

# THE KERKENES PROJECT

## A PRELIMINARY REPORT ON THE 2003 SEASON

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*Figure 1. Half of a megaron, identified through geophysical survey, was excavated in 2003. (03dpjv4223)*

## THE KERKENES PROJECT

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## THE LOCATION OF KERKENES DAĞ



Figure 2.

(a) Map of Turkey showing the location of Kerkenes on the northern edge of the Cappadocian Plain.

(b) Road map of Central Anatolia showing location of Kerkenes Dağ, the nearby town of Sorgun and provincial capital of Yozgat.

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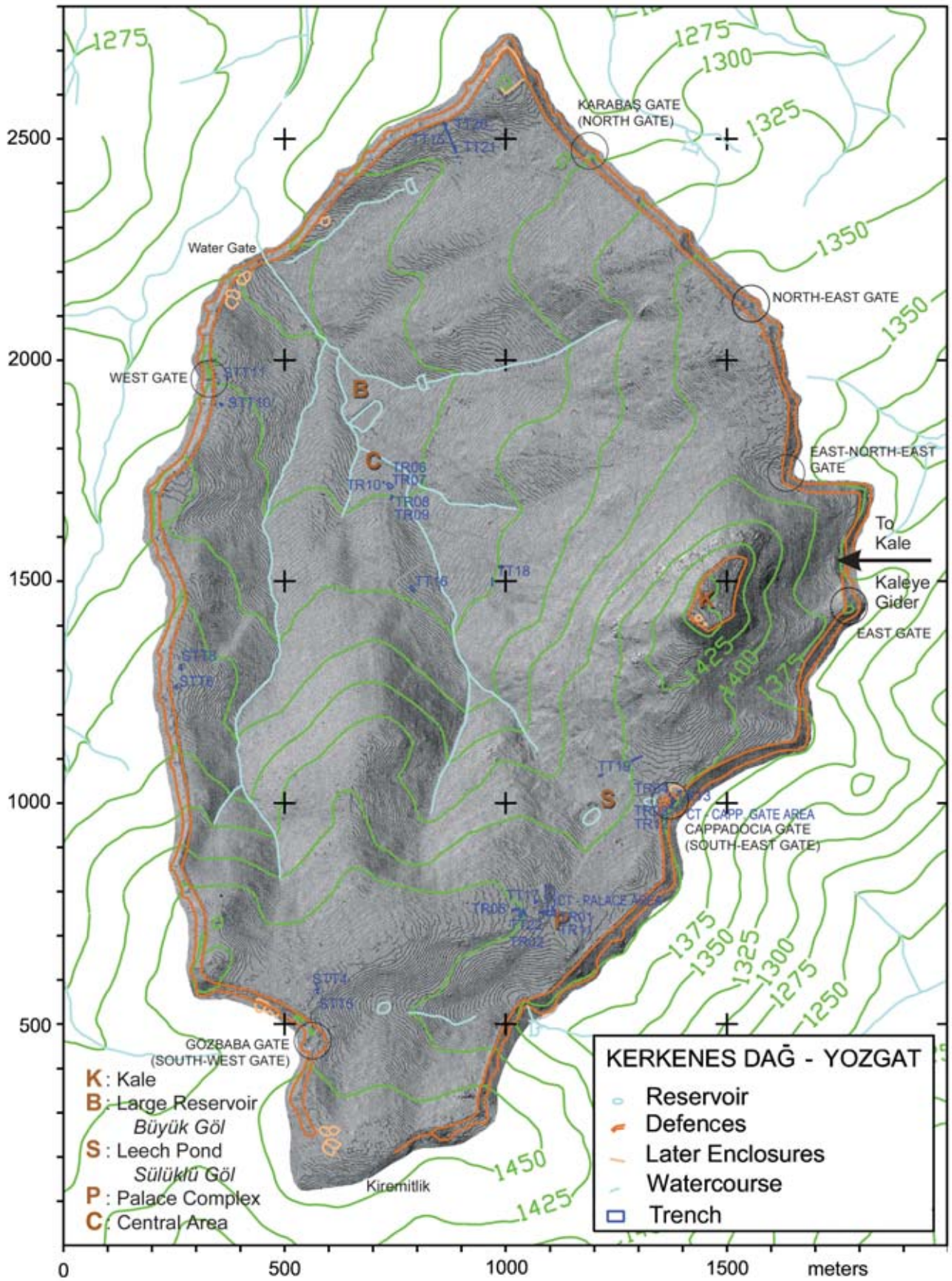


Figure 3. A Digital Terrain Model (DTM) of Kerkenes, made from the GPS survey, showing the city defences and the excavation areas.

## ACKNOWLEDGEMENTS

Excavation of the Ashlar Building by David Stronach concludes an ambitious 5-year program of collaborative research. David will continue to be involved in many aspects of the Project, and not least in the publication of the results. The successes of the last season could not have been attained without the support of the sponsors and friends of the Kerkenes Project. In 2003 the Project fully entered a new phase in which a program of more intensive excavation forms the focus of the Research Design. The results of the 2003 season, including the unexpected recovery of Old Phrygian inscriptions and relief sculpture, fully justify the implementation of this new program.

We are grateful to the General Directorate of Cultural Assets and Museums for the warmth of their support, and particularly to our representatives Songül Erbay of the Ankara Directorate and Mehmet Katkat of the Eskişehir Museum who both displayed enthusiasm and friendship, as well as to the Yozgat Museum Director Erol Özen, and assistant Hasan Şenyurt. We would also like to thank the Governor of Yozgat, Gökhan Sözer, Yozgat Director of Culture and Tourism, Mustafa Sarıkaya, Sorgun District Governor, Mustafa Dündar, and Mayor of Sorgun, Yılmaz Kılıçarslan, for their support. The Yozgat Directors of the Köy Hizmetleri, Muharrem Şengül, TEDAŞ, Osman Avcı, and Türk Telekom, Muttalip Efe, provided assistance which did much to aid in the smooth running of the expedition. Local good will was epitomised by the loan of a TEDAŞ truck with an extendable arm which made elevated photography of the central area excavations possible.

The Kerkenes Project is officially sponsored by the British Institute of Archaeology at Ankara and operates from a Project Room provided by the Faculty of Architecture at METU. Yibitaş Lafarge handed on to Lafarge Sağlık Eğitim ve Kültür Vakfı the role of major year-round sponsorship of the project through the METU Development Foundation. The METU Computer Centre provides technical support and hosts the Kerkenes web page. A grant from the BIAA was directed towards preparation of publications. The new excavations of a megaron and associated structures, as well as an extension of the resistivity survey, in the centre of the city was funded by a grant from the Loeb Classical Library Foundation. Excavation and conservation of the monumental architecture at the Cappadocia Gate was financed through a Rolex Award for Enterprise while excavations in the Palace Complex was made possible through generous grants from the Charlotte Bonham-Carter Trust, the Joukowsky Family Foundation, John Kelly Consulting Inc., The Silk Road Foundation of Saratoga - California, Mrs Linda Noe Laine, Dr Norman Solhkhah, The University of California at Berkeley, The Stahl Endowment Fund of UC Berkeley and several anonymous donors. We also thank Prof. Peter Kuniholm and his team who collected further charcoal samples from Kerkenes this year for analysis in The Malcolm and Carolyn Wiener Laboratory for Aegean and Near Eastern Dendrochronology at Cornell University. GEOSCAN, ESRI, ERDAS and İşlem GIS assist with software. Progress with GIS studies can be largely attributed to the collaboration with The Social Systems GIS Laboratory, The University at Buffalo. Sponsors contributing to our current publication program and other aspects of the project include the Anglo Turkish Society, Artı Sistem, Bell Helicopter-Textron, Datasel, Ertem AŞ, KavMar, METU Press, MESA, MNG Holding, Sokkia-Seza, Romar and Yenigün AŞ. Maintenance of and improvements to the expedition house were made possible thanks to Yibitaş Yozgat Çimento, the Sorgun Belediyesi, Onduline and ODE.

The results outlined in this report owe most, however, to the dedication and enthusiasm of the Kerkenes team, including that essential element of men employed from the village which now has its own web site: [www.sahmuratli.com](http://www.sahmuratli.com). The complete list of Project sponsors and participants can be found on our web page:

<http://www.metu.edu.tr/home/wwwkerk/>



## INTRODUCTION



*Figure 4. The Iron Age city on the Kerkenes Dağ encircled by 7km of stone defences, looking slightly east of south, from the hot air balloon in 1993. (93slhb0233)*

The single, most important, overall result of the 2003 season of survey and excavation at the Iron Age city on the Kerkenes Dağ in Central Anatolia (Figs 1 to 4) has been the revelation of very considerable evidence that further exemplifies the Anatolian characteristics of this large mountain-top capital. In summary this new evidence has shown it to be highly probable that the city was the centre of an Anatolian polity which was perhaps founded around the middle of the seventh century BC. Inscriptions on stone in the Old Phrygian language together with iconographic evidence perhaps point towards cultural influences from more westerly regions of Central Anatolia.

It remains clear that the city was, as has long been realised, a "new foundation" which displays unmistakable indications of a high level of centralised planning as well as the ability to command, organise and supply a huge workforce. In other words, the city was undoubtedly the capital of a powerful state and a part of its purpose was to make a very strong visible statement of that dominance which could be seen from a considerable distance in almost every direction. While it seems probable that the new evidence requires raising the date for the foundation of the city into the seventh century, it still appears that the city had a relatively short life. The 2003 season has provided yet further vivid demonstrations of the torching of the city followed by the thorough destruction of its stone defences. Architectural elements, relief sculpture, inscriptions, small objects and pottery, all reinforce the suggestion that the date of the destruction and abandonment can hardly have been much earlier than the mid sixth century, in which case it remains very probable that the destruction should be attributed to the activities of Croesus, King of Lydia, in or around 547 BC.

## THE MELDING OF ARCHAEOLOGICAL EVIDENCE WITH HISTORICAL RECONSTRUCTIONS

*Geoffrey Summers*

It is perhaps timely, in the light of the discoveries made in 2003, to reassess the historical background to Kerkenes. The melding of archaeological evidence with historical reconstructions is ever full of pitfalls, and the more so in the present situation in which the primary historical source is Herodotus. While it is true that there is no certain proof, there is no good reason to doubt that Kerkenes should indeed be identified with Pteria. If this identification is accepted the complete destruction would have been carried out by the hand of Croesus, King of Lydia, in association with what modern scholars have termed the "Battle of Pteria" in which, as recounted by Herodotus, neither Croesus nor Cyrus the Great gained victory. The date of the destruction at Kerkenes cannot, on the stylistic evidence of the ivory plaque recovered in 1996 as well as other excavated objects, be much earlier than the date for the fall of the Lydian capital of Sardis which is traditionally put at 547 BC. A greater difficulty is the date of the foundation of Kerkenes and the identification of the founding power.

Earlier interpretations have to be revised or altogether abandoned in the light of the new textual and archaeological evidence. It is perhaps helpful, nevertheless, to review the earlier ideas and to examine once again some aspects that led to their formation. In this respect it is perhaps salutary to note that excavation has demonstrated the extent of the shortcomings in interpretation that was almost exclusively dependent on the observation of features visible on the ground together with the preliminary results of the Remote Sensing Survey. The inability to understand correctly the observations and survey data, which perhaps - with hindsight - owed more than a little to preconceptions concerning the employment of mud-brick on stone for Iron Age city defences in the Ancient Near East, and within Anatolia in particular, demonstrates the essential need to corroborate such interpretations by means of extensive excavation. Examination of the evidence derived from a combination of survey methods led to the conclusion that the life of the city was of somewhat shorter duration than now seems probable. This interpretation was based on two ideas: firstly that the entire 7km of visible stone defences were merely the base for a mud-brick wall that had never been built and, secondly the interior appearance of the city itself which was likewise, it seemed, unfinished. It thus appeared reasonable that the city on Kerkenes was founded no more than 50 years before its destruction. If, as still appears highly probable, Kerkenes is Pteria, it would have been under the sway of the Median Empire by the time of the treaty between the Medes and the Lydians that followed the "Battle of the Eclipse" of 585 BC. But, if Pteria really had such a short life it seemed reasonable to conclude that it was a Median foundation which would have been established sometime after the fall of Assyria in 612 BC. This preliminary interpretation was thought to be reinforced by the fortuitous discovery in the 1996 test excavations of a columned hall of possibly Iranian type. Later survey and larger scale excavations, conducted since 2000, have increasingly pointed towards the Anatolian character of the city, but because the excavated evidence did not immediately suggest a longer life for the city these results were seen as reflecting the '*Anatolianisation*' of a foreign, namely Median, city. In the course of the latest, 2003, season it became clear that the successive phases of monumental architecture at the monumental entrance to the 'Palace Complex' could hardly be squashed into fifty or less years. That the 2003 excavations have moved interpretation forward to a point where recognition of Median influence on a mighty Anatolian city has become a major focus of future research design demonstrates the inestimable value of the new program of excavations at Kerkenes which will flesh out the skeleton of the city plan that has been obtained through a combination of Remote Sensing techniques.

## OVERVIEW OF THE RE-EVALUATION OF EVIDENCE

*Geoffrey Summers*

### Archaeological Evidence Bearing on the Length of Life of the City

#### *1. Defences*

In 2000 incontrovertible evidence was found that the entire 7km circuit of defences, together with the seven city gates were built entirely of stone (Figs 3 and 4). Not only were the defences found to have been completed, but additionally the fronts of the outer towers at the Cappadocia Gate were shown to have been crowned by a single course of cut sandstone (Fig. 5 at centre right) which was brought to the site from a considerable distance.

In 2003 partial clearance of the inner chamber at this same gate has provided evidence for some internal structure that included raised wooden flooring. Further, it was found that the surface of the Cappadocia Gate passageway had undergone significant erosion, forming a gully which had threatened to undermine a stretch of the passage walling on the north-western side that had been bolstered by the addition of stones along part of the gully edge (Fig. 6). Careful observations at other points around the defences suggest that the entire circuit would, if probed by excavation, provide similar evidence for embellishment together with a significant period of use.



*Figure 5. The Cappadocia Gate at the end of the 2003 season. (03dpjv7409)*

Defending seven kilometres of city wall, regardless of how imposing and strongly built they may have been, would have posed logistical problems. In this respect it might be relevant to remember that a considerable space of variable width appears to run around the entire inner side of the defences immediately behind the wall. Nowhere does this gap seem to measure less than 5.00m. It is reasonable to think that such a space might have been an integral part of any military design that depended on getting defending forces to any particular point along the wall where an enemy attack might be concentrated. If this interpretation is found to contain any merit, it should be noted that the surface of this "military road" was never made sufficiently smooth and level for mounted fighters, either on horseback or in chariots. Foot soldiers on the other hand could be quickly despatched from one place to another.



It can now be concluded, therefore, that the built defences were not only fully completed but that the gate towers were embellished with a topmost course of sandstone and had also undergone some minor repairs before their destruction. On the other hand, there is no sign that the original scheme of seven city gates was altered by the addition of further entrances in spite of the fact there is only one gateway in the entire length of the long western side of the circuit.



*Figure 6. The north-west wall of the gate passage where, at left, the gully has eroded down below the base of the wall which, at centre, has been protected by the addition of a row of stones. The vertical junction in the wall face at the extreme left is where the glacis butts against the front of the tower wall. (03dpjv6303)*

## *2. The "Palace Complex" Stratigraphy*

At what we tentatively continue to name the "Palace Complex" there is good evidence on which to suggest that an original defensive complex (Structure A in earlier reports), comprising massive towers retained by a stone revetment closely resembling both the scale and the style of defences at the Cappadocia Gate, underwent one or more major alterations. Both sides of the stone glacis were cut through, that on the north for the insertion of the northern wall to the Palace Complex and that on the south for the construction of a series of massive terraces (Structure B). Exactly how the newly excavated Monumental Entrance to the Palace Complex (Fig. 7) is to be fitted into this picture requires further excavation. Currently available evidence suggests that the Monumental Entrance also predates the construction of Structure B but was constructed after the "Audience Hall" (investigated in earlier seasons). In any event, it can now be demonstrated that there were a minimum of two and perhaps three major phases of construction on a monumental scale. Supporting evidence was recovered from the excavation, in 2000, of structures C and D, which lay to the west of Structure A. Here it could be seen that considerable modifications had taken place between the construction of these two buildings and the calamitous fire.



*Figure 7. The monumental entrance, trenches TR01 and TR11, at the end of the 2003 season. The scale is in front of the column base with the tower wall to the right. Structure B is in the foreground at right. (03dpjv6101)*

### 3. Dendrochronology

Part of a beam with 197 annual growth rings was recovered from the Monumental Entrance in 2002. It is hoped that further samples collected by Prof. Kuniholm and his team in 2003 will help to establish the date for the construction of the Entrance. In any event, preliminary evaluation does not appear to be inconsistent with an early sixth century date for the cutting of the main beam.

