

GIZA PLATEAU MAPPING PROJECT

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From January 8 to May 31, 2004, we carried out two kinds of excavation at the site of a large Old Kingdom settlement 400 m southeast of the Sphinx and south the colossal stone Wall of the Crow. We cleared large volumes of overburden consisting of sand and material dumped in modern times. Underneath we exposed and mapped more of the compact surface of the ancient settlement ruins. We also carried out detailed excavations and intensive sampling of material culture in selected small areas (fig. 1).

We focused our large-scale clearing north of the Wall of the Crow and east, west, north, and south of the Abu Hol Sports Club in the southeastern part of the site (fig. 2). The most remarkable discovery of this season was a vast, unknown section of the ancient city, the Western Town, which covers more than a hectare.

In this report I review the work of our 2004 season, beginning north of the Wall of the Crow. I summarize our detailed excavations, moving south across parts of the site that we had cleared in earlier seasons. I then describe areas of the settlement newly exposed this season, from east, north, and finally west of the sports club.

North of the Wall of the Crow

This season we worked north of the Wall of the Crow in salvage mode with some urgency because of imminent plans for the construction of a cement and steel corridor from the modern town to the modern Muslim and Coptic cemeteries that have spread north and south at the west end of the Wall of the Crow. The corridor was to be part of the new high security walls around Giza and around the modern cemeteries. We worked in part to help the authorities determine where to place the corridor.

When we began the whole area between the Wall of the Crow and a cement wall on the south side of the visitor bus parking lot was filled with modern trash and sandy material dumped from excavations of the early twentieth century in the Sphinx area. We removed the parking lot wall and cleared a 40 m wide strip to a depth of around 5–6 m, down to a clean sand layer. Our clearing extended over a length of 105 m from the east end of the Wall of the Crow west to the Great Gate in the wall and encompassed a total of more than 22,000 cubic m of material.

To reach the Old Kingdom level below the clean windblown sand layer, we first excavated an 11 m wide trench, 50 m west of the east end of the wall (or 45 m east of the wall's gate) running from the base of the Wall of the Crow for 24 m north (WCN). We exposed a very compact surface that slopes down gently to the north. The material is similar to the marly limestone debris banked against the south side of the Wall of the Crow (WCS) that we cleared and partially excavated in 2001. The builders apparently left the bank against the south side of the wall to reinforce its already stout 1:1 ratio of base width to height (10 m wide and 10 m high).

The compact surface is 1.8 m lower against the north side of the wall than on the south. However, the surface slopes up dramatically to a mound near the east end of the north side of the Wall of the Crow. The slope and mound may be the remains of a construction ramp, possibly with internal retaining walls to hold the debris. We exposed the east face of "Masons Mound" in 2002 during our work in front of the east end of the wall. We thought we might see cross walls of broken stone within the sloped surface of the debris. This season we exposed a band of material, 11 m long and 2 m wide embedded in the compact masons' debris at the top of the wall. The

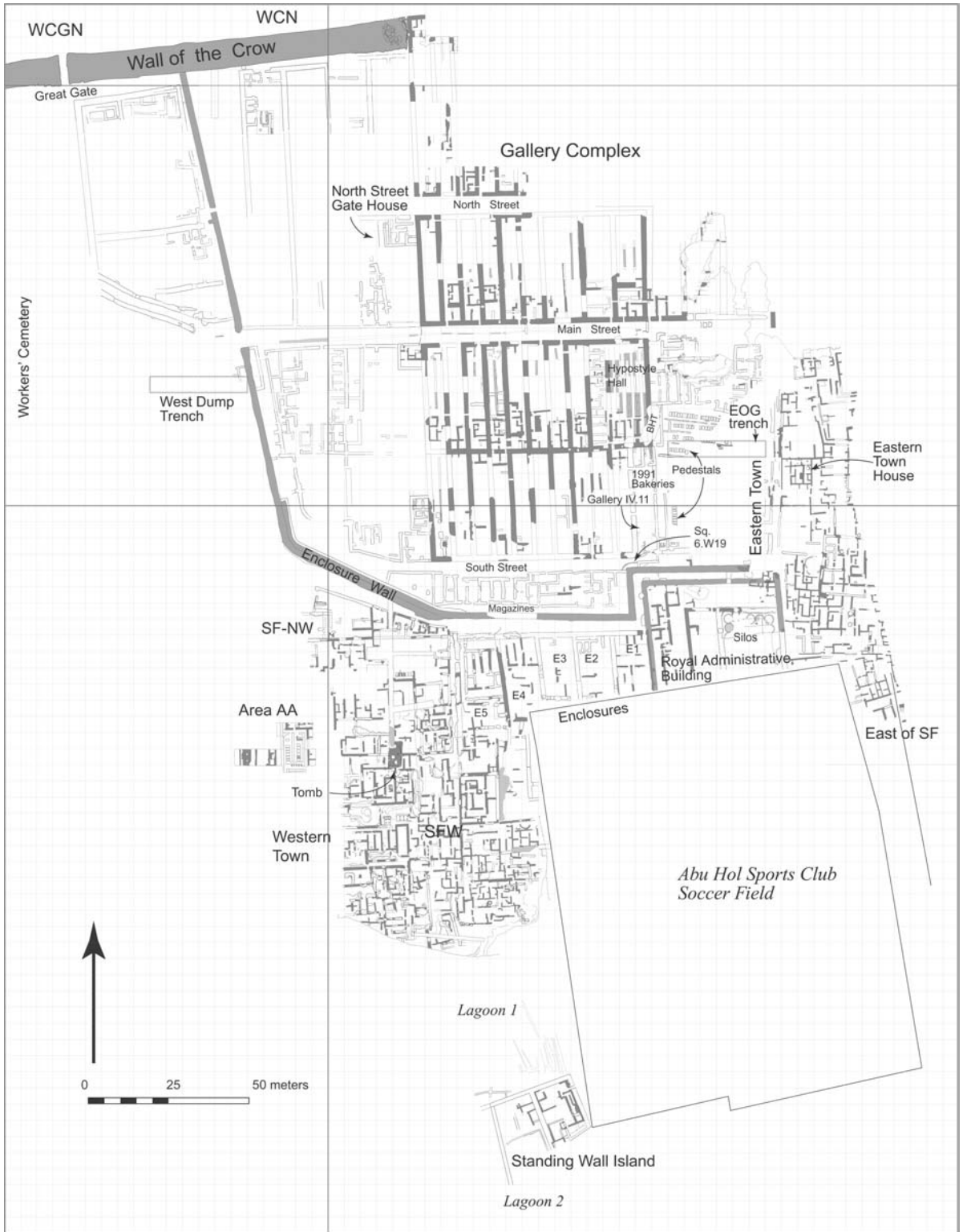


Figure 1. Map of the site after 2004 fieldwork

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material might fill a narrow corridor between the Wall of the Crow and a parallel retaining wall. Down the slope we found the top of a fieldstone retaining wall, 1.5 m wide, running parallel to and 1.8 m north of the Wall of the Crow in the WCN trench. This wall might run all the way to the top of the mound and be part of the ramp.

We eventually cleared the clean sand layer off the compact surface from the mound down to the WCN trench. We left the clean sand layer over most of the area north of the wall. However, given our results in the excavation north of the Great Gate (see below) we can say that the compact surface of a stony debris layer continues all the way to this opening in the wall.

