of the Crow a surface of crushed and broken limestone debris slopes more than two meters down to the level terrace on the north of the wall. This terrace is simply the leveling off at 16.30 asl of the indurated sand and limestone debris that the 4th dynasty workers intentionally dumped. In 2005 we recorded the deposits 2 m below this terrace in a 64 m-long trench. This trench was excavated by a contractor parallel to the Wall of the Crow for building a cement-lined corridor from the modern town to the modern cemetery at the foot of the *Gebel el-Qibli* knoll (LEHNER 2006; LEHNER, KAMEL and TAVARES 2006, 17–20). To create the terrace the 4th dynasty builders laid the crushed limestone layer over natural layers of sand, marl clay, and



Fig. 6 Derek Watson and workers scrape surface of Lower Rubble Layer [25,745] in the deep probe in Trench 2 up to the northern foundation of the Wall of the Crow. The probe cut into a thick brown sand bedding for the “Masons’ Mound” construction embankment, cut by the eastern (west-facing) section of Trench 2. Ground water filled the foundation trench cut through the Lower Rubble Layer. The builders had dressed the lower part of the Wall before putting Masons’ Mound up against it

gravel deposited by wind and water flowing from the wadi. These layers were relatively clean of cultural material.

East of the gate, on the north side of the wall, the rubble layer of the terrace begins to slope markedly down toward the east. A layer of sand separates this Lower Rubble Layer from an Upper Rubble Layer that the builders laid down to level the slope, perhaps after a hiatus in building, to continue building the Wall of the Crow at the east.

In 2005 and 2006 Derek Watson excavated a perpendicular trench (Trench 2) from the contractor's trench to the foundation of the Wall of the Crow. One aim was to obtain a stratigraphic section to the northern side of the wall that would complement that from Sharman's 2001 Deep Trench on the southern side. Watson found that the builders cut a shallow foundation trench into the Lower Rubble Layer [25,745] into which they set the foundation slabs for the wall (Fig. 6). After a hiatus, marked by the Sand Separation Layer [22,882], they leveled the easterly slope of the Lower Rubble Layer with the Upper Rubble Layer, on which they formed a ramp or embankment that we dubbed "Masons' Mound". The remains of the mound still exist against the northern side of the Wall at its eastern end (LEHNER, KAMEL and TAVARES 2006, 21–31).

We note distinct differences between the layers that predate the Wall of the Crow to the north and south. On the north the builders cut the foundation trench into the Lower Rubble Layer [25,745], which consists of limestone fragments in a matrix of marl clay spread over natural layers, more than 2 m deep, of sand, gravel, and desert marl clay with little cultural material. On the south, the builders cut the foundation trench through a layer of dense, black and lumpy alluvial mud [3736], 14 centimeters thick that overlay a thin marl (*tafla*) layer [3208] that is probably the purposive paving of an architectural space.

Since the Wall of the Crow builders cut a foundation trench into these layers, the layers [25,745], [3736], and [3208] must predate the wall. But the difference between the northern and southern sides indicates there must have been some kind of boundary where the alluvial mud layer and marl floor on the south stopped, and where the natural sands, gravels, and clays of the wadi began. The difference of the layers predating the Wall of the Crow north and south suggest that the gigantic stone Wall monumentalized some earlier barrier or wall.

We have found no evidence of residential architecture north of the Wall of the Crow, nothing of the complex urban layout immediately S–SE of the Wall. The

massive stone Wall must have reinforced a pre-existing barrier to access into the HeG site from the NW.

III. A.2. *The Western End of the Wall of the Crow*

We do not know what arrangement existed at the western end of Wall of the Crow. We address that question briefly. We must think about the function of the Wall of the Crow in terms of the broader topographical context of the wadi mouth between the *Gebel el-Qibli* on the south, the Menkaure Valley Temple (GIII.VT) and Khentkawes Town (KKT) on the west, and the Khafre Valley Temple on the north.

The western end of the Wall of the Crow does not seem to have attached to the *Gebel el-Qibli* knoll. This is not certain because this end of the Crow Wall has always been encumbered with sand and possibly with debris left over from quarrying the knoll for broken stone and *tafla*. In recent years, the local people built tombs directly on top of the buried western end of the Wall. So we must say with caution that the 4th dynasty builders of the Wall of the Crow left a gap between the gigantic Wall and the *gebel* (mountain), a gap now filled by the modern Coptic Christian cemetery (Fig. 7).

REISNER (1931, 38, 43) published the statement that he could not excavate the extension of the causeway corridor eastward from the SE corner of the GIII.VT more than 9 m because of the modern cemetery. The distance between the SE corner of the GIII.VT and the western end of the Wall of the Crow is between 250 and 300 m. The Wall of the Crow is oriented slightly more north of due east than the GIII.VT, and its western end is south of an alignment with the causeway corridor. Even if a stout wall crossed the distance and joined to the western end of the Wall of the Crow, people could have still skirted around the base of the *Gebel el-Qibli* to enter the site through the tract now occupied by the modern Coptic cemetery, along the southern side of the western end of the Wall. But access to the site would not have been easy from the quarries and pyramid cemeteries on the Moqattam Formation rise.

III. B. *Through the Gate: The NW corner of the HeG Settlement*

When the 4th dynasty inhabitants built the Wall of the Crow, they let the chips from their stone working accumulate into a bank of debris that rose along the southern side of the east end of the Wall. Toward the west, south of the gate, they dumped yellow, marl-limestone waste from local quarrying and waste from granite working to form a bank of debris that sloped upward from east to west reaching a peak west of the

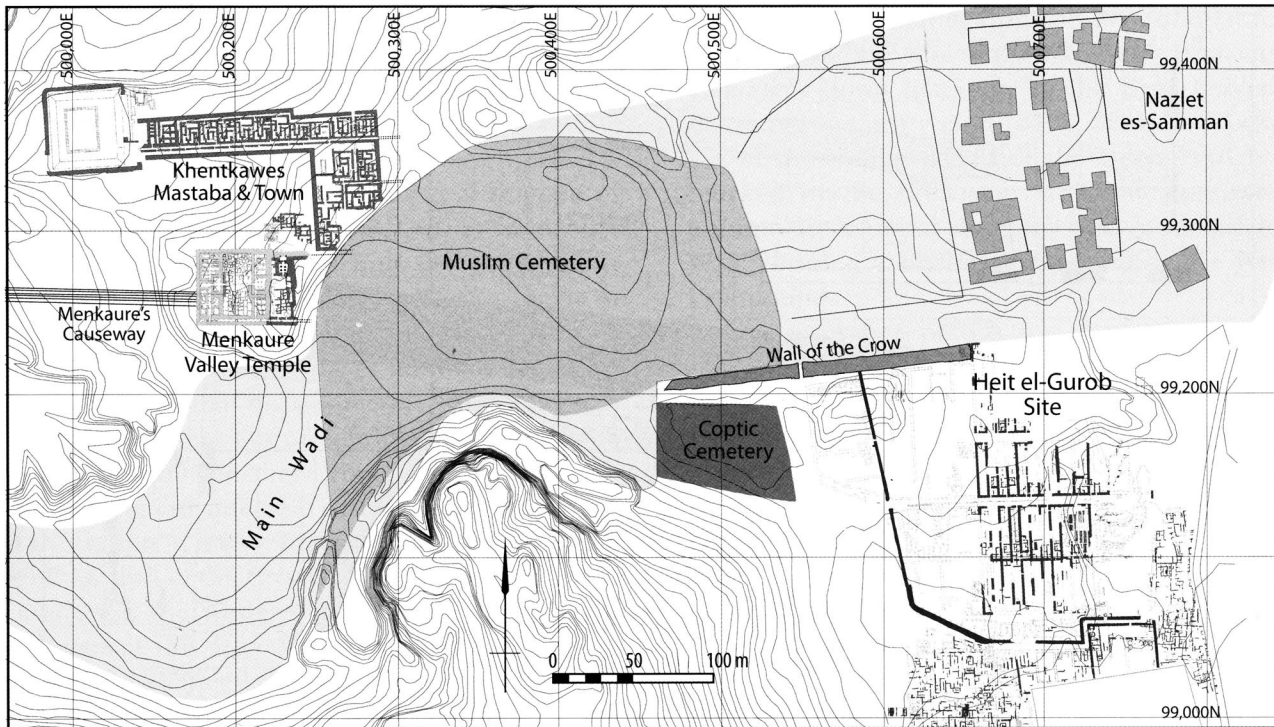


Fig. 7 Topographic map of the area of Giza from the HeG Settlement to the Khentkawes Town. The modern Coptic Cemetery fills a gap between the western end of the Wall of the Crow and the Gebel el-Qibli

gate. This slope of debris was possibly the base for a ramp like “Masons’ Mound” at the eastern end of the northern side of the Wall (LEHNER, KAMEL and TAVARES 2006, 30–31). It appears from the tip lines that show in the surface of this debris mound, south of the gate, that they dumped the debris from above and over the Wall, down from north to south. The result of this intentional dumping left the surface sloping down south to north for a total drop of 2.30 meters through the 10-meter long tunnel-like gate. The gate is 2.6 meters wide (about 5 ancient cubits) and about 4.6 meters tall. Three huge limestone lintels roof the gate. If the 4th dynasty Egyptians had left the Wall unencumbered with debris, the gate would be about 7 meters tall from the underside of the lintels to the base of the Wall.

The Deep Trench of our 2001 WCS operation (LEHNER 2001b, 55) showed that the “floor” level (the marl surface [3208]) on the southern side of the Wall below this accumulation was about the same level, 16.30 m, as the prepared compact surface north of the great gate. Here the Lower and Upper Rubble Layers merge into a layer of crushed limestone, marl, and granite dust, 9 to 25 centimeters thick, overlaying natural wadi deposits of marl clay, gravel, and sand. During the time that people occupied the HeG site they left a clear surface north of the gate and along much of the northern side of the Wall. Subsequently,

wind laid down layers of clean sand above the compact Old Kingdom surface. This wind blown sand appears to have continued to accumulate after the Old Kingdom. We found a number of 18th dynasty blue-painted sherds high in the undisturbed clean sand close to the Wall of the Crow.

We see a different sequence south of the Wall of the Crow. Our WCS Deep Trench revealed that coarse sandy layers with limestone grits [3198, 3281–3287] accumulated against the bank of masons’ debris and built up the surface 1.40 meters until it was nearly flush with the top of the masons’ debris banked against the wall. These gritty sand layers contained relatively little pottery, ash, animal bone, or other material culture. We might surmise this was the equivalent of the post-Old Kingdom sand overlaying the compact surface or terrace north of the Wall, except that upon the upper surface of the gritty sand accumulation and the mason’s debris we found a series of fire pits, clusters of bread mold fragments and a bakery that Augusta McMahon excavated in 1991, all dating to the 4th dynasty (LEHNER and WETTERSTROM 2007, 24–25).

We excavated the WCS Deep Trench in the center of an open area between two broad enclosures that we called the Eastern and Western Compounds (Fig. 8). The open area is trapezoidal in plan, 16 meters wide at the north and 15 meters wide at the south of

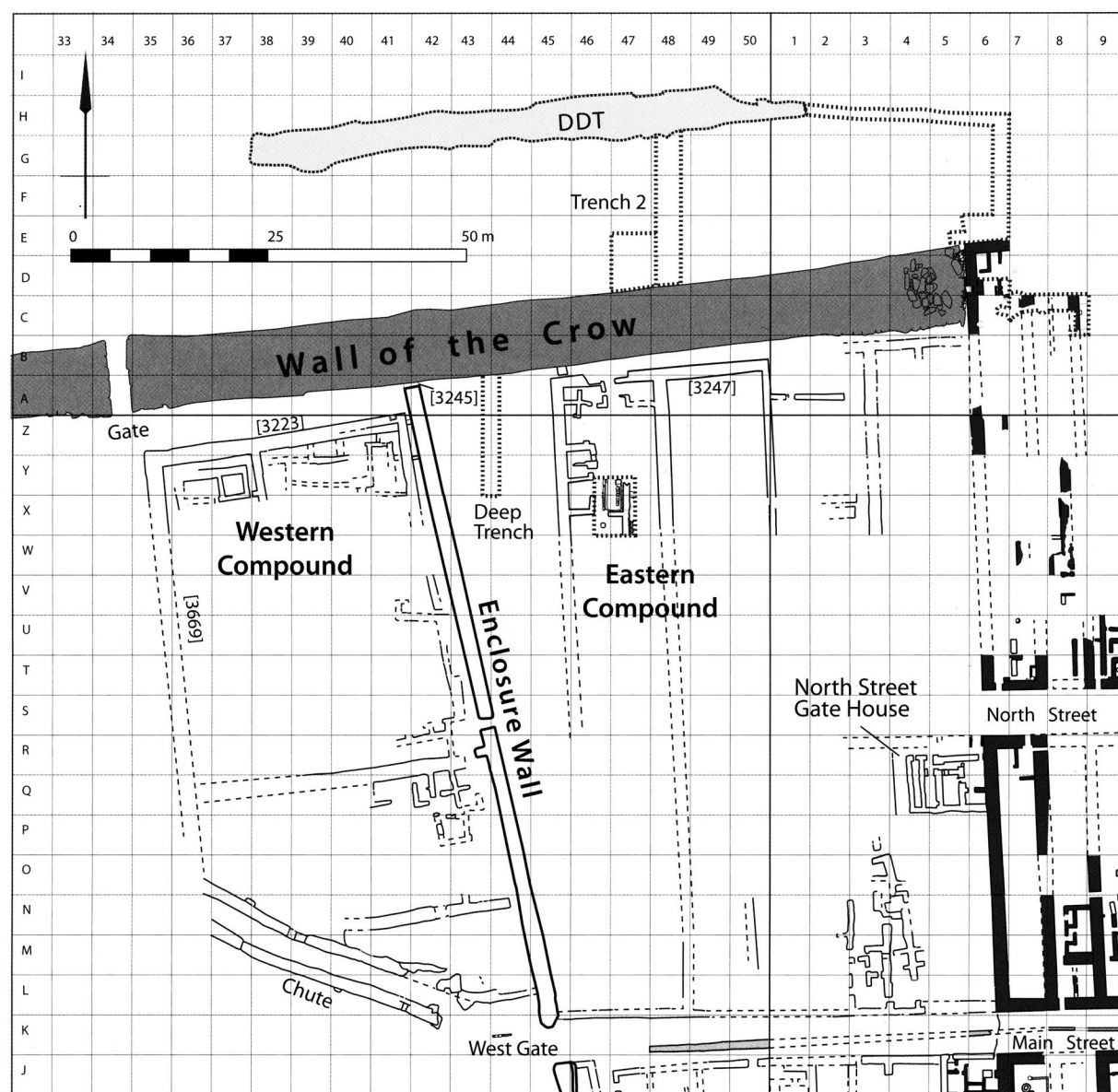


Fig. 8 The Eastern and Western Compounds southeast of the gate in the Wall of the Crow

our clearing. The northern fieldstone wall [3223] of the Western Compound runs close beside but not exactly parallel to the Wall of the Crow forming a corridor 5.20 wide on the west and narrowing to 3.60 m on the eastern end of the Western Compound. The corridor between the northern walls [3239] [3247] of the Eastern Compound is only 1.20 m wide on the west and 2.20 m wide on the east.

Our clearing revealed three fieldstone walls that depart south from the northern wall of the Eastern Compound and divide the compound into long strips with widths 11.20 m, 11.80 m, 11.80 m, and 11 m respectively from west to east. In 2001 Paul Sharman excavated in the NE corner of the Eastern Compound. He found that, subsequent to the building of

the northern fieldstone wall [3239, 3247], people made a recess into its northern side and created a doorway, about 52 cm (1 cubit) wide. Later this doorway was blocked. The doorway gave access to a series of small chambers in the northern end of the westernmost strip. Fieldstone stonewalls built against the western and northern walls of the compound defined the chambers. A trodden surface of compacted tafla fragments indicates that the people used the northern corridor after they had blocked the doorway into these chambers.

We have not excavated most of the corridor between the Eastern and Western Compounds and the Wall of the Crow, but the irregularity, narrowness, and the rough unfinished condition of the

parts of the “floor” we have exposed suggest the builders did not intend the corridor for significant passage from west to east. Also, we have as yet only excavated the very latest deposits from the occupation and use of the compounds. We have not excavated the western wall of Gallery Set I at the end of the corridor (in grid square, 2.B–C6), so we do not know if an entrance existed into the galleries. At some point, people blocked the alleyway north of both the Eastern and Western compounds and they remodeled the northern walls of both complexes. It is our hypothesis that once someone emerged south from the Gate there was no significant passage from west to east in this northern zone.

Aside from our intensive surface clearing and limited excavation in a 15 × 70 m stretch along the south side of the Wall of the Crow in 2001, we have done no excavation in the Western and Eastern Compounds. The layout of this area of the site during the phase when people occupied the Gallery Complex is largely unknown to us. Dry, encrusted layers of sand deposited in ancient times, and the density of Late Period burials cut into and below the sandy layers, stopped us from clearing down to the surface of the 4th dynasty ruins contemporary with the Gallery Complex.

We exposed the thick fieldstone walls forming the NW corner of the Western Compound, built into a cut through the tafla-limestone material banked up against the Wall of the Crow (Fig. 8). The wall [3669] running south from this corner, which we have tracked for about 10 meters, could have served to define the road leading to the Wall of the Crow gate, although the compact debris filled the gate before this wall [3669] was built. We suspect this wall [3669] continues farther south as the eastern wall of the corridor we call the Chute (see below). But where we might have expected superimposed roadbeds or pavements (such as we see in Main Street in the Gallery Complex, see ABD EL-AZIZ 2007), we find only a path sloping down into the great doorway. The path was trodden upon highly compressed limestone chips, sand, and desert marl clay (*tafla*) with rings and pockets of granite dust.

Once the inhabitants built the Wall of the Crow, it appears to have created a catchment for the accumulation of sand in the corner it made with the Gallery Complex, which accounts for the build up of gritty sand layers [3198, 3281–3287] such as we saw in the southern end of the WCS Deep trench. From our clearing of the surface of the ancient ruins below the soft, clean sand and modern dumping, it appears that the gritty sand continued to accumulate west of, and up against, the Enclosure Wall, which may have

provided protection against the depositional forces. Exactly along the line of the Enclosure Wall, the surface steps down markedly to the East. Forces that deposited the gritty sand [3198, 3281–3287] that we see in the southern end of the Deep Trench were blocked by the Enclosure Wall, but continued to accumulate material along the west of the Enclosure Wall, forming a higher surface within the Western Compound.

The relevance of this for our consideration of social organization is that we know very little about the architectural layout in this far NW part of the HeG site, especially in the Western Compound, just inside the gate through the Wall of the Crow, because the gritty sand, which apparently came down at least partly during the time people occupied the site, masks the layout of the settlement contemporary with the Gallery Complex and the building of the Wall of the Crow. What forces caused this sandy buildup? What architecture is underneath? How would that architecture enlighten us as to the purpose of the Wall of the Crow?

III. C. The Chute

Our clearing of the sandy overburden exposed the top of two parallel fieldstone walls beginning 15 m west of the opening in the Enclosure Wall that we call West Gate and curving to the NW for a distance of about 35 meters. This turn must make a connection between the far western end of Main Street at West Gate and the gate in the Wall of the Crow. We dubbed this corridor the Chute.

In order to trace the connection between the Chute and the north-south path through the gate in the Wall of the Crow we extended our clearing westwards as close as we could to the Coptic Cemetery to get on line with the gate in the Wall of the Crow. We were unable to clear the overburden this far west. The Chute continued to curve round toward an alignment with the gate, but it disappears into the overburden beyond our clearing. We still expect that the Chute curves round to align with the path leading up to the gate in the Wall of the Crow. It is possible the Chute leads under the Coptic Cemetery and passed the alignment with the gate in the Wall of the Crow to some place farther west, perhaps even to a path around the western end of the Wall of the Crow. However we doubt this. We believe that the Chute does align to the gate, but we have not been able to expose it.

