

**Dakhleh Oasis Project**  
**Columbia University**  
**Excavations at Amheida 2008**  
**Preliminary Report**

The 2008 excavation season started on the 26th of January and continued until the 23rd of February. The main goals of this season were to finish the excavation of the service areas in area 2.1 north of a rich house of the 4<sup>th</sup> century A.D. in the center of the city, to continue excavations of the area of the Temple of Thoth, and to carry out architectural conservation work aimed at stabilizing a tower tomb of the Roman period located to the north part of the site. Area 2.1 has been under excavation since 2004. In addition, the material from the house in Area 1.3, in the northern part of the site, which was excavated in 2005-2007, was studied in preparation for its final publication. The report on architectural conservation is presented in a separate document.

The 2008 team consisted of Roger Bagnall (director, papyrologist); Paola Davoli (archaeological field director); Olaf Kaper (associate director for Egyptology); Eugene Ball (senior archaeologist); Roberta Casagrande-Kim, W. Graham Claytor, Monica Hellström, Valentina Liuzzi, Annalisa Marzano, Elsbeth van der Wilt, and Elizabeth Warkentin (archaeologists); Delphine Dixneuf and Andrea Myers (ceramicists); Angela Cervi and Marina Nuovo (registrars); Fabrizio Pavia and Silvia Maggioni (topographers); Carina van den Hoven (Egyptologist); Bruno Bazzani (computer systems manager and photographer); Ashraf Senussi (pottery draftsman); Martin Hense (artist); Nicholas Warner (conservation architect); Constance Silver, Tamer Ramadan, and Mohamed Ahmed Sayeed (conservators); and Ashraf Barakat (assistant to the director). Anna Boozer (archaeologist) carried out the study of the house in Area 1.3 in cooperation with various specialists. Our inspectors were Ibrahim Abdel Hameed Ibrahim and (for the conservation work) Baha'a Gomaa Ahmed Ayyub.

## **Area 2.1**

Paola Davoli and Eugene Ball

During the 2008 season, an area consisting of five rooms was excavated (figs. 1, 2). These five rooms seem to compose one complete building. Within the excavated area (11.30 x 10.75 meters) however, several building phases are represented, both belonging to the building mentioned and to previous structures. The main phases present belong mainly to a bath house already partly excavated during the 2006 and 2007 seasons to the north of the area reported here, and to later domestic architecture.

The building of the later phase is approximately L-shaped and in its latest phase abuts the courtyard excavated in previous seasons. The building is entered through a narrow corridor approximately 1.1 meters wide and approximately 5 meters long. This corridor enters into the largest room of the building, room 19. From room 19 one east room, room 21, can be entered which in turn provides entrance to room 20. At the north end of room 19, room 23 can be entered.

The main room of the building, room 19, measures 7.5 meters north-south and approximately 6 meters east-west. During its excavation, a rectangular feature, 3.6 meters long and 87 centimeters wide, consisting of two “bins” have been found on top of the latest floor level, consisting of compacted mud. Another “bin” with a somewhat rounded plan was found in the southwest corner. These features belong to the latest phase of the building’s use. Their function is unclear although use as a working or storage space is most likely. While excavating underneath floor level, several walls belonging to earlier phases have been found. It is clear that these walls have been cut down to provide an equal surface and a large open space for its latest use.

The walls present at lower level once divided room 19 into three different rooms; their function is unknown. Room 21, measuring 3.80 meters by 2.81 meters, has yielded two features belonging to the late phase of use: a mud and mud brick structure in the southwest corner of the room, with a rectangular ground plan with rounded corner measuring 72 centimeters long, 35 centimeters wide, and 50 centimeters high can probably be explained as a pen for small animals. The feature has a hole in the front that could be closed from the top with a sliding door to contain animals inside. The structure is complete and well preserved. In the southeastern corner, another rectangular “bin” measuring 2.13 meters long and 88 centimeters high belonging to the same phase is present. The south wall of room 21 has a niche set into it measuring 42 centimeters deep, by 51 centimeters wide, and 60 centimeters high. The top of the niche is arched. The room used to be vaulted as is seen in a collapse excavated. The vault used to be oriented east-west.

Room 20, a room measuring 2.25 meters by 2.30 meters has yielded a rectangular “bin” measuring 1.4 meters by 70 centimeters in its northwest corner. On both the east and the west wall of this room, lower parts of a vault oriented north-south are still in place.