North of the Great Gate in the Wall of the Crow

We cleared an irregularly shaped area starting 10 m north of the great gate (fig. 3). We were told at this point in our work that the new corridor was to turn north toward the Muslim cemetery and south to allow passage to the Coptic cemetery south of the gate. We cleared through 6 to 7 m of trash dumped in recent years, old excavation dumps, and then a thick layer of clean windblown sand (with occasional New Kingdom pottery sherds) such as we found over much of the area north of the Wall of the Crow. A team under Adel Kelany exposed a thumb-shaped patch of ancient surface 17.50 m north–south on the west side, 15 m north–south on the east side, and about 13.20 m east–west across the base of the “thumb” (fig. 2).

The Old Kingdom surface is relatively flat, compact, and practically cemented, apparently from wetting and drying. No evidence of a roadway, as we saw in a 5 × 5 m square just north of the gate during our 2001 season, was observed. The only structural feature was a double line of thin, worn bricks northeast of the gate and oriented roughly northeast–southwest in the direction of the gate. These appear to be the meager residue of a structure that may have been washed away. The whole surrounding surface was very wet at one time, if not repeatedly so. About twenty-eight prints of large and small hoofs — possibly cattle, donkeys, and goats — located randomly in the Old Kingdom surface testified that it had been wet at one time.

We tested below the Old Kingdom surface with four test trenches and found few cultural remains. Kelany’s team excavated Trench A down to the water table at 14.56 m above sea level through layers of fine to coarse gravelly sands and marl clay interspersed with lenses of coarser gravelly sand. A series of large limestone fragments lay in the lowest layer of coarse sand.

Water and wind appear to have distributed and sorted the material in the strata under the compact stony debris north of the Wall of the Crow, as opposed to the thick cultural layers extending far and wide south of the wall. The stony “masons’ debris,” such as we saw in Trench WCN and Masons Mound to the east, is the only cultural layer. The surface of this layer also appears to have been washed by water, possibly floods washing out of the central wadi between the Mokkatam and Maadi limestone formations. The Wall of the Crow extends from the southern side of the mouth of the wadi, which one enters passing through the Great Gate from south to north.

The scarcity of cultural material north of the Wall of the Crow indicates that either the inhabitants avoided the area because of flash floods or that floodwater and wind eroded away settlement remains that had once been there. We suggested several years ago that the inhabitants built the Wall of the Crow to protect the site from wadi floods. Perhaps this is why we find extensive, dense, and thick settlement remains, including intact architecture, on the wall’s southern side.

After our work this season, it was agreed that the cement corridor to the modern cemeteries would be placed below the level of the bus parking lot at the very far edge of our clearing. About 35 m north of the Wall of the Crow, this location would help keep present-day activities as far



Figure 2. Looking east-southeast over the site. Work on the north and west sides of the Abu Hol Sports Club (behind fence on the right) can be seen in the fore- and mid-ground. On the left are the double walls of the Royal Administrative Building (RAB) and on the right, the Western Town. In the background, behind the security wall, urban sprawl extends from Khafre Gebel to the high rises of Maadi on the east bank of the Nile

away as possible from the huge megalithic structure, an important architectural element of the Giza Necropolis.

North Street Gate House

Ann Foster continued excavations that Mohsen Kamal began in 2001/2002 in the North Street Gate House (NSGH), so called because it is adjacent to the western opening of North Street into the Gallery Complex.

In this area of the site, people cut many burials during the Late Period, which had to be cleared before we could excavate the Old Kingdom layers. Osteo-archaeologists Jessica Kaiser, Johnny Karlsson, and Tove Björk excavated forty-six Late Period burials that stood in our path. Forty-three had human remains which included both sexes and ranged in age from children to adults. Apart from occasional coffin fragments, few burial objects were found with the skeletons. The exceptions were amulets with some of the children and pottery with two of the adult burials. One child burial also included a cache of cowry shells and a large sacred eye amulet. In addition, the remains of a faience bead net dress accompanied the skeletal remains of a young woman 12 to 16 years old. Orientation of the burials was primarily east-west with some minor variation from the true axis.

After the osteo-team removed the burials, Foster's excavations clarified the layout of NSGH (fig. 4). The gate house is bounded by three thick walls: the south wall of North Street, the west wall of Gallery Set II, and a wall that separates the house from a corridor on the west running from North Street to the south beyond the limits of this season's excavations. The entrance to the house is a narrow doorway in the northeast corner opening from North Street. The overall plan

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Figure 3. The clearing operation north of the Wall of the Crow Gate (WCGN), looking from the top of the wall to the northwest

appears to be a core domestic unit of a vestibule, two large rooms, and possibly a small chamber for sleeping. During one period of occupation one of the large rooms was an open-air bakery, evidenced by trenches with traces of sockets for bread pots and a crude stony platform where the bakers probably stack-heated pots. Two large shallow pits in the southwest corner were most likely vat emplacements. Two magazines occupy the north and west sides of the house. The inhabitants appear to have also used an access corridor on the north for storage.

Some time ago we proposed that this was a high status residence, based on the floral and faunal remains that included more “costly” foods than found elsewhere on the site. Now we must reassess this hypothesis in light of the fact that a hot, smoky bakery stood right in the middle of the compound.

In the North Street Gate House we found many ceramic vessels and parts of vessels in the magazines and corridor. A deep deposit of superimposed layers of pottery in the long, narrow western magazine may have been crushed when shelves collapsed. Foster noted that the deposit was “primarily composed of large fragments of nearly intact storage jars and associated contents, most commonly fish bones.” We also found fine red “Medium ware” bowls, a jar stand, bread molds, and a beer jar *in situ* on the floor. Storage jars and bread molds rested in place against the north wall of the northern corridor.

West Dump and Enclosure Wall

Since the beginning of our excavations in 1988/89, we have seen indications that the ancient inhabitants of the site might have dumped waste on the slopes west of the Enclosure Wall near the West Gate where Main Street exits the complex. The lower sections of the Workers’ Cemetery,

currently being excavated by a team under Dr. Zahi Hawass, appear to sit upon part of this dump. While excavating a tomb, Hawass's archaeologists broke through the dump layers in one spot and immediately turned up copper bits, flint blades, and quantities of pottery.

Excavations in these dumps could give us information about everyday life within the galleries and ascertain the stratigraphic relationships between the Workers' Cemetery and the Workers' City on the low desert below. For these reasons, Lauren Bruning and Adel Kelany excavated a 37 m long trench (WD) in the dumps from the wall westward up the slope leading to the cemetery.

As it turned out, the dump was shallower than we expected. Modern digging and Late Period burials severely pitted and turned over the Old Kingdom deposits at the top of the slope, leaving interspersed sandy layers. The Old Kingdom material included a copper crucible and pottery with copper adhering. The trash layers rest upon a deposit of concentrated limestone chips. Within this mass we could discern one of the crude pedestals of the kind so ubiquitous in the area east of the Gallery Complex, EOG (see below), and in the building we excavated in area AA in 1988/89. It is odd that pedestals should occur here at the break of the western slope and their presence calls for further research. But to expose more of this layer we would have had to excavate at least nine more Late Period burials sunk into the dump and underlying stony layer. Given our limitations of time and personnel we decided not to excavate the pedestals in favor of other priorities.

The lower east end of the trench gave us stratigraphic information about the Enclosure Wall. In a deep probe in the trench near the wall, we found part of an older fieldstone wall 1.45 m wide with a gate or doorway. The older wall is 2.15 m west of, and just a little lower than, the bottom of the Enclosure Wall. Clean sand separated this wall from higher layers, with limestone frag-



Figure 4. North Street Gate House (NSGH) after 2004 excavations. View to the northeast with the southwest corner in the foreground

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ments, marl brick debris, frequent pottery sherds, animal bones, charcoal, and some chipped flint that ran under the Enclosure Wall. The builders founded this wall at elevation 16.64 m above sea level upon successive layers of limestone rubble and crushed limestone. The layer on which the wall stands stretches 7 m to the west, but no obvious street or roadbed was observed. The inhabitants next left a sequence of layers rich in pottery sherds and other material that abutted against the Enclosure Wall. The material between the wall and the slope appear to have been washed or soaked by water.