### 4. The Urban Plan

Geophysical survey at Kerkenes has revealed a plan of the entire Iron Age city in remarkable detail. The electrical resistivity survey conducted in over the last three years has provided particularly striking results. The precision of this imagery has been fully demonstrated by the results from carefully targeted excavation in the central sector of the city conducted in the early part of the 2003 summer campaign (Fig. 8). The results of the excavations in trenches TR06 and TR07 show that the interpretation of the geophysical imagery, particularly the identification of a true *megaron* (with an open porch and central hearth) was completely correct. Within the excavated area there were found to be a minimum of four phases of construction, the most substantial being the megaron (Fig. 1) which was found to have been cut through an existing stone pavement.

On the other hand, no signs have yet been seen, either in the geophysical imagery or from excavation, that buildings had come to the end of their natural lives and had been left in ruin or replaced before the fire.

For the lower areas of the city, therefore, sufficient time elapsed between the foundation and the destruction of the city for a very substantial amount of building construction and the laying of extensive stone pavements, but there was only one single construction phase, albeit with many additions, extensions and modifications. This observation is in part a reflection of the physical extent of the urban space in which there was always sufficient area for the erection of a new building without the need to demolish an old one, but it also shows - in so far as can be seen without more extensive excavation - that old age had not led to the collapse and replacement of buildings.

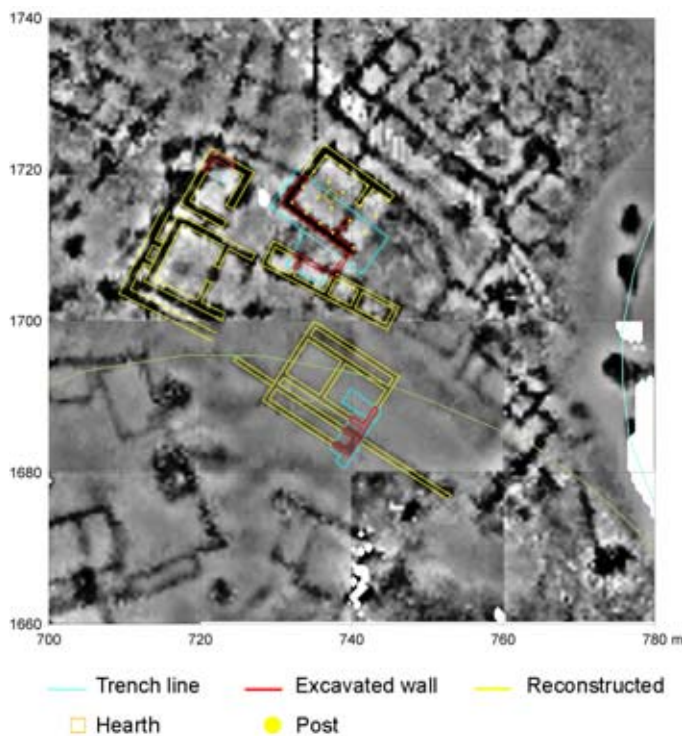


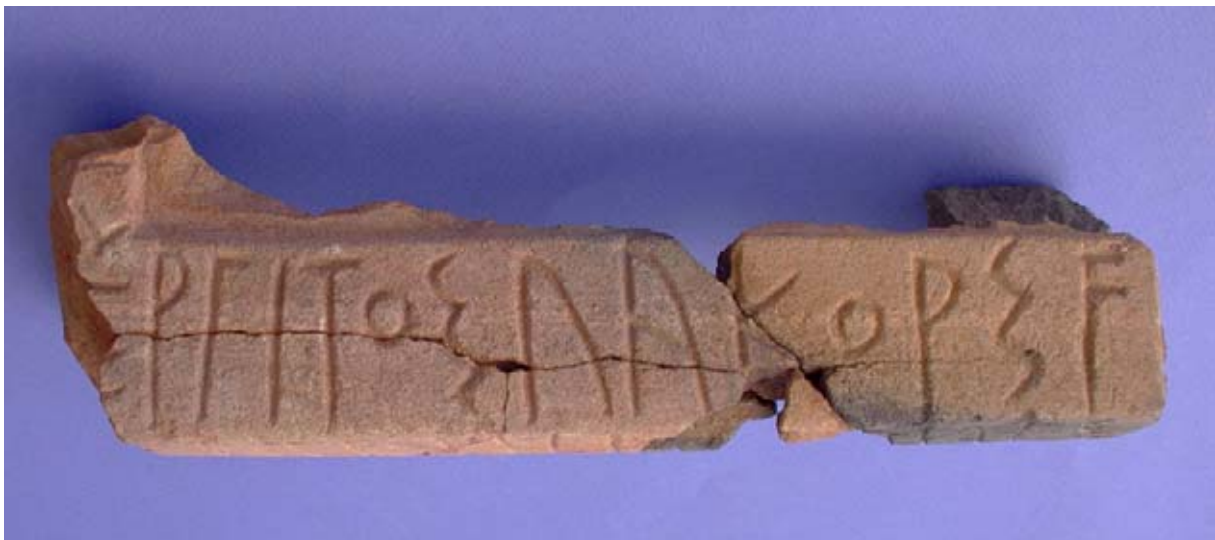
Figure 8. Resistivity survey map of part of the central area of the city with trenches TR06 to TR10 and a block plan of Structures A to E overlaid. See also Figure 28.

## Evidence Bearing on the Date of the Foundation of the City

### 1. Inscriptions and Relief Sculpture

The discovery of alphabetic or alphabetic-like letters inscribed on pottery found at the Palace Complex in 2001 as well as rows of marks on the faces of granite stones in the Ashlar Building first investigated in 2002 provided clues that pointed towards the not entirely unexpected presence of alphabetic writing at Kerkenes (Fig. 9). Completely unexpected, however, was the discovery in 2003 of fragments of one or more sandstone monuments that once stood in the Monumental Entrance to the large court in front of the "Audience Hall" at the Palace Complex. One or more of these monuments bear small-scale relief sculpture featuring winged lions and griffins together with figures in human form and inscriptions in Old Phrygian. For the moment the inscriptions and relief sculpture are not precisely dated, although it might be though somewhat perverse to suggest a date range wider than mid-seventh to mid-sixth century BC. on stylistic grounds (i.e. they appear to have neither Neo-Hittite nor Achaemenid characteristics). One of the inscriptions includes a dedication. The existence of these Phrygian inscriptions on one or more monuments would surely indicate the Anatolian character of Pteria, whether or not it was actually under some form of Median control at the time when the dedication was made. It is particularly noteworthy that the monuments appear to have been standing up until the time of the destruction, regardless of the date at which they were created.

Prof. Claude Brixhe, in his preliminary analysis, confirms the Phrygian character of the inscription.



*Figure 9. Joining fragments of an inscribed sandstone monument. The lower surface is also inscribed, see Figure 67. (03dpjv6514)*

### 2. Artefacts and Ceramics

This is a thorny area at a time when the date of the destruction level at Gordion has been convincingly raised by about 100 years. It has been recognised for some time that a certain amount of pottery and the repertoire of arrowheads at Kerkenes have close parallels with the finds from the Küçük Höyük at Gordion (the destruction of which is still most plausibly equated with the passage of Cyrus the Great in about 547 BC). In addition, however, Kerkenes has produced a few sherds, none of which come from good primary contexts, of black-gloss ware with raised lozenges and incised decoration. At Gordion pottery of at least superficially similar appearance is known from the South Cellar which is thought to date to some time before the end of the seventh century (Mary Voigt and Keith DeVries pers. comm.), although it is perhaps relevant that pottery of this type is not known from any of the tumuli at Gordion.

In this regard it is perhaps salient to remember that when the current series of campaigns at Kerkenes began in 1993 it was assumed that the main period at the site would be found to fall in the eighth century and, according to the chronological schemes which were then generally accepted, it was (erroneously) expected that much of the material culture, especially the ceramics, would closely parallel the well known local repertoire from Alişar Höyük, which lies only 23km from Kerkenes, and particularly from the period known as Alişar IV. Current opinion on the date of Alişar IV is in some ways related to the revision of the sequence at Gordion as well as to the results from recent campaigns at Göllü Dağ, discussion of which falls beyond the scope of this report.

Two fibulae from the current work at Kerkenes (in addition to those found by Schmidt in 1928) also find parallels with Gordion that might support a date earlier than the sixth century. Excavations in the lower central area at Kerkenes produced several three-footed stone bowls. Similar bowls are known from the City Mound and Tumulus J at Gordion, the latter tentatively dated to the later seventh century, and from Midas City.

No decorative revetment or roof tiles have been discovered at Kerkenes. The decision to excavate half of the megaron, in trench TR07, at the start of the 2003 season was partially influenced by the idea that if tiles of the types well known from Gordion, Pazarlı and elsewhere had been used at Kerkenes there seemed to be a high probability that they would be found in association with this megaron. It can now be asserted, with not inconsiderable confidence, that decorative tiles were not used at Kerkenes. The precise chronological implications of this observation are a matter for further discussion since the date of the earliest such tiles at both Sardis and Gordion, together with the date of those rock-cut façades in the Highlands of Phrygia that appear to depict both tiled roofs and tiled façades, is far from settled. In this context it should not however be forgotten that the site of Pazarlı lies only some 70km from Kerkenes as the crow flies.

### **Conclusion on the Date of Foundation**

There is no good evidence that can be used to suggest how much time might have elapsed between the mid-sixth century destruction of Kerkenes, still in all probability to be identified with Pteria, and the foundation of the city. All that can be said at this interim stage is that there is no good reason to squeeze the foundation date into a period after the fall of Assyria although, by the same token, there is little to suggest a very much earlier date.

### **Anatolian Characteristics of the City**

It might now be thought useful to list briefly the Anatolian characteristics that can be identified at Kerkenes.

#### *1. Planned Mountain-top Sites*

Before the commencement of the first, 1993, season at Kerkenes it was thought likely that the site would turn out to be similar to the very elevated and clearly special site on the Göllü Dağ in central Cappadocia. It was a happy coincidence that Prof. Schirmer's first season of exploration at Göllü Dağ also took place in 1993. There are, we now know, clear differences between the two sites, not least in their function and their date, which it would be tedious to enumerate. The point to make here is that Göllü Dağ does provide a good parallel for impressive stone defences following the rim of a mountain-top and for centralised rectilinear planning of the enclosed space. If more were known about other urban centres on the central plateau of Anatolia it might be found that, although the largest, Kerkenes fits into an Anatolian tradition of Iron Age city planning, the study of which remains in its infancy. Late Bronze Age antecedents for this tradition can be discerned at Hattuša itself and at other Imperial Hittite centres, most notably Ortaköy (Şapinuwa) and Kuşaklı (Sarrisa) near Sivas. Indeed the entire aspect of Hattuša is very like that of Kerkenes.

## 2. Defensive Systems

Göllü Dağ, as mentioned in the previous section, exhibits some similarities with Kerkenes, not the least of which is the way in which the circuit wall follows the rim of the crater as well as the discrete planning of each gate in order to make the best possible use of the immediate topography. The particular construction of stone defences at Kerkenes are however unique, both in their size and in the design of the granite glacis (Fig. 10). That said, however, the concept of a stone-faced glacis attains its apogee at the Upper City of Hattuša, where it reaches huge proportions. Perhaps less well known is that a similar but smaller stone glacis can be found, amongst other places, in the Iron Age defences at the Südburg (at Boğazköy).



*Figure 10. The glacis at the Cappadocia Gate makes an impressive background for group photos. (03dpjv7406)*

## 3. Water Management

At Kerkenes water resources were carefully managed (Fig. 11). As well as the stone-lined Sülük Göl on the high southern ridge and the very large Büyük Göl in the centre of the city, tiers of reservoirs are found both inside and outside the city, often constructed according to a sophisticated system of bank-side storage,. Most or all of these reservoirs were primarily designed to be filled by underground seepage rather than rain-fed runoff. Similar systems can be observed in the Hittite management of water resources at Bronze Age Hattuša where artificial pools also appear to have been fed by underground seepage.



*Figure 11. The central part of the city in spring with the artificial Büyük Göl full of water. Stone foundations of urban blocks and structures can be seen as can part of the western defences. Grazing cattle at right provide an idea of scale. The animal pound at centre left lies partially over the megaron that was excavated in the summer season. (03dpjv1411)*

#### 4. Architecture

The identification, on resistivity imagery, of two megarons, that is, of two buildings each comprising a large room with a central hearth, an open porch and a pitched roof, and the confirmation of this interpretation through the excavation of trench TR06 in July 2003, provides indisputable evidence for western Anatolian influence at Kerkenes (Fig. 1).

This result comes in addition to the evidence for the double-pitched roofing of the Audience Hall which was obtained in 2002. Not all buildings, however, necessarily had pitched roofs, either in the Palace Complex or in the lower area of the city. In the Ashlar Building and in test trench TT19, both within the Palace Complex, as well as in test trench TT16 in the centre of the city, evidence has been found for roofing made of mud and reeds. In these cases, however, it remains possible that some rooms possessed upper floors or balconies and that the entire building had a pitched roof covered with thatch. At the northern end of the site, where in 1996 a columned hall was partially exposed in test trench TT15, much evidence for mud and reeds from a flat roof was also recovered. The new evidence from the Palace Complex, however, raises the question of whether the columned halls at the northern end of the city might perhaps have been provided with a second storey, as well as how precisely the form of the roof should be reconstructed. The possibility that columned halls at Kerkenes represent an Iranian presence must, therefore, be left open, even though much doubt might be cast on it.

With regard to details of construction techniques, at the Monumental Entrance to the Palace Complex it has been found that some, and perhaps most, of the large sandstone blocks were secured together with the aid of wooden clamps (Fig. 12). The date of the first use of such clamps in Central Anatolia is not clear, but I do not know of any examples from Gordion or Boğazköy. Nor are there any such clamps in Urartu. At Sardis the earliest clamps are found in a few of the blocks in the Tomb of Alyattes, but these appear to have been entirely lead filled (Crawford Greenewalt pers. comm.).

The Kerkenes clamps vary in size, but not in depth, even where two occur on the same face of the same stone. The form resembles the swallow-tailed rather than the dovetailed variety, although the sides are sometimes slightly curved. It is generally assumed that iron bars were fixed into these wooden clamps, as they were later fixed into lead, but no such iron clamps have been recovered from amongst the large number of very well preserved iron building elements which were found in the burnt debris. Yet other cuttings in the sandstone blocks appear to represent additional forms of fixing that employed squared wooden elements, but the sandstone blocks were smashed and usually shattered, with the result that it has been difficult to reconstruct the precise form of these cuttings.



*Figure 12. Part of a sandstone block, with a swallowtail cutting for a wooden clamp, from the Monumental Entrance to the Palace Complex. (03dpjv5444)*

### *5. A Stepped Shrine with an Aniconic Stele of a Phrygian Deity inside the Cappadocia Gate*

This completely unexpected discovery, which has not yet been fully excavated, provides clear evidence for the presence of an Anatolian cult at Kerkenes. The shrine is located in the rear part of the gate passage adjacent to the north-west wall of the inner, north-eastern, tower. The steps continue down below the level at which excavation was halted in 2003. The edifice comprises a series of steps, rather poorly constructed of rough granite, with a top step and a stele both made from a chalky stone which has shattered as a result of the fire and the collapse of the adjacent tower. The top step has a recess into which the stele was snugly fitted. It might well be assumed that there was a matching slab at the rear which, together with the smashed back of the stele itself, was broken during the destruction of the gate.

### *6. The Extra Mural Temple at Karabaş*

Without mustering again the arguments concerning the huge monument at Karabaş, which is located about 1km due north of the northernmost tip of the city (Fig. 13), being a cult structure of some kind, it is worth remembering that Hattuša too has an extra mural cult site and temple at Yazılıkaya, and that many open air shrines, all be they of somewhat different character, are known from several parts of Phrygia. On the other hand, the plan of Karabaş is not paralleled in Anatolia whereas the corner buttresses are similar in concept, if not in scale, to smaller monuments in Urartu and Iran.

### *7. Tumulus Burials*

Tumulus burials of various type, dating from the Iron Age to the Hellenistic or Roman period, abound in Central Anatolia. There is, however, a particularly heavy concentration of tumuli, some of which were certainly for cremation, on the ridges to the west of Kerkenes (Fig. 13). It may be safely presumed that most if not all of these tumuli are associated with the city, although that does not mean that all of the inhabitants were buried in the same way. Tumuli are, of course, characteristic of the Gordion Ankara region of Phrygia in the Iron Age.