We have only traced the tops of the Chute walls in the compact weathered deposits. The walls have been eroded by water and wind. We have yet to excavate these walls and discern their make-up. The tops of

the walls range from 1.2 to 1.6 meters thick (they are probably 3 cubits like the gallery walls), and they define a corridor about 2.6 meters wide – very close to the width of the gate through the Wall of the Crow. The Chute walls end ambiguously about 15 meters from West Gate — the beginning of Main Street. Between the eastern end of the Chute and West Gate there is an open area about 25 meters north to south along the western side of the Enclosure Wall. No walls enclose this space. Why does such a narrow corridor end in this open space? This sequence of highly restricted to more open space is also reflected in the exit south from the Wall of the Crow gate to a simple open path over an enormous dump of limestone chips and granite dust.

Just outside the Chute to the SW begins a very substantial deposit of mud, ash, and much pottery. This is the bottom of ancient dumps that extend south on the lower slope above the HeG site. We surmise this to be waste from the occupation of the HeG settlement, dumped on the slope after the inhabitants bought the material down Main Street and through the West Gate.

III. D. The Enclosure Wall

A two-meter thick fieldstone wall, hereafter dubbed the Enclosure Wall, runs south at an odd angle askew to the Wall of the Crow (Fig. 1). It runs for the north-south length of the Gallery Complex, turns to run east west between the galleries and the Western Town, and then jogs north and east to run between the galleries and area EOG on the north and the RAB on the south. The Enclosure Wall thus connects the far NW and SE parts of the site.

The Enclosure Wall begins 70 meters west of the eastern end of the Wall of the Crow. The end of the wall does not abut directly the southern face of the Wall of the Crow, but stops at an edge lined with stones about 60 cm from the Wall of the Crow (Fig. 8). Limestone debris with more of a marl matrix [3245] than the Enclosure Wall fills this gap, which the Enclosure Wall builders probably left to allow passage through the corridor between the Wall of the Crow and the Eastern and Western Compounds. As they did with the doorway from this corridor into the Eastern Compound, the occupants filled the gap to close off the corridor. In spite of the gap, we are certain that the occupants built the Enclosure Wall after they had erected the Wall of the Crow. The Enclosure Wall is founded upon the debris banking against the Wall of the Crow.

After we cleared the overburden of wind blown sand, the Enclosure Wall [here 3215] and the eastern

wall [3249] of the Western Compound appeared together as a linear mound of toppled fieldstone. The two walls are only 40 centimeters apart at the NE corner of the Western Compound, and about 1.05 meters apart at the southern limit of the WCS excavation. The difference reflects the amount that the Enclosure Wall is askew to the Western Compound. The north-south walls of the Eastern and Western Compounds are almost perpendicular to the great Wall of the Crow, which is angled about 5.5 degrees north of true east. The compound walls are about 3.5 degrees east of true south. The walls of the gallery system are likewise turned slightly counterclockwise to the cardinal directions. But the Enclosure Wall, about 2 meters wide, is turned even more counterclockwise than all the other architecture, running south at an angle 97 degrees/83 degrees with respect to the Wall of the Crow, or about 13 degrees east of due south.

The Enclosure Wall continues 88 meters in a straight line at the angle of 13 degrees east of due south until it intersects the path of Main Street. Here two stony humps mark the ends of the Enclosure Wall where it opens into a gate 53.50 meters west of where Main Street is bordered by Gallery Sets II and III. For convenience, we called this West Gate.

In our overall thinking about the development of the site we have understood the Enclosure Wall as a single building “event.” However, we have to consider the vertical exposure of its western face in a trench (WD), 7 m long and 2 m wide, that Lauren Bruning and Adel Kelany excavated in 2004 in grid squares 3.H44–45, about 10 m south of West Gate. The WD trench exposed the Enclosure Wall for a height of 1 meter. The Enclosure Wall was founded upon successive layers of limestone rubble [20,803], crushed limestone [20,804] and gritty tan colored sand [20,805]. The wall appears to have been built in two stages, a lower one, 40 to 43 centimeters high, of white limestone pieces in a gray mud matrix, and an upper one 50 to 60 centimeters high of more yellowish limestone in a mud matrix. These stages could be merely two courses of the same construction period. However, the top of a layer [20,788] of concentrated sherds, 24 centimeters thick, runs up to the wall just at the interface of the upper and lower phase, suggesting the upper phase was added when the surface had risen. We still believe that this coursing reflects the construction technique rather than a rebuild.

More compelling is the sign that an earlier version of the Enclosure Wall, and possibly West Gate, once existed here. Kelany excavated a deeper probe, 1 × 1.2 m, in the SE corner of square 3.H45 two meters

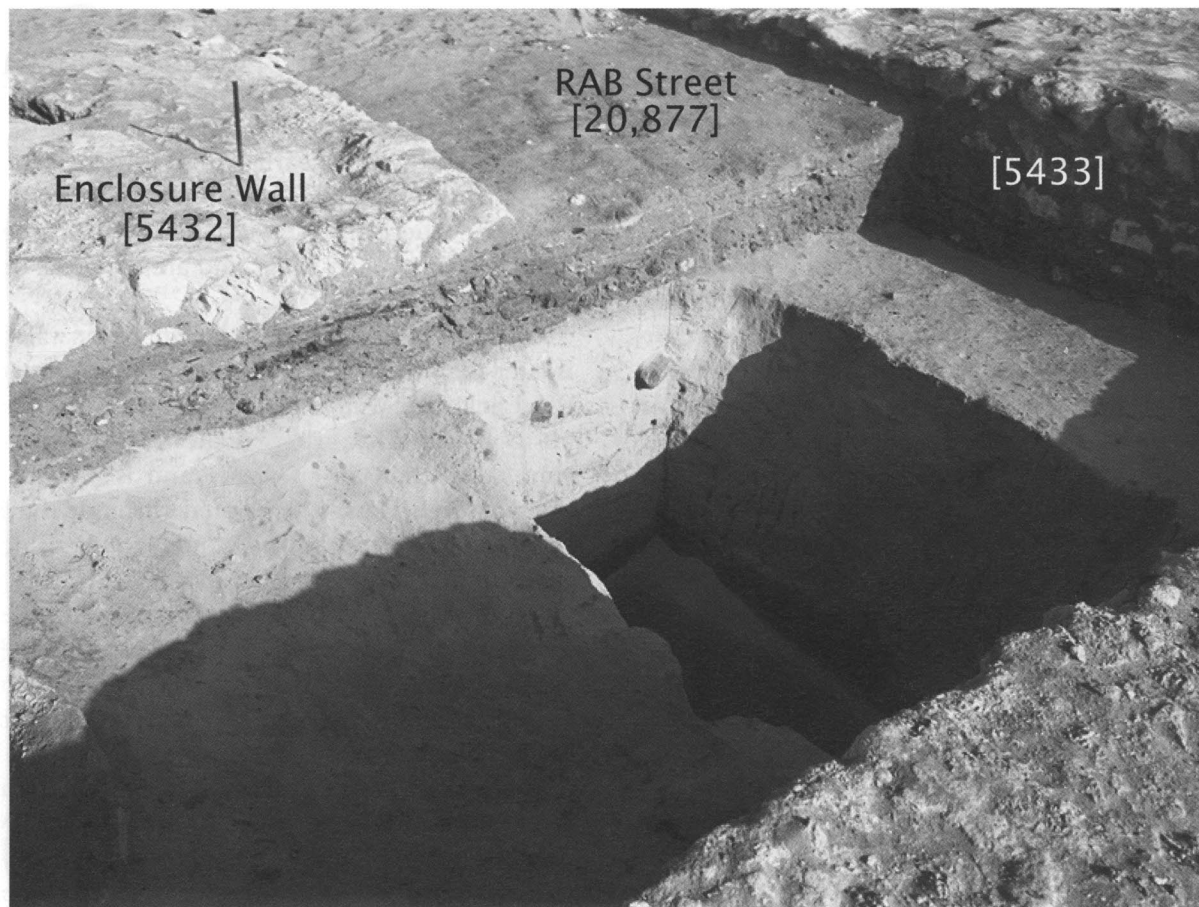


Fig. 9 Aneis Hassan's 2005 trench across the Enclosure Wall [5432] and RAB Street (surface = [20,877]) to the northern RAB wall [5433]. View to the SE

west of the Enclosure Wall. The collapse of sandy material from the north section of the deep probe exposed stones belonging to a deeper, older wall that had been hiding just behind the face of the section. The older wall [20,839] is about 1.07 meters below the surface after our clearing, 2.15 meters west of, and just a little lower than, the bottom of the Enclosure Wall. (Layers 20,803, 20,804, and 20,805 intervene between the older and younger walls.) The lower wall is built upon a few centimeters of sand [20,812] just above a layer of many pottery fragments [20,814]. The wall [20,839], measures 1.45 meters wide E-W and 50 centimeters high. The wall is wider at the bottom than at the top (as preserved, the wall once rose higher). The eastern face of this wall is plastered with mud. It appears to be a true end, not a corner or a wall that had been cut through.

It was surprising and coincidental enough that a wall had been hidden just behind the sand in the north cut of the trench. But then, on the very day we were back-filling the trench near the end of the 2004 season, remains of another wall announced itself in the southern face of Trench A! When the southern

section also collapsed, we saw 3 limestone blocks at the same level as the wall [20,839] in the north section. The blocks have no mortar but they line up, 1.10 meters wide and 17 centimeters high. The blocks appear to belong to the butt end of another field-stone wall. The distance between these blocks and the wall [20,839] in the northern section is 1.80 meters. The two wall ends appear to form a gate. The walls run somewhat north south like the Enclosure Wall (actually 13° west of north, or east of south). It is possible the gate between the two walls is earlier version of West Gate at the far W end of Main Street, albeit slightly farther south.

From West Gate the Enclosure Wall runs 50 meters farther south at the same orientation to a point where it seems to double in width to 4 meters. It continues for another 15 meters and then turns to run NW to SE for 55 meters with a width of 4 meters. We have not yet cleaned and articulated carefully the stone ruin to clarify the original structure, but we can see that this width is actually two walls combined. On the outside (SW) we see the edges of a wall 2 m thick like the rest of the Enclosure Wall. Some of the thick-

ness of the south-SW side in our map is the splaying out of stone that slumped off the wall. The inside (NE) edge is a wall only 50 to 60 centimeters thick, spaced about 1.4 to 1.5 m from the 2m wall. The two walls run parallel making the Enclosure Wall 4 meters wide until the next turn or bend to the east. North of the big bend the narrower wall turns 90 degrees to join up against the 2-m thick wall. We believe that the narrower wall was simply to retain stony fill in order to thicken the 2 m width to 4 m.

The builders must have intended the great bend in the Enclosure Wall and its reinforcement as added protection against natural forces – wind, sand storms, and possibly water flowing south-SW from between the western end of the Wall of the Crow and the Gebel el-Qibli (see Fig. 7). The bend, along with the northern wall of the Trapezoid (see below) creates a kind of funnel narrowing into RAB Street, the main passage to the RAB and Eastern Town. We wonder if animals were introduced into the site, through the Chute, accounted for at West Gate, then moved along and outside the Enclosure Wall, around the bend, and then funneled into RAB Street. The strengthening of the bend in the Enclosure Wall may have been reinforcement against pressure from herded animals.

After the thickening the Enclosure Wall turns again to run due east at the width of 2 m (Figs. 24, 25). During our 2002 season we revealed the relationship of the Enclosure Wall to the large compound we call the Royal Administrative Building (RAB, for the reason that it contains a central storage facility consisting of a series of large silos, and because in our first excavations in a complex of rooms in the NW corner of this enclosure we found many sealings, some bearing the names Khafre and Menkaure). From its great bend on the SW, the Enclosure Wall runs east toward the RAB where it turns north to continue 15 meters and then east again to the NE corner of the RAB.

During our 2005 season Aneis Hassan excavated a trench, 2 m east west by 6 m north south, in our grid square 6.V22 and 6.W22, through the Enclosure Wall [here 5432] and up to the northern wall of the RAB [5433] (Fig. 9). In 2001 and 2002 we had understood the Enclosure Wall as the outer of two parallel fieldstone walls of the RAB (LEHNER 2002, 59–60). The results of Hassan's 2005 trench showed that the two walls were built at different times. His trench cut across the silty surface [20,877] of RAB Street (see below). The street surface lay above another street surface [21,766], which lay above a sandy bed [21,745] that was in turn laid over a layer of gray

sandy silt [21,749] that ran under the Enclosure Wall [5432] but up against the RAB wall [5433]. This stratigraphy establishes that the two walls are not the result of the same building event; the fieldstone wall of the RAB [5433] is earlier than the Enclosure Wall [5432]. As HASSAN and AYDINOGLUGIL (2005, 12) summarized: "There are a series of floor [RAB Street] surfaces that abut wall [5433] and are at a level beneath wall [5432]."

We now have no doubt that the outer wall [5432] is later than the inner wall [5433]. The foundation of the Enclosure Wall is shallower, and preserved only 10 to 40 cm thick, whereas the RAB fieldstone wall runs more than 55 cm lower and is founded on a deeper level. Hassan excavated through the Enclosure Wall [5432] within his 2-meter wide trench and a bedding of sandy silt [21,753].

"At this point it became apparent that there was a general difference between the deposits in the [RAB] street area and those in the area underlying the [Enclosure] wall. Those in the street were obviously a series of compact/concreted surfaces and those underlying the [Enclosure] wall appeared more like dumps and/or make-up deposits" (HASSAN and AYDINOGLUGIL 2005, 7).

After he removed the make-up and dumped deposits under the Enclosure Wall, Hassan found an older floor [21,776] and patches of articulated mud bricks that remained of an older mud brick wall [21,785] that corresponded in alignment to the southern edge of the Enclosure Wall [5432]. The floor [21,776], possibly an older street surface, covered an older marl surface [21,777], another line of bricks, and yet another, older silt surface [21,787]. These are probably older street surfaces up against an older enclosure wall [21,785] of mud brick replaced by the fieldstone Enclosure Wall [5432]. We found similarly that the western RAB fieldstone wall is a thickening and capping of an older and thinner mud brick wall (LEHNER, KAMEL, and TAVARES 2006, 45–46). It is possible the inhabitants almost completely removed the hypothetical earlier mud brick wall when they built the Enclosure Wall.

III. E. Eastern Boundary Wall

The far eastern end of the Enclosure Wall was lost to erosion in our grid square, 6.W28, about 7.5 m shy of the eastern wall of the RAB. The remains of the Enclosure Wall thin to only the bottom few centimeters, but before it disappears, it is composed of mudbrick.

In 2002 we exposed the eastern fieldstone wall of the RAB, about 1.60 m wide, and by 2004 we had traced it for 30 m to the south where it runs under

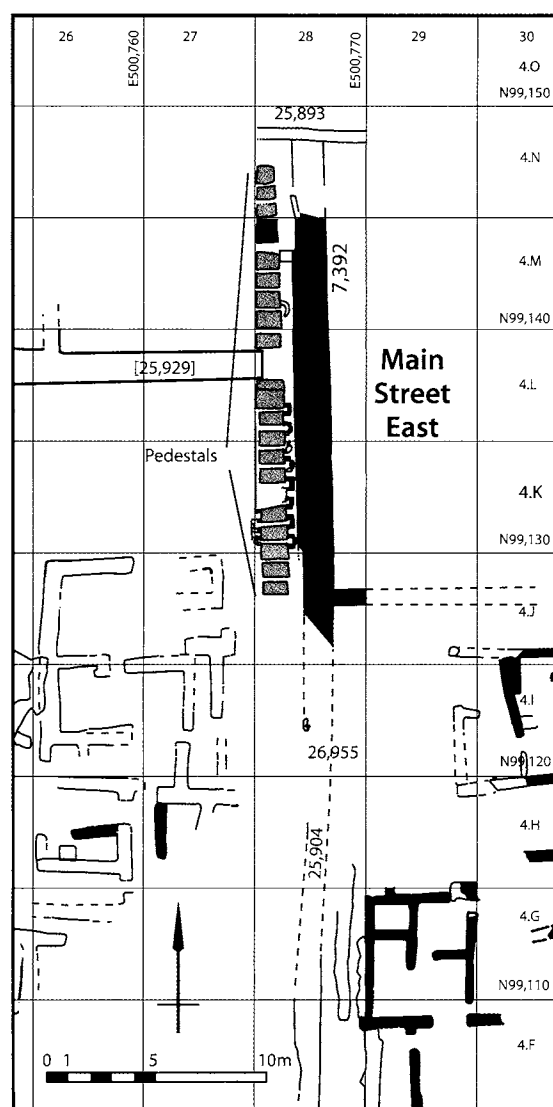


Fig. 10 Map of Eastern Boundary Wall [7392] and pedestals in area MSE after 2006–2007 excavations

the modern Abu Hol Sports Club and soccer field. The corner this wall makes with the northern RAB wall [5433] is not closed. The builders created a doorway, about 80 cm wide, in plastered mudbrick with a jamb against the western face of the eastern RAB wall. This entrance is similar to the entrances (also about 80 cm wide) into the galleries. Upon clearing the overburden, we could see other marl plastered lines of walls forming small chambers of an earlier phase. These structures belonged to the Eastern Town. The builders superimposed the RAB northern wall on this part this residential area.

We have long suspected that the Enclosure Wall may have turned north, or that some kind of major boundary wall ran north from the RAB entrance, but the surface exposed under the sandy overburden, cemented and homogenized by repeated saturation

from water, probably high Nile floods, showed only thin, badly weathered fieldstone walls, here and there suggestive of a north-south path about 1.5 m wide. Any eastern boundary running 75 m north from the RAB entrance would intersect with Main Street emerging from between Gallery Sets II and III.

In 2001 Ashraf Abd el-Aziz tracked the northern wall of Main Street to square 4.L26 where layers of sand and silt deposited by the annual Nile floods covered the wall. (The southern wall of Main Street gives out much farther to the west, at the NW corner of the Hypostyle Hall and Gallery Set III in square 4. K20.) In 2002 Lehner oversaw the shallow excavation of two 5 × 5 meter squares, 4.L27–28, at the far eastern end of Main Street. Farther east and north the HeG settlement appears to be lost to Nile alluvium and then deep, sterile sand. The question in excavating 4.L27–28 was how far to the east the north wall of Main Street [25,929] survives before this erasure.

When Lehner removed the laminated sand and alluvial silt he exposed the north wall of Main Street [25,929] composed of fieldstone continuing east. The wall was wrinkled, pocketed and pitted, by water. The lines of the wall blur into homogenous gray “settlement sludge,” literally, settlement deposits pureed by Nile floods. We see this condition on the surface of the ruins across much of the NE corner of the site, probably because Nile floods soaked this area every year. Then the wrinkled fieldstone wall gives out. After a space of less than a meter, a well-preserved mud-brick wall [7392], about 1.40 meters wide, crosses square 4.L28 from north to south. The wall runs south across the projected path of Main Street, so that even if the street continued (although there is no southern boundary wall for the street here), this wall would have been the dead end of it.

In 2006 and 2007 Ashraf Abd el-Aziz excavated in this area, which we call MSE (Main Street East), to ascertain whether the mudbrick-wall [7392] in square 4.L28 continued farther north and south. Abd el-Aziz found the wall [7392] running for 18 m, at a width of 1.38 to 1.41m (Fig. 10). He excavated the flanking deposits to a depth that left the wall standing 11 to 46 cm high, exposing five courses of brick. The wall is founded deeper than the level at which the 2007 excavations stopped. We began to call it the Eastern Boundary Wall. If it extended all the way to the RAB, it would indeed have been the eastern complement to the Enclosure Wall on the west and south of the Gallery Complex, albeit of mudbrick instead of fieldstone.