Kelany excavated the deep probe to the water table at elevation 14.66 m above sea level, 10 cm deeper than the groundwater in Lagoon 1, a great depression alongside the soccer field (see below), and 10 cm higher than the water table in Trench A in the operation north of the Wall of the Crow Gate.

East of the Galleries

The inhabitants of our site used a large rectangular area east of the Gallery Complex (EOG) for industry and dumping waste. The rectangle lies between Main Street and the Royal Building (about 75 m north–south) and between the Gallery Complex and the Eastern Town (35 m east–west). Across this zone the inhabitants constructed a series of fieldstone pedestals for a variety of purposes. The pedestals, about 50 or 60 cm wide and more than 1 m long, are laid out in sets of two rows with a thin wall or line of fieldstones running down the center aisle.

We first encountered pedestals in area AA during 1988/89. Remarkably well preserved, they still retained marl clay plaster on the sides. One even had a marl-plastered top. Gray alluvial clay marked where single brick partitions divided the top of the pedestal in quadrants. It appears that small bins or compartments stood upon the pedestals, not directly, but straddling the spaces between the pedestals. As with storage platforms from elsewhere in the ancient world, the aim apparently was to have air circulate below the compartments, while keeping the stored material high and dry. Small stones and sherds filled the little trenches running continuously at floor level along the bases of the pedestals in AA. This may have been to facilitate drainage.

As far as we have cleared in the southern EOG we have found four rows of the peculiar pedestals, the longest run being twelve pedestals in squares. But a large part of EOG remains untouched where, until this season, we had located our camp and access road. Since we have yet to scrape and map this area, there are likely more pedestals in southern EOG.

This season we carried out two operations in EOG. The first was near the remnants of Egypt's oldest known faience workplace, which happened to escape the teeth of the modern backhoe that gouged a trench (BHT). We first cleared the faience-working spot during 2001 at the bottom of the trench. The older architectural phase that includes the faience-working material extends under the Hypostyle Hall on the west and under the bread mold dumps of EOG on the east. This season Angela Milward-Jones and Brian Hunt supervised excavations at the eastern edge of the backhoe trench to expose more of the older phase of settlement. They exposed a slightly mounded deposit of pinkish slag-like material similar to material that University of Pennsylvania excavators found in faience-working hearths at Abydos. Is it related to the patches of a faience-working area that we salvaged from the backhoe trench lower down? A bit of the same kind of material occurs in the floor where we found the faience material at the bottom of the backhoe trench. As it turned out, the team did not excavate into the pinkish material of the lower phase. So the question of whether this material relates to faience working nearby must remain to be answered in a subsequent season.



Figure 5. View of the site looking to the northwest from the Eastern Town. The excavation squares in the operation East of the Galleries (EOG) trench can be seen just beyond the Eastern Town House in the foreground. The Wall of the Crow and the Khafre and Khufu pyramids can be seen in the background

Ashraf Abd al-Aziz supervised the second operation in EOG, excavations along a transect from Gallery Set IV and the 1991 bakeries to the Eastern Town (fig. 5). The goal was to understand the stratigraphic connections between these two areas. We excavated alternating squares to the east, linking up in square 4.D28 with the Eastern Town House excavations of Dan Hounsel and Emma Hancox (see below).

Abd al-Aziz's excavators first removed very compact silty sand from the surface, the result of Nile inundation waters reaching this part of the site, possibly as recently as the early twentieth century A.D. Repeated saturation with Nile floodwaters compressed, compacted, and homogenized this gray mud with concentrations of fragmented pottery. This cemented "settlement sludge" increases to the northeast across our site.

Under this layer the team found more fieldstone pedestals and evidence that the curious structures must have served additional functions. A patch of concentrated pigment near one pedestal suggested that it might have been ground on the top of the pedestal surface. Near another there was a cache of animal bone, possibly the remains of livestock butchered on the pedestals. The cache included numerous teeth and other non-meat-bearing bone, which butchers would discard. The pedestals may have been platforms for working as well as storage.

The Eastern Town House

In 2002 we barely ascertained the existence of the Eastern Town before the trench for a new high security wall was dug along the modern road on the eastern edge of our site. This season our goal was to excavate and sample material culture intensively to understand the nature of the

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Figure 6. Excavations in the Eastern Town House, looking toward the north

habitations, and how life in the Eastern Town differed from that in the galleries. We also hoped to find evidence of the town’s life-span. Did people live on here after the royal house had moved away from Giza at the end of Menkaure’s reign?

To tackle these questions, we excavated one of the house compounds. Dan Hounsel and Emma Hancox supervised excavations in a 10×10 m area (squares 4.BC-29–30) that took in one discrete house complex, which we called it the Eastern Town House (ETH) (figs. 6–7). But first, the osteo-archaeology team excavated nine burial pits in the eastern side of ETH. Several features suggested that these burials are probably later than the Late Period, possibly from the Roman or Christian periods.

Hounsel and Hancox found that the ETH has a core domestic unit measuring 3.6×5.3 m. An entrance on the west side opens unto a small vestibule. The main north–south room (B3) has a marl-plastered low bench, remodeled from a small bin. At the far southern end of the main room is a niche with a raised platform. About 2.1×1.1 m, it may have been used for sleeping, like the bed platforms found in Old, Middle, and New Kingdom houses. The same pattern of foyer, main room, and sleeping niche is seen in the houses at the south ends of several of the galleries. It is a simple form of the divided-court plan, or “snail house.”

Small courts and chambers for storage and industry surround the core domestic unit. Three courts along the north and two along the east side had small installations. One was filled with dark ash; another had a limestone basin and a small ceramic vat buried to its rim in a floor. A third court held the remains of a mud-lined circle, about 1.10 m in diameter — most likely the bottom of a grain storage silo like the silos we found in other parts of the Eastern Town. In a fourth court a rectangular bin, used perhaps for storage or as a grinding platform, was built into the northeast corner. Another L-shaped series of courts and chambers, some with ashy fill, flanked the west and south sides of the core domestic unit.

North and East of the Soccer Field

This season, we took up the modern asphalt road along the northern end of the eastern side of the Abu Hol Sports Club. This allowed us to clear a corridor 11 m wide and 25 m long between the club and the new high security wall along the eastern side of our site (SFE).

As we found in 2002, the ancient surface slopes down toward the south. Here we uncovered the walls of a house embedded in the surface, measuring 7×15 m, with the same features we have seen in other small houses at our site: a foyer, main room, and sleeping niche, with courtyards around. Indeed, the layout was very similar to the house (ETH) we excavated this season in the Eastern Town (see above), but rotated 180 degrees (fig. 8). The house belongs to the southerly continuation of the Eastern Town that we found in 2002.

Just north of the house compound, in the area immediately beyond the northeastern corner of the sports club, we exposed the outlines of more of the Eastern Town, including two round silos, 1.4 and 1.6 m in diameter, with a grinding stone or quern nearby, a corridor or pathway bounded on the north and south by mudbrick walls, and parts of other domestic structures.

Royal Administrative Building

We also removed the modern asphalt road along the entire north side of the sports club. This allowed us to clear to the ancient “mud mass” in a swath 10.0 to 18.5 m wide north to south over a length of 150 m east west.