*Figure 13. Karabaş at centre top and some of the many tumuli outside the city seen from the hot air balloon in 1993. The north tip of the defences can be seen at the left bottom corner of the photo. (93slhb0232)*

## SURVEY IN THE CENTRAL AREA OF THE CITY

### Resistivity Survey in May 2003

Resistivity survey was conducted for two weeks in May when the ground was still sufficiently wet for efficient insertion of the probes. The areas that were surveyed all lay to the south of the main streambed where it was possible in the time available to connect and substantially extend the separate areas previously surveyed (Figs 14 to 25).

Space precludes detailed description and discussion of these remarkably clear and precise images of buried buildings. Three major conclusions can however be drawn as a result of this survey. Firstly, on the ridge towards the western side of the city, where magnetometer images had shown that the fire did not spread very far beyond those special buildings that were deliberately torched, it could be demonstrated that highly detailed and clear plans of subsurface structures can be obtained by this method (Fig. 15). In this region of the city urban blocks that could only be recognised in outline on geomagnetic maps have been fully revealed. Secondly, towards the northern end of this same ridge a large number of small two-roomed buildings are seen to have been rather huddled together, although slight differences in orientation is perhaps suggestive of piecemeal development (Figs 18 and 19). Thirdly, the resistivity images have revealed the existence of many small structures along the edges of some stream banks (e.g. Fig. 22 at top). Continuation of this survey in future spring seasons will permit still greater understanding of the urban infrastructure.

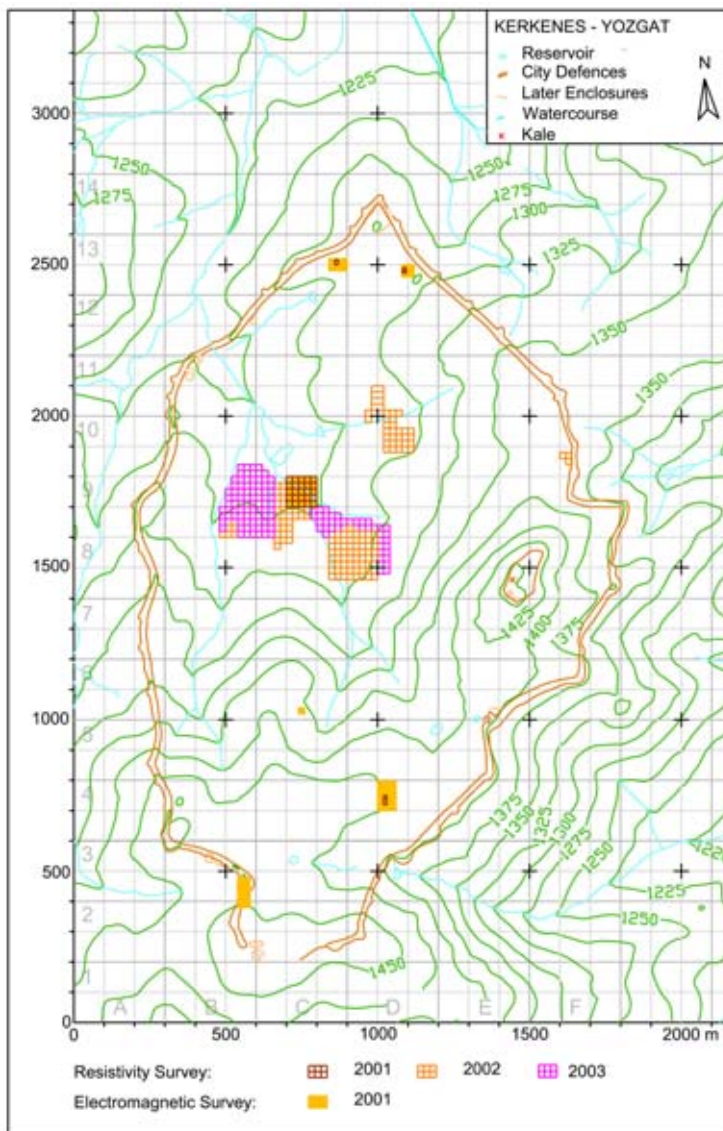
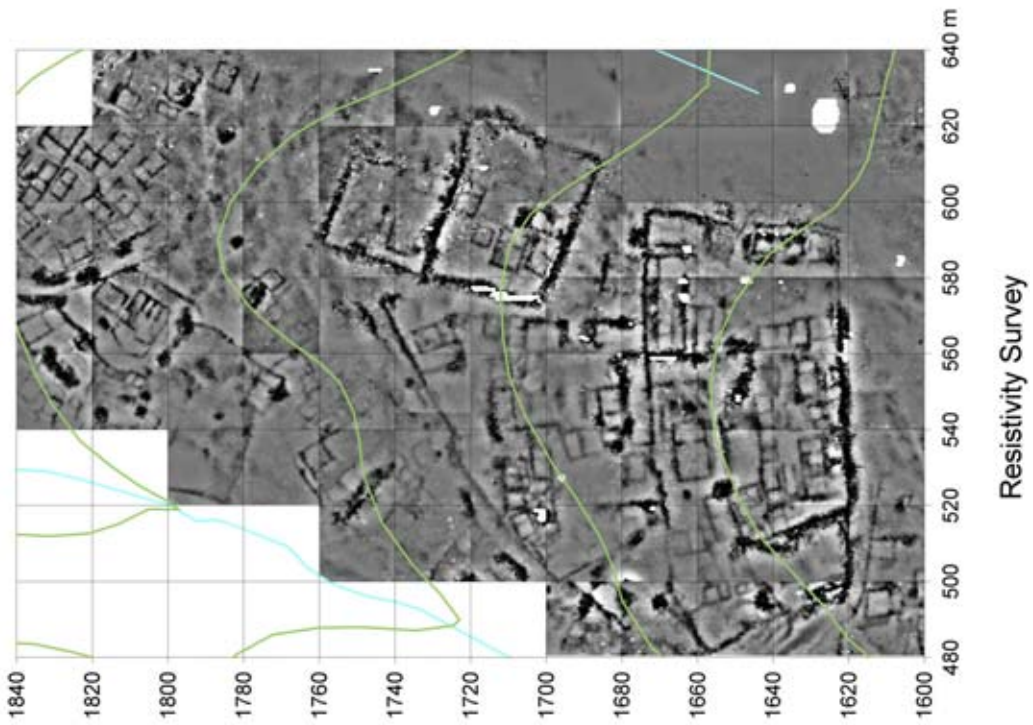
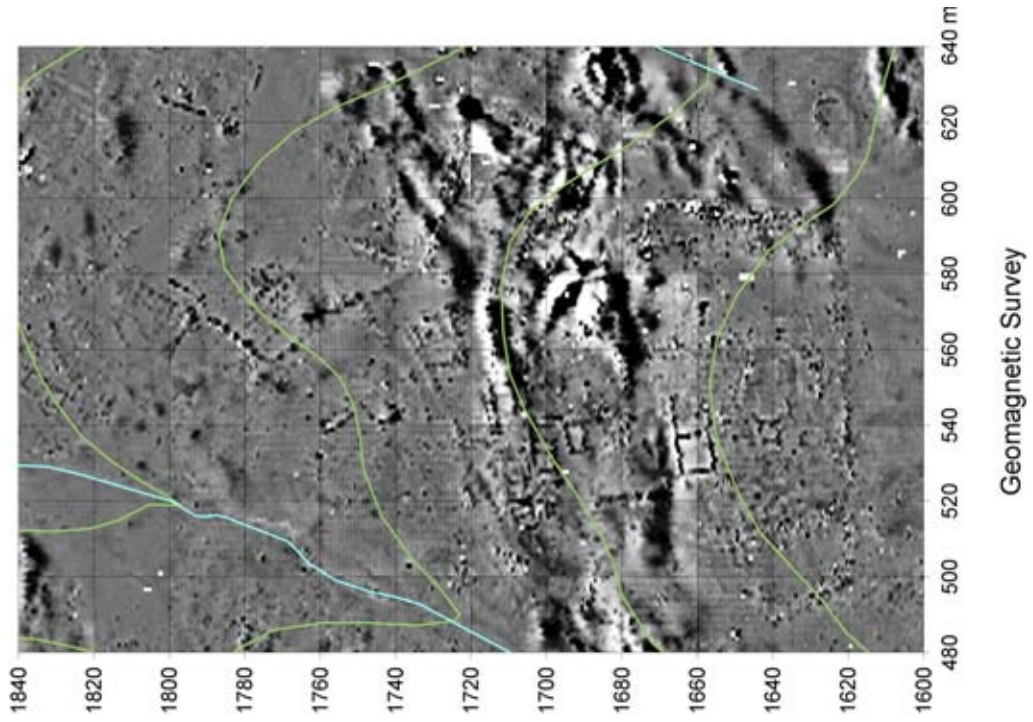


Figure 14. Progress map of the resistivity survey.





*Figure 15. In the lower area of the city resistivity provides much clearer imagery than geomagnetic survey.*

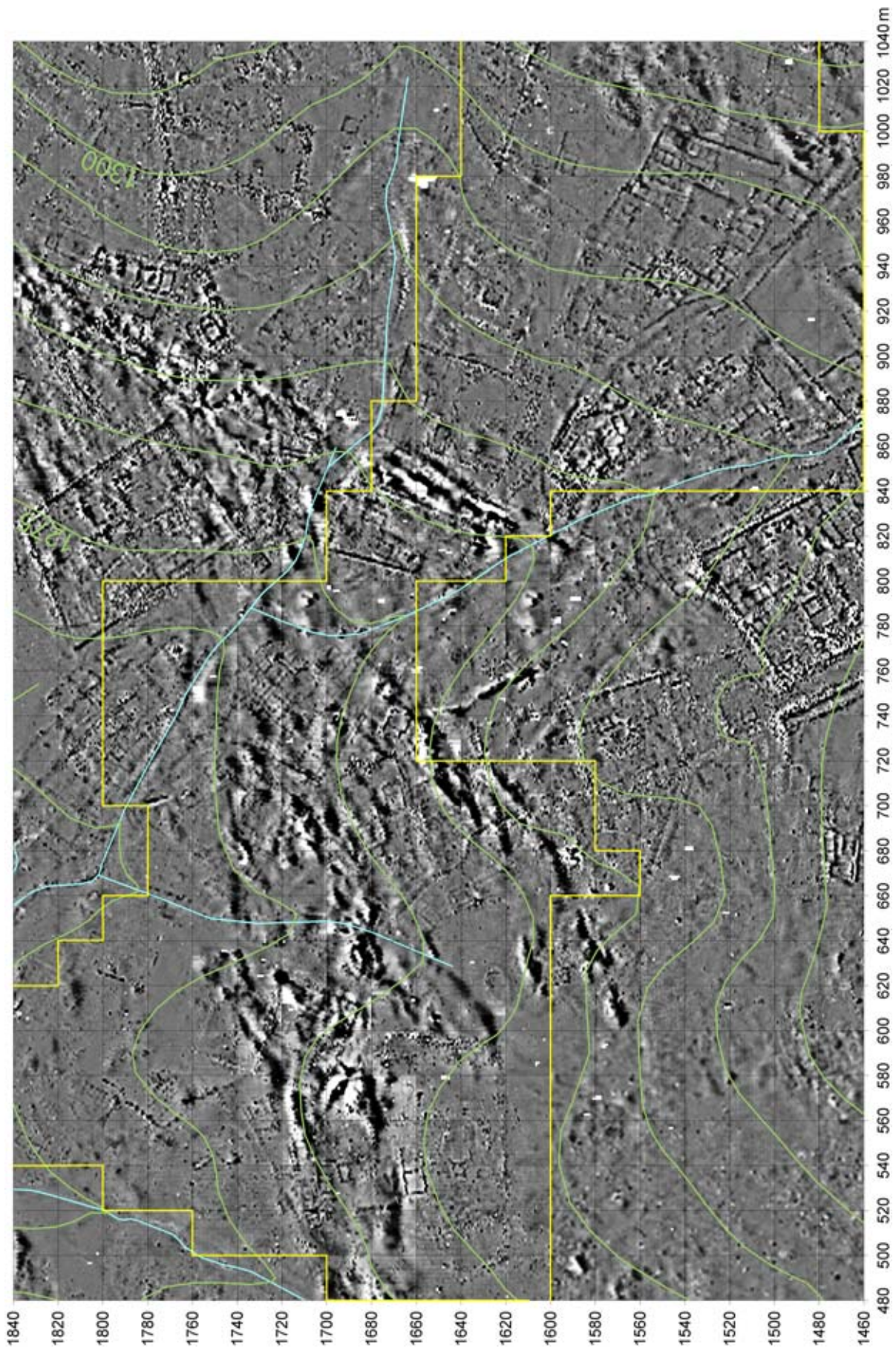


Figure 16. The area of Resistivity Survey, in yellow, over the gradiometer map.

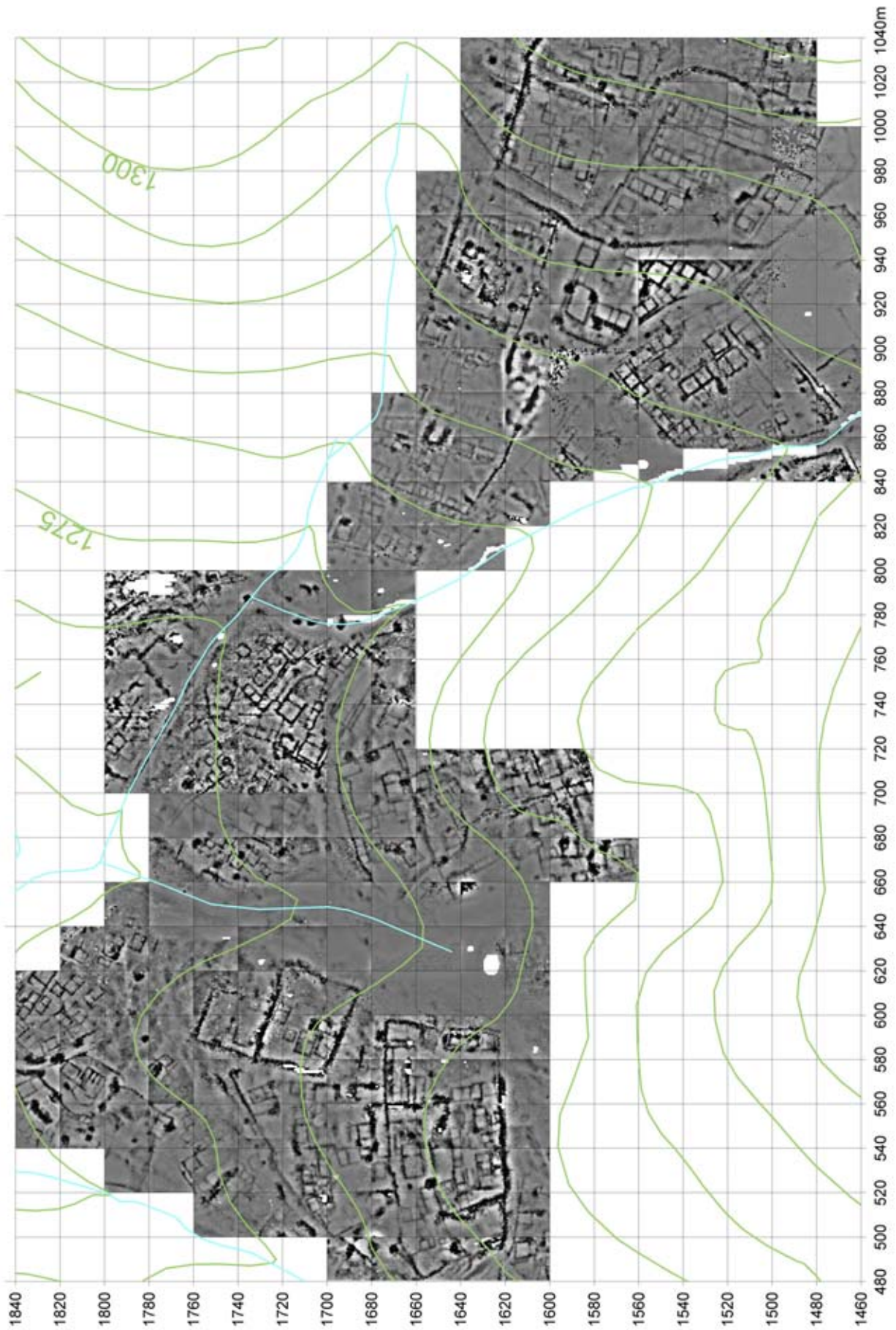
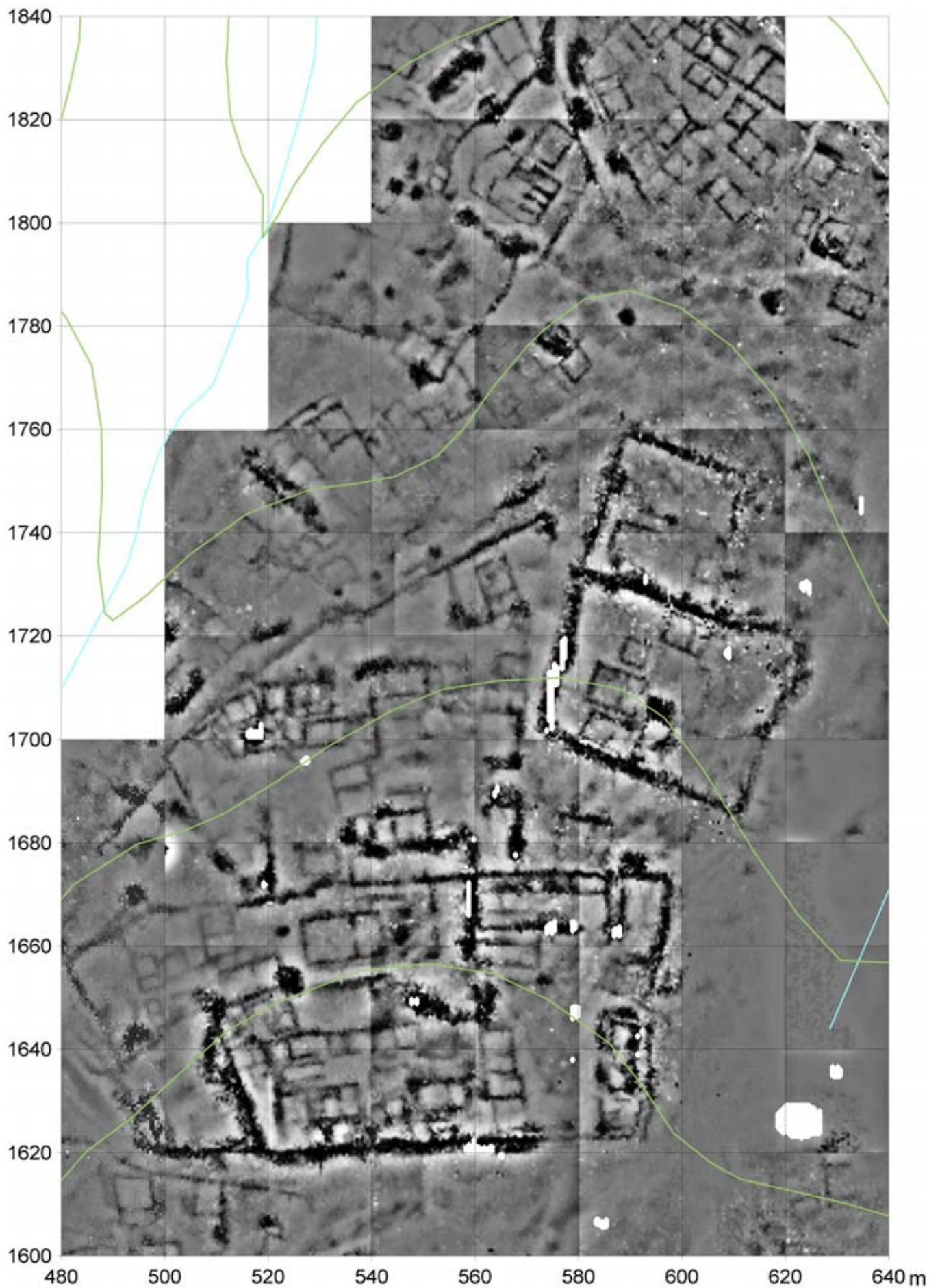