On the north, in square 4.N28, the thick north south mudbrick-wall [7392] gives out. However, a line



Fig. 11 The Eastern Boundary wall [7392] of mudbrick with the later-built fieldstone wall [25,893] in the foreground. View to the south

of single mud bricks [26,940] extends 1.10 m north from the western side of the large mudbrick wall [7392]) marking the continuation of the wall, where the ancient inhabitants intentionally removed it (Fig. 11). The cut [26,939] of the ancient trench to remove the bricks showed in the southern (north-facing) section of this excavation square. Later, the inhabitants built a fieldstone wall [25,893], 55 cm wide, running east to west across the path of the mudbrick boundary wall [7392]. The fieldstone wall [25,893] was one of the latest walls constructed in MSE.

To the south, the Eastern Boundary wall [7392] ends in the middle of square 4.J28, possibly at a doorway. There are some indications in this square that the wall once continued south beyond this point. In Square 4.H28 Abd el-Aziz exposed limestone pieces [26,955] that might remain from the foundation of the mudbrick wall [7392] (Fig. 10). The east side of the limestone feature, 1.30 m wide, aligns with the eastern side of the thick mudbrick wall [7392] in squares 4.M-J28 to the north. The west side of the foundation, of which a single course of limestone remains, is disturbed and possibly missing. If a single limestone fragment at the southern end of this feature represents the original west side of the wall, it

was 1.52 m thick. It is compelling to think the foundation stones [26,955] mark the true, original, western side of this wall [7392], because from this single stone a line of mud bricks (26,963) runs farther south 1.10 m. This line of bricks aligns with the west side of the large, mudbrick wall [7392] to the north.

On the southern edge of square 4.H28 a thin residue of a badly eroded limestone wall [25,904], only 5 cm maximum thickness and 1.20 m wide, showed on the surface of the ruins (Fig. 10). This trace of a wall [25,904] ran into the southern side of the square from where it shows on the surface for a length of 15 m farther south (Fig. 12). This stretch aligns with, and is probably part of the same wall visible 50 m farther south in squares 6.X28 and 6.Y28. Here, five meters in front of the entrance to the RAB, Ana Tavares found it preserved to a thickness of a few centimeters. In square 4.H28 the limestone wall covered eroded mud brick tumble that could derive from the dismantling of the earlier mudbrick wall [7392].

This wall [25,904] of broken or crushed limestone lines up with the thick mudbrick wall [7392] in squares 4.J28 and 4.L28 to the north. The mudbrick wall [7392] is certainly older, and we had no traces of the higher, later, fieldstone wall in those northern



Fig. 12 The thin residue of a broad fieldstone wall [25,904] running north south making a corridor with the thinner fieldstone wall [25,914]. View to the NW

squares. But this far north the fieldstone wall [24,904] might have been entirely eroded away. We believe the fieldstone wall [24,904] replaces an earlier mudbrick wall just as fieldstone walls replaced earlier mudbrick walls in the Royal Administrative Building (RAB).

Both walls, the older one of mudbrick [7392] and the later one of fieldstone [25,904] line up roughly with the eastern wall of the RAB in the 28 range of our grid. Together they suggest that the occupants and administrators of the site maintained a walled boundary separating the Eastern Town from the EOG production yard and the Gallery Complex.

IV. WAYS

After describing some of the major walls of the HeG settlement, we consider the pathways that these walls define and the human circuitry they controlled. We begin where we left off with the walls – the issue of a boundary and, now, a passage, along the eastern edge of the site.

IV. A. East Avenue? The Question of Narrow Lanes

The most prominent feature to emerge from the difficult conditions in square 4.H28 was a comparatively well-preserved fieldstone wall [25,914], 60 cm wide,

running north south, east of the broader fieldstone wall [25,904], described above (Fig. 12). Whereas the broader wall was preserved for a height of only 5 cm, the 60 cm wide wall [25,914] stood 23 cm high, was founded deeper, and may in fact predate the broad, north-south fieldstone wall [25,904].

Abd el-Aziz traced the fieldstone wall [25,914] through squares 4.E-H-I28 for a length of 6.35 m. as it curved slightly east of north. We could map it on the surface of the unexcavated ruins to the south in squares 4.F28 and 4.G28. It formed the eastern side of a lane 63 to 84 cm wide, with the north south limestone wall [25,904] as the western side. This lane led generally south toward the entrance of the RAB, albeit at a later period than the mudbrick Eastern Boundary Wall [7392]. It is possible that the better-preserved fieldstone wall [25,914] had earlier formed a corridor here with the continuation of the mudbrick wall [7392].

The eastern boundary walls and the remains of the path or corridor that Abd el-Aziz excavated raise the question whether an “East Avenue” ran north south between the Eastern Town and the EOG production and waste disposal yard. If so, this avenue was probably not half as broad as the streets running

through the Gallery Complex – North Street, Main Street, and South Street, each of which was originally 5.25 m wide (see below).

The corridor between the residual broad fieldstone wall [25,904] and the thinner fieldstone wall [25,914] roughly lines up with another corridor, more formally defined by mudbrick walls, 15 m south of square 4.H28. These walls were excavated by Ashraf Abd al-Aziz during 2004 in square 4.D27 immediately NW of the small urban estate we call the Eastern Town House (ETH; see WETTERSTROM 2004). The eastern wall of this corridor runs south where it was picked up by Dan Hounsell and Emma Hancox as the western wall of a court (H) in front of the ETH. This corridor is only about 1.50 m wide. If projected northward, the corridor aligns with the eastern side of the thick mudbrick wall [7392]. It is possible we are dealing with two corridors, an earlier one of mudbrick and a later one of fieldstone.

We need to excavate the squares to the south to further track these walls and corridors. So far it appears that the inhabitants replaced a substantial mudbrick wall [7392] with a limestone fieldstone wall [25,904], both of which could have formed the western side of a north south lane or corridor. Could such a narrow corridor have functioned as an eastern avenue that ran north to south along the Eastern Town? Consider that the so-called Western Roadway, which departs from RAB Street and runs straight south into the Western Town, is only 1.50 m wide for a length of about 55 to 60 meters (see below). This might seem extremely narrow for a main north south avenue. But it might be comparable to the widths of major lanes in Old Kingdom Elephantine, which were generally not wider than 2 m, the width for two donkeys to pass (Cornelius Von Pilgrim, this volume?).

IV. B. RAB Street

We hypothesize that the north south way along the east of the site once joined to the eastern end of the Enclosure Wall in front of the NE entrance to the RAB. We may never know for certain because erosion scoured away the settlement structures immediately north of the RAB entrance. The end of the Enclosure Wall where it might have joined to the Eastern Avenue is missing. Beginning 5 m west of this corner, a street, which we call, for convenience, RAB street, runs to the west 2 m wide between the Enclosure Wall and the RAB wall, then south at a width from 2.4 to 2.6 m, then west at a width of 3 to 4 m between the Enclosure Wall and the northern walls of a series of five large rectangular enclosures, finally NW between the Enclosure Wall and the northern wall of the set-

tlement area we call the Western Town. In this last stretch RAB Street opens up from a width of 2.6 m on the SE to 6 m on the NW.

During our 2005 season we excavated RAB Street in three places: north and west of the RAB, and near the turn of the street to the NW at its juncture with the Western Roadway (WRW).

IV.B.1. RAB Street North and West of the RAB

Banu Aydinoglul supervised excavations in RAB Street where the path turns around the NW corner of the RAB. When people and, possibly, animals rounded the NW corner, they hugged the inside of the turn, wearing down the street surface [20,877] contemporary with the walls, and creating a deeper pathway just at the base of the outer corner of the interior of the two parallel walls. At the same time, more refuse accumulated along the outside of the turn, around the base of the interior corner of the outer wall. The result was a roadbed that sloped down from NW to SE into the corner.

In his 2005 trench through the Enclosure Wall [5432] and across RAB street Aneis Hassan found that the silty street surface [20,877] lay above an older street surface [21,766], which lay above a sandy bed [21,745] that was in turn laid over a layer of gray sandy silt [21,749], which ran under the Enclosure Wall [5432] but up against the RAB wall [5433]. The lower surfaces suggest that the zone along the northern wall off the RAB was a traveled path before the fieldstone Enclosure Wall was built. This path may have run between mudbrick walls that preceded both the fieldstone Enclosure Wall [5432] and the northern fieldstone wall of the RAB [5433] in its later phase.

In 2004 Astrid Huser and Ana Tavares excavated another trench across RAB Street on the west side of the RAB. They found that, as on the north of the RAB, the alluvial mud paving of RAB Street [20,877] that functioned in phase with the fieldstone wall of the RAB and the Enclosure Wall rests upon a sandy bedding [20,869]. A lower, older surface [20,870] functioned with an older mudbrick wall that the builders enlarged and capped as the thick fieldstone RAB wall (Fig. 21). A layer above the surface [20,870] and below the mud paving [20,877] runs up against the RAB fieldstone wall but under the Enclosure Wall. This indicates again that the inhabitants built the Enclosure Wall after the RAB wall. The builders jogged the Enclosure Wall around the RAB, which they had built earlier, in order to segregate the RAB on the south from the Gallery Complex to the north. Tavares and Huser, unlike Hassan in his trench on the north, did not cut their western trench through

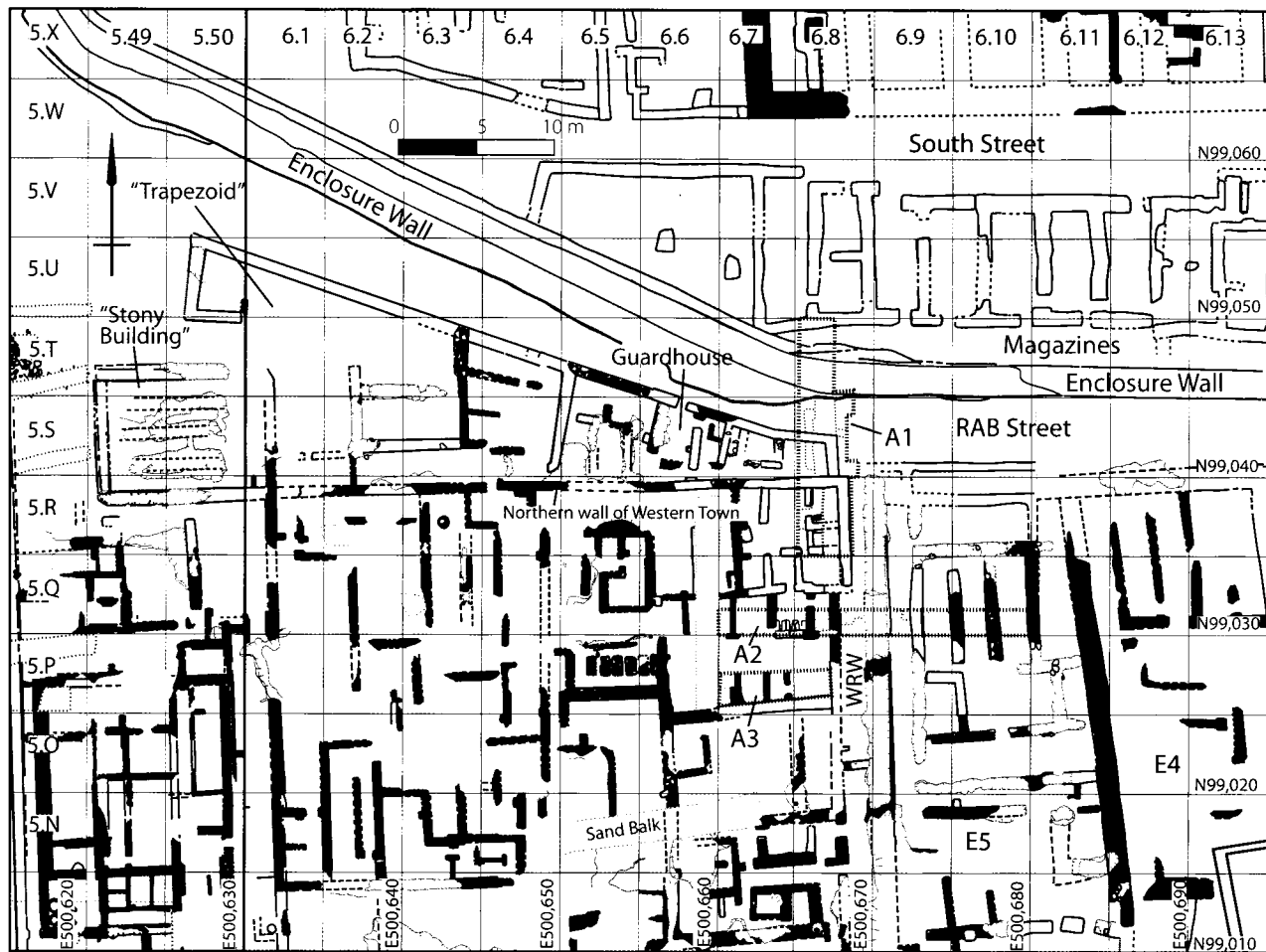


Fig. 13 Juncture of RAB Street and Western Roadway (WRW), Guard House, and locations of 2005 Trenches A1, A2 and A3

the Enclosure Wall, so we are not yet certain if on the west the Enclosure Wall was, like the RAB outer wall, a rebuild of an older mudbrick wall.

From the RAB NW corner we move west along RAB Street to the beginning of the big bend of the Enclosure Wall. Here we excavated Transect A in 2005 because we were keen to know the relationship in time between the Gallery Complex on the north, the Western Town on the south, and the Enclosure Wall, which separates the two districts (Fig 13). Dan Hounsell supervised Transect A, a north-south excavation trench, 15 m long, across the second bend in the Enclosure Wall where it swings east on its run around the west and then south of the Gallery Complex.

From north to south Trench A1 crossed the field-stone southern wall [22,101] of structures we call the South Street Magazines, the Enclosure Wall [here, 22,102], RAB Street, and the eastern end of a trapezoidal building built onto the northern wall of the Western Town [22,104] (Fig. 14). The northern wall of the Western Town runs straight east west, while the northern wall of the added building [22,081]

runs parallel to the SE-NW bend of the Enclosure wall. This creates a trapezoidal ground plan to this building and the larger compound, which we called the Trapezoid, stretching to the west. Trench A1 continued south alongside a pathway between the Western Town and Enclosure E5. This path, which, for convenience, we called the Western Roadway (WRW), opens from RAB Street and penetrates south into the labyrinthine Western Town.

The team excavated in Trench A1 down to the road surface [22,052] of RAB Street, consisting of fairly small, broken, fragments of limestone in a coarse sandy matrix (see fig. 20). A narrow (55cm, about one cubit), shallow (14 cm deep) channel [22,067], lined with clay [22,068], runs roughly along the center of the road. Some remnant stones indicate that parts of the channel were lined with small, unworked, limestone blocks. The channel is similar to the carefully built channel or drain down the axis of Main Street (ABD EL-AZIZ 2007, 123–25). Silty sand with much pottery [22,069] filled the drain after it fell out of use (HOUNSEL 2005).

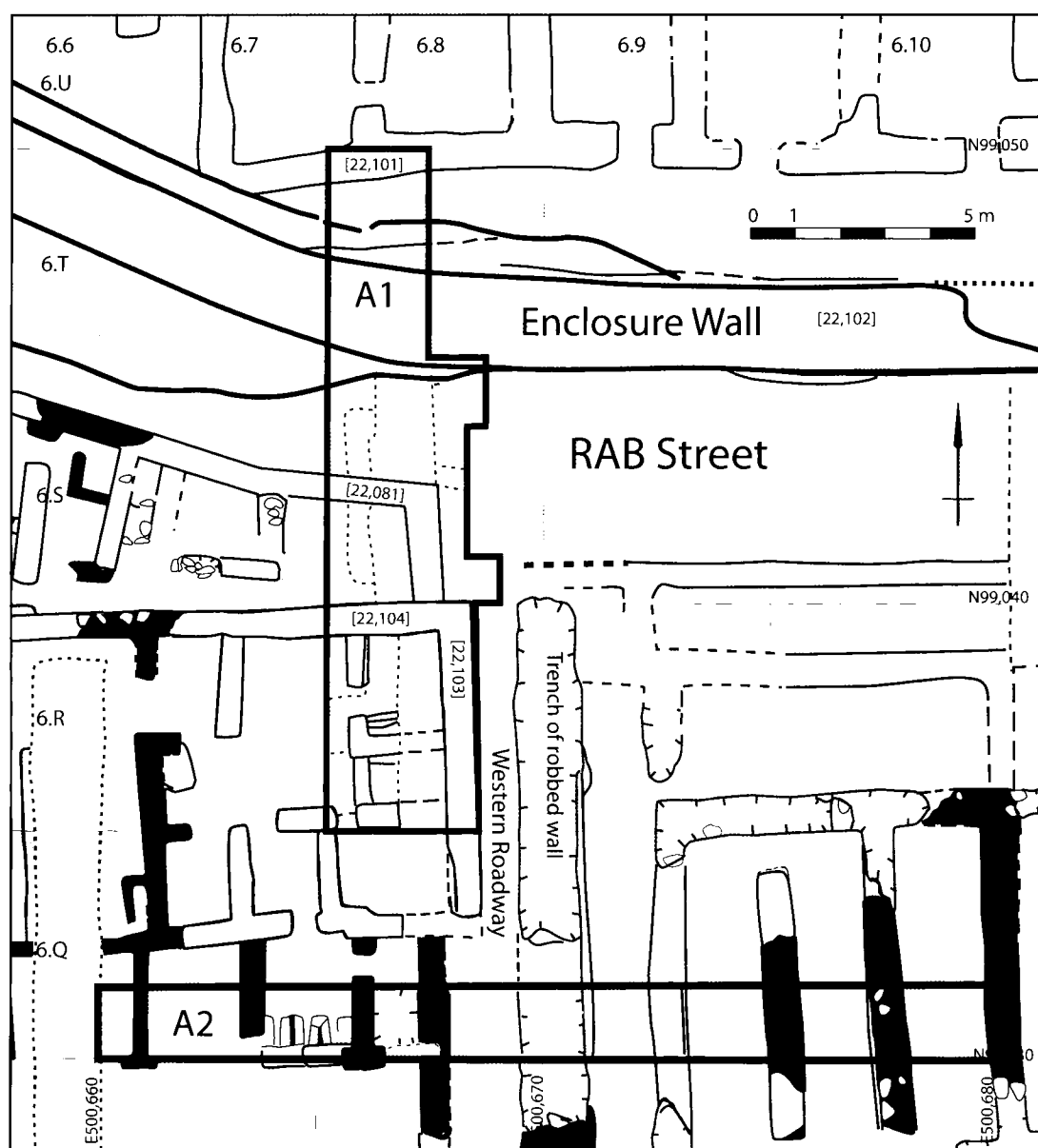


Fig. 14 Trench A1, Enclosure Wall, RAB Street, Western Roadway and Guard House

RAB Street comes to no formal end on the NW. Rather it opens up at the elbow of the Enclosure Wall where it turns to run NW. The stretch alongside the wall on its straight run to the Wall of the Crow is architecturally undefined, except for a single line of mudbricks that runs parallel to the Enclosure Wall at the northern end of the bend. This line of bricks, which seems to respect and define a continuation of the RAB Street path, is founded upon layers of concreted sand and levigated marl clay from standing water. Although this line of bricks appears to be rather late in the settlement sequence, it might have functioned when the Enclosure Wall still stood to some height, because it runs parallel.

Farther NW, in the 2004 Trench WD that Adel Kelany and Lauren Bruning excavated, we found that

the lowest of the limestone rubble layers [20,805] upon which the inhabitants built the Enclosure Wall stretches 7 meters to the west, so this could have formed a kind of roadbed. However the people who occupied the site left a sequence of layers rich in pottery sherds and other material abutting the Enclosure Wall, so they did not maintain or keep clean the surface of this layer as a formal road surface.