We gained an additional 15 m north to south of the Royal Administrative Building (RAB) (fig. 9). We found that the east and west walls of the building continue south under the soccer field and saw traces of two more silos, as yet unexcavated, belonging to the series of sunken silos that we excavated in 2002. In the silo court we exposed more of the fieldstone from the surrounding (parapet?) wall that collapsed upon the remains of the silos. Nearly all the fieldstone of the west wall was gone, leaving only the robbers’ trench. Most likely the stone was recycled in the tombs of the Workers’ Cemetery (see below).

West of the granary, and just inside the outer west wall of the Royal Building, we could see embedded in the mud-mass walls a southerly continuation of the complex that we excavated in 2002 where we found clay sealings and other evidence of administrative activities.

Royal Administrative Building, Inside Northwest Corner

Inside the northwest corner of the Royal Administrative Building, Freya Sadarangani, James Taylor, and Hala Said resumed intensive excavations. They found more evidence of royal administration, including the better part of an actual cylinder seal in dark hard ceramic material, incised with a design. More clay sealings came from the excavations in all the rooms and courts, including one that may read, “Great Estate” and “King’s Son,” and one with Khafre’s Horus name.

It is possible that in the later phases in the northwestern corner of the RAB, there were three discrete roofed units, which we provisionally designated as Room 2, 5–6, and 8–9. These units, divided into north and south parts, may have functioned as domiciles. In the southern half of Room 2, located along the western wall of the RAB, we found a small red ware ceramic vat, 42 cm in diameter, sunk into the floor, nearly identical to one in Eastern Town House. In Room 5 two rectangular installations, possibly hearths or fireplaces, occupied the corners just inside the doorway that opens into Room 5 from Room 1, an unroofed court during this phase. These two features may belong to a class of low rectangular, brick installations, used as hearths or bins, that

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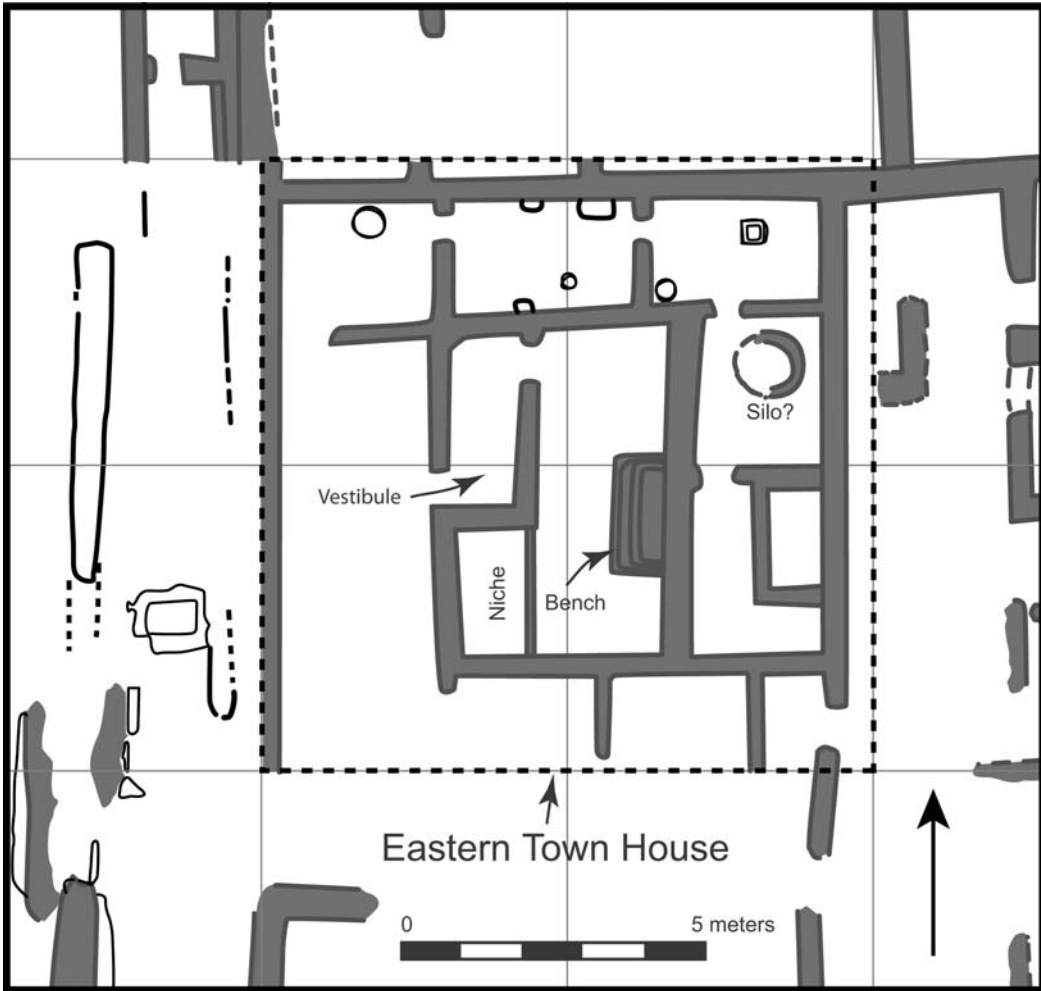


Figure 7. Plan of the Eastern Town House. Stone walls are white, mudbricks are gray

we have found in houses all across the site. A mud-lined circular hole, 43 cm in diameter, in the middle of Room 5 may have been an emplacement for a small vat like that in Room 2 and in the Eastern Town House. In Room 6 a vat, about 42 cm diameter, is set in the lower floor on the west side and in the northwest corner is a rectangular hearth. In a later period the inhabitants constructed a doglegged, two-course mudbrick wall, running east to west, turning the southern end of the room into a kind of platform. On the east side of this platform they made a circular depression, 42 cm in diameter, which might have been for another small vat. On this side they also built another hearth.

The combination of Rooms 8 and 9 may yet be a third roofed unit. A small vat is embedded in the southeastern corner of Room 9.

Doorways open from both Rooms 2 and 5 into the court (Room 1) in the northwestern corner of the RAB. The unit comprised of Rooms 8–9 opens to the court east and north of the sunken court of silos. The courts provided open space and light for various kinds of work.

In an earlier phase a series of three small magazines occupied what became the court (Room 1) in the northwest corner of the RAB. The magazines line up with Room 2 leaving an open space or court (Room F) on the east. Doorways on the east with limestone pivot sockets allowed

the inhabitants to open and close the magazines. Various artifacts turned up scattered across the floors of these small magazines, including a spouted vessel, red pigment, fallen plaster, painted red sandstone pieces (perhaps abraders), a saddle quern fragment, yellow ochre, parts of bread baking trays, three cylindrical jar stands, a stone hammer, and a lump of basalt, flint, and a “pillow stone.” The small rectangular pillow stones with rounded corners form a class of artifact with examples from across the site. However, we do not know their function. Excavations elsewhere in the RAB northwest corner revealed that the magazines were part of a broader complex that comprised as many as eleven rooms.

The magazines predate the double fieldstone enclosure walls of the RAB and are probably contemporary with an earlier mudbrick wall capped by the inner fieldstone wall that we found in excavation probes outside the RAB. The thick, double, fieldstone enclosure walls of the Royal Building are later, thrown up around a mudbrick complex that already existed.

Royal Building, Outside Northwest Corner-Square 6.W19

Square 6.W19 has played a critical role in understanding the relationships between various areas across our site. Here we can connect the stratigraphy of our areas east of the Wall of the Crow (WCE) and south of the Wall of Crow (WCS) with the RAB, the Hypostyle Hall in the Gallery Complex, and beyond. The Enclosure Wall is the connecting link because it runs from the Wall of the Crow around the west and south of the Gallery Complex to join to the RAB.