Figure 17. The resistivity map of the central area shows buried structures in remarkable detail.



*Figure 18. The western portion of the resistivity map. The broader walls probably represent the reuse of Iron Age walls by shepherds.*

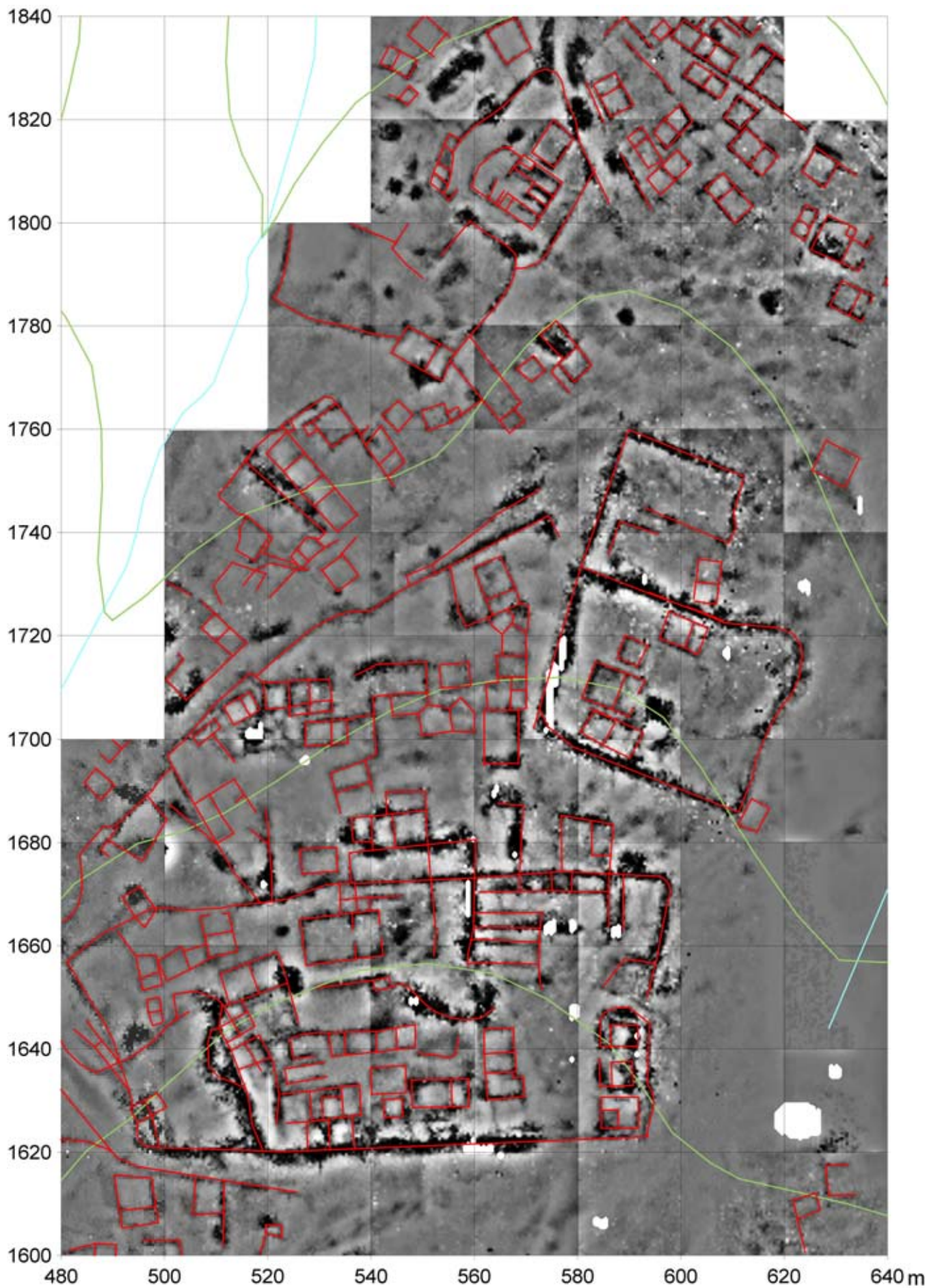


Figure 19. The western portion of the resistivity map with buried walls in red.

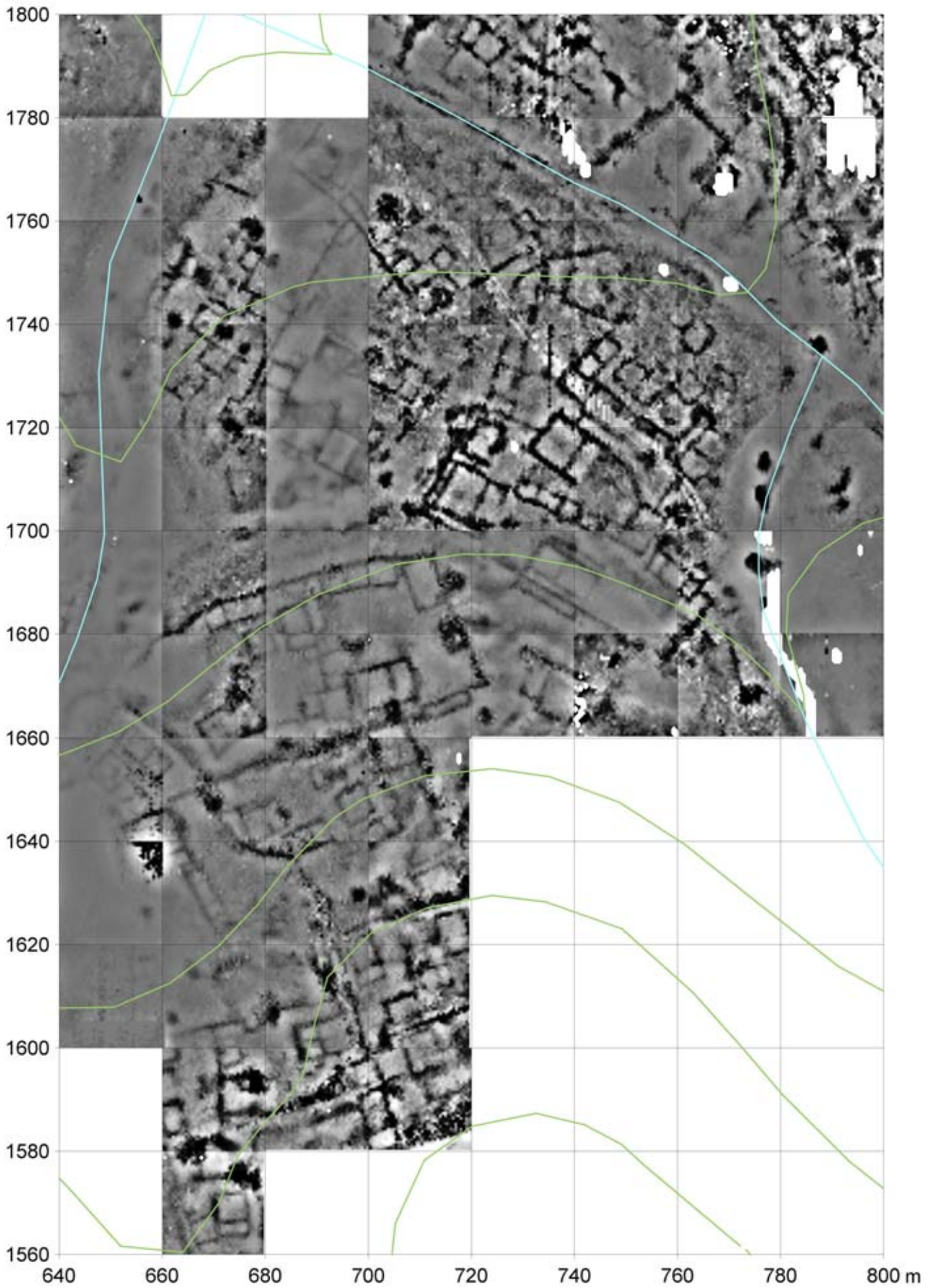
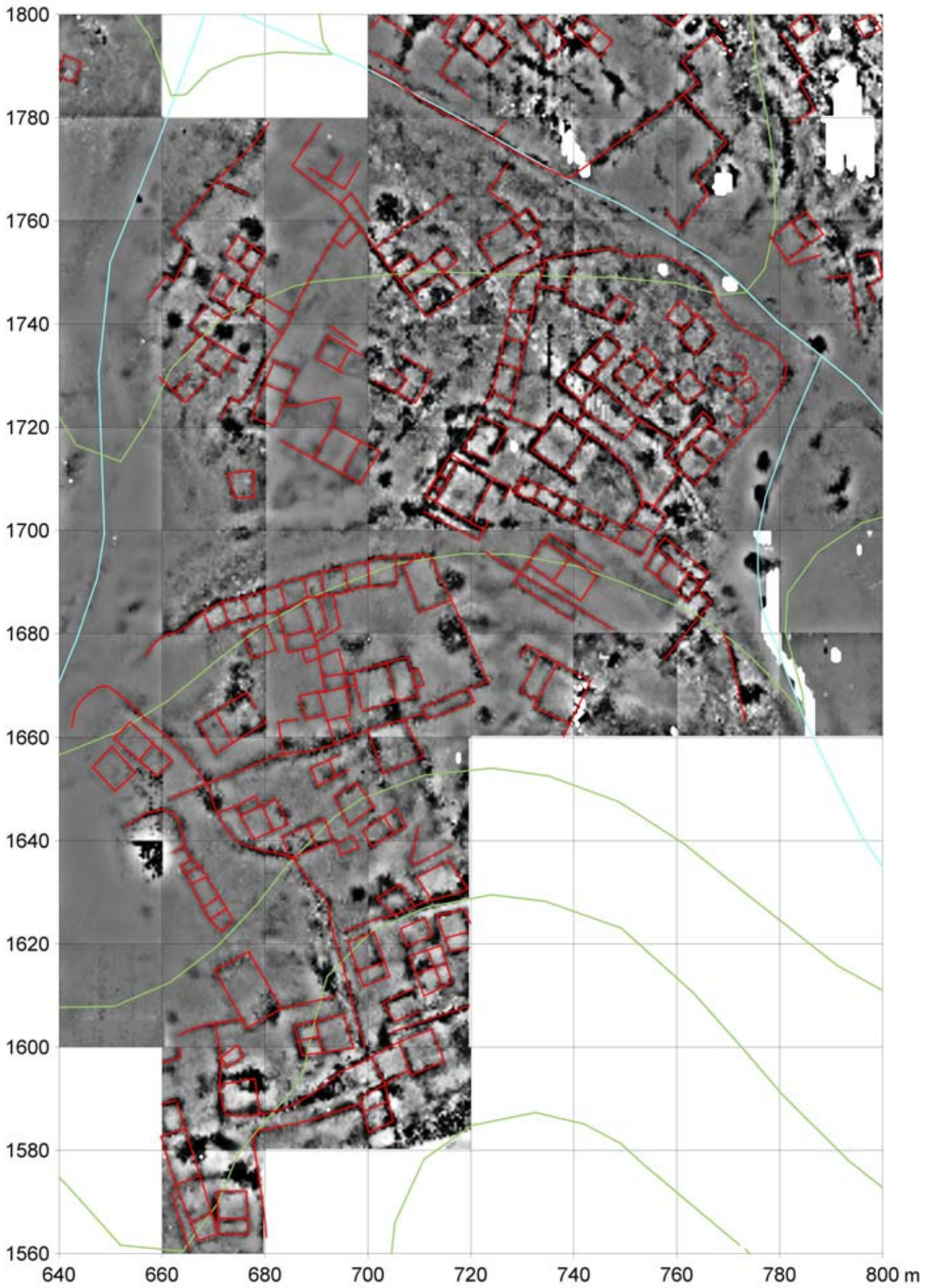


Figure 20. The central portion of the resistivity survey, including the structures that were partially excavated later in the 2003 season.