Room 23 is a room measuring 3.21 meters long by 2.91 meters wide. Both east and west walls have parts of a vault in place. The roof was oriented north-south. Above the latest floor level, no features were encountered. Underneath it however, another “bin” (1.60 x 1.25) made of loosely laid bricks and with slightly rounded plan was found.

The characteristic features encountered in all rooms described make clear that the building, at least in its later phase, was not used as living quarters but had a utilitarian function probably connected to the house to the south of the excavated area. Ostraka found in the corridor suggest contemporary use by the same family.

A previous use of the excavated space was already suggested by the findings in the previous season. Texts found on the plaster in room 15 as well as in room 19, suggested the use of the space as a school (fig. 3). The building of this phase is badly destroyed but consisted of at least three large rooms: rooms 15, 19, and an area partly covered by room 23. The building was characterized by the use of plaster on the walls, on which texts for education could be written, whether by a teacher or by students. The plaster facing was renovated in the lower part of the walls and painted in purple. Only fragmentary traces of this purple plaster remain. The presence of low benches along the perimeter walls of all the rooms of the school distinguish the building. These benches are made of mud brick and baked brick and have a mud facing. Some of them are cut baked brick walls of a previous building phase.

One of the earlier building phases of the excavated area, as already mentioned, is comprised of the remnants of a large public bath house. Features of this building were already discovered and excavated in the previous seasons (a laconicum, latrina, and piscina). This year, the remnants of a large shallow pool, a smaller shallow pool, and an approximately 1 meter deep square bath with rounded corners have been found. Remnants of a second bath probably with a similar plan were also found, which belonged to an earlier phase of the bath house's use. The main characteristics of the building are the use of baked brick in all walls, and the use of a thick layer of hydraulic mortar both on the walls and for floors. A striking feature in the largest pool area excavated is the remains of a stepped base with fragments of a limestone labrum next to it. The labrum might have been raised above pool level by the pedestal. The most complete bath excavated measures 2.3 meters by 2.08 meters and approximately 1 meter deep (fig. 4). The bath would have been set in a large, more or less rectangular, stepped platform of which the remnants have been found. From the platform the bath could be entered through steps with a rounded plan in the northwest corner. The top of the platform itself could be reached by steps with a similar plan in the southwest. Remains of both sets of steps have been found *in situ*. The baths, including platform and steps, were covered by a white layer of hydraulic plaster. The remains of the bathhouse also yielded two channels. One of the channels feeds water from the large pool into the latrina excavated in room 10, to the south of the excavated area. A more substantial channel, belonging to a sewer system, has also been recognized. The water was drained from the latrina through this north-south oriented channel. The channel is 45 to 50 centimeters wide, 1.1 meters deep, and is covered by a pseudo-vault.

#### **Area 4.1**

Paola Davoli and Roberta Casagrande-Kim

Area 4.1, the location of the Temple of Thoth, has already been investigated during the 2004, 2005, and 2006 campaigns. This season was focused on the excavation of squares AQ50 and AR50 (20 x 10 m). The aim of the season was to clarify the possible layout of the temple and to get a better understanding of the underlying layers in which many of the pits disturbing the ancient remains had been dug.

The surface layers in squares AQ50 and AR50 (DSU 105 and DSU 114) consist of wind-blown sand, mainly characterized by the presence of small block fragments, clumps of gypsum mortar, mud brick fragments, grinding stones, and a great quantity of pottery sherds.

Immediately below the surface, in squares AQ50 and AR50, we excavated eleven pits and we recognized a twelfth one that was not excavated (F51) (fig. 5). The nature of the soil the pits were dug in can be differentiated according to their relative heights and to their chronology. Indeed the more recent pits (F52, F54, and F65) have either been cut in the filling of previous pits (as it is the case for F52 cutting the south western corner of pit F49), or did not reach earlier anthropic stratigraphy (F54 and F65) because of their shallow depth. In these smaller pits, few stone blocks from the temple, which had slid in from other nearby pits (as it is the case for F52) have been found or sometimes no blocks at all (F54 and F65). On the other hand, the deepest pits (as in F60, F55, F50, and F58) contained a large number of temple blocks (both fragmentary and complete) some of which were decorated with painted sunk relief, mostly of the Saite Period (26<sup>th</sup> Dynasty) (fig. 6). Moreover, such pits were cut through earlier stratification (165 centimeters to 200 centimeters), revealing a series of horizontal layers alternating thick strata of dark ashes, and red compacted clay. Around most of the pits, spoil heap layers (DSU 111, DSU 112, DSU 117, and DSU 119) are visible, mainly characterized by the presence of large clusters of mud bricks. Some of these clusters (DSU 127, DSU 133, DSU 131, and DSU 140) suggest the presence of mud brick structures in the area now identifiable only as collapse partially fallen into the pits. The fill of the pits consisted predominantly of temple blocks slid inside from the immediate vicinity and sand accumulated between them. Only in the case of pit F58 was a layer of dark brown rubble material (DSU 124) clearly discernable below the usual upper layer of sand and blocks (DSU 122). Moreover, pit F58 cuts at its northeast limit into an earlier, possibly circular, pit (F56). This pit, visible only in its north-south section, seems still to be filled with its original stratigraphy of a thick ash layer, one possible course of mud brick immediately below it, and rich dark brown soil. Considering that the eastern half of F66 is still probably *in situ*, it would be interesting to excavate it from the top so its original use might be better defined.