This season, by exploring the junctures of walls and floors in Square 6.W19 and adjacent areas, Ana Tavares and Astrid Huser unraveled the following stratigraphic history of the RAB and adjacent areas: The inhabitants built the two outer fieldstone walls around an older complex



Figure 8. A house plan revealing itself in the mud mass of the Soccer Field East (SFE) operation. Looking north–northwest. On the left is the soccer field wall

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bounded by a mudbrick wall. Some of the early phase structures, like the magazines inside the RAB's northwestern corner, belong to this older layout. Postholes in the courtyard to the west suggest lightweight wood and reed structures. This older complex was built and functioned about the same time as Gallery IV.11. The bakeries that we excavated in 1991 are located in the northern end of this gallery.

Sometime later the inhabitants built both of the RAB outer walls simultaneously. They constructed the inner fieldstone wall as a capping over the earlier mudbrick enclosure wall that bounded the west side of the courtyard with postholes. Subsequently they divided the already narrowed east end of South Street with a thin fieldstone wall, the Division Wall, running east-west, parallel to the north outer wall of the RAB. About the same time, the builders put up the first fieldstone wall of the South Street Magazines to the west. Later, they added the curved mudbrick wall connecting the magazines and the Division Wall. The resulting bottleneck passage constricted the eastern end of South Street to less than 1 m, perhaps to limit movement through the complex.

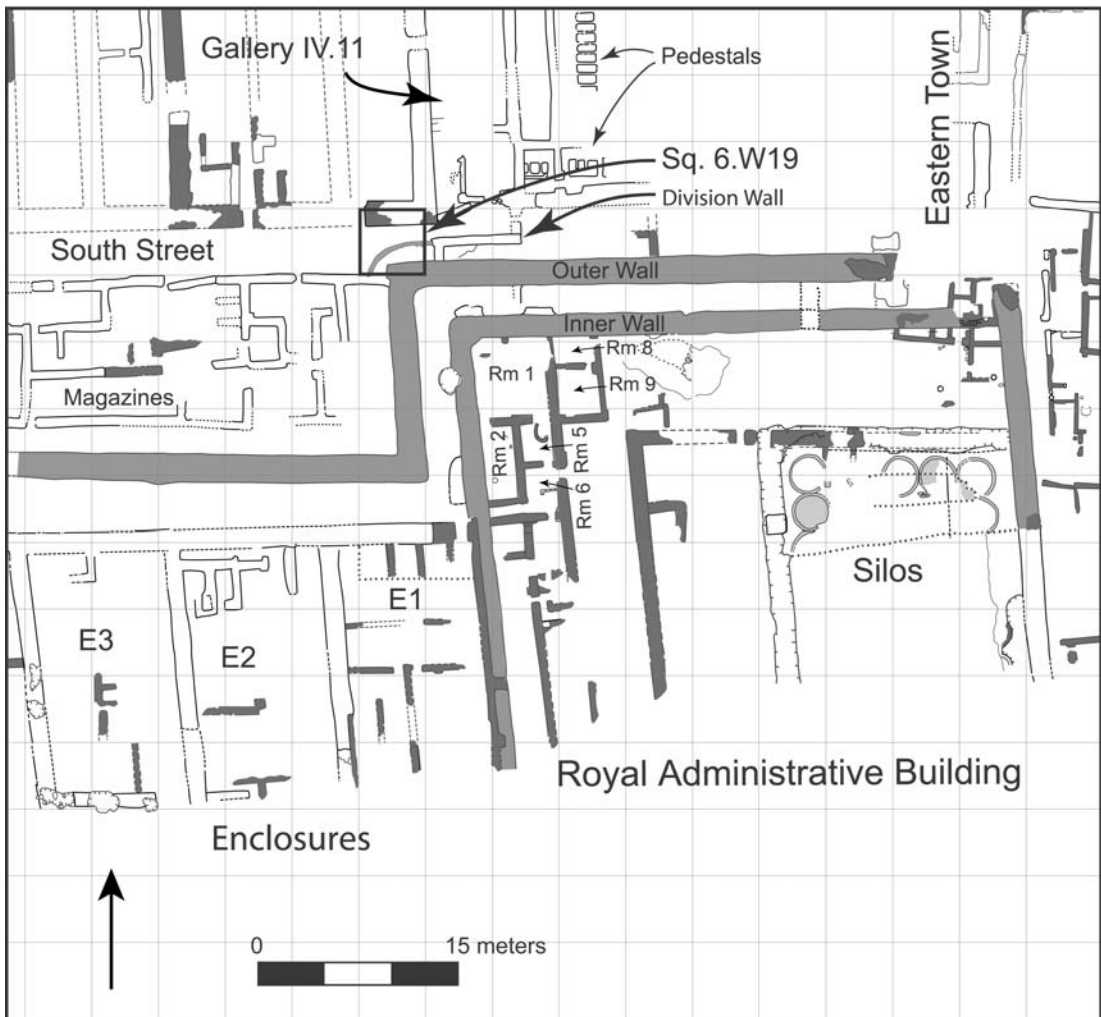


Figure 9. Plan of the Royal Administrative Building (RAB)

In the final building stage the inhabitants erected a fieldstone structure just north of the RAB that includes small fieldstone pedestals similar to those east of the galleries (see above).

The Enclosures

A series of five enclosures (E1–E5), 10.2 to 10.7 m wide, extend 80 m west of the Royal Administrative Building. Fieldstone walls over 1 m thick frame the enclosures and separate one from the next. All five appear to share a common northern wall running parallel to the Enclosure Wall, leaving a 3 m wide corridor or roadway. Two of the enclosures continue under the soccer field. Enclosure E3, bounded by a fieldstone wall across the south end, is 18.1 m long. We do not know the length of Enclosure E4, but we have traced its western wall 24.7 m to the south. Within Enclosures E1–4, we see traces of mudbrick walls that subdivide the spaces into courts and chambers.

Enclosure E5, the last enclosure on the west, shows the most internal structure (fig. 11). Four large magazines on the north measure about 1.50 m wide × 7.2 m long. The magazines open south onto a court and two small side chambers. Corridors flank the magazines and court on the west and south. The rooms and courts on the southern end of Enclosure E5 do not show in the unexcavated mud mass as well as those on the north. However, a wall across the south end gives a total length of about 25 m for Enclosure E5. Here as elsewhere in areas west of the soccer field (SFW and SF-NW), someone looted the substance of the walls, trenching out the very foundations. The main western wall is traceable only by the robber's trench.

The enclosures appear to have been extensions of the Royal Building. They are each about the same width as the zone that includes the small chambers and courts that we excavated in the northwestern corner of the Royal Building. The magazines fronted by courts in Enclosure E5 suggest gathering and accounting material for storage and distribution. The enclosures may have each contained a complex of courts, chambers, and magazines for working, living, and administration, like those in the RAB's northwest corner. So far we have only mapped what shows of these enclosures in the surface of settlement mass. Excavation will reveal more about their purpose.

West of the Soccer Field

We were aware that there was ancient settlement in the area west of the soccer field (SFW) of the Abu Hol Sports Club from two test trenches we dug in 2003, but we knew little of its nature or extent. In order to examine this *terra incognita*, we cleared a vast swath nearly 200 m long and 60 m wide. The overburden of trash and recently dumped waste was piled high along the soccer field, but it diminished to the west. Stable boys had removed much of the original clean sand cover here to the point that ancient walls were within centimeters of the surface.

In this area we found that the walls of the settlement, made of mudbrick and fieldstone, belong to a dense network of domestic structures that appear to be of a larger scale than houses elsewhere on the site. We called this part of the SFW settlement, stretching south of the Enclosure Wall around the Gallery Complex and west of the Royal Building, the Western Town.