IV. C. The Western Roadway (WRW)

The Western Roadway appeared as a straight north south path on our schematic map of the walls, after removing all the “noise” of toppled stone, uncleared sand, and debris. The path, about 1.5 meters wide, was framed on the east by the thick, western wall of

Enclosure 5 (E5), now marked by a robber trench, and a thinner wall on the west (Fig.14). The reality on the ground is a mass of toppled stone that Dan Hounsell's 2004 excavation team cleared where their east-west Trench A2 cut across the WRW (LEHNER, KAMEL, and TAVARES 2006, 63–68). Trench A2 exposed part of the western wall of WRW, 70 cm wide and composed of mudbrick. The A2 trench confirmed that this path could not have been more than 1.50 meters wide.

On the surface of the ruins, we could see the possibility of WRW running unobstructed, except for one possible cross wall that might be late in the sequence, as far as 60 m south to the SW corner of the structure we identified as House Unit 3. On the northern end of the western wall of this unit, in grid square 6.I8, we had the definite sides of the path, still 1.50 m wide. In grid squares 6.F8–9 at the SW corner of House Unit 3, there is a clear marl plaster line of

the northern face of a wall that at some point blocked this long, straight and narrow path (Fig.15). Just here, Mohsen Kamel's excavation team found an entrance from WRW into a corridor along the southern side of House Unit 1 (see LEHNER, KAMEL, and TAVARES 2006, 73–74, fig. 13).

Unfortunately the SE corner of House Unit 3 was badly eroded and close to the ground water, which from 2005 to 2008 rose dramatically to completely inundate this part of the site. However, it is possible that an entrance into House Unit 3 opened in the southern wall just where this wall is truncated by erosion, for the team could find no other entrance in the otherwise well preserved boundary walls of the unit. So WRW seems to have ended at a doorway that opened to a perpendicular corridor that may have led east to the entrance of House Unit 3. In summary, WRW might have penetrated from RAB Street 60 m deep into the Western Town like some of the



Fig. 15 a. The Western Roadway (WRW) running south to the SW corner and possible access into House Unit 3
b. The end of the WRW at the SW corner of House Unit 3 in the Western Town

narrowest lanes through contemporary Middle Eastern villages, and like instances of the “blind alley structure of the residential district” (WIRTH 1992, 22), ended in a cul-de-sac at a residential compound. The difference from a typical village path is the straightness and relative orientation of WRW to the cardinal directions, a product of what appears to have been an initial orthogonal plan and layout to the Western Town, probably a product of planning by the central authority.

IV. D. Corridor to the Pedestal Building

So far, we have found at the NW corner of the Western Town one other narrow corridor that led south deep into this urban agglomeration. On the far west of the site, in square 6.T47, our overburden clearing revealed the northern end of a fieldstone wall that runs straight south for 55 m where it becomes the western wall of the Pedestal Building that we have investigated since our first excavation season in 1988–89 (LEHNER 1992; 1993; 2007b).

At half this distance, the fieldstone wall becomes the western side of a corridor, 90 cm wide, between this limestone wall [525] on the west and a parallel mudbrick wall [28,054] to the east. The corridor leads to the western end of an east-west corridor along the northern front of the Pedestal Building. The floor of the corridor is elevated 40 cm above the floor of mudbrick buildings to the east and north, which we partially excavated in 2006 and 2007. The pedestal Building is also on this higher floor level. The corridor is a by-pass of the buildings east of it at the higher floor level of the Pedestal Building. The path continues southwards, 1.00 m wide, between the eastern wall of the Pedestal Building and a mudbrick wall (see plan in LEHNER and WETTERSTROM 2007b, 2). The corridor ends at the southern corridor of the Pedestal Building. Here we found an intact set of the pedestals, the partition walls forming compartments above them, and *in situ* crude red ware jars at the bases of the pedestals. A doorway through the thick southern wall of this part of the corridor opens south, so this pathway continues farther south (LEHNER, KAMEL, and TAVARES 2007).

We need to investigate the northern end of the corridor further. We do not know if a parallel wall on the east continues the corridor as far as we have been able to trace the western fieldstone wall. This wall is roughly on line with the line of single bricks that seems to mark the continuation of RAB Street to the NW and north as an open path along the west of the Enclosure Wall. It is already apparent, however, that one could penetrate into the western side of the West-

ern Town from the open path along the Enclosure Wall, and then into very narrow and highly restricted “feeds” into the density of the Western Town.

We should note that the Pedestal Building, a bakery complex to the east, and the mudbrick building to the north (see LEHNER and WETTERSTROM 2007b) appear so far to have had no communication with the large house units we have investigated to the east. A stout wall of fieldstone and mudbrick [25,450] appears to have separated the production and storage facilities on the west, including the Pedestal Building and bakeries, from elite residential structures to the east. Similar to the WRW, the narrow corridor offered a straight and narrow access south until a certain point – the Pedestal Building – after which movement was very indirect, with many 90° turns, and eventually blocked, when the corridor east and south of the Pedestal Building became dead space where the inhabitants dumped their waste.

IV. E. Ways Through the Gallery Complex

Three streets run east-west through both the Gallery Complex and the fieldstone foundation walls to the west, in what we call the Western Extension. Again for convenience, we gave our own names to these ancient features – North Street, Main Street, and South Street. These three streets divide an area about 185 meters north to south into three large blocks, Gallery Sets I, II, and III and IV; the latter two are conjoined.

IV. E. 1. North Street

Of the Gallery Complex streets, we are least certain about North Street. Through the excavations of Mohsen Kamel and John Nolan during our 2000 season, we have tracked the walls of Gallery Sets II and III that frame this street for a distance of 35 m. The street is around 5.6 m wide, slightly wider than Main Street, which is 5.20 to 5.25 m wide, an intended 10 cubits. We are certain of the continuation of the southern wall of North Street immediately west of Gallery Sets I and II where, composed of fieldstone, it functions as the northern wall of the structure we call NSGH (North Street Gate House, see below).

We can only assume that North Street once ran the distance between Gallery Sets I and II like Main Street, because Nile floods and possibly wadi outwash removed any remains of the NE corner of the settlement. Most of Gallery Set I was lost to this erasure, although it is certain that with further work we could retrieve more of its north-NW end and the western four or five galleries.

The Enclosure Wall, such as we mapped in its collapsed and weathered condition after removing the

overburden, seems to show an opening about on line with North Street and just to the north of an east-west fieldstone wall that spans the Western Compound. It is possible the fieldstone wall is one side of a corridor to North Street, an extension of the street out to the path leading from the gate in the Wall of the Crow, the equivalent of the Chute. We need to excavate through the compacted sandy layers, anciently deposited, that cover the floor levels contemporary with the gallery floors to check if North Street adjoined the path from the gate in the Wall of the Crow.

IV. E. 2. Main Street

Main Street was the center spine and organizing axis of the Gallery Complex (LEHNER 2007b; Abd el-Aziz 2007a). We have mapped this street for 165 m from West Gate in the Enclosure Wall to the Eastern Boundary wall [7392]. We need to study further the chronological phasing between the Eastern Boundary Wall [7392] and Gallery Sets II and III, but it appears that this wall [7392] brought Main Street to a complete dead end. The last 25 m of the northern wall [25,929] of Main Street, built of fieldstone, appears to be an add-on with no counterpart on the south. This wall, 1.36 m wide, once attached to the Eastern Boundary Wall [7392], but the inhabitants later removed the end of the fieldstone wall 1.56 m shy of the east face of the mudbrick wall [7392], probably in order to pass along a linear series of small pedestals, similar to others in various parts of the site (Fig. 10). Abd el-Aziz's team exposed the bottom of the linear depression [25,948] that marked the fact the fieldstone wall [25,929] once attached to the mudbrick wall [7392] (ABD EL-AZIZ 2007c).

With no defining southern wall east of Gallery Set I and the entrance into the Hypostyle Hall, Main Street must have opened broadly into Area EOG (East of the Galleries), a rectangular zone 40 m east-west by 75 m north-south that was to given over to industry like baking and waste disposal from that production (Fig. 1).

North Street and Main Street were very different from the straight and narrow lane of WRW, or that suggested for the boundary between Area EOG and the Eastern Town. Bright sunlight would have illuminated these broad east-west streets, which would have lacked shade and the prevailing northwest-southeast cooling breeze. Anyone at one end of the street could have seen anyone coming and going through the dark doorways into the galleries, which opened flush with the walls facing into the streets.

On the basis of our excavations of Gallery III.4 (ABD EL-AZIZ 2007b), it appears that one descended

slightly from the streets down into floor level at the northern, front end of the galleries. The floor rose 1.18 m from front to back (LEHNER 2007c, 187). From the rear, southern end of Gallery II.4, on the opposite side of the street, people stepped down into the street from a higher level. In the structure we call Main Street Gate House (MSGH), Justine Gesell excavated a set of simple steps down through a doorway in the southern wall of Main Street to the lower floor level of a room in the NW corner of MSGH. On the other hand, in the Western Extension in square 3.J50 Lauren Bruning excavated a small ramp up to the higher floor level of what appears to be an open court. The fieldstone structures of the Western Extension seem, in general, to have been built later than the galleries, so the ramping up might be a function of settlement build-up over time.

Late in the use of Main Street, the occupants added fieldstone walls projecting perpendicular from the northern wall to constrict the passage to only 2 m, one about halfway down the length of the street between Gallery Sets II and III in square 4.K13 and the other at the eastern end of these blocks, in square 4.K20, just outside the entrance to the Hypostyle (ABD EL-AZIZ 2007a, 114–18, figs. 5.7, 5.8).

IV. E. 3. South Street

The southern wall of Gallery Set IV forms the north boundary of South Street. Segments of fieldstone wall, later incorporated into the South Street Magazines, define the southern side of South Street (LEHNER 2002, 58–59, fig. 15). Our cleaning and scraping of the surface of the settlement ruins exposed the mudbrick foundation of the SW corner of Gallery Set IV. Immediately west, a fieldstone wall continues the northern side of the street, just as fieldstone walls carry Main Street and North Street west of the galleries.

We have found very little of the southern wall of Gallery Set IV, which was the northern side of South Street, because the central southern part of Gallery Set IV was deeply eroded into a depression. But sighting east from the SW corner of Set IV we see it lines up with the east-west wall, 1.57 meters thick, at the southern end of Gallery IV.11, the gallery stretching south from the bakeries we excavated in 1991 (Figs. 1, 24, 25). We found a short stretch of the marl plaster line marking the southern face of the north wall of South Street in square 6.W11, midway between the segments on the east and west. Linking these pieces, we have the line of the north wall of South Street.

In contrast to the eroded state of the northern mudbrick wall of South Street, the fieldstone walls on

the southern side of the street rise about a meter. The wall segments on the south belong to the South Street Magazines, nine rectangular structures, some of which are stuffed tightly with disintegrated pottery, mostly bread molds. Some of these chambers might be bakeries. The distance between the northern mudbrick wall of South Street in square 6.W11 and the fieldstone wall to the south is 5.20 meters — close to 10 Egyptian cubits, the same width as Main Street. The magazine walls to the east and west intrude into this space, so that much of South Street is narrower than 5.20 meters. The builders may have planned South Street with a width of 10 Egyptian cubits. As they added modified structures overtime, the street became narrower.

South Street runs the length of the south side of Gallery Set IV to the NW corner of the RAB. Here, the Enclosure Wall narrows the street to a corridor only 2.80 meters wide. The addition of a curving mudbrick wall [5450] reduced the passage to about a meter (Fig. 22). The way to this bottleneck from the west ran through Wall Street.

IV. E. 4. Wall Street

From what we can see of the HeG settlement so far, no passage existed north to south through the entire gallery system, only east west via Main Street, North Street, and South Street. To move from the entrance into the site through the gate in the Wall of the Crow to the RAB and the Eastern Town, one had to move along the path of the Chute, and enter through West Gate in the Enclosure Wall. From there one could move northwest to southeast around the gallery system by way of Wall Street.

To reiterate, the path through the gate in the Wall of the Crow was simply a trodden surface on compact masons debris, sloping up from north to south through the gate. At some point that we must have just missed slightly west of our clearing, we believe this path meets the Chute, a corridor only 2.5 meters broad curving round from a north-south direction to a northwest-southeast direction. The Chute ends on the SE at an open area just outside West Gate, an opening about 5 meters (or 10 cubits) wide through the Enclosure Wall at the western end of Main Street.

Entering West Gate you turned right, or south. The southern wall of Main Street ends and turns to the south, forming a corridor, only 2 m wide and 13 m long, with a fieldstone accretion built onto the eastern face of the Enclosure Wall. This is the beginning of the path along the inside of the Enclosure Wall that we named, for convenience, Wall Street (LEHNER 2002, 54, fig. 13). This street continues

south, 4.4 m wide, for another 21 m, narrowing along this stretch to 3.4 m.

Now you arrive at another gate, about 2 meters wide. Through this gate Wall Street broadens into a court 6 meters wide, extending another 12 meters farther south. Then, because the Enclosure Wall thickens to 4 meters wide with the accretion built onto its inner face, the passage narrows again to about 3.30 meters. From here Wall Street begins a long curve toward the SE, following the bend of the Enclosure Wall. Along this curve Wall Street opens to a width of 6 or 7 meters. We describe the arrangement as it shows after we cleared the overburden. Further excavation may reveal more structures in this open area. After 40 meters, at the end of this curve, Wall Street turns into South Street.

Now at the western end of South Street, you move through a corridor, 2.60 m (5 ancient cubits) wide and about 16 meters long. On your left (north) is a square fieldstone complex (South Street Gate House) and then the southern wall of Gallery Set IV becomes the northern wall of South Street. On your right (south) are the South Street Magazines. From here, South Street runs straight, 60 m long, to the NW corner of the RAB. Here, at the eastern end of South Street, a curving wall [7419] on the NW corner of the RAB closes off the path to a width of less than a meter (Fig. 22). Yet the whole path system so far described seems to lead just here, to this constriction at the NW corner of the RAB.

V. GATE HOUSES

Buildings that appear to be houses occupy key points along the ways through and around the Gallery Complex. In particular, we found house-like structures south of the entrances into North Street, Main Street, and South Street.

V. A. North Street Gate House

During our 2001 and 2002 seasons Mohsen Kamel supervised excavations in the building we called North Street Gate House (NSGH). In 2004 Ann Foster supervised the continued excavation of the Old Kingdom deposits (FOSTER 2004; LEHNER 2004c, 64–65). We dubbed this building a “gate house” because it sits just south of the entrance of North Street into the Gallery Complex, between Gallery Sets I and II. Many Late Period Burials complicated the task of excavating NSGH. Osteo-archaeologists Jessica Kaiser, Johnny Karlsson and Tove Bjork, documented, removed, and mapped forty-six burial pits (KAISER 2004).

A little ramp ascended up into Vestibule 1 from the lower level of North Street through a doorway 1.10 m

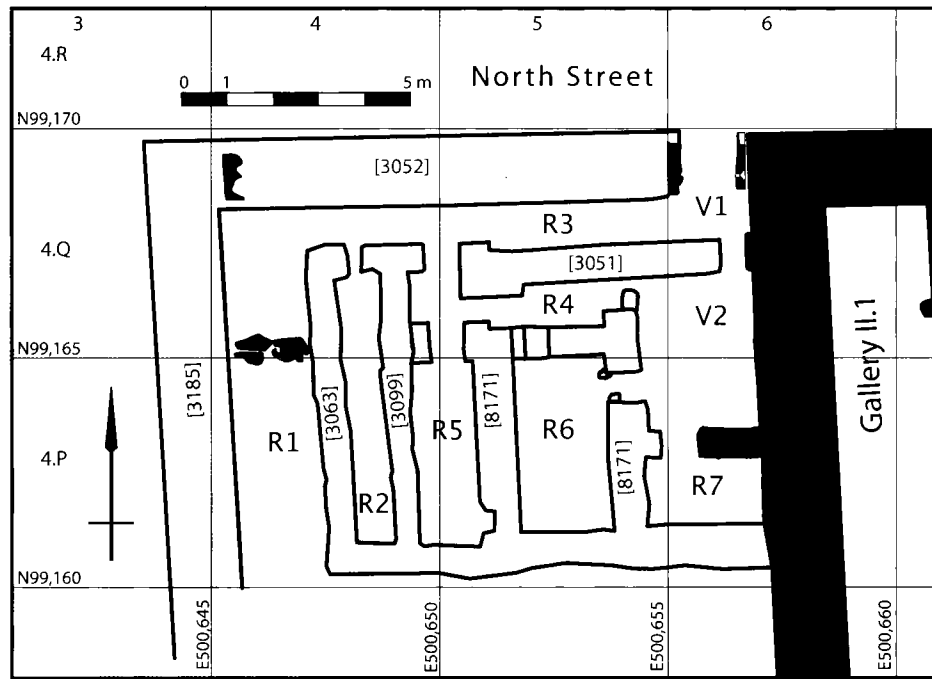


Fig. 16 North Street Gate House, plan

wide on the northeast against the western wall of Gallery Set II, which is also the eastern wall of NSGH (Fig. 16). This doorway opens through the 1.50-meter thickness of the southern wall of North Street. A right turn in Vestibule 1 gives access to a corridor (Room 3) running west along the north side of the house.

NSGH sits as a discrete unit within a larger enclosure formed by the western wall of Gallery Set II (to which NSGH attaches), the southern wall of North Street, and the western wall [3185] of a passage, 1.75 m wide, running outside NSGH on the west. The overall plan of NSGH appears to be a core domestic unit consisting of a vestibule (2) or foyer, two main rooms (5 and 6), or possibly a main living room (5) and a bakery (6), and a room (7) possibly for sleeping. Added to the core unit are two magazines (Rooms 2 and 4), and an access corridor (3) that the inhabitants may have also used for storage. West of the house proper is a space ("Room" 1) about 1.75 meters wide and longer than 6 meters, extending from the south wall of North Street for an unknown distance to the south beyond the limits of our 2004 excavation. This appears to be a street or passageway.

In Room 6, the central space in the house (2×3.8 m), Late Period burials destroyed about half the floor deposits, but enough remained to ascertain that at one time the inhabitants used this space as a bakery with features similar to those in the bakeries we excavated in Gallery IV.11 in 1991 and elsewhere in the site (LEHNER 1993, 60–66). These bakeries were

almost certainly without substantial roofs, if not completely open-air, so we suspect Room 6 might have been unroofed. Below an ash deposit two shallow, worn ditches ran parallel to the western and eastern walls. These appear to be baking pits, and smaller depressions within the ditches were probably bread mold sockets. Two larger, shallow pits in the southwestern corner are probably emplacements for vats, and we might understand a crude stony hearth platform in the northwest corner as the spot where the bread molds were stack heated, as shown in Old Kingdom tomb scenes and figurines.

In Room 5, 1.4×4 m. Foster associated an ash deposit [2612] on the floor against the eastern wall of the room with burn marks on the wall and posited a small hearth here. She noted three other burn marks on the walls — in the southern corners of the room as well on the western wall across the room from the hearth [2612]. As narrow as it is, Room 5 may have been the main private living or sleeping room of the unit, especially if Room 6 was given over to open air baking. "Vestibule" 2 would have been the more public main room.

Room 2, 6 m long and only 90 cm to 1 m wide, is oriented north south along the western side of the core house. Fine red "Meidum ware" bowls, a jar stand, bread molds, and a beer jar lay *in situ* on the floor of this magazine. Foster writes in her report that the ceramic deposit "was primarily composed of large fragments of nearly intact storage jars and associated

contents, most commonly fish bones. This was a deep deposit and the discovery of several superimposed layers of these vessels suggests some sort of collapse, possibly of shelves in a storeroom" (FOSTER 2004).

In Room 7, 2.5×1.5 m, Late Period burials badly disturbed the floors and deposits. Traces indicate a plastered shelf along the inside of the northern wall. We hypothesize Room 7 might have been for sleeping because of the raised floor level and offset doorway.

On the basis of the location of NSGH, and on the basis of material culture (see below), we have hypothesized that the occupants were of higher status than people in the galleries. The NSGH core house is only 70 m square in area. Including the northern and western corridors increases the area to 92 square m. It is possible NSGH included additional open areas or even chambers to the south. However, we need to assess the idea of "elite" occupants against the fact that, during at least one period, the largest central room (6) of the house was given over to bread baking in open pits (so probably left unroofed).