*Figure 21. The central portion of the resistivity survey with buried walls shown in red.*

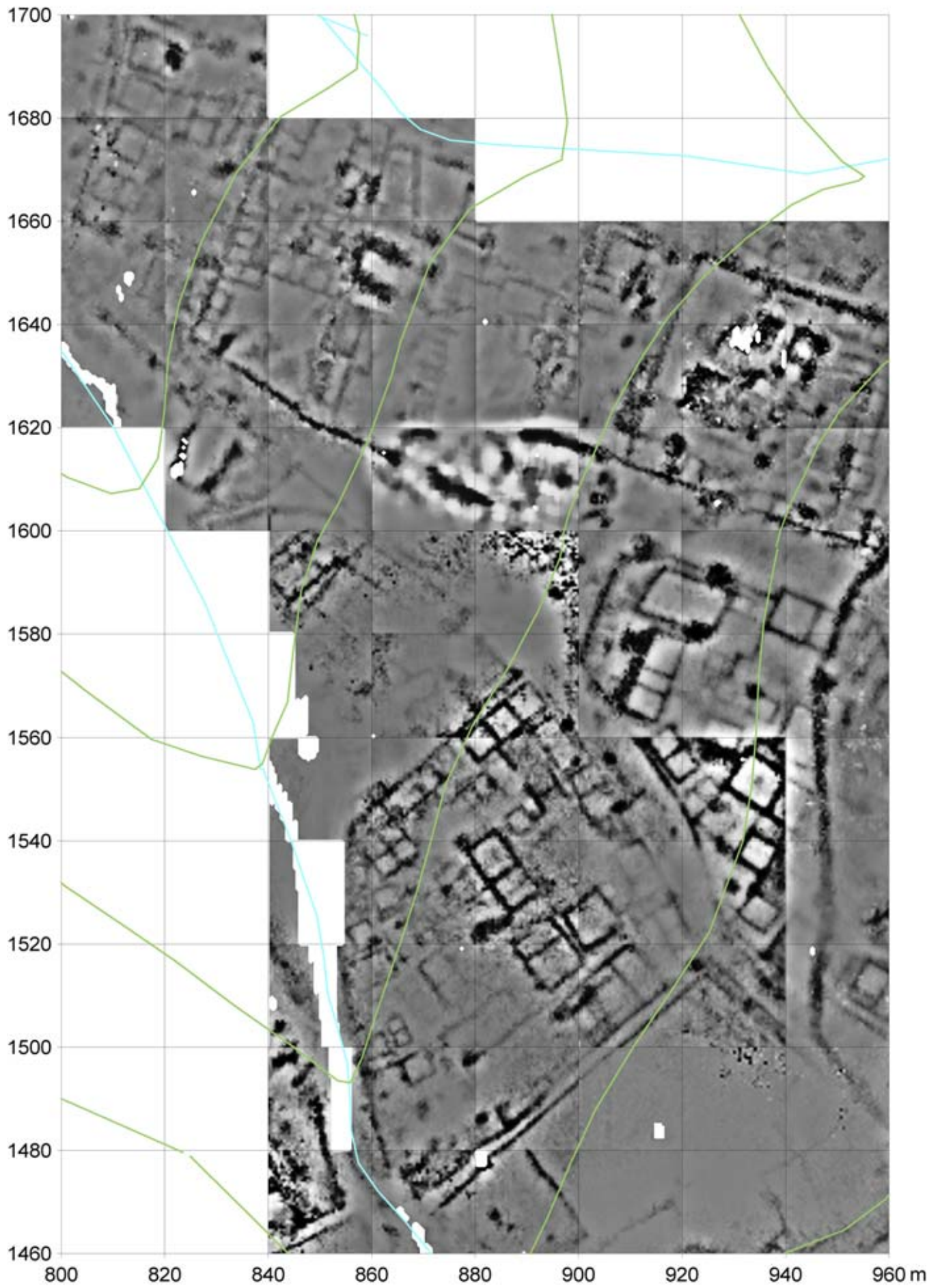


Figure 22. The east-central portion of the resistivity survey.





*Figure 23. The east-central portion of the resistivity survey with buried walls shown in red and a later enclosure wall in green.*

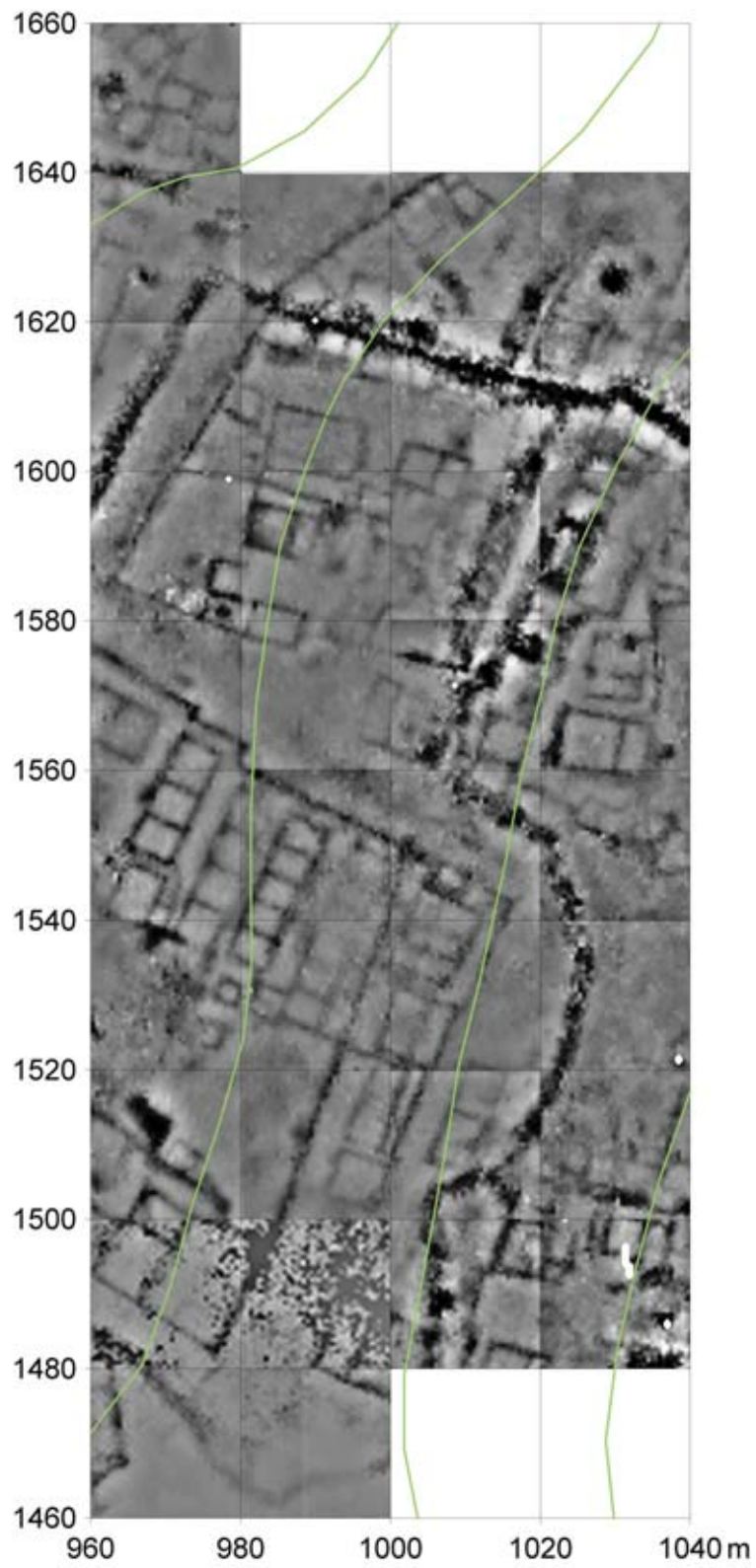
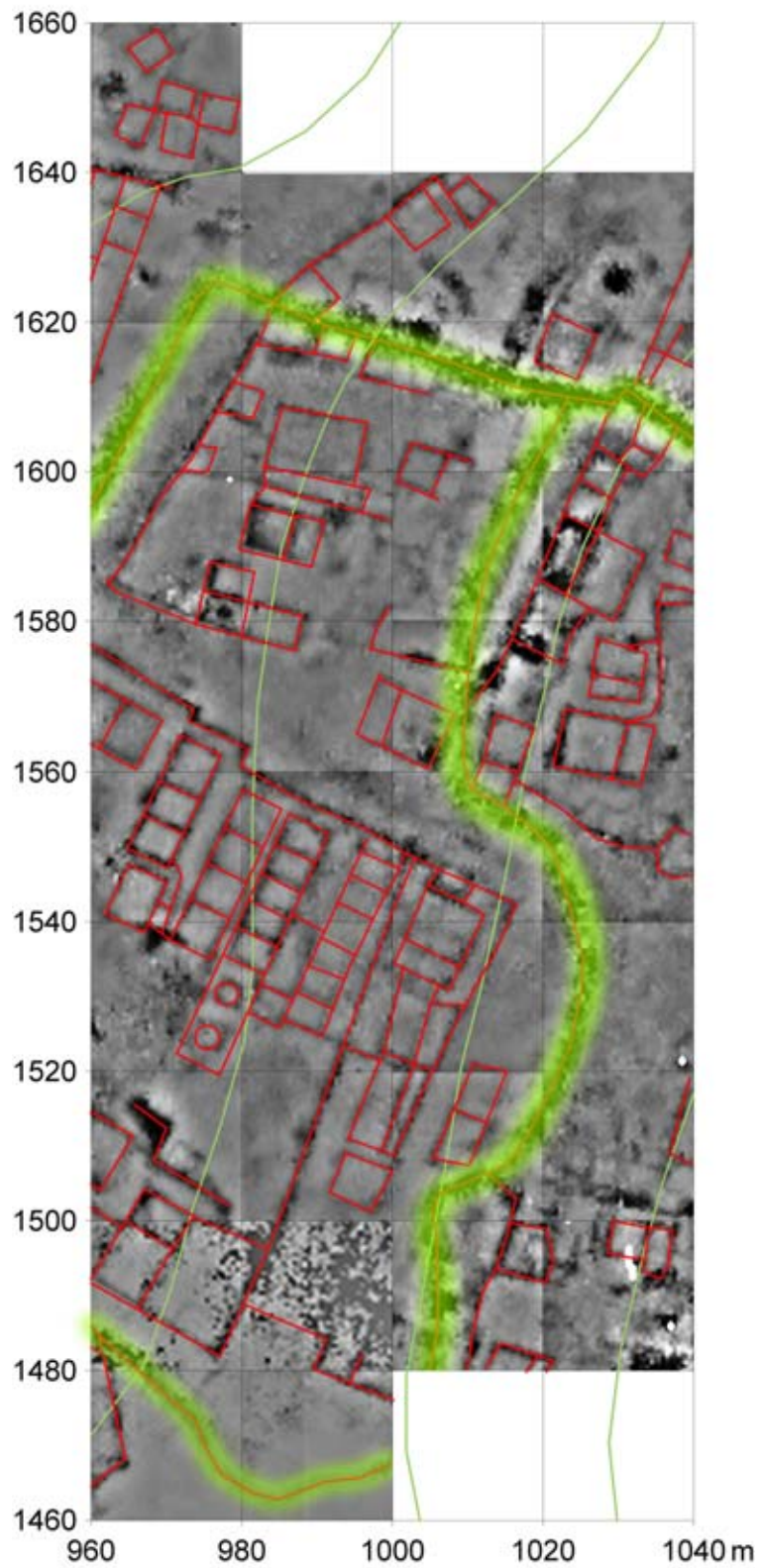


Figure 24. The eastern end of the resistivity survey.



*Figure 25. The eastern end of the resistivity survey with buried walls shown in red and later enclosure walls in green.*

## THE 2003 SEASON OF EXCAVATIONS

The excavations in 2003 had three objectives:

1. Examination of a megaron and associated structures in the centre of the city;
2. Further clearance of the entrance passage and inner chamber at the Cappadocia Gate;
3. Further exploration of the entrance to the Palace Complex.

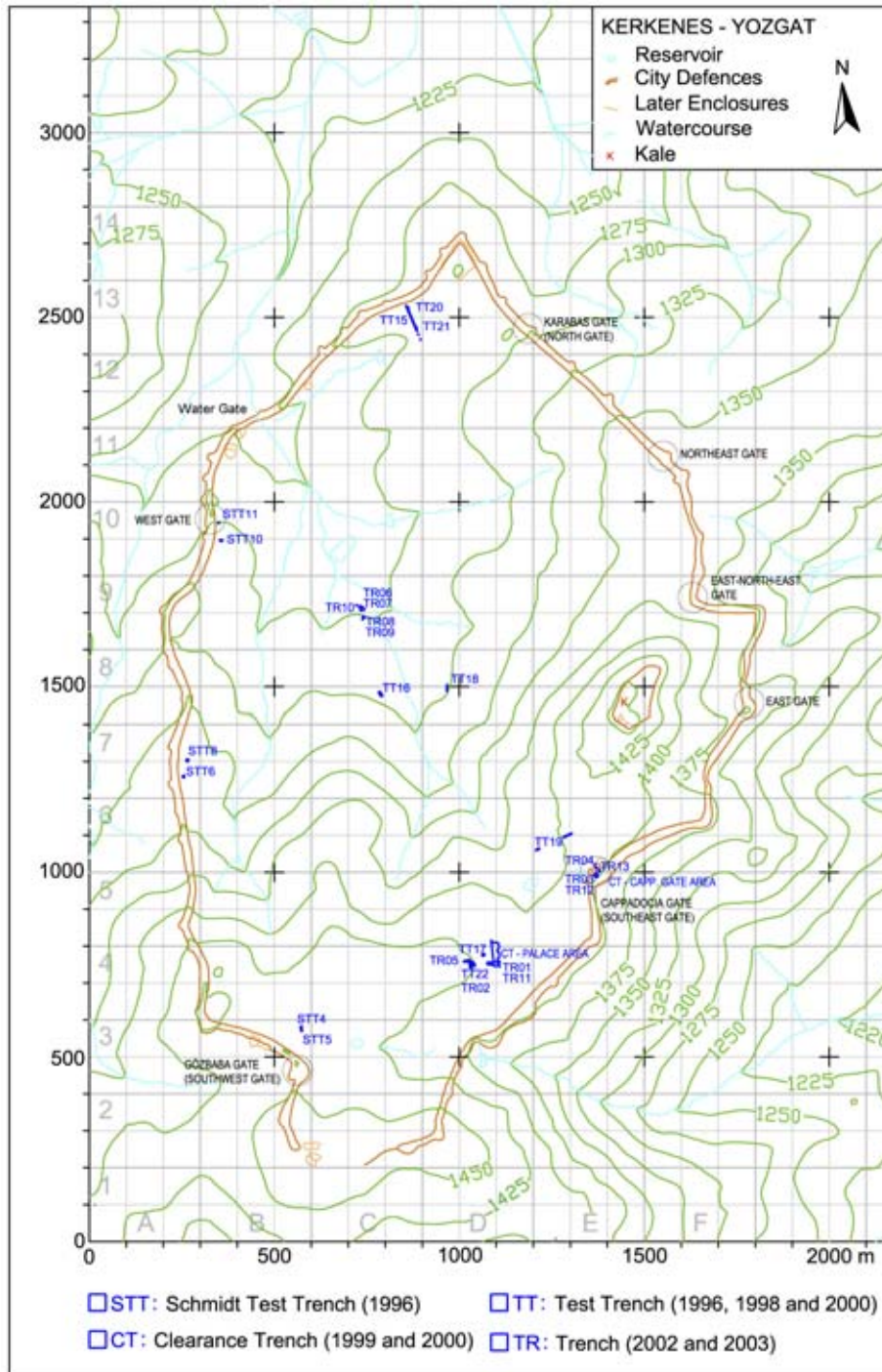


Figure 26. Map showing the locations of excavations.