West of the Soccer Field-The Western Town

The Western Town covers an area of 105 to 120 m north–south (figs. 10–11). On the east it is bounded by the enclosures (see above) and farther south it runs east under the soccer field. On

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Figure 10. Soccer Field West (SFW) operation, looking toward the north. Workers scrape the mud-mass surface revealing walls of the Western Town. The sand-bagged soccer field is on the right

the west it continues beyond the new access road that leads to the Workers' Cemetery. It probably extends under the cemetery as well.

Mohsen Kamal, Justine Gesell, Yukinori Kawae, Mark Kincey, and Tim Evans investigated the central part of SFW (Soccer Field West). They distinguished three large rectangular units up to 22 m long with outer walls up to 1 m thick aligned approximately to the cardinal directions. (The walls are oriented slightly west of north like the Gallery Complex.)

Unit 1, a possible workshop and storeroom on the northwest of SFW, is 11.5 m wide and more than 16.0 m long, possibly extending another 10.0 to 11.0 m farther west. The eastern end of the complex is taken up with a series of rooms that might have been a bakery. In the center of Unit 1, one of the rooms produced evidence of roofing materials: clumps of mud with impressions of reed and ropes. A small magazine in the room was full of crude red ware pottery jars (fig. 12). In the "main" area of the chamber mudbrick benches lined up against the south and west walls of a central large room. Black paint still adheres to plaster on the base of the walls.

Unit 2 is more than 22 m long and extends beyond the western limits of our clearing. Four magazines occupied its northern side. Large rectangular chambers, just under 9 m long and 3 m wide, flank the magazines on the south and east. A wall may have subdivided the southern chamber to add a small vestibule on the east. A robbers' trench marks where another (older?) east-west wall was removed running down the center of this chamber.

Unit 3, a 16.0 × 12.3 m structure located in the northeast portion of SFW may be a single large house. Unit 3 includes two large rooms, two small chambers, magazines, vestibules, and a small chamber with a set of three pedestals, probably foundations for storage compartments. The most striking feature of the unit is its very robust eastern wall, more than 1 m thick and entirely

fieldstone. South of Unit 3 are many small chambers or courts within larger enclosures. Ash fills some chambers, and hints of semi-circular or circular features could be grain storage silos. These structures might have been used for storage and industry that supported life in the large house.

A maze of walls and fragments of walls in the central area between Units 1–2 and Unit 3 belong to courts and chambers that could have been more support structures for the large compounds or contiguous smaller domestic units.

Northwest of the Soccer Field (SF-NW)

Large compounds, like Units 1–3, appear to have extended almost to the big bend in the Enclosure Wall. Area AA, our first excavation area in 1988/89 belongs to another large unit in the SF-NW zone. The walls in SF-NW stop short of a corridor, just under 2 m wide, running parallel to the Enclosure Wall. We were not able to map all the walls in SF-NW because large patches of playa-like deposits covered the settlement remains (fig. 13). Covering much of area, these patches consist of intercalated sand and marl desert clay, suggesting that large pools of water once stood here. Out of an interest in post-abandonment conditions, we left many of these deposits intact. Tobias Tonner and Josh Trompier mapped the locations and stratigraphy and sampled the material from these layers.

South SFW

Small courtyards and chambers occupy the southern part of the Western Town north of a large natural depression (see below). As in the Eastern Town, these structures are not as aligned to the cardinal directions as the larger compounds. Walls veer farther west of north than in the large units. These may be smaller residential units, like the Eastern Town, although this area is even denser. At the southernmost end, the settlement layer slides down into a deep depression we call Lagoon 1 (see below).

Wall Robbing

A remarkable feature of the Western Town is the degree to which people robbed the walls of bricks and fieldstone. The trenching out of walls begins with the west wall of E5 and, even farther east, the wall around the silo court in the Royal Administrative Building. Wall trenching increases to the southwest, and accounts for many pits in this area. In many places part of the wall remains in mudbrick, while a ragged trench follows the line of the rest of the wall. In some cases the robbers took out the bricks so neatly they left the marl plaster intact along the sides of the trench.

In the early 1980s sand diggers from the nearby riding stables exposed a mudbrick wall in our grid squares 6.KL4–5 and a mound of crushed pottery to the southwest (between Units 1 and 2). These two features first suggested settlement remains of the Pyramid Age lay below this track of low desert. After clearing the sandy overburden down to the surface of the settlement layer, we saw that the wall is actually the core of a small mastaba, an extreme eastern outlier of the mudbrick and fieldstone tombs of the lower Workers' Cemetery. The tomb (fig. 11) rests directly upon the north wall of Unit 1 and the remains of marl-lined walls of what is probably another large (house) structure farther north.

It is important to note that *the settlement remains were already in the condition we found them when the tomb was built*, presumably in the later Old Kingdom. If the tomb was built in the Old Kingdom, people and powerful forces of erosion had already cleaved a horizontal section — sometimes only a few centimeters above floor level — through our workers' city before the end

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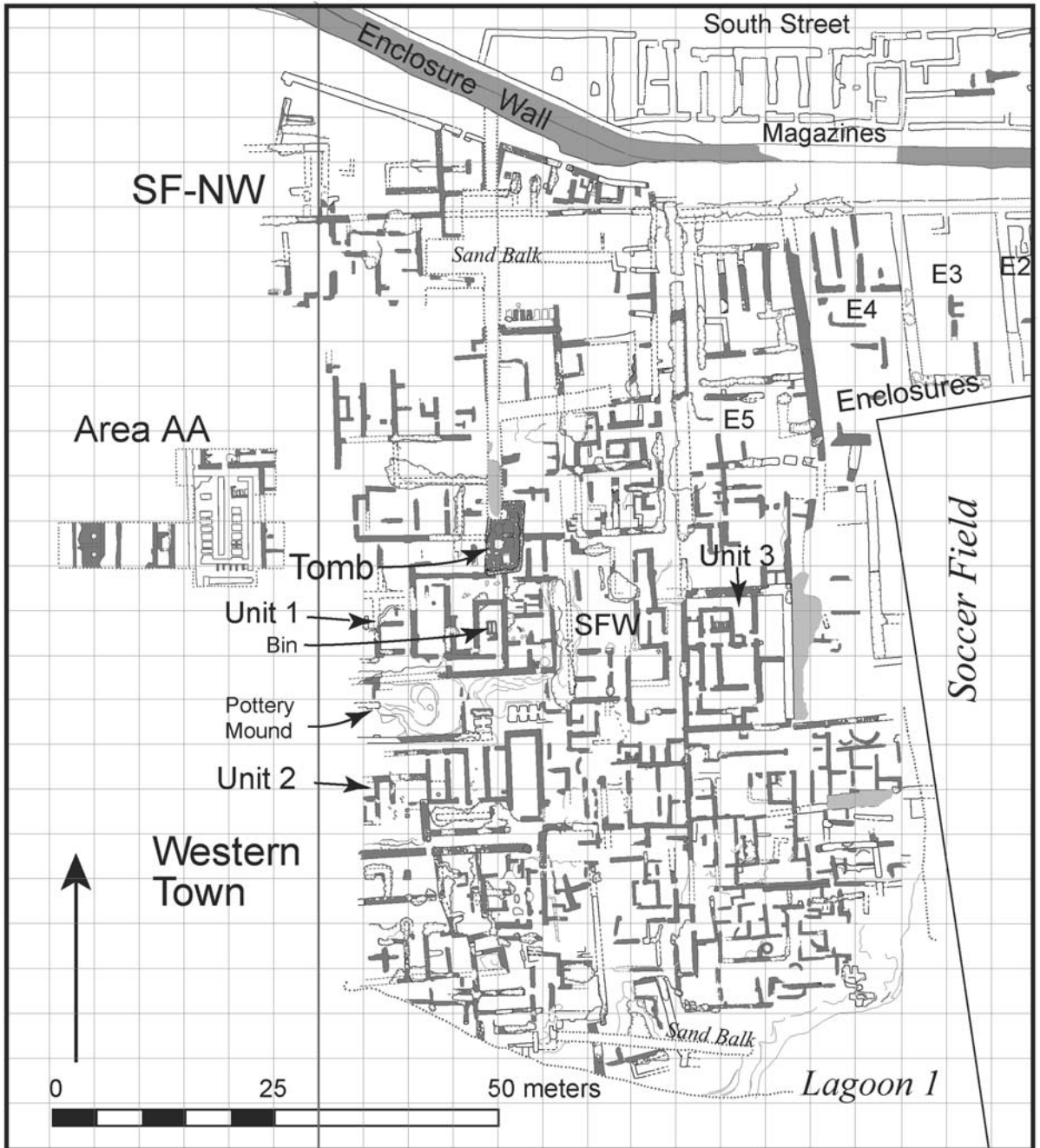