V. B. Main Street Gate House and Manor

Main Street Gate House (MSGH) occupies 58 square meters south of the entrance of Main Street from the Western Extension into the Gallery Complex (Fig. 17).

In 2000 Tobias Tonner excavated a rectangular bin full of ash, presumably for cooking, in the southern end of the main room. In 2001 Justine Gesell excavated the northern part of this building in grid

squares 4.J5 and 4.J6. We have not yet excavated the southern part. The outer fieldstone walls are 80 cm thick. Mudbrick walls enclose an area in the SE part of the house with a well-paved floor and a thick pillar, 90 cm \times 1.10 meters, made of stone and clay. Three steps ascend from a small room in the NW corner to the higher level of Main Street through a doorway, only 50 cm wide, at the western end of the northern wall of the building. A doorway, again only half a meter wide, opens onto Main Street at the eastern end of the northern wall, just where the street enters between Gallery Sets II and III. Here, we found a thin line of fine gravelly sand through the layers that build up over the Main Street surface. We might take this as the traces of a reed fence. This point was uncertain.

Although the doorway opening from MSGH is narrow, stepping out one would have a clear view down the broad length of Main Street. We imagine that anyone coming and going through the dark doorways of the galleries would be obvious.

A larger and more massive building occupies the opposite side and northern end of Main Street. We call it the "Manor" (LEHNER 2000, 43; 2002, 41–42). Measuring about 11 m east west by at least 15 meters north south, its outer walls are about 1.57 m thick, like the gallery walls (Fig. 18). The Manor also occupies the southwestern corner of a larger enclosure 20.2 m wide, the width of three galleries; the overall ground plan is the very hieroglyph for *hwt*. Within this compound north of the Manor two long, thin, benches

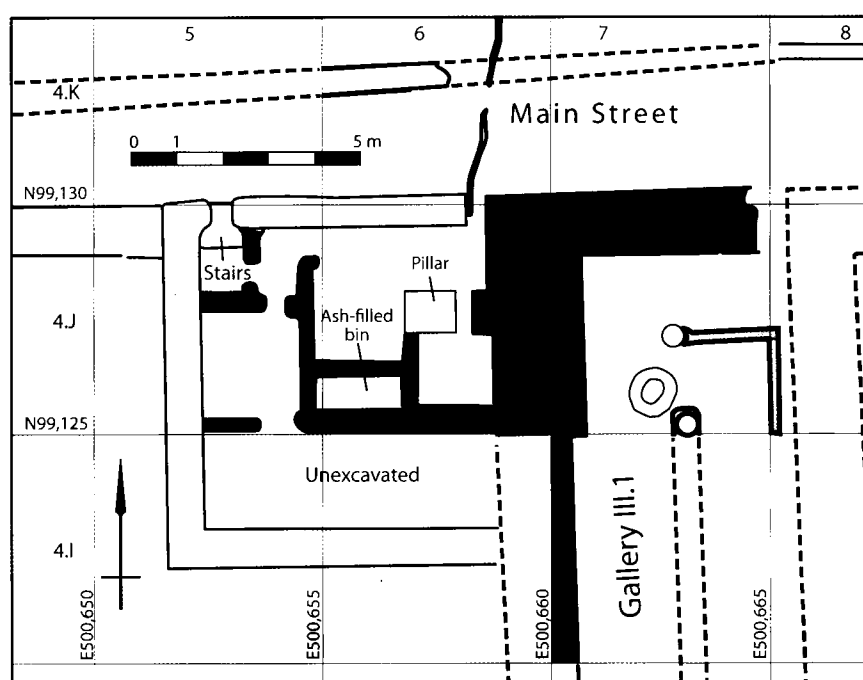


Fig. 17 Main Street Gate House, plan

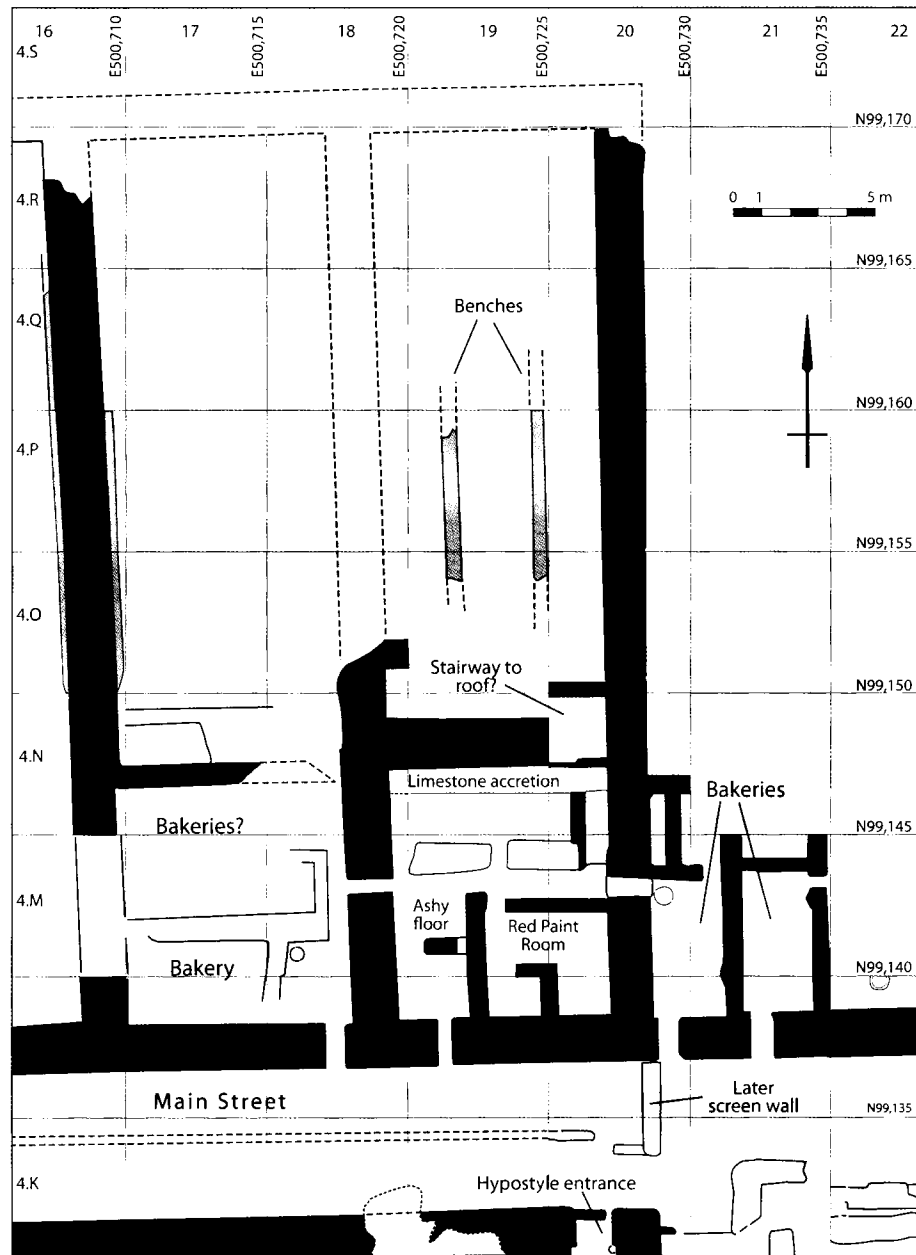


Fig. 18 The Manor, plan

run north-south and parallel, spaced about 2.60 (5 cubits) apart, while each is about 2 meters from the east and west gallery walls respectively. Here, is the larger version of the colonnades in the galleries. If the gallery colonnades are barracks, we might speculate the northern part of this compound slept a special force attached to the main resident of the Manor.

At least one and possibly three bakeries occupy this compound west of the Manor core house. Two additional bakeries attach to the east side of the Manor, with their own entrances through the northern wall of Main Street. Did these bakeries feed a group ensconced in the compound, as the rear,

southern chambers in the galleries, which housed cooking, roasting or baking, might have fed those who slept in the colonnades of the galleries?

In 2000 Hratch Papazian excavated the well-maintained southeastern room within Square 4. M20. A thin red paint layer covered fragments of marl plaster found in the fill, indicating that parts of the walls, perhaps a dado around the base, were painted red. Sarah Sterling excavated in the western room just inside the western doorway and found a thick ashy layer with evidence of cooking or baking.

The Manor, plus its compound with bakeries beside it on the west, is aligned to the Hypostyle Hall

across Main Street to the south. This enclosure and the Manor take up the width of three galleries, like the hypostyle hall and the fieldstone units along its western side. If the Hypostyle Hall belongs to the Manor, the ‘workers’ houses’ along its western side may have been direct dependants to the occupant of the Manor who served the function of the hall and its southern chambers.

People ensconced in MSGH at the southern side and west end of the Main Street, and in the Manor at the northern side of the eastern end of the street, north side, would have had excellent control over all comings and goings through the doorways of the galleries, which open onto the street. At a late phase (IIc) in the use of the streets, the occupants constructed fieldstone walls that narrowed passage through the street. One [2702] projected directly from the SE corner of the Manor and narrowed the entrance between Gallery Sets II and III to 2 m (ABD EL-AZIZ 2007, 114–118, fig. 5.8). Another wall [2813] projected from beside the back entrance to Gallery II.6 at about half the length of Main Street between Gallery Sets II and III.

The walls of the Manor are so thick (1.57 m, 3 cubits) for such a confined interior space (7.6 × 9 m) that we wonder if the structure rose as a kind of tower house, with a roof whence one could overlook much of the Gallery Complex, at least the extensive combined roofs of the galleries whose own walls, of the same thickness, might have supported an upper story and substantial activity on the roof. The unusual thickness of the gallery walls (again 1.57 m, or 3 cubits) suggest that each wall supported double-springing vaults, while the thinness (22–23 cm) of the columns rising through the benches in the gallery colonnades suggest a wood/reed second floor (HEINDL forthcoming). The vaulted roofs of the galleries could have been filled to produce a uniform, flat roof. While “squarish house foundations built with thick walls capable of supporting a tower-like building” (KEMP 2006, 355) are a feature of the Late Period and later, we nonetheless consider the possibility of the Manor rising above the gallery blocks stretching to the west, north, and south, and the industrial yard of Area EOG to the southeast. The peculiar thickening of the already thick back, northern wall of the Manor, with

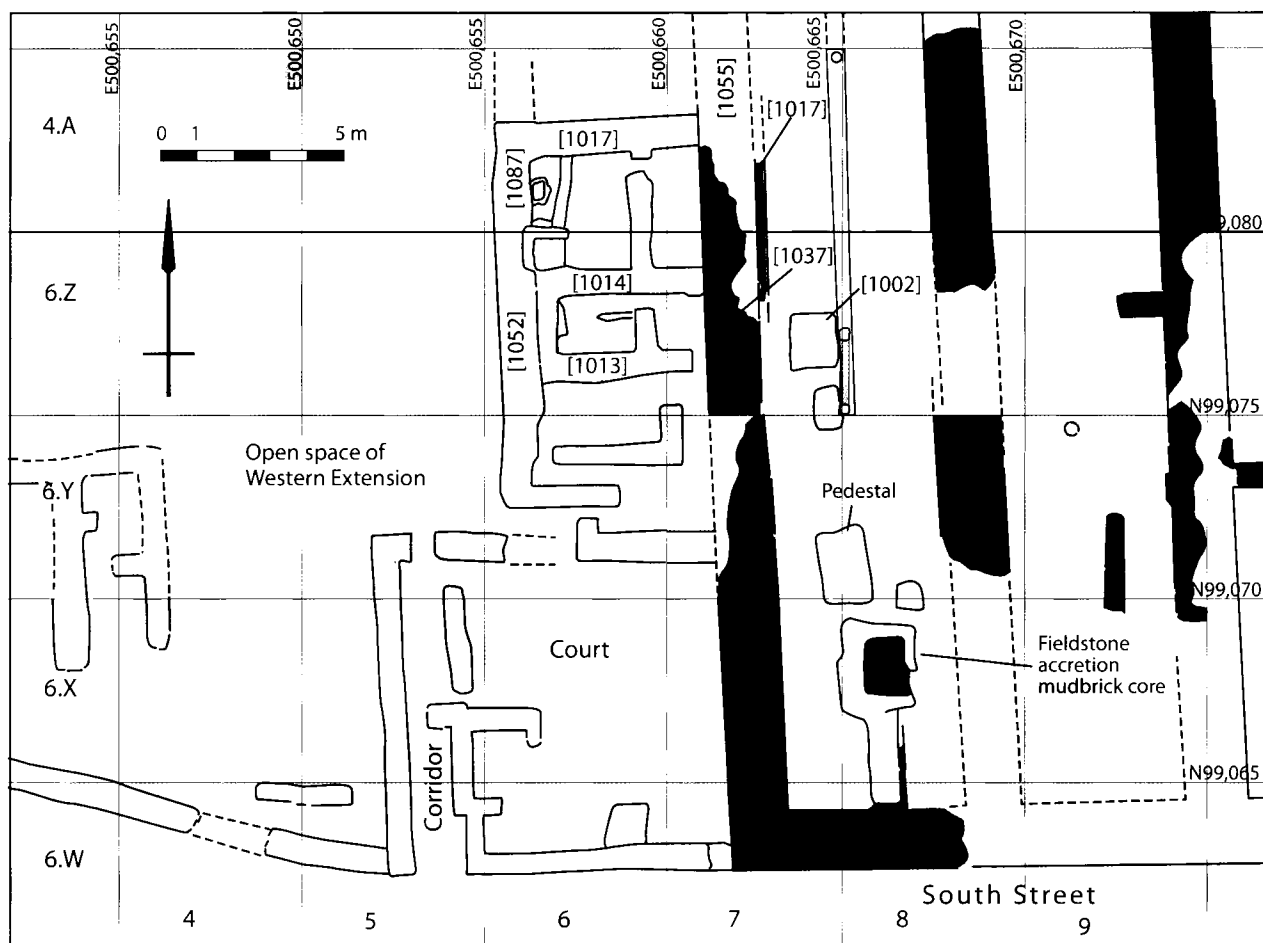


Fig. 19 South Street Gate House (SSGH), plan

an accretion of limestone, suggests this wall may have supported a stairway ascending from a short north-south corridor on the east.

V. C. South Street Gate House

We see a building composed of fieldstone walls located immediately outside and north of the western entrance to South Street as a possible functional parallel to NSGH and MSGH for controlling and monitoring the movement of people, material, and possibly animals through these streets into and out of the gallery system (Fig. 19).

Two parts compose this unit, SSGH (South Street Gate House). On the south, fieldstone walls confine a corridor that opens 1.10 to 1.40 m wide through the northern wall of South Street and runs north for 8.5 m passing at half this length through a doorway that restricts the passage to 70 cm. A right (east) turn puts one into what appears to be an open court, 7 × 7.6 m broad. Another doorway, 60 cm wide, opens at the northern end of the corridor to the broad open spaces of what we call the Western Extension. We have not excavated this part of SSGH, only mapped the walls showing at the surface of the ruins. We wonder if the court and open areas, including the trapezoidal enclosure directly south on the opposite side of South Street (Fig. 1, 24), might have been for temporarily holding animals on their way to the processing yard of EOG, or to the galleries for slaughter by the occupants in the broad streets to which the galleries open.

Small chambers within a rectangular enclosure, 10.5 m north-south by 5.7 m east-west (about 60 square meters) comprise the northern part of SSGH (Fig. 19). Like NSGH and MSGH, the SSGH attached directly to the western face of the western wall of the Gallery Complex. An unusually long zigzag entrance on the south gives access to a series of five rooms: one vestibule and two additional rooms entered through very narrow (40 cm) doorways, each with an antechamber.

Fiona Baker excavated the northern part of SSGH in 1998 before we had revealed its context in the overall architectural layout (LEHNER 2007a, 31–32). Her exposure, which included squares 6.Z6–7 and 4.A6–7, took in the badly ruined western wall of Gallery Set IV. Tumbled mudbrick that filled the upper parts of the rooms indicate that the fieldstone walls served as foundations for walls were completed in mudbrick. The builders took little care with the foundation walls, filling the cores by dumping pottery and trash between outer casings. The rooms were filled with ashy soil that contained large quantities of

pottery sherds of many different types, including many crude bread molds and fragments of a polished red ware jar stand. On the floor of one chamber there were several dolerite hammer stones. Within that part of SSGH building that Baker excavated, she found no evidence of doorways from the SSGH into the gallery during the time the gallery wall stood.

It appears that the western wall [1037] of Gallery IV deteriorated and eroded nearly to the condition we found it during the life of SSGH. After the mud brick wall eroded, or after people dismantled it, the inhabitants of SSGH used the more open space on the east as a courtyard. Two crude limestone pediments formed an entryway on the southeast in what had been the western side of Gallery IV.1. These align with the walls [1013 and 1014] forming the passage out of the SSGH vestibule. A sharp turn to the north directed one into the SSGH interior against the mudbrick gallery wall [1037], but when that wall was denuded down to its base, the passage into or out of the vestibule continued eastward between the two pediments. The removal of the thick mudbrick wall [1037], which may be the reason for no apparent entrance into the room on the NW, would have left the antechambers of the inner rooms open to the east. We have not established a secure stratigraphic relationship between the two fieldstone pedestals and the SSGH walls. The larger of the two platforms [1002] overlies an abandonment deposit [1267]. A third such pedestal occurs 2.6 m farther south. All three pedestals appear to align with a fieldstone wall built around an earlier mud core attached to the southern wall of Gallery IV.1, which we have not excavated.

With the exception of these pedestals and the fieldstone wall to the south, which were certainly built after the mud brick walls of Gallery IV.1 had eroded away, the walls of SSGH in both the northern and southern parts were built up to the western mudbrick wall of the Gallery IV.1, which must have stood when people built the SSGH. The suggestion is, however, that life continued in SSGH after Gallery IV.4 had been abandoned, and its western wall [1037] removed down to floor level.

V. D. The RAB Street-Western Roadway Guard House

We found one other building, again associated with a major street, whose character compelled us to dub it a gatehouse or guardhouse.

At the west side of the juncture between the RAB Street and WRW (“Western Roadway”) a building constricts RAB Street to less than 2 meters (Fig. 13).

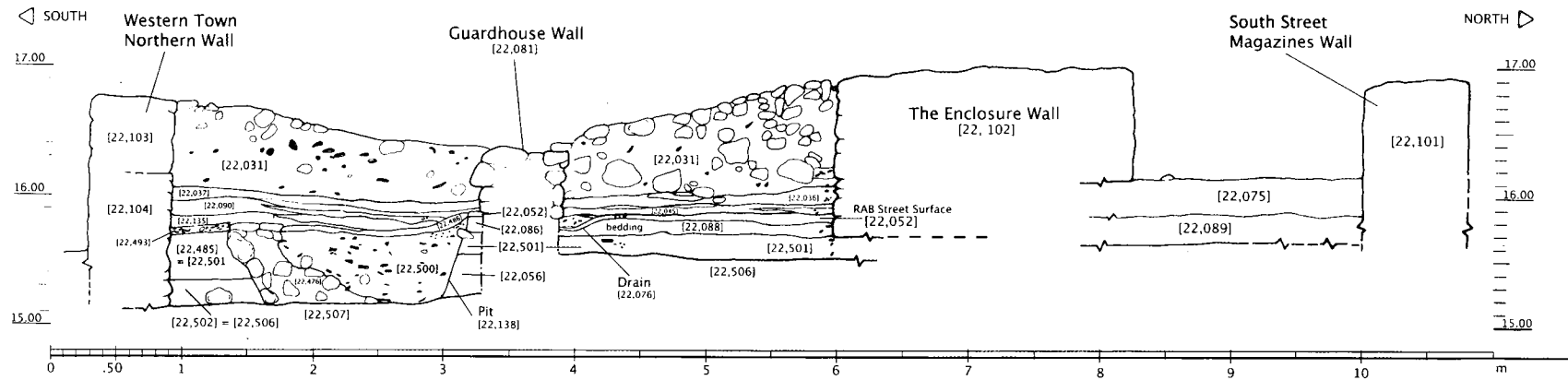


Fig. 20 East-facing section of the western side of Trench A1 from the South Street Magazines across RAB Street, the Guard House, and to the northern wall [22,104 and 22,103] of the Western Town

We called this building the Guard House because its position at the intersection of the two paths and its restriction of RAB Street suggests that someone ensconced here could have monitored traffic through the two ways (LEHNER, KAMEL and TAVARES 2006, 63–68).