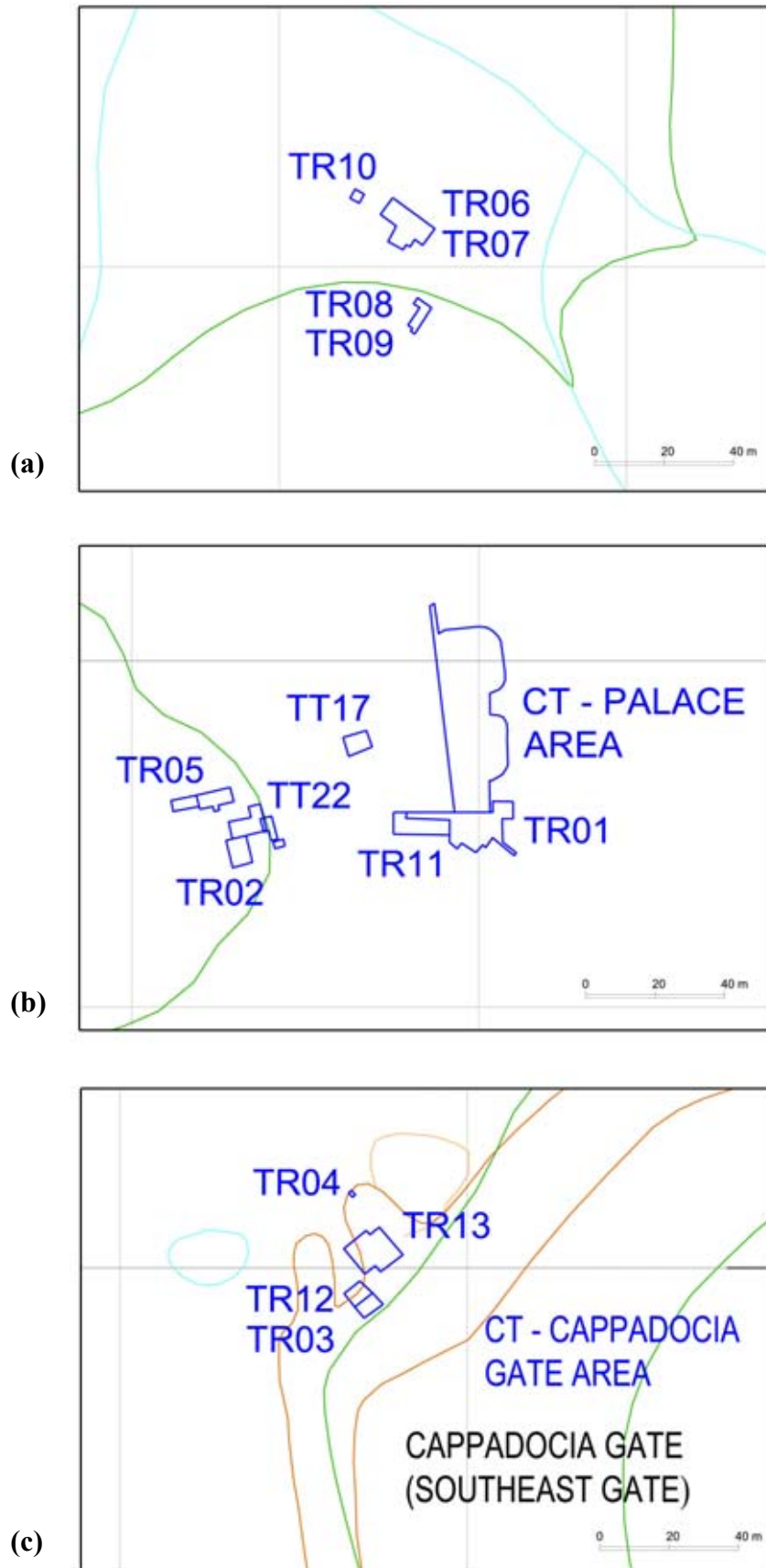


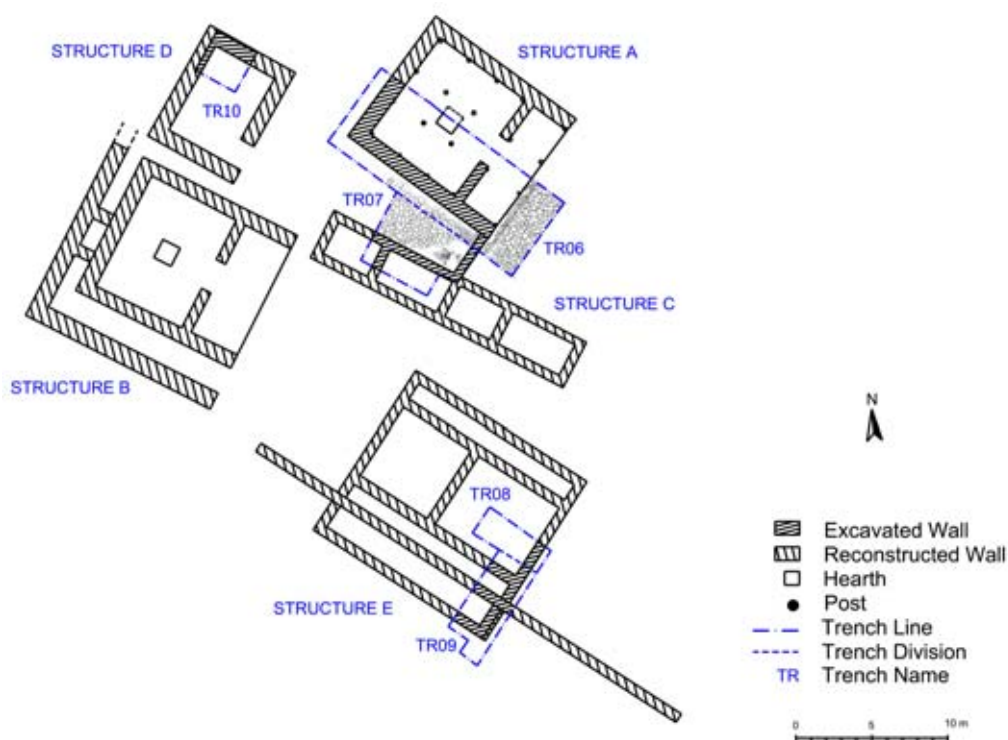
Figure 27. Trenches in (a) the lower central area, (b) the Palace Complex area and (c) at the Cappadocia Gate.

## EXCAVATIONS IN THE LOWER PART OF THE CITY

Structures are accurately located from the resistivity plans in such a way that the coordinates of building corners can be precisely determined. Once the four corners of a building under investigation have been marked on the ground trenches can be positioned so that rooms can be excavated a quarter or half at a time, thereby permitting the recording of sections along central axes (Figs 28 and 31).

### Excavation of the Megaron and Associated Structures in Trenches TR06 to TR10

Resistivity survey in the central zone of the lower part of the city had revealed what appeared to have been a large compound or urban block within which a number of well preserved building plans could be readily identified. Of these buildings, some would seem to be distinctively different to structures seen elsewhere in the city. Following a pattern established in earlier seasons, for the purpose of reports and publications each recognisable structure within a definable complex or block was given a letter code beginning with A. Each Structure is then given its own set of room numbers and wall numbers, in both cases beginning with 1. These designations, which are regardless of Trenches or excavation "units", are given once fieldwork is well advanced or has been completed. This procedure is possible because buildings are generally well defined on remote sensing imagery as well as being relatively straightforward to excavate.



TENTATIVE RECONSTRUCTION OF THE STRUCTURES IN TRENCHES TR06, TR07, TR08, TR09 AND TR10

*Figure 28. Block plan of Structures A to E in the central area together with outlines of Trenches TR06 to TR10. Structure A, TR06, is the partially excavated Megaron; Structure B, a second megaron at centre left; Structure C, TR06, the row of cell-like rooms; Structure D, TR10, the rectangular building and Structure E, TR08 and TR09, the complex of rooms at lower centre.*



*Figure 29. In the spring of 2003 a local shepherd installed animal pens and a makeshift mobile home on top of the megarons. (03dpjv2519)*



*Figure 30. Excavations in the central area of the city with the western section of the defences in the middle distance. (03dpjv2902)*

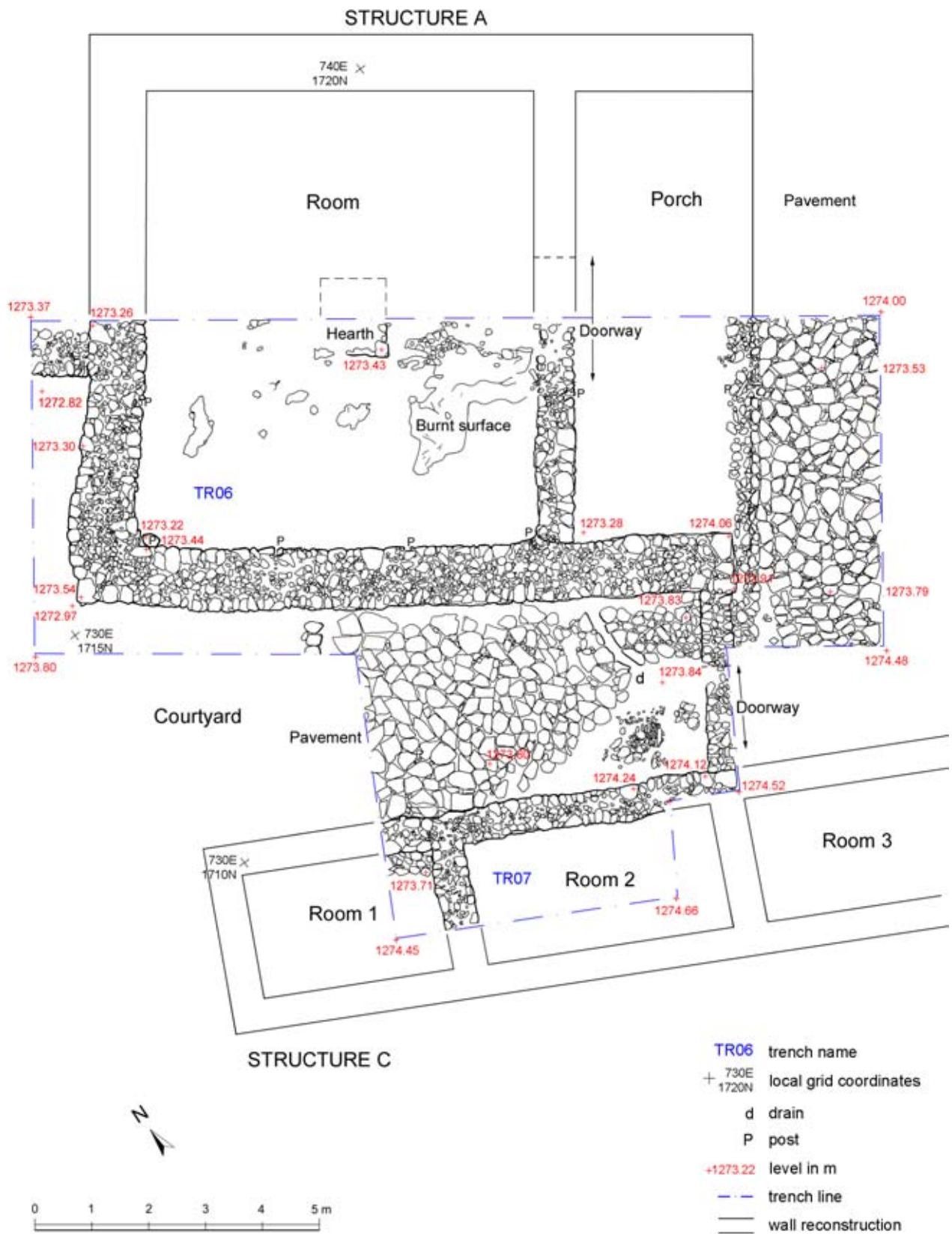


Figure 31. The megaron, Structure A, row of cell-like rooms, Structure C and areas of external paving.



Of specific interest, not least because of their Anatolian connotations, were what seemed clearly to be two large megarons, i.e. buildings comprising a large main room with a central hearth and an open porch at the front. These were labelled Structures A (trench TR06) and B (not excavated) (Figs 1, 9 and 28).

Structure C (Fig. 31) appears to comprise a row of three or more rooms, orientated approximately east-north-east by west-south-west, located between the megarons in a way that might seem to sub-divide the entire compound into two discrete spaces, each of which would perhaps have been dominated by one of the megarons. Similar rows of cell-like rooms can be identified on the geophysical imagery in very many parts of the city, and one had been partially excavated at the northern end of test trench TT15 in 1996 and completed in test trench TT20 in 1998. The function(s) of these rows of cells is of interest, not least because of their almost ubiquitous presence in the urban blocks over the lower portion of the city and the concomitant implications for reaching a greater understanding of how the "urban blocks" might have functioned. It was anticipated that these particular rooms would be well preserved and they might, therefore, contain evidence that was pertinent to their use at the time of the destruction and abandonment. In terms of the plan, the location of doors would provide a clear indication as to whether this row of buildings was associated with the megaron to the north (Structure A) or with that to the south-west (Structure B). Yet another aspect to be investigated was the stratigraphic relationship between each of the Structure C rooms themselves as well as between the row of rooms and associated structures. In this last respect it will be of special interest, in the longer term, to attempt establish the sequential relationship between each of the two megarons and this row of cells which itself defines and makes discrete the open spaces in front of each building. The second megaron, Structure B, apparently possess small additional features, notably at the rear, which might perhaps indicate that it was the first to have been built.

Structure D (Figs 28, 36 and 37), situated behind and partially to one side of Structure A, comprises a rectangular building with what appears to have been a door in the south-eastern corner.

Structure E (Figs 28 and 38 - 40) is a large two-roomed building with narrow magazine-like rooms along each side, lies adjacent to the central portion of the south-western wall of the compound. The two large rectangular rooms were seen to be flanked by long, narrow, magazines and appeared to have an extension on the south side that had encroached on open space beyond the block. This interpretation was fully confirmed by excavation.

Other walls and rooms visible on the geophysical imagery are less easily defined and, as a consequence, have not yet been assigned to Structures.

One of the primary reasons for choosing for investigation this particular location within the lower portion of the city, apart from the seemingly exceptional buildings, was the element in the overall research design that envisaged the provision of running water, via gravity feed from a çeşme, for trench-side wet sieving (Fig. 41) and flotation as well as for dampening the soil during excavation.



*Figure 32. TR06 and TR07 photographed from the TEDAŞ lorry. The scale is in the main room of the megaron. (03dpjv4112)*



*Figure 33. TR06 and TR07 with Structure C at top, the scale rests on external paving between the row of cells and the megaron at bottom. (03dpjv4204)*



*Figure 34. The megaron, Structure A, looking west with the scale in the open porch, external stone paving in front and the scant remains of a central hearth in the main room. (03dpjv4311)*



*Figure 35. Excavation of TR06 and TR07 in the central area, June 2003 after the shepherd had moved away. (03dpjv3907)*

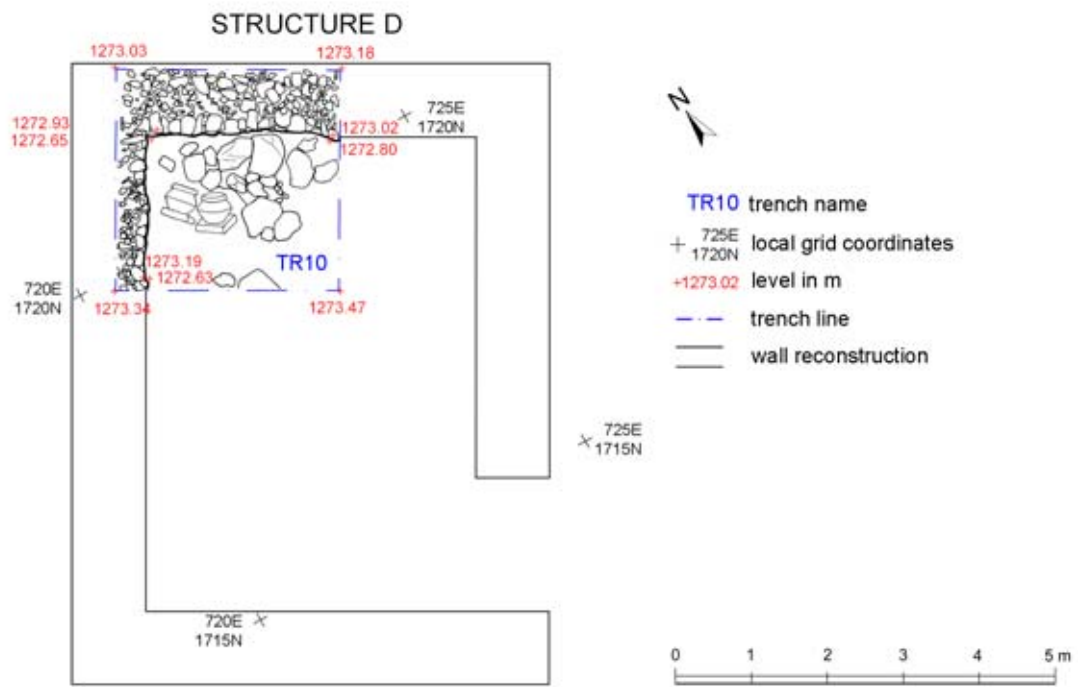


Figure 36. Plan of TR10 with Structure D.