The way the blocks are concentrated in the different pits, more specifically in the alignment of approximately 100 blocks inside pits F49, F60, and F52 (three contiguous pits stretching in both squares) allows speculation about the original layout of the Roman temple once present on the hill. Indeed, these blocks were probably part of one of the temple's external walls running north-south. Two clusters found at the western limit of AQ50 (pit F49), of still-bonded blocks reinforce this hypothesis.

Among the total number of blocks found in this campaign in the two squares there were 37 decorated large blocks and 76 decorated fragments (fig. 6). They date mainly to the Saite Temple dedicated to the god Thoth and were reused in the Roman Period after the building was dismantled. Some inscriptions in hieroglyphs are preserved, most notably some cartouches of King Amasis. As for the decorated scenes, a depiction of two goddesses (one of which interpreted as Mut), a scene of King Amasis

in an offering gesture, and an image of a falcon-headed god are among the most complete and representative.

In square AR50, roughly at the center, a large area (2.55 by 5.40 meters) appears to be the only portion (DSU 120) left undisturbed by the cutting of the nearby pits (fig. 7). This area seems to be delimited by four walls (F56, F57, F61, and F63) possibly creating a room. Further investigation is required to clarify the situation even considering that DSU 120 was not fully excavated during this campaign. Five complete pottery coffins, the traces of two broken ones still *in situ*, and numerous fragments of similar coffins scattered in the western part of the square, attest to the area being used as a cemetery for unummified animals (probably birds). Considering the location of the coffins within the temenos wall, they most probably represent multiple burials with a sacred function. The bones contained in the coffins will be further investigated to ascertain the species and number of the animals. The deposition of the coffins is most certainly later than the erection of the walls. A cavity cut into the corner between walls F57 and wall F56 in order to accommodate one of the coffins clearly demonstrates this. The presence of 25 fragments of bronze Osiris statuettes and pendants (fig. 8), as well as a large depositional cluster of at least 40 miniature vessels, all found in context of DSU 120, seem to reinforce the hypothesis that the area had a sacred function.

As it was the case for the previous campaign, the pottery sherds confirm the very disturbed nature of the area. Indeed, vessels dating from the Old Kingdom to Islamic periods are recognizable. However, it is interesting to notice a predominant concentration of Old Kingdom double bread moulds throughout AQ50 and most notably in the fill (DSU 118) of pit F60 and in DSU 140 at the northwest quadrant of the square. On the other hand, these moulds are almost completely absent from the rest of AR50, possibly suggesting that the activity of bread production was limited to the eastern half of the squares investigated this year.

### **Study of Area 1.3**

Anna L. Boozer

Area 1 clusters around the major east-west road in the northeastern part of Amheida. During the 2005 and 2006 campaigns, excavation focused upon Area 1.3, a domestic context. In the 2007 campaign, we completed excavations for this structure with a test trench in the street (Area 1.2) north of Area 1.3 and an exterior courtyard (Area 1.4) probably belonging to house 1.3. During the 2008 season we began to prepare the publication of this house. We completed the documentation through analyzing, drawing, and photographing the objects and ceramics and completing the digitization of plans and data from the three excavation seasons. The objects were analyzed for form, dating, material, dimensions, and parallels with related objects. An outline for the publication has been drawn up and writing responsibilities assigned.

## **Epigraphic work**

Olaf E. Kaper

In January, before the start of the excavation season, drawings of about 90 fragments of relief decoration from the Amheida temple were made, which had been excavated in the 2005 and 2006 seasons. All these fragments were photographed and their documentation was practically finished. The records for all relief blocks and fragments in the database were checked, updated, and corrected by C. van den Hoven. The photographic record was checked and remaining fragments were photographed.