The southern wall of the Guard House is the straight-running east-west wall [22,104] forming the northern boundary of the Western Town. The northern wall of the Guard House runs for a length of 17.5 m at an angle SE to NW alongside the bend in the Enclosure Wall. The distance between the two walls widens from SE to NW. The ground plan of the Guard House, therefore, is a trapezoid. The eastern end of the building is only 3 m wide north south (Fig. 14). The western fieldstone wall, 18.5 m to the west, is about 7 m long. Six or seven chambers occupy the northern side of the Guard House, connected by a common corridor along the southern side (HOUNSELL 2005).

The Guard House occupies the eastern end of a larger trapezoidal enclosure, which, for convenience, we call the Trapezoid (Fig. 13). The northern wall of the Guard House continues another 25 m NW beyond what we have taken as the western wall of the Guardhouse for a total length of 42.50 m. Over this distance the width of RAB Street between the Enclosure Wall and the northern wall of the Trapezoid increases from 1.5 m at the eastern end of the Guard House to 7 m, ending in the vicinity of the stony mass that marks some building at the far NW limit of our clearing of the Western Town ruins. We provisionally call this structure the Stony Building (LEHNER, KAMEL, and TAVARES 2006, 64–65).

This Stony Building occupies the SW corner of the Trapezoid. The southern wall of the Stony Building is the continuation of the northern wall of the Western Town. Trenches, where someone robbed the walls, indicate that three E-W walls divided interior of the Stony Building into four long magazines or corridors about 7 m long east to west. A few walls divide the remainder of the interior of the Trapezoid west of the Guardhouse into larger open areas. The far western end of the northern wall of the Trapezoid turns south and then east, forming, with the northern wall of the Stony Building, a corridor, 2.60 m (5 cubits) wide leading into the broad open NW end of the Trapezoid.

We wonder again whether such broad enclosures might have been temporary pens for animals, in this case after people brought the animals through the Chute and then southward along the outside of the Enclosure Wall, which must have strictly segregated such traffic and livestock from that delivered into the

open areas in the southern part of the Western Extension of the Gallery Complex. It would help this hypothesis to excavate these open areas, which we have yet to do, and to find coprolites, tethering stones and water or feeding troughs.

We imagine that people occupying the Guard House probably had some function connected with the larger purpose of the Trapezoid, but they would also be in a good position to monitor the paths leading east to the RAB and south into the Western Town. The stratigraphic sequence that Dan Hounsell found in his 2005 Transect A excavations (HOUNSELL 2005; LEHNER, KAMEL and TAVARES 2006, 67–68) indicate that the decision-makers established such control over time.

Trench A1 (see Fig. 14 for location in map, Fig. 20 for section) exposed a seam running vertically through the wall that forms the southern boundary of the Trapezoid. The wall [22,104] west of the seam is deeper-founded than the eastern part [22,103], which stands on higher ground that had accumulated up against the western part. The builders also built the eastern part [22,103] up over the western part as a kind of capping.

Two distinct layers [22,502], [22,485] of silty sand accumulated up against the face of the older wall segment. Hounsell's team traced layers [22,485] = [22,501] to the north where the inhabitants built the Enclosure Wall [22,102] upon it. Since the Enclosure Wall is built upon this layer [22,501], which banks up to the northern wall of the Western Town (= the southern wall of the Trapezoid), the Enclosure Wall must be younger than the older part [22,104] of the Western Town northern wall.

The northern end of Transect A took the trench N of the Enclosure Wall across a corridor, 1.50 m wide, between it and the southern, back wall of the South Street Magazines within the Gallery Complex. On this side the Enclosure Wall is based at a higher level upon a layer [22,075], 35 cm thick, of dark sandy silt with many pottery fragments (30%) that runs up against the southern wall [22,101] of the Magazines, indicating that this wall [22,101] is older than the Enclosure Wall. Because we did not cut through the Enclosure Wall itself, we do not know how the layer [22,501] upon which it is founded on the south relates to the layer upon which it is founded on the north [22,075]. As with the layers into which the builders cut the foundation trench for the Wall of the Crow, this difference suggests an earlier separation, perhaps an earlier wall, along the path of the Enclosure Wall.

Next, people laid down a layer [22,088] as a level bed for RAB Street. Above this they formed the road

surface [22,052] with a drain [22,067] running through the center. At this point they built the addition [22,103] or repair to the older north wall [22,104] of the Western Town. They founded this addition [22,103] partially on the road surface itself.

The inhabitants built the Guardhouse later than the RAB Street surface and its channel. Up against their addition [22,103] to the older wall [22,104], they next added a mud padding or foundation for the walls of the Guard House. The inhabitants built the wall [22,081] of the Guardhouse in fieldstone up against the younger part [22,103] of the Western Town northern wall. The Guardhouse filled much of the space between the previous north wall of the Western Town and the Enclosure Wall at its elbow or bend to the east. The extension to the west of the northern wall of the Guardhouse, which runs SE to NW, carried RAB Street NW along the bend of the Enclosure Wall. Prior to the Trapezoid, this was an open area funneling into the beginning of RAB Street at the juncture of the WRW and the large Enclosures 1–5, which are westerly extensions of the RAB.

VI. CONTROLLED ACCESS IN THE SE PART OF THE SITE

The stratigraphic sequence in Hounsell's Transect A excavations indicate that parts of both the Gallery Complex and the Western Town predate the Enclosure Wall. At some point it became important to those who made decisions about the settlement to separate residents of the Gallery Complex from residents of the Western Town by building the 2-meter thick Enclosure Wall.

Presently it looks like both the Eastern and Western Towns existed prior to the Enclosure Wall. When this was built it established a strict separation north (Gallery Complex) from south (Western Town). The "Royal Administrative Building" (RAB) created an east west separation between the Eastern and Western Towns, with RAB Street as a controlled link between the two towns.

The imposition of stricter control of traffic between the Gallery Complex, the RAB, and the Eastern and Western Towns is exemplified by what we found in our grid square 6.W19, where three paths trunk together.

Ana Tavares and Astrid Huser excavated near the NW corner of the RAB in 2002, 2004, and 2005 to link the stratigraphic relations between our excavations in areas WCE (east of the Wall of the Crow) and WCS (south of the Wall of Crow), with our excavations in Royal Administrative Building (RAB) and Gallery Set IV, the bakeries we found in 1991, and the Hypostyle Hall. We have not excavated a continuous

exposure between these separate areas of excavation on the far north-northwest and the far south-southeast corners of the site, but if we assume that the Enclosure Wall was a single building event, it provides a long stratigraphic synapse between these parts of the site.

VI. A. Sequence of Building at the NW Corner of the RAB

Tavares and Huser first ascertained that the RAB builders established its outer western fieldstone wall [5434] on an earlier, thinner, mud brick wall [20,867] (Fig. 21). Excavations inside the NW corner of the RAB from 2004 to 2005 confirmed this conclusion. The earlier mud brick wall bounded a courtyard with a clay surface [20,876] on its west, possibly belonging to a mud brick structure that preceded enclosure E1 east of the RAB. Post-holes in the courtyard suggest lightweight wood and reed structures.

This earlier mud brick ensemble was built and functioned about the same time as Gallery IV.11 (Fig. 22).



Fig. 21 Ana Tavares and Aneis Hassan examine early phase mudbrick wall [20,867] embedded within later Western field stone wall [5434] of the RAB. View to south

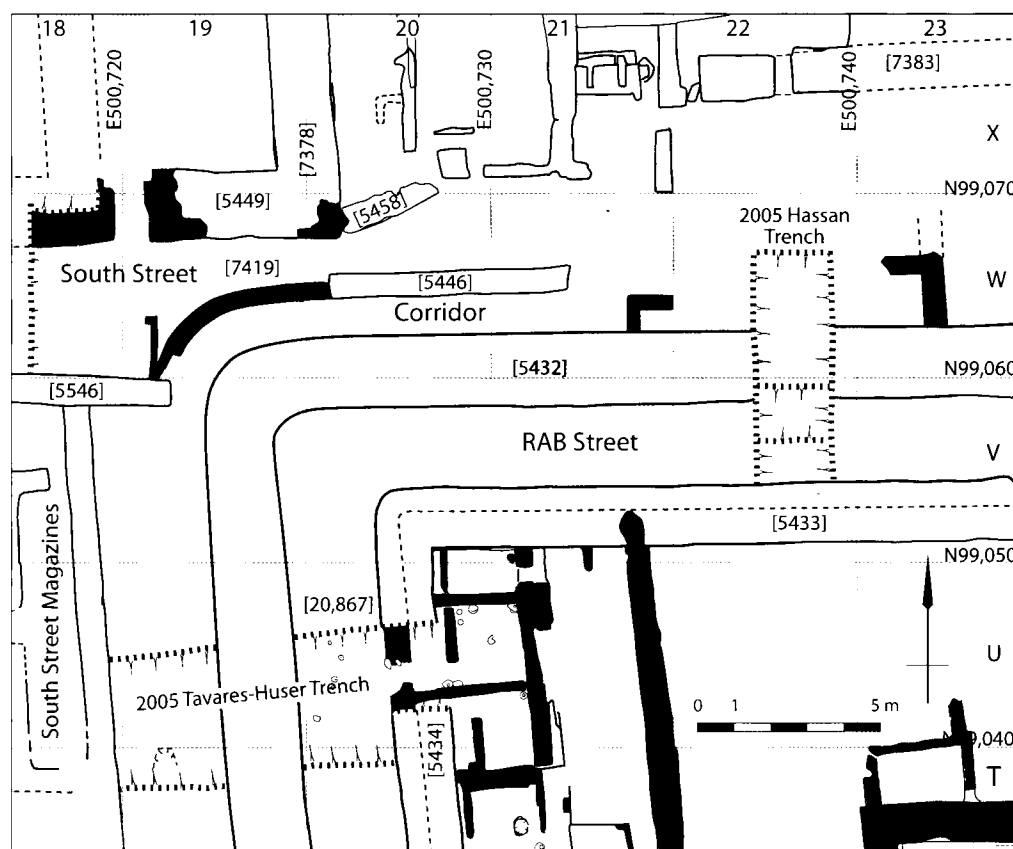


Fig. 22 Plan of walls and excavations at the NW corner of the RAB as of 2005

The western wall of Gallery IV.11 [7378] is the same build as the western wall [234] of the bakeries that we excavated in 1991 (LEHNER 1993, 60–66; 2007A, 25–27). This wall [7378] provides a stratigraphic link to the excavations in the bakeries and to our investigations throughout the Hypostyle Hall enclosure, which extends north of those bakeries along the eastern end of Gallery Set III (Fig. 1).

We know from Aneis Hassan's excavations in 2005 (see above) that after the inhabitants rebuilt the northern RAB fieldstone wall [5333] they later added the fieldstone Enclosure Wall [5432] (Fig. 9). The two walls then framed RAB Street for a width of 2.3 m. The Enclosure Wall narrowed the eastern end of South Street to 2.8 meters. A series of layers and surfaces built up within RAB Street.

Next in sequence, the inhabitants built the first room to the west of the RAB belonging to the South Street Magazines (SSM) as evidenced by the northern fieldstone wall [5546] of this room running east west (Fig. 22). About the same time they built a fieldstone wall, the Division Wall [5446], which further divided the narrow east end of South Street into two ways; a corridor on the north, 1.03 m wide, leading into or out of South Street, and a corridor on the south, 1.20

m wide, leading south into a room, 3.3 m wide along the eastern side of the SSM.

As part of the same building event, they added onto the western end of the Division Wall [5446] a curving mud brick wall [7419] that connected the Division Wall to the northern fieldstone wall [5546] of the South Street Magazines. They might have used mudbrick because it was better material than fieldstone to make the curve. The northern fieldstone SSM wall [5546] stops 1.03 m short of the corner turned by the Enclosure Wall, leaving a doorway. The corridor south of the Division Wall and curved wall is a direct feed to this doorway.

Originally, the builders left two openings or doorways through the curving mudbrick wall [7419], one on the north between the mudbrick wall and the Division Wall [5446], the other on the west close to the northern SSM wall [5546]. As they used the corridor between the mudbrick wall [7419] and the fieldstone Enclosure Wall [5432], people left layers of fine gray soil filled with very small fish bone. Over this they began to leave broken pottery interspersed with trampled "floor" surfaces. Perhaps the broken pottery derives from breakage and spill of vessels removed from storage in the eastern end of the SSM.

As the broken pottery accumulated, the material began to block the doorways through the curved mudbrick wall [7419]. Those who used the site blocked the doorways and plastered the outer (north and west) face of the curved wall [7419]. We found this plaster face [7423] preserved on the outer NW face for a height of 50 cm and extending down lower than the top of the sherd fill in the corridor on the south. As the southern corridor into the SSM filled with waste and trampled floors, the inhabitants kept open the narrow street, constricted to 90 cms on the north of the mudbrick curved wall. They repaved the street with a silty layer that lipped up against the plaster face [7423] of the mudbrick wall [7419]. The same surface also respects the wall [5449] of Gallery IV.11, which forms the northern side of the South Street constriction. The street surface has a pronounced concavity and slopes markedly down to the west. While this narrow street between the curved wall [7419] and Gallery IV.11 southern wall [5449] was still in use, it is possible that the southern corridor between the curved wall and the Enclosure Wall became blocked and no longer functioned.

VI. B. Three Ways at a Critical Juncture

When the corridor into the SSM around the NW corner of the RAB was open and passable, three ways trunked together near this juncture. The pattern of controlled access is very clear in the five-meter space

(in our grid square 6.W19) in which the NW corner of the RAB and the SE corner of Gallery Set IV meet. By building the Enclosure Wall [5432], then the Division Wall [5446] and the curving mudbrick wall [7419], the authorities divided this space into three ways: the access into South Street (90 cm wide), the curving corridor into the magazines. (SSM), and RAB Street (Figs. 23, 24).

The Enclosure Wall is preserved nearly as far east as the NE corner of RAB. Here there is an entrance into RAB through its northern wall. It is probable that RAB Street once ran at least as far as this entrance. So far we are not certain of the walls and ways coming from the east toward the three-way split at the NW corner of the RAB. To the north extends the expansive area we call EOG (East of the Galleries), a place of great industry and waste disposal. Both Main Street and South Street appear to have opened ultimately into Area EOG (Figs. 1, 25). We have mapped the continuation to the east of the south-SE fieldstone wall [7383] of Gallery IV.11 (Fig. 22). If this wall [7383] ran farther east it might have formed a street, 6.30 m wide, with the Enclosure Wall on the south. This wall [7383] is very late in the building sequence, but it might, like other walls in this area, have replaced an earlier wall.

As you approached Gallery IV.11 from the east the Division Wall [5446] divided the way (Fig. 22). Keeping to the right (north) you entered a street



Fig. 23 Remains of walls that formed three ways at the NW corner of the RAB. View to the south

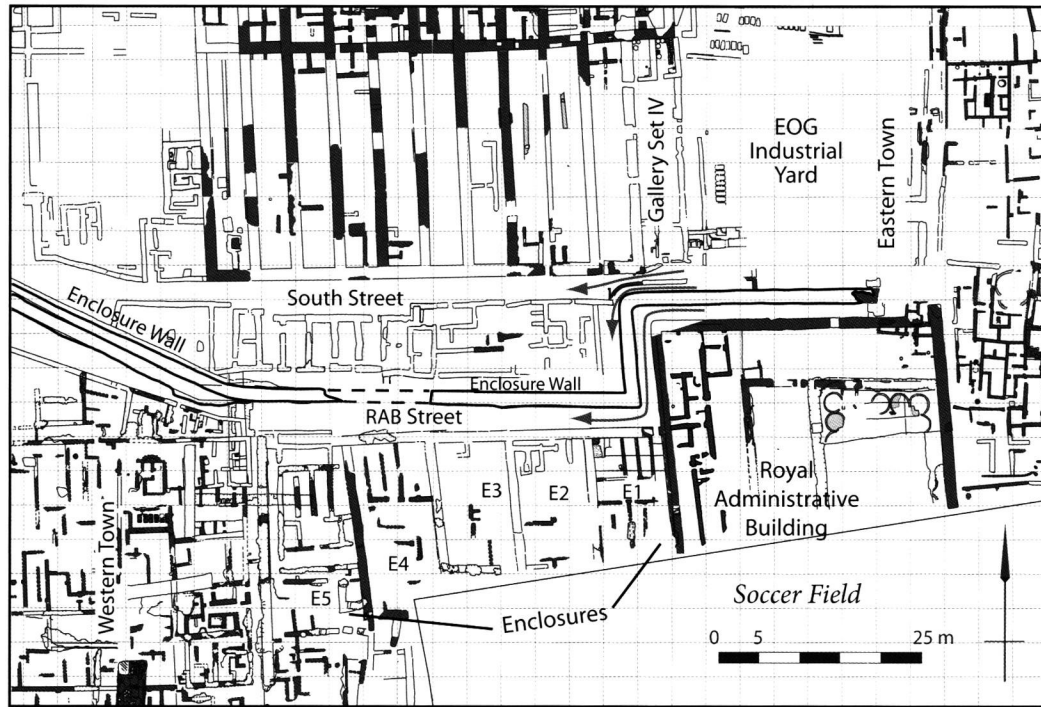


Fig. 24 Plan showing the divergence of three ways at the NW corner of the RAB

reduced to a width of 2.53 meters, and then to only 90 cm (Fig. 22). A curved fieldstone wall [5458] formed the northern side of this street. The wall swings from the western side of Gallery IV.11 into the southern end of this gallery like a curved open gate, and it also funnels the width of the passage into the

constricted eastern end of South Street (Fig. 22). Once through this bottleneck, the curved mudbrick wall [7419] first constricted and then widened the passage into South Street, which from here ran straight and wide 75 meters west between Gallery Set IV and the South Street Magazines. The two curved