Figure 37. TR10 with the pair of column bases as they were found in Structure D. (03dpjv3903)

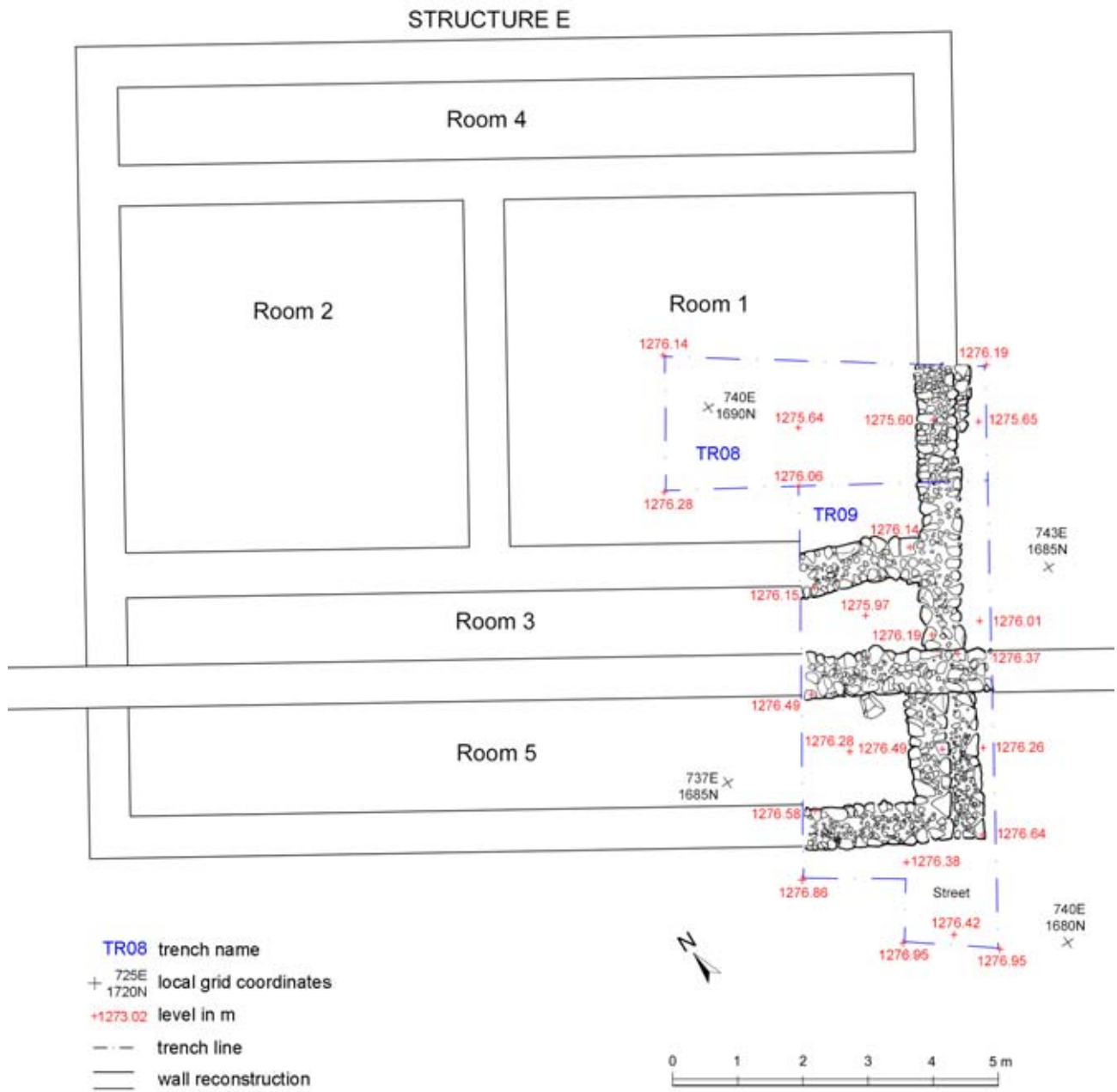


Figure 38. Plan of Structure E and TR08 and TR09.



*Figure 39. Structure E in TR08 and TR09. The Compound Wall is right of the scale which lies in the eastern end of Room 3. (03dpjv4302)*



*Figure 40. Structure E with part of TR08 and TR09. The scale is in Room 1. (03dpjv4514)*



*Figure 41. Jennifer Branting and Tasha Granger experiment with gravity fed wet sieving. (03dpjv2814)*

### **Methods and Progress**

Trenches were laid out according to the plans of the buildings as they appeared on the resistivity map. In large rooms one quarter is excavated at a time while smaller rooms are half excavated with, in all cases, sections maintained along the central axes of each structure. Trench TR06 was positioned so as to reveal the south-western half of a megaron, Structure A. This was done in two stages so that a section was cut through the middle of the main room at ninety degrees to the central axis. Trench TR07 was laid out so that the north-east quarter of the north-western room and north-west quarter of what appeared to be the central room would be excavated together with a strip of the external surface on the north-eastern side. Trench TR07 was subsequently expanded in two stages, firstly to join it with trench TR06 and secondly to the south-east in order to reveal the wall running between the megaron (Structure A) and Structure C. It proved possible to lay out the trenches in such a way that trench TR06 was precisely aligned with central axis of the megaron, while trench TR07 was exactly parallel with the long axis of Structure C, negating any need for adjustment.

On completion of excavation it was possible, through the kind offices of the Mayor of Sorgun, to have the loan of a TEDAŞ lorry with an extendable arm from which high-level photographs could be taken. In addition to these overall photographs, a full digital record was made of all wall tops and faces for possible future use in making simulations or rectified images. This photographic record was in addition to the normal procedure of systematically drawing detailed plans, sections and elevations at a scale of 1:20.

At the end of the season the trenches were lined with geotextile and refilled with earth.

### Finds from Trenches in the Lower Central Area

Two ornate and unusual biconical sandstone column bases or, perhaps, offering tables, are of not inconsiderable architectural interest. The square bases have curved sides and drafted margins on the top, the drums are biconical supporting circular recessed seating. The pieces are very similar but not identical.



*Figure 42. A pair of ornate sandstone bases from the fill of Structure D in TR10. (03dpjv4928)*



*Figure 43. Two views of a three-footed sandstone bowl from Structure C. (03dpjv6315 and 03dpjv6336)*



*Figure 44. A three-footed sandstone bowl from TR07. (03dpjv6736 and 03dpjv6740)*





*Figure 45. (a) A pottery lid or cover, TR07 (03dpjv6810)*



*(b) A similar pottery lid, slightly larger. (03dpjv6833)*



**Figure 46. A cooking pot, TR07. (03dpjv6836)**



*Figure 47. A small burnished jar, TR07. (03dpjv6808)*



*Figure 48. A rosette with eight petals and a central nail, bronze. (03dpjv6192).*

#### **Conclusions on Work Done in the Central Area**

Interpretation of the resistivity imagery proved to have been very accurate in this area with the result that plans of the larger area of survey can now be drawn up with considerable confidence.

The identification of two megarons, i.e. buildings with double pitched roofs comprising a single large room with a central hearth and an open porch, was indisputably confirmed by excavation. On the other hand, the function of the megarons and the associated structures within this special compound or urban block has not been resolved with complete satisfaction. None of the excavated buildings were found to contain domestic installations, nor was any evidence for everyday domestic activity discovered. The recovery of three tripod footed stone bowls (Figs 43 and 44 plus one not illustrated), a number of pottery lids (two shown on Fig. 45) and a few other poorly preserved pottery vessels (Figs 46 and 47) might point towards some special public function for these distinctive buildings, although further support for such a function is best found in the negative evidence for recognisable activity. The recovery of an ornate rosette headed tack (Fig. 48) and a small stone inlay of a feather, as well as fragments of one or more stone trinket moulds, while of intrinsic interest in their own right, are of little help in determining the function of this area and its special buildings since none were recovered from primary contexts. The absence of charred floral and faunal remains was not unexpected because similar results had been obtained in test trenches dug in 1996, although it had been hoped that there would have been a greater depth of deposit in this low central area of the city. The complete absence of architectural decorative tiles is a negative result of wider significance (as discussed earlier in this report).

Another conclusion of some importance is the extent of the building activity. In trenches TR06 and TR07 it is possible to recognise a minimum of four structural phases. Building activity in this area of the city can be seen therefore to have spanned some considerable time, although not so long that buildings had (obviously) begun to collapse from age.

## EXCAVATION AT THE PALACE COMPLEX

### The Monumental Entrance to the Palace Complex, Trench TR11

#### *I. Conservation*

At the stone glacis which delimits the eastern extent of the Palace Complex several fallen and slipped stones were set back in their original positions so as to enhance the appearance of this impressive monument as well as to slow further deterioration. At the end of the season all of the small the sandstone fragments that had been carefully stacked in discrete piles during the course of the excavation, once it had been realised that some elements were carved and inscribed, were each re-examined and placed in a total of 100 sugar sacks. Geotextile was placed on the pavement, over the sides of the fractured, plain, granite orthostats on the north side and pinned to the upper part of the section on the south side. Then old car tyres were placed on top of geotextile along both the front and the sides of the trench. These tyres were filled with soil and used as a base on which to stack the sacks of sandstone against the walling and the south section. A tractor was then used to backfill over the sacks. This backfilling provided an opportunity to re-examine the excavated soil in case any fragments might have been overlooked during excavation. Neither the re-examination of the sandstone fragments, nor the process of backfilling, led to the recovery of further carved or inscribed pieces: a tribute to the diligence with which the workmen had undertaken the tedious task of searching and examining each fragment of stone during the course of the excavation. Although much of the newly revealed stone paving has been covered, the tops of the granite walling remain visible. It is hoped that this temporary measure will protect the remains from the elements and will at the same time deter interference with the south side of the trench where further pieces of carved and inscribed stone surely await excavation in a further season.



*Figure 49. Starting the excavation of trench TR11 with TR01 in the foreground and the terraces of Structure B at right. (03dpjv4704)*



*Figure 50. The Monumental Entrance, trenches TR01 and TR11, at the end of the 2003 season. (03dpjv7035)*



*Figure 51. The sandstone column base on the north side of the Monumental Entrance to the Palace Complex. (03dpjv6112)*

## *2. Aims, Methods and Progress*

The original aim of the excavation of trench TR11, following on from the successful lifting of a portion of a beam with 197 annual growth rings in 2002, was the recovery of burnt beams for dendrochronological study by Prof. Peter Kuniholm and his team at Cornell University. An additional aim was the revelation of more of the plan of the gate passage as well as the recovery of further evidence for its embellishment in the light of the discovery, in 2002, of the lower portions of two large ibex cut from sheet bronze. Trench TR11 extended Trench TR01 in a westerly direction towards where it was estimated that the inner side of the gateway might have lain. The southern edge of the trench, which was 5.00m in width, was intended to provide a section through the centre of the passage based on surface indications as to the position of the southern tower (Figs 49 and 50).

As the digging progressed it was found that the burnt and collapsed rubble filling of the passage was extremely loose and perpetually prone to collapse. In order to prevent injury the southern and western sides of the trench were stepped inwards as soon as it was thought judicious to do so. Before the end of excavation the long southern section was cut back to the original line in such a way that it was made as straight and vertical as was deemed compatible with safety.

An added complication to the smooth progress of excavation was the character of the southern wall of the north tower (which formed the north limit of the trench). The lower courses of this wall comprised neatly dressed granite orthostats the tops of which had been carefully cut to form seating for a thin course of, presumably, levelling stones of granite (Fig. 56). Where the wall turned to the north, in trench TR01, there were four courses of dressed granite stones with large completely burnt out timbers between each. With regard to the north wall of trench TR11, the granites do not appear to have stood higher than when they were first uncovered. Here there was a timber, more than 25cm thick, beneath the first block above the pavement which had totally burnt away. Loose rubble had slipped into the resultant void. This void combined with the shattered nature of the granite orthostats and the fact that in both walls of the tower the blocks had slipped forward from their original positions as the timbers had disintegrated, made excavation somewhat treacherous. Eventually the corner of the tower collapsed, thankfully without causing injury.

In addition to the difficult logistics of working in such circumstances as just described, the recovery of fragments of carved sandstone relief and Old Phrygian inscription, some of which were very small indeed, meant that every fragment of sandstone need to be closely examined. This procedure was complicated by the very large amount of sandstone from several courses of walling that had once stood above the granite orthostats and which had been shattered by a combination of fire damage and impact on collapse (Figs 52, 53 and 57). Only once the excavation had made considerable progress was it realised that there had also been deep and extensive disturbance by treasure seekers sometime in the distant past. This disturbance added to the propensity of the section to collapse and had the additional result that fragments of architectural, sculpted and inscribed stone were distributed randomly throughout the fill. A further difficulty was the fact that the burning of the relief, inscription and architectural ornamentation meant that could vary from red to black and all shades between (e.g. Figs 57 and 58). Some of the sandstone had completely vitrified, and this observation in a few cases holds true even of carved fragments.

As the magnitude of the problem became apparent a system was devised of separating all sandstone from other debris and stacking it in discrete lots, while pieces and groups of particular interest or possible significance were taken back to the laboratory for cleaning and further study. At the end of the season these piles of sandstone were, as described above, carefully re-examined, bagged in sugar sacks and stacked against the sides of the trench to provide some protection and stability over the coming winter.



*Figure 52. Trench TR11 with the stone paving in the foreground, the granite walling on the tower on the north side of the passage at right and fallen sandstone blocks. (03dpjv5674)*



*Figure 53. The monumental entrance with debris filling the void created by the burning of the timber beams in the tower wall and the large sandstone column base. (03dpjv6018)*

### 3. The Monumental Entrance

At this preliminary stage in the excavation there appear to be a minimum of four construction phases at this eastern end of the Palace Complex: 1, Structure A together with its stone glacis and part of the stone pavement; 2, the "Audience Hall" with yet more of the stone pavement which is aligned with it; 3, the Monumental Entrance itself; 4, the terraces of Structure B.

With regard to the Monumental Entrance, the south-eastern corner of the north tower has been exposed along with the surviving stretch of granite orthostats that form the north side of the gateway. The east wall of the tower, first revealed in trench TR01 in 2002 has four preserved courses of neatly trimmed granite interspersed with burnt-out timber beams (Fig. 57). The south wall comprised one course of granite orthostats beneath a levelling course of thinner stones which were tightly fitted into carefully cut seating (Figs 53 and 56). In some instances the back, hidden, side of the orthostats was as well dressed as the front. The orthostats rested on a very large timber beam beneath which is yet another course of large cut granite which, for reasons of safety, has only been glimpsed at. At the south-east corner of the tower the large lower block, which is level with the top of the pavement, is slightly offset. These granite blocks appeared to have carried another substantial wooden beam and a minimum of five large (up to 1.50 by 0.50 by 0.50m) sandstone blocks. At the south-east corner the walling would, therefore, have originally attained a height of some 5.00m.



*Figure 54. The west end of the pavement with a large lump of fused and vitrified debris. Notice the very loose nature of the rubble in the section at left. (03dpjv6145)*



*Figure 55. The debris with a sandstone block containing a clamp cutting and a large iron bar with dome-headed nails. (03dpjv5833)*



*Figure 56. The top of a granite orthostat carefully cut to seat a thinner levelling course. The face of each stone has broken away as a result of the intense burning. (03dpjv5123)*



*Figure 57. The south-east corner of the tower showing four extant courses of granite in the east wall. (03dpjv7060)*

The sandstone contains dovetail clamp holes for wooden clamps (Fig. 55). Some blocks are known to possess clamps at either end, as discussed earlier in this report. Several iron bars with nails in position at each of the splayed ends appear to be too large for the clamp holes that have been recorded up to now and it seems probable that these iron clamps were used to strengthen or secure architectural timber elements (Figs 55, 63 and 64). It is noteworthy that clamping was restricted to the sandstone, the granite presumably being too hard and difficult for the masons to cut clamp holes.

Some of the sandstone blocks were embellished by carved three-quarter bolsters decorated with concentric compass drawn circles on the ends (Figs 59 - 60). Although no complete example of these large bolsters has been found, they were presumably symmetrical and double ended. In other instances the shallow relief carving was restricted to the ends (Fig. 58) or with just a part of a cylindrical barrel which stood slightly proud (Fig. 61). All of these blocks are badly smashed and, in some cases, partially vitrified, with the result that no complete example has yet been assembled from the many shattered fragments. Although these blocks would appear to have formed a row of architectural decoration at the top of the south-eastern corner of the north tower, it is not impossible that some of these carved elements could have come from sandstone capitals to wooden columns. It might be speculated that the exposed ends of the horizontal wall beams at the corner of the tower were carved with similar spool-shaped terminals. Some of the smooth faces of the sandstone blocks retain splashes of paint which might possibly have derived from the painting of the timber elements.

The burnt debris filling the gateway contained many fragments of burnt mud containing reed and, sometimes, plank impressions. These had evidently fallen from the roofs of the towers during the fire.





*Figure 58. Concentric circles in relief (03dpjv7208)*



*Figure 59. Part of a bolster with compass drawn concentric circles and a bevelled edge. (03dpjv7238)*



*Figure 60. A three-quarter bolster with concentric circles. (03dpjv7230)*



*Figure 61. A cylindrical element with concentric circles. (03dpjv7249)*



*Figure 62. Splashes of paint on the face of a sandstone block fragment. (03dpjv7204)*



*Figure 63. Iron clamp with large nails for fixing into wooden architecture. (03dpjv7106)*



*Figure 64. Part of a large iron band with nails. (03dpjv5445)*

Approximately one third of the way inside the gate and set against the passage wall was a large, square, sandstone block the top of which contains a cut circular depression almost 1.00m in diameter and some 3cm deep that formed the seating for a large wooden pillar (Fig. 51). It is not clear whether this pillar or column, which would have made a dramatic visual impact, carried a capital of some sort, nor whether it in fact supported a double-pitched roof covered with thatch. If it did indeed carry such a roof it is more than likely that the iron bars and bands together with the huge nails that affixed them to very substantial wooden elements, were associated with the roof structure and the burning of the timber frame would explain the intensity of the fire, which was sufficient to melt both sandstone and granite, in the entrance. Further, it might be imagined that the bronze cut-outs of an antithetical pair of ibex that were recovered from the surface of the pavement in trench TR01 during the 2002 season would once have been nailed to the pediment, probably on either side of a representation of sacred tree affixed to the king post. This pillar does not seem to have been associated with doors for two reasons. Firstly, there is no door socket and secondly the inclination of the pavement would seem to preclude the presence of doors in this position.