During the excavations, drawings were made by C. van den Hoven of all remains of decoration on blocks and fragments from Area 4. In total, 37 relief blocks were drawn, recorded and photographed and 76 fragments of relief decoration were found, most of which could be drawn and recorded this season. After recording, the reliefs were stored in the magazine at Ain Birbiyeh. Because Kaper had to leave the field early for a family emergency, the drawings of the reliefs could not be finalized and this remains to be done in the next field season.

As for the information contained in the relief blocks that were found during the 2008 season, it is remarkable that all are of pre-Roman date, mainly of the Saite period. Several relief blocks contain the name of king Amasis (Dynasty 26), and some blocks join on others of this reign found during previous seasons. One important block carries a representation of a human foot and a lion's paw standing on a snake, of a scene depicting Seth defeating Apophis. Several blocks depict a king, presumably Amasis, from a decorated doorway of the temple. The appearance of the temple built by Amasis has become more clear this season, because of the finds of specific ritual scenes in the blocks and the names of some specific deities that were depicted. Architectural fragments, such as a decorated cornice from the top of a wall, provide further evidence for its reconstruction.

The lack of Roman period reliefs is surprising, and this presumably indicates that the temple which formerly stood at this location was not decorated in its entirety.

Apart from the reliefs, a small block with demotic writing (dipinto) was found, which possibly dates to the early Ptolemaic period.

## **Greek Ostraka**

Roger Bagnall

A total of 83 ostraka were found in the 2008 campaign, all, except for a handful of badly preserved Demotic texts, in Greek. Most of these were found in the structure in Area 2.1 described above. The bulk of them came from the final phases of the structure, after its use as a school, when it was used for service and processing functions. These phases correspond to the last period of the use of the large house immediately south of this complex of rooms, to which it undoubtedly belonged. The principal figure of the ostraka found in 2008 is Serenos, known already from many texts excavated in the house. He was almost certainly the owner of the house and its northern annexes during this period, and evidence from an

ostrakon found in 2004 identifies him as a member of the city council. He appears to have managed a substantial amount of property, some his and some belonging to a landlord living somewhere else, perhaps in Hibis (Kharga). The ostraka found in 2008 concern particularly deliveries of provisions useful for feeding donkeys, barley and hay, and in general they are (as is the case with the texts found in the house) principally centered around the dispatch and delivery of agricultural products, including oil, wine, and wheat. Several documents indicate the raising of birds as an activity of the household, and there is evidence also of involvement in supplying the local military unit stationed at El-Qasr.

## **Topography**

Fabrizio Pavia and Silvia Maggioni

The topographic work carried out during the 2008 excavation season continued on the basis of what was already elaborated in 2007, using the same established fixed points (S1 to S5).

- Topographic assistance in the fieldwork

Following the development of the work on the field, daily updates were prepared as new rooms were uncovered to provide total station references in order to assist and facilitate the work of the archaeologists, especially in Area 2.1. The result of the work generated two comprehensive 2D plans of the area of the villa and the new rooms opened, one reflecting the architectural situation visible on the ground level, the other reflecting the one of the end of the season.

Considering the lack of architectural structures in Area 4.1, the work there was mainly focused on providing fixed points according to the staff's needs. In both areas, points have been total stationed to create schematic sections cutting through the whole extent of the investigated areas.

- Site survey

We continued the surface mapping of the site in the areas not yet excavated, more specifically in two distinct quarters (fig. 9). The first unit surveyed, an area of 75 by 45 meters, is located around the pyramid (3.1) where a complex of monumental tombs was uncovered.

A second, larger plot (220 by 75 meters), East-West oriented south of 2.1 and 4.1, can be most probably identified as the southeastern limit of the town's expansion, characterized by a rather regular road system around which a district of small residential units was organized.

- Photogrammetry

Photogrammetric survey was carried out on the site, providing data implementing two ongoing projects. On one hand, a complete documentation has been provided for the area of the so-called 'tower' tomb, located at the northern limits of ancient Amheida. For this building, non-compressed photographs of both the external and internal faces of the walls were taken with the help of a Total Station. These images were then exported and geo-referenced using coordinates, rectified and joined together in a photomosaic. This process allowed us to obtain a single high-definition photogram, imported and scaled

in CAD environment as a graphic base layer for vectorial drawings. Concomitantly, a full planimetry of the building, the walls' elevations, and N-S and E-W sections were elaborated so to provide a full overview of the state of the architecture before the intervention of restoration.