Figure 11. Plan of the Soccer Field West (SFW) including the Western Town and northwestern area

of the Old Kingdom. If the tomb is from the Fifth Dynasty, perhaps contemporary with some of those in the cemetery up the slope, then the top of our city was blown away soon after the demise of the Fourth Dynasty Giza pyramid builders, that is, soon after the royal house moved away from Giza to Saqqara and Abu Sir.

These facts make it a very compelling hypothesis that the mudbrick and fieldstone robbers who stripped the walls of the Western Town were the tomb builders of the later Old Kingdom,

and that many of the bricks in the tombs up the slope, as well as some of the broken stone — mostly limestone but also granite — derive from walls of the town below.

Lagoons 1 and 2

Two depressions on the west side of the soccer field may have flooded in post-occupational times during the annual Nile inundation. Lagoon 1, at the southern limit of the Western Town, extends about 50 m south to the “Standing Wall Island” settlement (see below), just west of the southern end of the soccer field. The depression extends westward beyond our clearing. Lagoon 2, on the southern side of “Standing Wall Island,” is more than 28 m wide, east to west, and continues past our clearing 15 m south of the “island” settlement. Both depressions dive more than 1 m below the surface of the Old Kingdom ruins, but we do not know the total depth. Before reaching the bottom of the depressions, while removing the sand fill, we hit the water table at 14.66 m above sea level.

Are these depressions ancient features or a product of severe post-occupation erosion? They appear to have been part of the natural landscape during Old Kingdom times but may not have filled with water until later when the floodplain level rose and the inundation reached farther west. One clue lies in the bakery and the extensive dumps of ashy pottery near the northern and western “shore” of Lagoon 1. The inhabitants might have built the bakery and other chambers with ash-producing industry where it would be easy to discard the refuse into natural depressions.

Another clue is found on the “island” where the settlement appears to respect the edges of the depressions. The compound north wall of the compound (see below) roughly parallels the southern shore of the northern lagoon. The southern walls drop sheer down into the southern lagoon.

It is also possible that the Fourth Dynasty inhabitants constructed settlement all over the natural contours of the landscape, in the low as well as high areas. If we could excavate below the water table in the depressions we might find the continuation of the settlement.

Southern Settlement: Standing Wall Island

An “island” of settlement rises from the southern edge of Lagoon 1 (fig. 14). A fieldstone wall, 1.2 to 1.5 m thick, stands 1.5 m above the “mud mass,” the layer of mudbrick walls, eroded brick tumble, and fill (fig. 15). “Standing Wall,” as we called it, is the north side of a complex that extends east–west from 27 to 30 m and north–south 17.5 to 26 m. Aligned 21 degrees west of north, the complex is much farther off the cardinal directions than Units 1–3.

Yukinori Kawae and Josh Trompier mapped this part of the site. Walls divide the compound into two enclosures (ES1 and ES2) that face south and open unto a second depression, Lagoon 2. The main north–south walls of the compounds are extra thick, from 1.0 to 1.6 m, and because they are not perfectly parallel, the two enclosures are trapezoids. We had difficulty ascertaining the internal structure along the eastern and northern sides of the eastern enclosure (ES2) because of damage wrought by pits, stone robbers, modern trash dumping and burning, and a rising water table. The pit diggers took away features while the moisture distorted them. When the area was wet, mudbrick “melted” and “flowed,” mixing with modern debris. When we exposed it, the surface dried in wavy and even swirled patterns, obliterating the linear outlines of walls in one critical patch along the northern edge of ES2.

We could see traces of mudbrick walls in the ruin surface along the west side of ES1. A thin fieldstone wall runs parallel to the south end, then turns 90 degrees to run west, closing off ES1 about 11.5 m from the north wall (Standing Wall). A thicker fieldstone wall runs north–south,

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Figure 12. A double bin filled with crude red ware pottery in Unit 1 of the Western Town, Soccer Field West

dividing the enclosure in half. In ES2 many walls show in the ruin surface, which we have yet to excavate. A square enclosure, 5.3 m (10 cubits) east–west, by 5.9 m north–south occupies the southwestern corner. This could be a house or domestic structure. There is a small chamber in the southeast corner of the “house,” possibly with a low platform to the north. Traces of mudbrick walls suggest another structure in the northwestern corner of ES2. Along the eastern side of ES2 mudbrick walls form a square court on the north, from which a corridor extends more than 9 m south. A long narrow magazine flanks the northern end of the corridor. Two doorways opened to the east into areas now as yet under the soccer field. The thick eastern fieldstone wall of ES2 closed off the southern of these two doorways.

It is apparent in ES2 that thick fieldstone walls enclose and fortify an earlier mudbrick complex. Ana Tavares, Astrid Huser, Freya Sadarangani, and James Taylor found a similar sequence of fieldstone rebuilding of an earlier mudbrick layout in their excavations of the northwest corner of the Royal Administrative Building.

Conclusions

Our 2004 season added another hectare to our knowledge of the ancient settlement with the discovery of the Western Town. Its maze-like ground plan appears to include large house-like structures aligned roughly to the cardinal directions, as well as smaller structures, courts, and chambers that filled spaces between larger units over time, forming a densely packed network.

The Western Town certainly extends west beyond our clearing, but we do not know if there is settlement south of “Standing Wall Island.” We established, however, that little or no settlement extends immediately north beyond the Wall of the Crow. Here the Fourth Dynasty builders left a construction ramp and a layer of mason’s debris extending at least 35 m north of the wall. Forces of erosion smoothed and compacted the surface of this debris into a broad terrace.

We added to our knowledge of previously cleared areas and refined our understanding of the complex history and stratigraphy of this extensive site. We mapped more of the Eastern Town after clearing south of our 2002 boundary. In the center of the town we intensively excavated one house compound, a core domestic unit surrounded by courtyards with a variety of installations. On the opposite side of the site we intensively excavated the North Street Gate House, which had a more complex internal configuration, including an open-air bakery. We excavated dumps near the Western Gate in the Enclosure Wall, revealing an earlier wall and older phases of occupation. The cultural remains grow progressively sparser with depth but continue all the way down to the level of the water table.

We mapped and intensively excavated more of the Royal Administrative Building (RAB). Around the northwest corner of the RAB we established that there was an earlier occupation built of mudbrick as well as reed and poles that functioned about the same time as Gallery IV.11, just to the north. During a later period the inhabitants built the double outer walls of the RAB, and later still, the South Street Magazines to the west. Lastly they added the thin walls creating a bottleneck at the end of South Street.