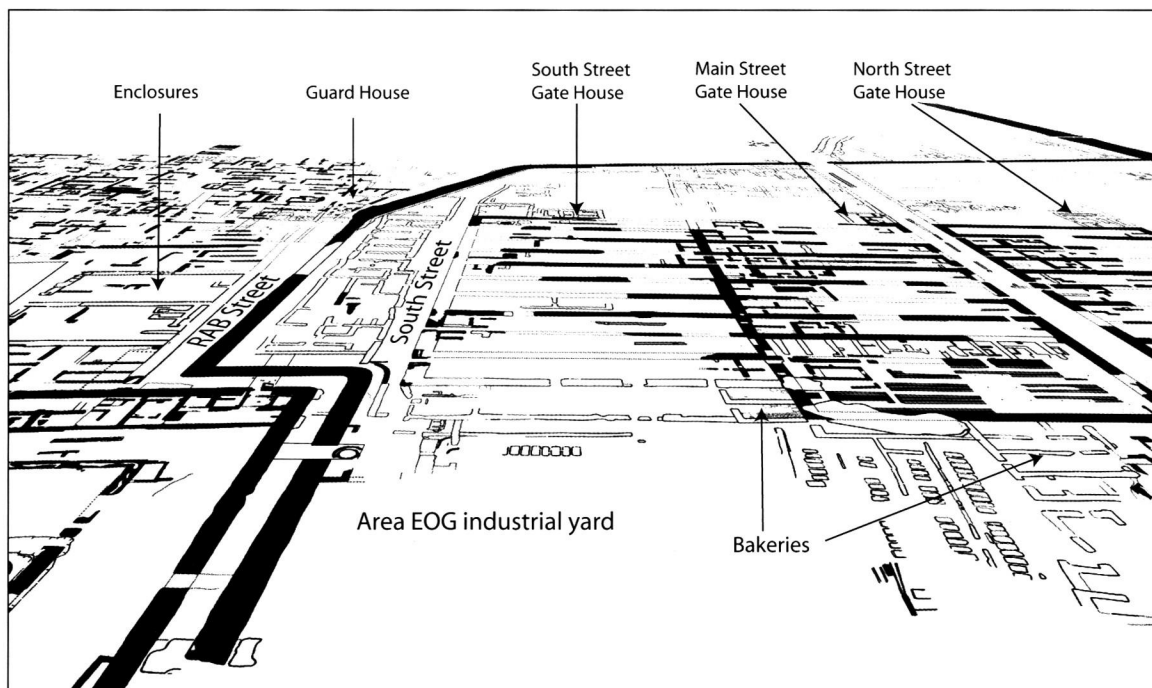


Fig. 25 Perspective view to west toward approach to NW corner of RAB from east

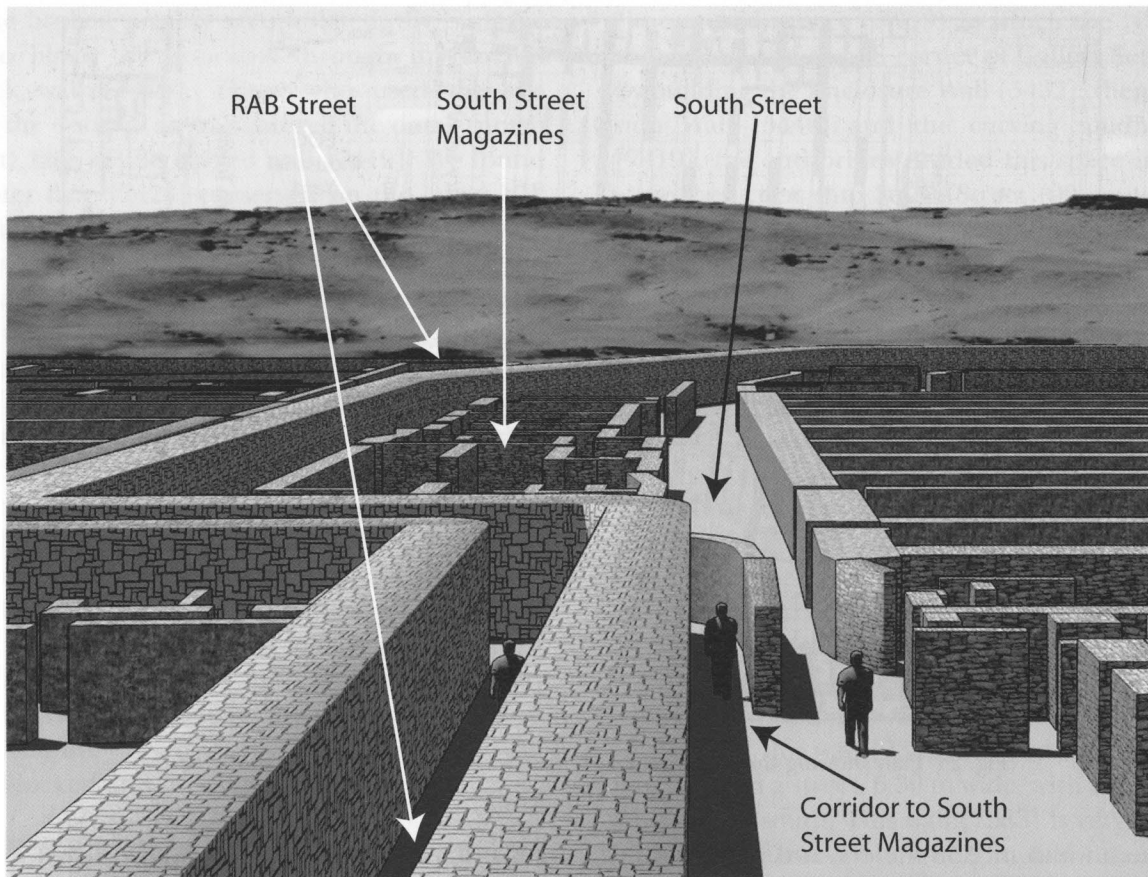


Fig. 26 Extruded perspective view to the west of walls at the NW corner of the RAB

walls form the constriction of the three ways and indicate its intentionality. The trunking of ways was meant to control traffic.

If, as you approached the NW corner of the RAB from the east and bore to the left (south) and proceeded south of the Division Wall [5446], you entered a corridor that was parallel to, but separated from, the passage leading to South Street. On this side the curved mud brick wall conducted you into the eastern end of the South Street Magazines (SSM). The two doorways through the curved mudbrick [7419] wall at first allowed free access from the right lane into the left lane, that is, from South Street path to the SSM corridor. The inhabitants later blocked these doorways, strictly separating the two paths.

RAB Street along the southern side of the Enclosure Wall was the connector between the Eastern and Western Towns. Bordered by thick walls, this street was very secure, possibly with upper floor or at least partially roofed. Proceeding west along RAB Street, you turned southward rounding the NW corner of the RAB. You were now little more than two meters from someone passing through the constriction at the eastern end of South Street, but totally separated by the Enclosure Wall (figs. 26, 27). With a base width

of 2 m, we imagine the Enclosure Wall stood 3 to 4 m high, and totally concealed people and animal traffic from those passing on the other side.

VII. SOCIAL GROUPS AND MATERIAL CULTURE

From considering the walls, path system, and the different parts of the urban footprint we have so far mapped and excavated, we make the following observations and inferences. These ideas remain hypotheses because we have only recovered part of the site (which continues east under the modern town), and because we have excavated only a portion of the footprint that we have mapped in the surface of the settlement ruins.

- RAB Street was the principal path from the Eastern to the Western Town.
- The area around Square 6.W19, where the NW corner of the RAB and the SE corner of the Gallery Complex meet, was a point of controlled access between the Gallery Complex, a barracks; a large production zone (EOG); and a residential zone (Eastern Town). Three paths diverge at this carefully constructed juncture.
- The Enclosures, E1–5, to the west of the RAB (LEHNER 2004c, 72–74), which were entered from

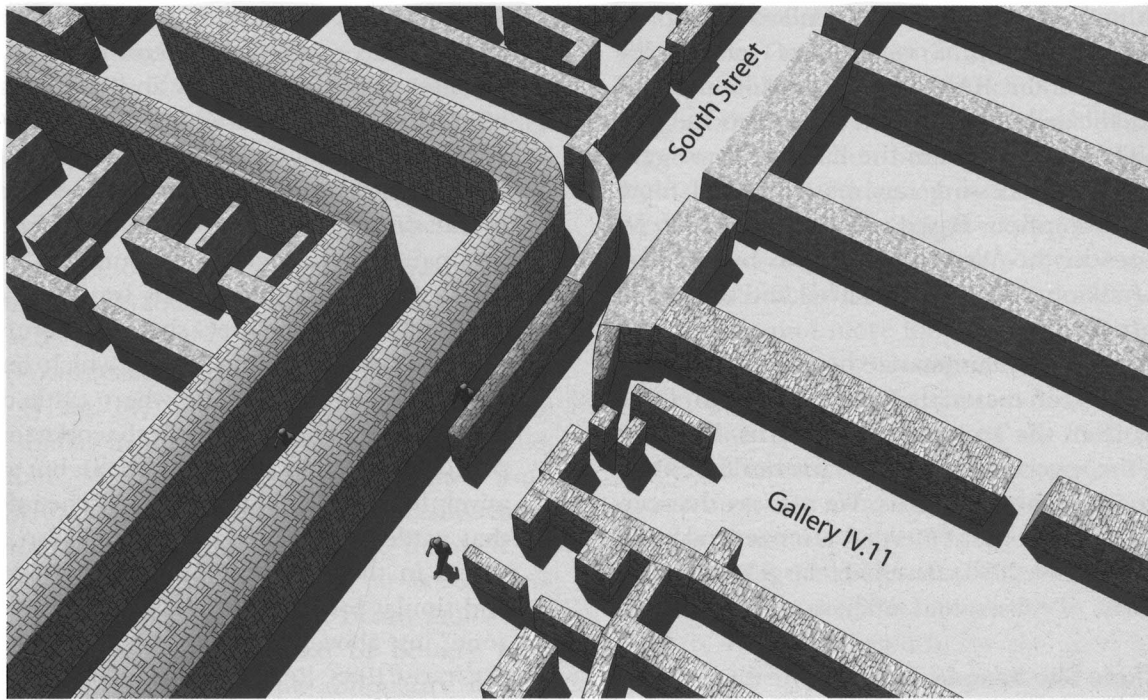


Fig. 27 Extruded view of walls at the NW corner of the RAB

RAB Street, or from the Western Town to the south and west, contain magazines for storage fronted by courts and vestibules where people took account of goods coming and going (Figs. 1, 24).

- The people in the Western Town enjoyed access to, and administrated the functions of the Enclosures.
- The Western Town, penetrated by the Western Roadway (WRW) departing south from RAB Street, is comprised of large houses or urban estates, with smaller structures for support staff and production facilities.
- High-status administrators lived in the large houses in the Western Town.
- The Enclosure Wall established a strict segregation between the Gallery Complex and the Western Town. People in the Gallery Complex were restricted from access to the Enclosures, E1–E5.
- People in the Eastern Town had a connection to the people in the Western Town. They had limited and highly controlled access to the RAB with its court of silos, to the South Street Magazines, and to the Enclosures.
- People in the Eastern Town might have worked in EOG, produced the flour from grain in stored in the RAB, and made other products from material stored in the South Street Magazines and in the Enclosures.

We make these inferences from our observations of the architectural layout. Unfortunately we do not have a record of the architectural layout at the NE corner of the site, which was wiped out by Nile floods and wadi outwash. Nevertheless, looking at what we have salvaged of the footprint of this pyramid city, we begin to feel hints of a social order. We can test our vision of a social order from our sampling and analysis of material culture from those parts of the site (about 10%) that we have sampled by excavation.

VII. A. Sampling Material Culture

When we excavate through the seal of decayed mud brick and other compact post-occupation deposits to the living floors of the settlement, we systematically and intensively retrieve ancient objects, plant remains, animal bone, ceramics, sealings, lithics (chipped and ground stone), and charcoal. We count and weigh stone exotic to Giza, such as granite and alabaster. We take samples of archaeological deposits for the flotation process to recover charred plant remains. We dry sieve the sediments on site and wet sieve the finer material in the store to recover the smallest animal bone, chipped stone, pottery, and seal impressions. This material culture provides a great deal of additional evidence about life in the distinct parts of the HeG settlement.

To reiterate, we work with the hypothesis that the galleries were barracks; the surrounding fieldstone structures, which included bakeries, processed food-

stuff for those ensconced in the Gallery Complex, perhaps temporarily in a rotation of service. We hypothesize that the RAB, with its sunken court of silos, was dedicated to centralized storage and administration. Those who lived in the Eastern Town were responsible for processing raw materials and food-stuff for consumption. Based on what appear to be large houses in the Western Town, we hypothesize that high-ranking administrators lived and worked in the Western Town.

Here we can only summarize how broad patterns of distribution of material culture relate to these inferences from the architectural patterns. We must leave it to the specialists' reports to further test, modify, and quantify these patterns. We can say that certain broad patterns that emerged after several years of analysis (LEHNER 2003) have been largely sustained through years of subsequent analysis.

VII. B. Whole Site Sample

Team members who study the material culture from the GPMP excavations compare the percentages and ratios retrieved from the various areas against the whole site sample, for which already some patterns are striking: The high numbers of cattle, sheep and goat bone (REDDING, forthcoming); the low density and low variety of plant remains per liter of float (MURRAY 2005A, 2005B); the high amount of wood charcoal; the high numbers of bread molds and CD7s, a carinated bowl that seems unique to Giza in the 4th dynasty (WODZINSKA 2007, 299–301); the high number of formal sealings from the Western Town (NOLAN, forthcoming; NOLAN and PAVLICK 2008). All patterns suggest the central authority provisioned this site. Provisioning is itself a primary form of social control.

We infer social order and function from the layout of the site combined with the distribution of material culture. Here we summarize in brief emerging patterns:

- *Sealings* are more abundant, with more formal texts and designs, south of the Enclosure Wall than north inside the Gallery Complex. Excavations north of the Enclosure Wall turned up 123 sealings that John Nolan defines as “formal.” These are sealings with impressed designs conforming to a common layout. So far that layout on the formal sealings from the HeG site includes royal *serekh* names (NOLAN 2007a, 179). As of 2007, excavations south of the Enclosure Wall (principally in the RAB and Western Town) turned up 1,576 formal sealings (Nolan personal communication; forthcoming).
- *Plant Remains*: Mary Anne Murray finds that the HeG site has relatively low densities of plant items per liter (i.e. grains, weeds and chaff) and a low number of taxa compared to other settlement sites in Egypt (MURRAY, 2005a; 2005b; in press). Forage and fodder legumes occur in low densities in the overall site sample. In spite of the evidence that the occupants consumed high numbers of cattle, sheep and goat, Murray finds very little evidence for dung fuel in the HeG site. This contrasts with the Delta site of Kom el-Hisn, which has strong associations with cattle and where cattle dung was a major component of the archaeobotanical samples (MOENS and WETTERSTROM 1988), but where relatively little cattle bone was found. The inference is that cattle were raised at Kom el-Hisn and like places in the provinces but transported to Giza, and similar foci of the royal house in the “capital zone” just above the Delta apex. (MOENS and WETTERSTROM 1988; REDDING 1992, 2006).
- *Wood charcoal*: In contrast for the paucity of evidence for dung fuel, the volume of wood charcoal indicates the occupants of the HeG settlement burned large amounts of wood, particularly *Acacia nilotica* (GERISCH, pers comm.). MURRAY (in press) notes: “At Giza, the routine activity of burning *Acacia nilotica* wood in the specialized area of the bakery, and the subsequent dumping of the ash is a major feature of the site.” The site, and no doubt the pyramid building it supported, was thermodynamically expensive.
- *Grinding stones and querns* for grinding grain into flour are more abundant in the Eastern Town and the RAB, in proximity to the large silos. While we found bakeries flanking, and within, the Gallery Complex, these artifacts are rare or absent within this walled zone. Most of the quern and grinding stones come from the Eastern Town or the adjacent RAB. We hypothesize that the Eastern Town people ground grain from the central RAB stores into flour for use in the bakeries in EOG and inside the Gallery Complex (LEHNER 2003, 4–5).
- *Animal Bone*: A striking pattern is that cattle (*Bos taurus*) are the second most abundant mammal after sheep and goat. A bovine provided many more times the amount of meat than sheep and goats (REDDING, 2007b, 266–269; forthcoming). The cattle, sheep and goat consumed on the site were predominately young (under two years old) and male, suggesting that the authorities were harvesting herds and provisioning the site with high-quality meat. Pig bone is most frequent from

the later deposits in the RAB and from the Eastern Town. Pig is a family-based resource, typical of self-sufficient village life (REDDING 1991). On the basis of the faunal analysis alone, Richard Redding hypothesized that the Eastern Town is a residence for people supporting activities inside the walled area, that is, inside the Gallery Complex.

- *Pottery*: A type of carinated ceramic bowl, CD7, is the third most abundant pottery type from the HeG settlement, and occurs almost exclusively at Giza (WODZINSKA in press; 2007, 299–301; LEHNER 2002, 47, fig. 10). The CD7 is probably a serving bowl, similar in function to the well known, Old Kingdom “Meidum” ware carinated bowls (our type CD6). Bowls in general are the second most common class from the overall site followed by jars. The most common type of jar is so-called crude red ware beer jar (AB4). Bread molds (F) from the most common class of pottery type (WODZINSKA 2007, 309). The abundance of the special form, CD7, and the vessels associated with bread and beer, suggest an intensification of production (SAHLINS 1974, 101ff; RICE 1987, 190) for provisioning, itself a form of social control.

VII. C. Focus on Areas and Object Classes

We obtain as a broad pattern for the site as a whole a kind of “ring around the galleries.” Markers of high status such as formal sealings and cattle bone are more numerous to the SW, south, and east – outside the Enclosure Wall. The evidence is that those who inhabited the Galley Complex were provisioned, and those who inhabited the Western and Eastern Towns were the providers and processors, respectively.

Below we take a closer look at five particular areas of excavation: North Street Gate House (NSGH), Eastern Town House (ETH), Gallery III.4 (GIII.4), and the “Pottery Mound” in the Western Town. We then discuss the possibility that two classes of objects, limestone balls and pottery tokens, might reinforce the overall hypothesis of the Gallery Complex as barracks.

1. North Street Gate House

We hypothesized NSGH was a residence of people who controlled movement into and out of the Gallery Complex, specifically, the access to Gallery Sets I and II via North Street (LEHNER 2004C, 64–65). We consider this hypothesis in terms of the material culture.

REDDING (forthcoming) finds NSGH has higher ratios of cattle bone, and lower ratios of sheep and goat than in the whole site sample. The residents of NSGH consumed relatively high amount of fish. The deposits from NSGH contained higher ratios of Nile

perch and lower numbers of catfish than the whole site sample. Catfish spawn in the flood recession shallows and Nile perch is a deep channel fish. Redding suggests that perch is the more desirable fish. And he suggests a correlation between cattle and perch in a high status diet, evidenced in the NSGH and in the Western Town. As one might expect from this inference, pigs occur in very low ratios in these areas. Pig is a domestic, village animal, high in calories. With short legs, pigs cannot move long distance, but can be fed waste from human consumption (REDDING 1991).

On the basis of the faunal remains, we might want to imagine that a member of the “elite” lived in NSGH. However, the NSGH, between 70 and 92 square meters in area, is in the same size range as the Eastern Town House (ETH, see below), which we might infer is the abode of a low status person or family (WETTERSTROM 2004; LEHNER 2004C, 68–69). The ETH is 42 square meters for the core house but 100 m² with the surrounding courts, some of which could have been roofed.

It will be useful to make comparisons of the areas and other features of these houses, such as doors, numbers of rooms, and sizes of rooms, with houses from many other sites and periods (KAMEL, forthcoming). For now, now, we cite in passing SHAW’s (1992) study of houses at Amarna where he suggested 100 m² (of the core house without its surrounding enclosure) as a possible threshold of house area between “elite and non-elite sections of society ... Such ‘social divisions’ must certainly be regarded as determined by the influence of many different architectural variables, but it is possible that the abrupt fall-off in house numbers around the 100 m² mark indicates this very crucial gap between illiterate artisans and literate ‘officials’” (SHAW 1992, 156).

Guards, perhaps, do not need spacious accommodations like the people to whom they report, and those “elite” people are more likely the source of high-status food in the redistribution of provisions.

On the other hand, the numbers of chipped flint from retouch, that is, sharpening flakes and knives, are high in NSGH, which may suggest butchering (LEHNER 2003, 1). In the common Old Kingdom tomb scenes of butchering large cattle, the butchers have rods attached to their kilts by a strip of cloth or rope. They sheath the rod in the back of their kilts like a gun in a holster, and when they need to sharpen their knives, the pull it out and use the end to push off the small retouch flakes such as those that our lithics analysts see in NSGH. This feeds into a suspicion that the Western Extension, with its open areas and courtyards, might temporarily held ani-

mals on the hoof. If the NSGH occupants were involved in slaughter to provide meat to for higher status residents in the Western Town, they might have received remnants.