On the other hand, we continued to document area 2.1, with a complete photogrammetrical view of the West perimetral wall of room 19, two detailed views of the inscription located roughly at the center of this wall, and a photogrammetrical rendering of the floor in room 23.

- Cartography

The map previously created to show degrees of human occupation in the area surrounding the main site has been updated with data collected from a GPS based survey (performed by EM) in order to visualize possible zones of archaeological interest located outside the current limits of the SCA protected territory. Moreover, the basic elements of the modern infrastructure (i.e., power cable lines, channel systems, and settlements) were mapped to facilitate the planning phase in the reconstruction of the villa complex.

- Graphic elaboration of collected data

Using the data collected during the previous season, this year we were able to elaborate the 3D survey done in 2.1 to create a fully scaled metric reconstruction of the extant features in CAD to be used in the recreation of the complex in a 1:1 scale.

The photomosaics and vectorial images elaborated last year in CAD were joined together to provide a combined visual representation of both planimetry and elevations of the rooms in 2.1. As for room 1, the photomosaic has been elaborated *ex novo* using existing images shot in 2006.

The result of this combined views have been summarized in 12 room-plates.



AMHEIDA 2008  
AREA 2.1

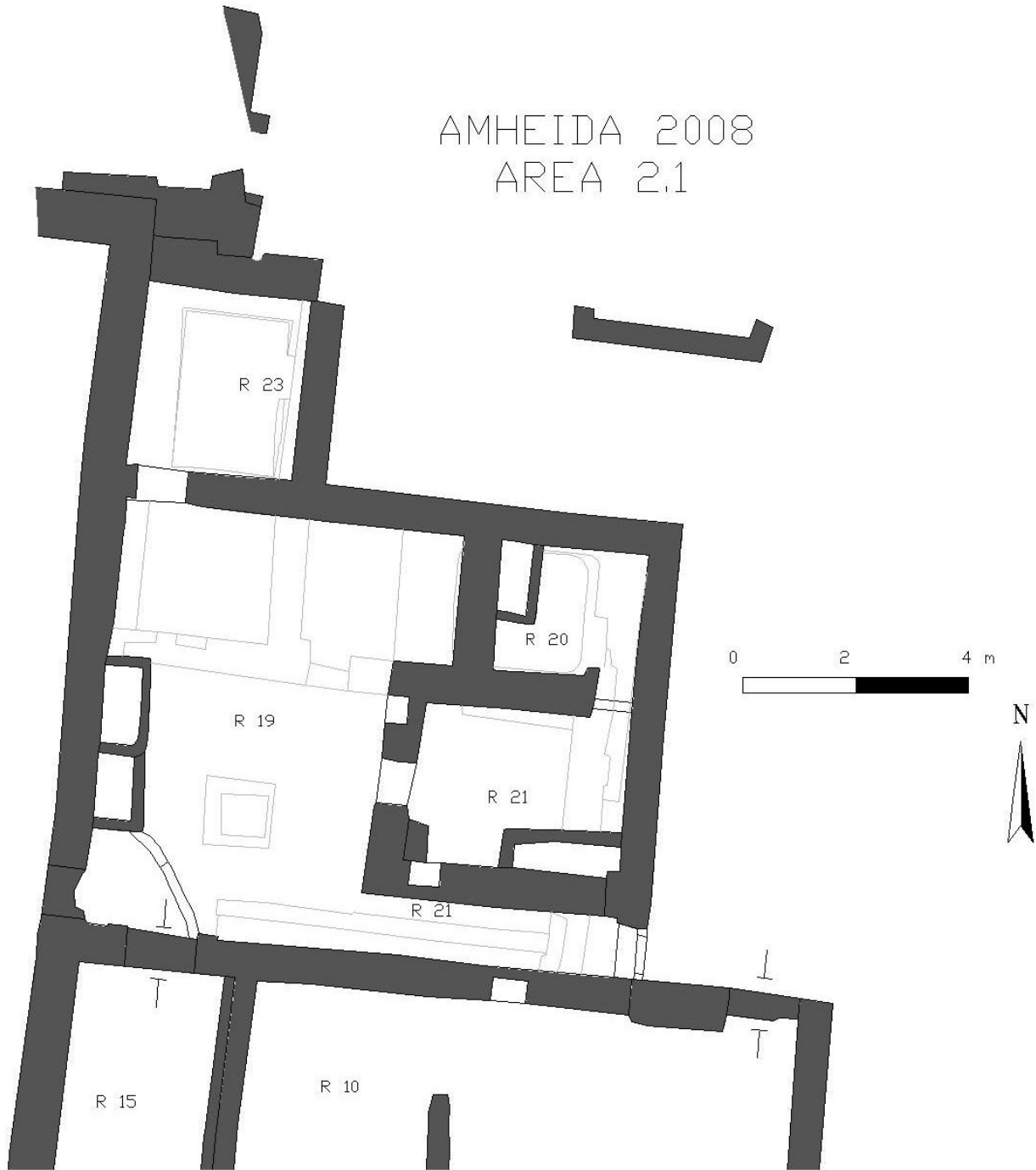


Fig.1: plan of excavated building in area 2.1





Fig.2: overview of excavated sector in area 2.1



Fig.3: Greek text on white plaster in room 19, area 2.1





Fig.4: pool belonging to the Roman bath, area 2.1

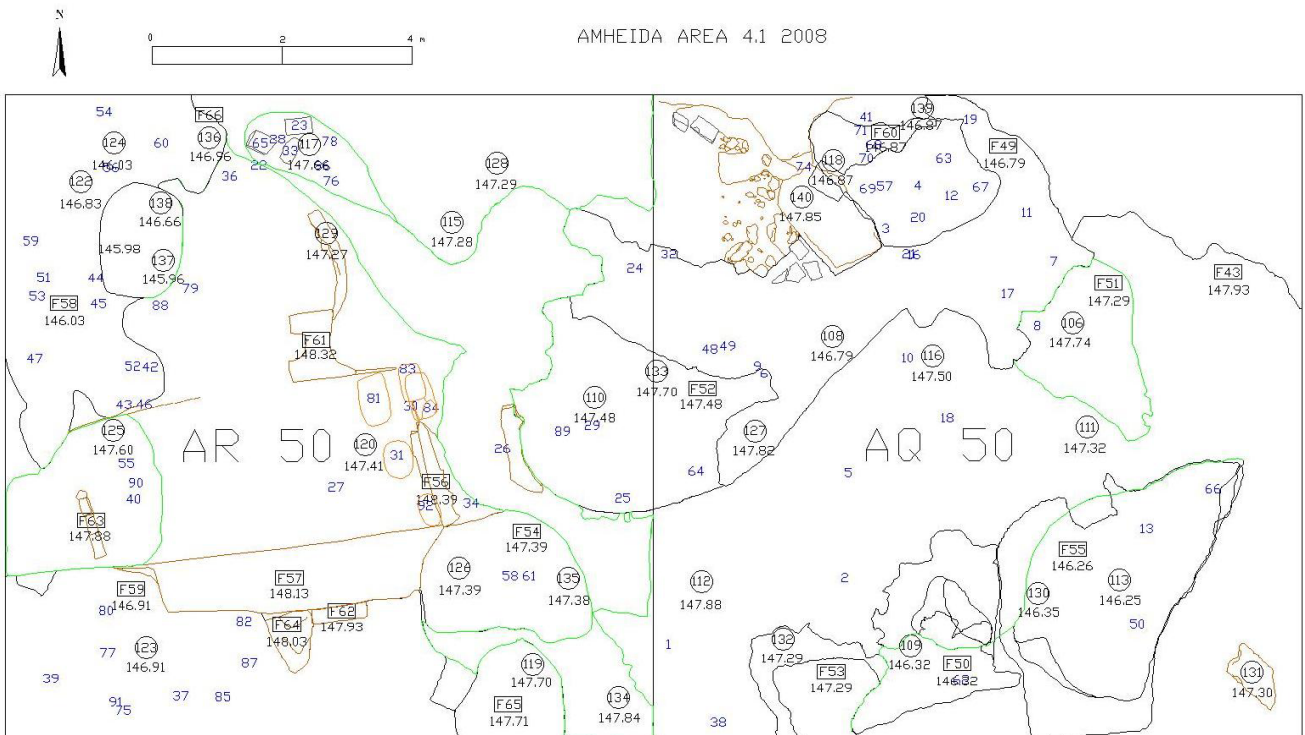


Fig5: plan of excavated sector in area 4.1





Fig.6: King Amasis making offering, block from area 4.1



Fig..7: coffins for sacred birds in area 4.1





Fig.8: Osiris statuette in bronze, from area 4.1



Fig.9: updated general plan of the site