With each field season's work this urban layout of the Fourth Dynasty becomes larger and more complex and we glimpse more of the everyday life of the pyramid builders.

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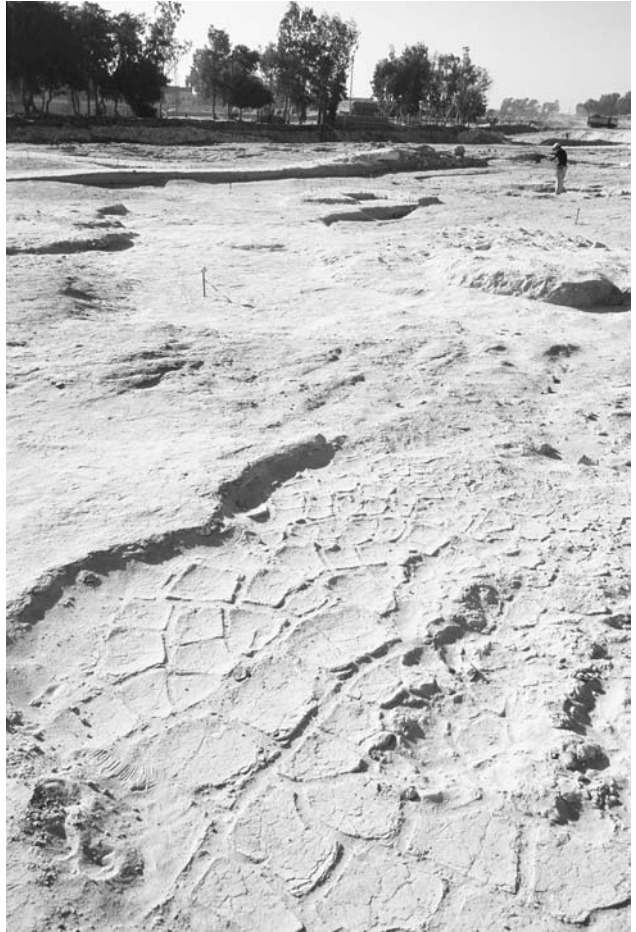


Figure 13. Playa deposits in the northwestern area of the Soccer Field West operation, looking southeast. A sand balk can be seen in the background

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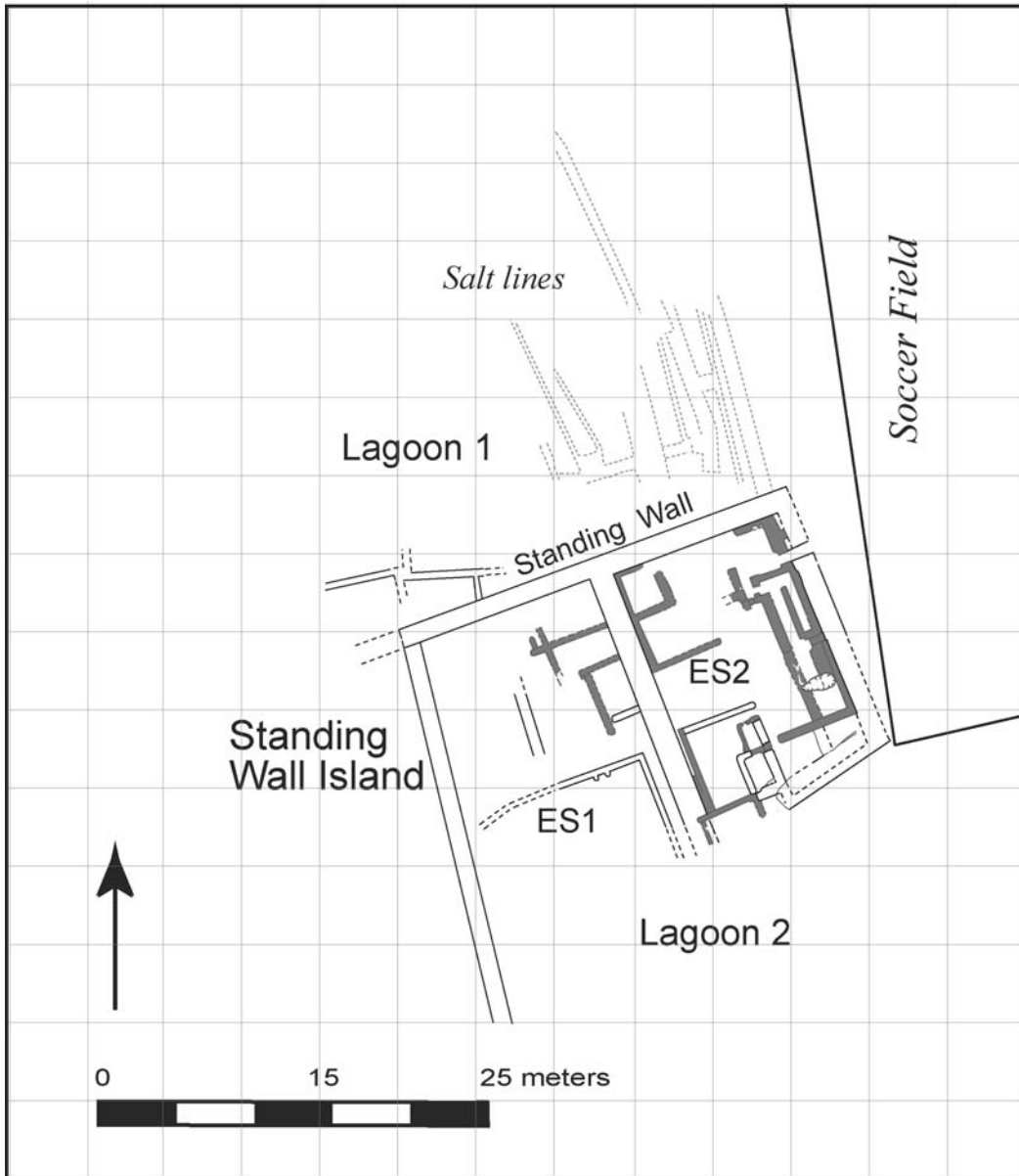


Figure 14. Plan of Standing Wall Island

storeroom. We are especially grateful to Engineer Abd al-Hamid Kotb for assistance with mechanized equipment used to clear modern overburden from our site clearing the way for our work. Once again this season we are grateful for the services of loader operator, Mohammed Musilhi, who carried out this task with skill and determination. Without this help we could not have carried out the work summarized above. Reis Ahmed Abd al-Basat did a remarkable job supervising our specialist workers and skilled excavators from Luxor.



Figure 15. Workmen cleaning sand off Standing Wall, view to the southwest

Ann Lurie, on behalf of the Ann and Robert H. Lurie Foundation, once again insured that our goals for a long, ambitious, and rewarding season 2004 were fully met, and for this we offer special thanks. We offer special thanks to David H. Koch, Peter Norton, and Nathan Myrhvold for major support. I am grateful to Bruce Ludwig who has helped to develop financial support for our work at Giza since 1986. Our 2004 season would not have been possible without the support of Jon Jerde, Robert Lowdermilk, Glen Dash, Matthew McCauley, George Link, Glen Dash, James Allen, Douglas Rawles, Ann Thompson, Fred and Suzanne Rheinstejn, Sandford and Betty Sigoloff, Victor and Nancy Moss, David Goodman, Marjorie M. Fisher, Alice Hyman, Don Kunz, Bonnie Sampsell, Lora Lehner, and Craig Smith. And we welcome the support of Michael Fourtciq, George Sherman, Michael K. MacDonald, Donna L. Dinardo, Robin Young, and Barbara Russo.

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Wilma Wetterstrom substantially revised and adapted the text from a longer report and prepared the figures.