2. Gallery III.4

Gallery III.4, the fourth from the west in Set III, is the one gallery that we excavated in its entirety (ABD EL-AZIZ 2007a). We hypothesize that here up to forty people, workers or members of a paramilitary force (LEHNER 2004a; 2007c, 190–192), slept in the empty colonnade, the northern 20 m of the elongated enclosure. Based on textual evidence from other sites, we could further imagine the occupants rotated in some cycle of obligatory labor (ROTH 1991). As such we would expect material culture to reflect lower status. In contrast to NSGH, Redding finds that the faunal sample from Gallery III.4 has higher than expected numbers of sheep and goats (based on overall site numbers), while cattle is lower than “expected” (REDDING 2007a; forthcoming). Further, the ratio of goat to sheep was higher here than anywhere else on the site. Goat is lower in body fat and calories than sheep, and therefore less desirable. The percentage of catfish bone is higher, and Nile perch lower than the overall site. These results appear to support the hypothesis of lower status people occupying the galleries.

The fact that each gallery has rear chambers with evidence of cooking, roasting, or baking, might indicate a degree of self-sufficient production within a system of provisioning. Meat probably arrived in the form of live sheep and goats. Faunal evidence hints that livestock were butchered right at the galleries. In Gallery III.4 the ratio of meat bearing (long limb) to non-meat bearing bones (knuckles, jaws, etc.) is very close to what we would expect if the butchering took place close to where the bone was excavated (REDDING 2007a, 266; personal communication). The gallery occupants may have received a sheep, or more often a goat, either as a standard ration or as part of the numerous feasts so well attested in the tomb inscriptions. The animal would most likely have been delivered on the hoof and slaughtered immediately. The broad streets fronting the gallery entrances could have been where the small animals were slaughtered. Perhaps the drain or channel that we found running down the center of Main Street was for cleaning up after slaughter.

The distributions within Gallery III.4 also show meaningful patterns to the hypothesis that the galleries served as barracks, and to the different parts of this gallery (LEHNER 2007c, 188–90). Bread mold fragments, types F1 and F2 (WODZINSKA 2007a,

306–308) increase from north to south, showing the highest numbers in the rear, southern chambers where we find much evidence of burning resulting from cooking, roasting, or baking. Where bread mold fragments are fewer in the front colonnade, Abd al-Aziz found more fragments of the special carinated bowl, CD7, and vessels stands, E2 (WODZINSKA 2007b, 241), such as we might expect from serving and consumption to and by those who were stayed in the barracks.

The corpus of sealings from GIII.4 has one of the lowest relative proportions of incised to the more formal impressed sealings. Incised sealings, less literate and ad hoc, were probably for short-term use by lower status people, perhaps from closing and opening moveable goods in bags and jars. The corpus also shows one of the highest relative numbers of clay “objects” – blanks and cores – used for making sealings (NOLAN 2007b). The evidence might indicate sub-literate accounting of frequent opening and sealing of containers within the gallery, something we might expect of lower ranking authority controlling the distribution of portable, provisioned goods.

3. Eastern Town House (ETH)

The ETH is a small house in a zone of what appear to be a dense agglomeration of small courts and chambers, with other discrete houses possibly identifiable, in a zone along the eastern rim of the HeG site as we have so far mapped it. In 2004 Dan Hounsell and Emma Hancox excavated the ETH, which appears to be a small urban estate, with a core house surrounded by courts for work and production (HOUNSELL 2004; forthcoming; LEHNER 2004c; WETTERSTROM 2004). As mentioned, the ETH occupies 42 square meters for the core house, depending which of the surrounding rectangular spaces we take as roofed and interior. With all these, the unit covers about 100 m².

REDDING (2007a, 267; forthcoming) finds that the faunal sample from the Eastern Town House (ETH) is significantly higher in the frequency of pig bone than other areas or the whole site. Again, pig is a domestic, village animal, high in calories (REDDING 1991). With short legs pigs cannot move long distance, but can be fed waste from human consumption. Redding concludes that the ETH sample does not reflect the provisioning so evidenced in the Gallery Complex.

MURRAY (2005a; 2005b; in press) finds that in general the density of plant remains at Giza is extremely low compared to other sites, particularly within the Gallery Complex. But the densities are higher in the gatehouses and highest in the Eastern Town, possibly

because the inhabitants carried out the initial processing of plant material. The Eastern Town shows a higher density of plant remains more characteristic of other ancient settlements than the Gallery Complex where the density is low.

4. *Western Town*

The Pottery Mound (PM) fills an enclosure measuring about 6.40 m north to south by 11-plus m east to west surrounded by mud-brick and fieldstone walls (LEHNER, KAMEL, and TAVARES 2006, 69–73; KAWAE and BJORK 2005). The mound results from accumulated dumping within the space between large House Units 1 and 2. The softer mudbrick walls of those units eroded away, leaving the harder pottery that constitutes the bulk of material in the mound.

In 2005 Yukinori Kawae and Tove Bjork excavated opposite quadrants inside the enclosure where the pottery mounded up. They also excavated in a small corridor or chamber, 1.60 m wide (N-S) and 3.4 meters long (E-W), along the northern side of the Pottery Mound, between the mound and House Unit 1 on the north.

The PM also contains a large amount of animal bone, and from this REDDING (2007b) found extraordinarily high numbers of cattle, especially meat-bearing hind limbs. He hypothesizes that the absence of forelimbs is due to the fact that people took them for offerings, as shown in traditional tombs scenes. REDDING (forthcoming) concludes, “The residents were eating the youngest and the most cattle of any area on the site. They also had preferential access to wild fauna. Further, they were also consuming more domestic geese and ducks than anywhere on the site.”

REDDING (2005) also found relatively large numbers of cattle bone from excavations of House Unit 3 (H3), the third of the large core houses we can distinguish within the Western Town (see fig. 15). Here the bone derives from cattle that were older than the cattle bone from the rest of the site. Redding also found comparatively high number of pig in H3. At the same time the bone from H3 showed more wild taxa, which Redding relates to hunting, an elite prerogative at this period. Redding concluded, before our excavation of PM, “a larger sample size is needed but given what we have I think we can conclude that the residents had one of the better diets on the site.”

John Nolan finds that the formal sealings from the Western Town bear the impressions of high-ranking titles. Kawae and Bjork retrieved 2,524 sealing fragments from their 2005 excavation of two quadrants of the Pottery Mound dump deposit. Status of the highest order is indicated by the fact that “only seals

belonging to ‘Scribes of the Royal Documents,’ ‘Scribe of the King’s Writing Case,’ and ‘Scribe of Royal Works’ ever sealed more than one sealing from the PM. That is to say that the seals used most often at Pottery Mound belonged exclusively to some of the highest scribes in the land. The presence of door sealings, artifacts related to making sealings and the isolated nature of the PM dump itself lend support to the hypothesis that these high-ranking administrators most likely lived and worked in the Western Town” (NOLAN, personal communication; forthcoming; NOLAN and PAVLICK 2008).

In what we have mapped of the Western Town ground plan, we have identified houses larger than those elsewhere on the site. House unit 1 (H1), just north of the PM, is the largest. After four seasons of excavation, KAWAE (2007) ascertained what we believe are the boundaries of this house unit, which extends approximately 25 m E-W and 16 m N-S and covers an area of 400 m². A dense network of walls, most of which we have only mapped on the surface of the ruins, surrounds the three large house units that we perceive within the footprint of the Western Town. In a proper comparison of house areas we therefore might want to include the surrounding structures, could we identify them with one unit or another, and so far we cannot.

This approaches the area of some of the large houses at Amarna (without their surrounding enclosures), 400 to 500 m² (groups 9 and 10 of SHAW 1992) – and SHAW cites these as houses of “important administrators.” At the same time this is very much smaller than the large mansions of Kahun, 42 × 60 m, or 2,520 m², where the overall town plan precludes broad surrounding, as opposed to smaller internal, courts (KEMP 2006, 211–221).

Also, we do not find at HeG the extreme differential and 1:20 ratio of small to large house units at Kahun. The ration of area of ETH to H1 is 1:4 if we include the surrounding courts of the ETH and exclude any surrounding structure from H1, and nearly 1:10 if we include only the core house of ETH. We might consider an average gallery, with its columned more “public” front colonnade, the house or domicile toward the rear, and the back chambers for cooking and other production, as having certain elements of a “house” (LEHNER 2002, 38). Each gallery covers an area roughly 175 m², yet, each may have housed, possibly in rotating groups, 40 to 50 people on the ground floor alone (LEHNER 2002, 69–70), more if there was a second floor (HEINDL forthcoming). A proper assessment of social groups (“elite” vs. lower status) would have to take into account some estimate of people per floor

space, and here, in this analysis and comparison between the Gallery Complex and the Eastern and Western Towns, is where we will probably find an extreme differential of people per space (Kamel, forthcoming). This analysis, which can take advantage of a fair range of published sources on house size and population, is a work in progress.

5. *Objects: Gaming and Counting*

We have recovered numerous balls of limestone and clay from across the overall site and stratigraphic sequence. The limestone spheres, which range in diameter from 1.8 cm to 3.6 cm, are roughly shaped; they can roll and sometimes sit well on one flattened surface.

The occupants might have used the limestone balls as marbles or gaming pieces. Similar pieces have been identified in clear gaming contexts either with a gaming board or in funerary contexts in a set of gaming pieces. (See for instance a set of spherical gaming pieces found together with conical gamers and throw-stick from Tarkhan, Petrie Museum London UC 28496a–g. For limestone balls see PETRIE 1927, 56, pl. 48, nos. 211–215). It is possible that such limestone balls could have also served as tokens or counters (see below), or in spinning and yarn preparation as cores for winding threads, although in extant examples of thread wound on a core the core is usually unfired clay.

Compared with the Kom Rabi'a object corpus, the limestone spheres are quite numerous at HeG. The excavators of Kom Rabi'a recovered a variety of gaming pieces and gaming boards in the New Kingdom and post-New Kingdom levels of the Memphite settlement (GIDDY 1999:319–23, pl. 72). Although this corpus covers different periods we have found that many of the every-day objects are attested in both sites. The gamers from Kom Rabi'a include fine conical and reel-like pieces in different materials but only a single limestone ball. From the HeG settlement site we so far have 76 marbles, of which 59 are limestone balls. Other gamers (17 recorded so far) include disc, dome and conical pieces of stone, ceramic and clay. We may also have two fragments of limestone playing boards. The large number of limestone and mud spheres, the lack of use-wear traces on their surface and parallels from other sites suggest that these objects were gaming pieces. Their presence on the HeG site might parallel later bar-rack sites where dice and gamers are ubiquitous (FINKEL 2006: see *Duodecim scriptorium*).

We also find pottery sherds cut into flat circular pieces. We categorize these as tokens. Recut ceramic

objects are classed using shape, use-wear, and occasionally type of ceramic fabric and vessel. Circular ceramic discs are sub-divided into pierced and unpierced. Pierced examples are mostly spindle whorls; some may have been counter weights. Unpierced discs are usually 4.5 cm in diameter and 0.5–1 cm in thickness. We recorded have less than 10 examples.

We find parallels to the small ceramic discs at Giza (KROMER 1978, 67 *tf.* 26) and other sites. Similar ceramic tokens were ubiquitous in the Kom Rabi'a object corpus (GIDDY 1993). We have other kinds of tokens, including small clay cones, but only seven of the re-cut ceramic discs.

We can compare the numbers of the circular tokens with the numbers of other objects made by re-shaping pottery fragments: lentoid tools, scoops, scrapers, and burnishers. The overall corpus of objects made from sherds is similar to that from Kom Rabi'a, except for the relative paucity of the circular tokens at HeG. Why do we have so few of these ceramic tokens whereas they are an important and numerous part of the Kom Rabi'a corpus? It is unlikely that people removed such common objects when they abandoned the settlement as they are not precious and could easily be made.

GIDDY (1999: 324–326) suggested people used these objects for counting and/or reckoning at the household level within the community. If Giddy's suggestion is correct that these tokens are being used for day-to-day reckoning and accounting, and if the objects we have so far collected are a representative for the overall HeG settlement, then people living within the Enclosure Wall in the in the Gallery Complex were reckoning and accounting less, or in a different manner than members of the artisans' community at Kom Rabi'a. This might again reflect at HeG a social group provisioned by the central authority.

We hope evaluate this hypothesis in relation to evidence for levels of literacy and objects from other communities provided for by higher and central authorities, such as Deir el-Medina, and the Amarna workers' village. We know that although they received provisions, individual and household exchange flourished at Deir el Medina, along with many other activities of basic village life (JANSSEN 1975), but this community a millennium later than the HeG settlement certainly saw a higher degree of literacy.

At the HeG settlement, accounting and weighing tools and copper, quantities of raw material of all sorts, stone for building and for statuary, provisions, rations and payments must have been a common and

continuous activity. The evidence of the sealings suggests highly literate administrators, indeed scribes of the highest rank, either sending materials to the Western Town, or actually working and living there and is south of the Enclosure Wall in the RAB. We hypothesize that temporary, revolving *corvée* workers, or a paramilitary force along the lines of the ad hoc expeditionary forces called up by the royal house, occupied the Gallery Complex within the Enclosure Wall. We might expect that members of such an early Old Kingdom force would have been less literate than those of the New Kingdom artisans' community at Deir el-Medina. To the extent that the ceramic tokens reflect more a non-literate, sub-formal system, this system might not have been in place among the people occupying the Gallery Complex. If this layout was a barracks, we might expect, given parallels to barracks in other times and places, the occupants were primarily men, and then mostly young men, who would might engage in gaming using limestone balls, but had little to exchange, and possibly little time for their own economy to emerge within the larger system into which they had been thrust.

VIII. SUMMARY: FUNNELS AND FILTERS

Both the architectural layout and the distribution patterns of the material culture suggest a high degree of social control within and between the distinct components of the HeG settlement. The Enclosure Wall segregated the Gallery Complex from the RAB and the Western and Eastern Towns. The pathways between the distinct parts of the site, the constrictions along these pathways, and the locations of the larger house-like structures indicate that movement between these parts of the settlement was highly controlled. Bed platforms across or beside critical doorways suggest watching and control functions down to the level of particular chambers within the major structures (LEHNER and SADARANGANI 2007).

We imagine that at least several people who lived in the houses of the Western Town were high-status administrators. During the transition from the reigns of Khafre to Menkaure, they governed the Enclosures (E1–5), which extended in a series to the immediate north and east of their neighborhood all the way to the Royal Administrative Building (figs. 1, 24). The Enclosures contained magazines for storage and courts and vestibules where scribes took account of goods coming in and going out.

At the NW corner of the RAB where the road from the Eastern Town split off into three paths, authorities controlled access to the Enclosures, to the Gallery Complex, and to a separate set of magazines, the

South Street Magazines. People in the Eastern Town had a connection to the people in the Western Town, but it was more distant than those in the smaller structures within the Western Town itself. RAB Street was the principal path between the two neighborhoods.

People who lived in smaller houses in the Eastern Town may have produced the flour from grain stored in the Royal Administrative Building, worked in the EOG production yard and produced bread in the bakeries (Fig. 25). The Eastern Town people might have also made other products from material stored in the South Street Magazines and in the Enclosures. These are admittedly inferences, hypotheses, to be tested in continued excavation and analysis.

The houses of the Eastern Town and the gate-houses at the Western ends of North, Main, and South Streets may have acted as filters for the Gallery Complex. We find greater variety and density of taxa from our excavations in these areas than elsewhere on the site. Overall it appears that the people living in the houses along the edges of the Gallery Complex lived a better life than those within. The Eastern Town was probably more typical of a village, the lives of its residents more normal for any ancient Egyptian settlement of the Old Kingdom than the lives of those in the Gallery Complex, at least for the time they stayed in the galleries.

In 2002 we saw that the Eastern Town continues east of the HeG site, beyond the modern road and modern high security wall, but we know neither its overall form nor boundaries. Erosion from wadi outwash and Nile floods removed the settlement ruins on the NE, so we can only speculate that deliveries came in from the east, probably from a Nile that was much closer to the western desert than in more recent times – perhaps as near as several hundred meters (LUTELY and BUNBURY 2008; JEFFREYS 2008). We do not know how or whether people and material entered the site from the east. There is a good possibility of a major access to the south, since both the RAB and the enclosures of what we call Standing Wall Island at the far SW of the site seem to open toward, or reference the south (LEHNER 2004c 78–80).

In spite of our ignorance of access to the HeG site from east and south, we have the very definite impression that the authorities introduced people, goods, and animals through the gate in the Wall of the Crow and then into the Gallery Complex within the Enclosure Wall. Both Main Street and South Street must have ultimately delivered people and materials into the EOG production yard. We wonder if the broad open areas to the west of the gallery blocks are hold-

ing areas for animals. People, material, and possibly animals passing south outside the Enclosure Wall, were funneled between the wall and the Western Town into RAB Street. The funnel at the great bend in the Enclosure Wall was over 20 m wide on the NW, narrowing to 5 m on the east before the inhabitants built the Trapezoid. Even then, the funnel at the western end of RAB opened 7 m and narrowed to about 2.6 m. Material passing along this route may have ended up in the Western Town, the large Enclosures, and the RAB.

We see evidence that many of the major elements of the complex existed in a lower, older phase of the settlement: Gallery Set I (excavations in WCE 2002); a wall where the Wall of the Crow now stands (WCS 2001 and WCN 2006); the Enclosure Wall (WD 2004; BBN 2005); and the RAB (BB 2004–2007). At the same time it appears that the authorities enlarged major walls and constricted gated areas to impose greater control over time. We know from the stratigraphic relationships that Gallery Set I existed first in the broad earlier phase, and builders erected the Wall of the Crow up against Gallery Set I of the second phase. They later built houses with fieldstone foundations up against the western wall of the Gallery Complex, just south of each entrance of North Street, Main Street and South Street, probably to monitor access into the galleries. They built the Enclosure Wall in its two-meter thick, fieldstone phase after the Wall of the Crow, segregating the Gallery Complex from the Western Town. They superimposed the eastern fieldstone walls of the RAB over part of the Eastern Town. They thickened a mudbrick wall of an earlier phase with limestone to massively reinforce the western wall of the RAB. Where the NW corner of the RAB meets the SE corner of the Gallery Complex, the authorities increasingly restricted and controlled access between the Eastern Town, the Gallery Complex and the Western Town.

The *Heit el-Ghurob*, the Wall of the Crow, is the most ostentatious sign of social control. It is hard to conceive that the occupants butted such a massive,

weighty, stonewall up to the much more fragile western mudbrick wall of Gallery Set I. However, that is what the evidence shows; the Wall of the Crow is later than the Gallery Complex, or at least later than the northern Gallery Set I. Why park this massive, gigantic stone Wall up to an already existing block of galleries, and thereby seal off the entire northwest access to the site, except for the gate through the wall? Although the builders never finished it (they had yet to dress down most of the faces), the Wall of the Crow speaks “permanence.” Those who ordered its construction must have intended it to fulfill its purpose for a very long time. Those who ordered that the Wall of the Crow should be built up to the NW corner of the Gallery Complex must have intended that the Gallery Complex itself would be functioning permanently, or for a very long while.

Yet, the evidence shows that longevity was not the case for the Gallery Complex, nor for the urban district to the south of it. All evidence points to the site being reorganized in a huge way during the reign of Khafre, builder of the Second Giza Pyramid, and occupied through the reign of Menkaure, who built the Third Giza Pyramid. Before the builders finished the Menkaure Pyramid complex, people abandoned the settlement. We know from historical and other archaeological sources that the royal house moved away from Giza. The pharaoh who followed Menkaure, Shepseskaf, built his monument in South Saqqara, 20 km away. We have some indication, such as continued occupation in South Street Gate House after the western mudbrick wall of Gallery Set IV was removed, of stragglers and squatters after the major occupation came to an end.

The reach for permanence was in vain. The builders left the Wall of the Crow unfinished with one of its construction ramps – Masons’ Mound – still in place along the eastern end of the northern side. We are reminded of the idea that excessive control and domination may be a sign of control’s imminent absence, not its presence (PADGET and ANSELL 1993, 1260).²

² PADGETT and ANSELL (1993, 1260) state: “As Weber recognized long ago, in crisis (sooner or later inevitable), direct

intervention in or overt domination of locked-in interactions is a sure sign of control’s absence, not its presence.”

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