As to the stone pavement, the surface of which had been worn to a polish, it is quite steeply inclined until it approaches its original upper limit, the position of which is indicated by the westernmost two stones at the south-east corner of the exposed portion (Fig. 54). Here, at this upper limit, the pavement appears to be more level, an observation which is compatible with the idea that the partially excavated burnt rubble beyond the stone paving represents a wooden threshold associated with doors. It would be most reasonable to reconstruct doors in this position, towards the inner end of the monumental entrance, and indeed it is possible that the robbing in the north-west corner of the trench was a result of looters looking for a metal door socket or other valuable embellishments. Further excavation might resolve some of these issues if the extensive robbing has not obliterated all of the pertinent evidence.

With regard to stratigraphy, the pavement contains several setting lines (barely visible in Fig. 50) which, whatever they represent, were clearly intentional. The two most prominent of these lines, while not quite parallel with one another, follow an alignment that is at about 30 degrees to the line of tower wall and are very close to the alignment of the central axis of the "Audience Hall". The evidence currently at hand does not permit clear and certain division of the paving into phases of stratigraphic significance, although it is more than probable that not all of the paving can have been part of one and the same original scheme.

The stratigraphic relationship between the construction of the newly revealed Monumental Entrance to the Palace Complex and the building of massive stone towers of Structure A together with their supporting stone glacis has not yet been certainly ascertained. It is however noteworthy that Structure A has a strongly defensive character, whereas the monumental entrance represents a display of grandeur and opulence. If materials are any guide, the absence of sandstone in Structure A might be of chronological significance. Whether the construction of the monumental entrance is associated with the cutting through of the glacis or represents some intermediate scheme is uncertain.

Following the destruction of the entrance by fire, during the course of which, it has been postulated, the pitched timber and thatch roof together with substantial parts of the towers to either side fell onto the pavement. Hopes of recovering charred beams for dendrochronology were dashed because the intensity of the burning had reduced everything to ash except by the south-eastern corner of the north tower where some burning timber appears to have been smothered by fallen stone blocks.

#### *4. Inscribed and Sculpted Monuments in the Entranceway*

Somewhere inside the entrance, probably towards the centre of the rear, was a sandstone monument embellished with three quarter round bolsters and bolster ends in relief. These bolsters closely resemble, on a somewhat smaller scale, the carved elements from, perhaps, the corner of the tower. Joining fragments make up about two thirds of the decorated architectural element of this monument, which although the recess on the top is rectangular seems to have been square in plan (Fig. 68). This monument would appear to have been free-standing. Also recovered were fragments of small-scale relief sculpture amongst which have been identified figures in human form, a griffin and a lion - both apparently winged, a rosette with eight petals and other fragments. There are also vertical and horizontal elements inscribed in Old Phrygian. Prof. Claude Brixhe reports the presence of the word for a dedication. It is very likely that the inscribed relief sculpture and the architectural element belong to the same monument, although this is not certain. There are, in addition, other fragments of inscribed sandstone and a large but fragmentary piece which resembles a stepped platform or table with a recessed top. The fact that joining fragments, of dramatically different fire-altered colour and sometimes only millimetres in length, were found scattered both horizontally and vertically throughout the undisturbed burnt debris (as well as in later disturbances) can safely be taken to indicate that the monument was destroyed during the conflagration. Further fragments doubtless lie beyond the excavated area, but a few of the pieces which were retrieved have partially vitrified - with the result that some unknown portion of the relief and inscriptions has been totally lost. These discoveries are of considerable importance and will be the focus of much future research.

At a later, unknown, date there was very considerable disturbance to the deposits and the structure, presumably at the hands of treasure seekers. All of the masonry is in such poor condition that the large pits can hardly have been dug by stone-robbers. Inscribed and relief fragments were recovered from the fill of the robber pits as well as from the undisturbed burnt debris, adding another element to the likely-hood of recovering further pieces if a future season of excavation.

#### *5. The Function of the Monumental Gateway*

This monumental gateway led directly to the huge "Audience Hall" which was the subject of partial excavation in previous campaigns. The positioning of this imposing and substantial building within one discrete area of a huge complex could be seen as supporting the proposed identification of the building as an "Audience Hall" (rather than a temple) located at the most public part of what appears most likely to have been a large Palace Complex.



*Figure 65. A fragment of sandstone with two naked feet toe-to-toe above part of an Old Phrygian inscription. A word divider, four vertical dots, is bisected by the crack. Faint incised lines were used to mark out the inscription before it was cut. Colour difference demonstrates breakage during or before the fire. (03dpjv5407)*



*Figure 66. A fragment of inscribed sandstone. (03dpjv5404)*



*Figure 67: The largest inscribed piece, almost certainly from the same monument as those in Figs 65 and 66. On the upper surface, also depicted in figure 9, at extreme right is one end of a vertical inscription. Faint guide lines for the lettering and the contrasting fire damage are clearly seen. (03dpjv6509)*



*Figure 68. A square architectural element probably from a freestanding monument. The smooth upper side has a rectangular recess in the centre. (03dpjv7262)*



*Figure 69. Head of a griffin. (03dpjv6854)*



*Figure 70. A rosette. (03dpjv6855)*

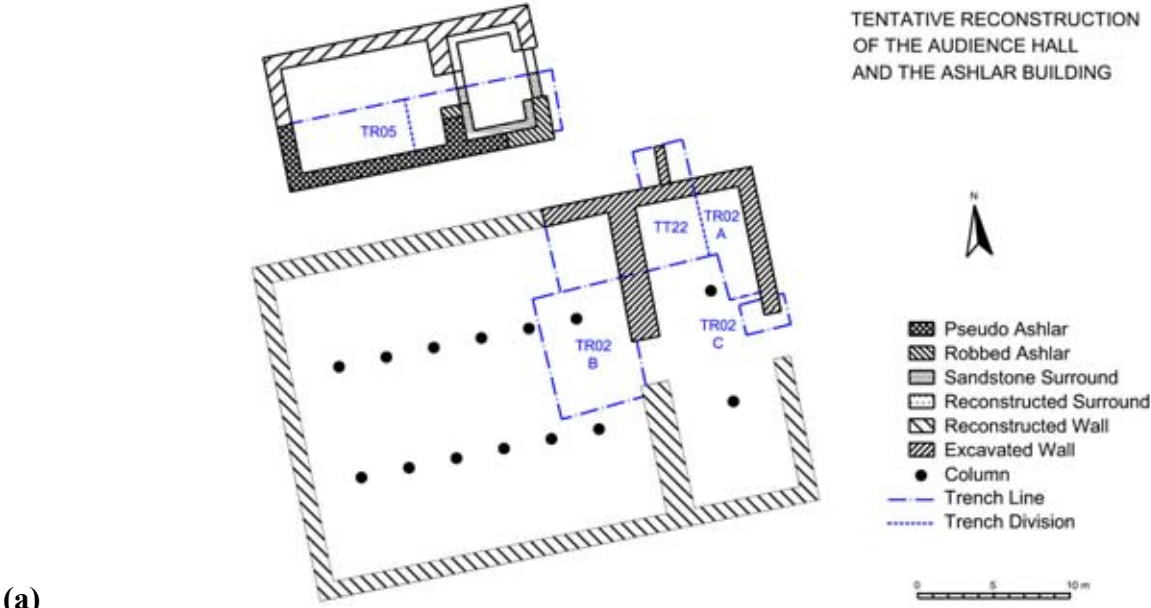


*Figure 71. Part of a torso perhaps holding the butt of a spear. (03dpjv6856)*

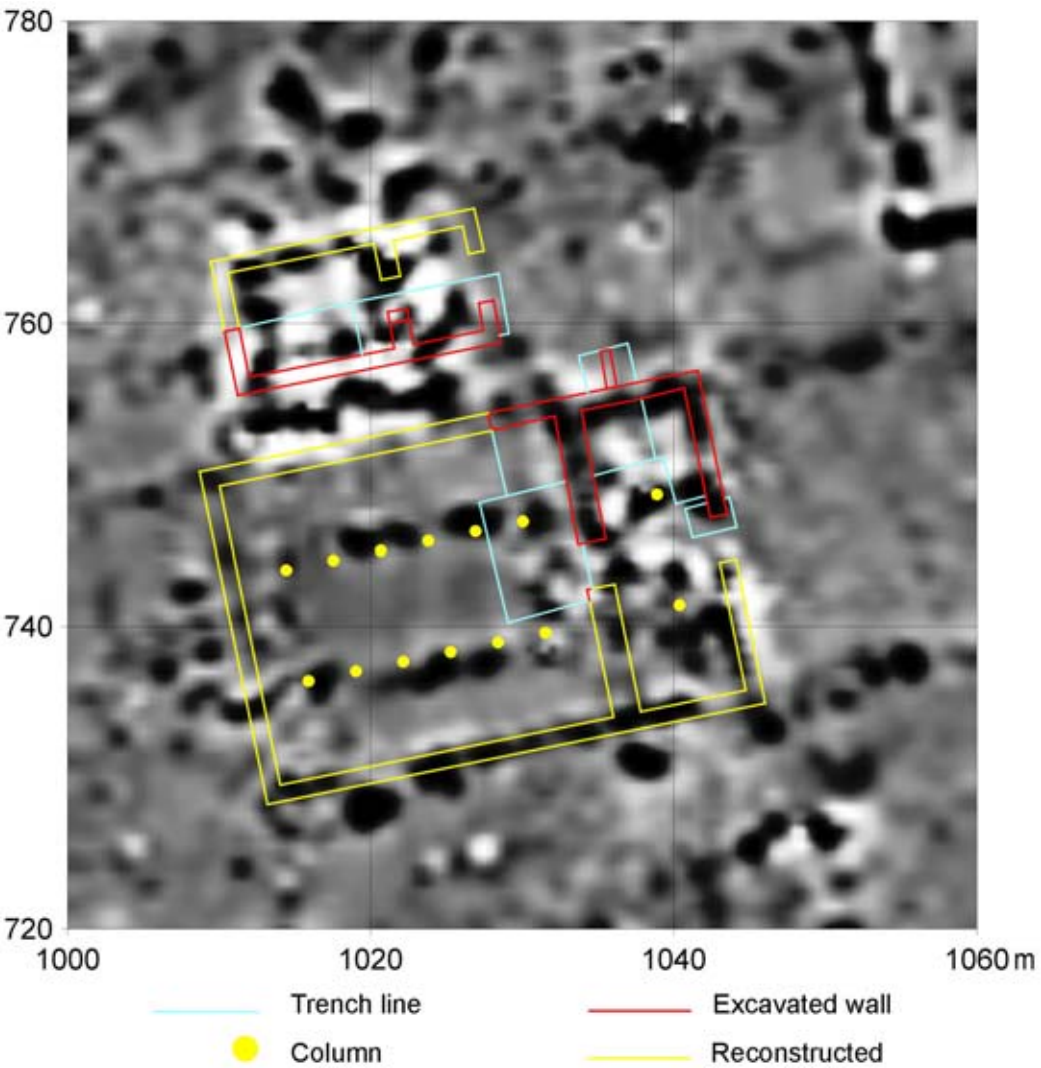


*Figure 72. A clenched fist. (03dpjv6962)*

The Ashlar Building, Trench TR05



(a)



(b)

Figure 73. (a) Block plan of the Audience Hall, Ashlar Building and trenches; (b) Geomagnetic map with block plan overlay.

Work at the Ashlar building in 2003 was designed to complete the excavation of the southern half of the larger, inner room which had been partially investigated in 2002 (Fig. 73a). The room was found to have been some 3.00m longer than interpretation of the geomagnetic image had suggested (Fig. 73b), although the position of the outer face of the rear wall of the building could be distinctly seen on the ground.

Contrary to expectations, no internal features or installations of any kind were discovered (Fig. 74). It is, however, very significant that a straight and level line of burning was seen along all of the wall faces. This line was just above the rough, unsmoothed, lower portion of the granite blocks except in the south-west corner where, as can be seen on the left side of Figure 75, it was some 0.10m higher. This scorch-line surely represents a burnt wooden surround which would thus have formed the equivalent of the sandstone pavement in the front room that was revealed in 2002.

The existence of such a surround, with a slightly raised portion in the south-west corner, provides explanations for the rough finish to the otherwise smooth face of the ashlar as well as for the fact that the multi-layered mud-plaster floor did not run up against the walls. The recognition of this surround which, it may be imagined, was covered with cushions and fine materials, combined with the regular re-plastering of the floor has made a not inconsiderable difference to our conceptions of this building. Now this larger inner room can perhaps be envisaged as having been more comfortable and plush than the outer room with its cold stone paving. This impression finds some confirmation from the observation that most or all of the thick mud plaster that covered the rubble filled walling above the faced granites was coated with white lime plaster.

There was surprisingly little burnt clay with reed impressions of the kind generally associated with burnt roofing, suggesting perhaps that entire the building was covered with a double pitched thatched roof and that the clay and reeds represent an upper floor or balcony in the outer room where (in 2002) they were found to be more concentrated.

With regard to the ashlar, no. 14 (Fig. 76), which was not fully uncovered in 2002, was found to have a total of six strokes while no. 19 also bore marks, perhaps in two groups. As to finds, part of one charred wooden terminal that appears to be a miniature version of the bolsters on the sandstone at the Monumental Entrance to the Palace Complex perhaps represents all that has survived from sumptuous furniture. Otherwise there were no objects other than a few iron nails and a poorly preserved iron bracket.



*Figure 74. Trench TR05, the southern half of the large inner room of the Ashlar Building showing the undulating floor, the southern half of the rear wall and the character of the fallen debris in the section. (03dpjv6724)*





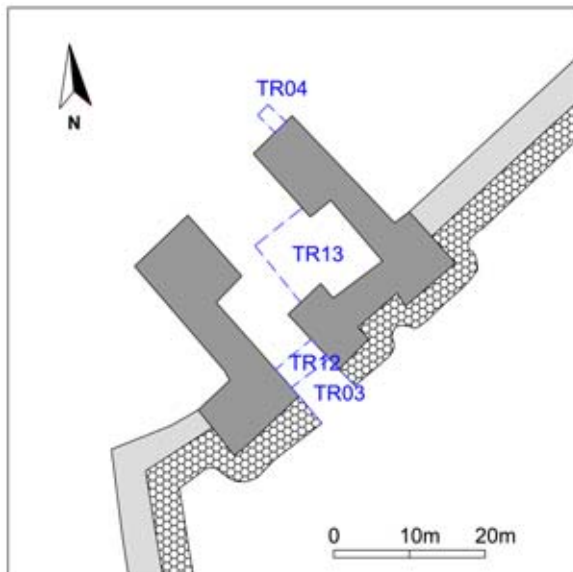
*Figure 75. The western end wall of the Ashlar building with scorch marks. (03dpjv5809)*



*Figure 76. Ashlar no. 14, which was not fully uncovered in 2002, was found to have a total of six incised strokes. (03dpjv6434)*

## EXCAVATION AND CONSERVATION AT THE CAPPADOCIA GATE

During the 2003 season essential conservation work at the Cappadocia Gate enhanced the appearance of the Eastern Tower glacis while excavations focused on two areas, the passage and the inner chamber (Figs 77 and 78). A new section was cut through the entrance passage (Fig. 77, TR 12) while the uppermost 2.00m of rubble fill was removed from the inner chamber (Fig. 77, TR 13).



*Figure 77. A revised plan of the Cappadocia Gate showing the trenches.*



*Figure 78. A further portion of the entrance passage was cleared and the uppermost 2m of the inner gate chamber walling, at centre, was exposed. A shepherd's hut and animal pens can be seen in the middle distance with the Kale looming behind. (03dpjv6820)*

### 1. Conservation

This aspect of the work forms part of a long-term program of site enhancement which is intended to improve the visual aspect of the major monuments at Kerkenes and, at the same time, to provide the visitor with an understanding and appreciation of the remains themselves. In 2003 a number of slipped and fallen glacis stones were set back in their original positions and some new stones were introduced to fill gaps along the top of the glacis (Figs 79 and 80).



Figure 79. Using a winch to replace large stones that had fallen from the face of the glacis. Ministry Representative Mehmet Katkat skilfully supervised this operation. (03dpjv5616)



Figure 80. The glacis and the tower wall behind after conservation. A full record was made of which stones had been replaced and which were newly introduced. (03dpjv6753)

All of this work took place on the south-eastern side of the gate and was particularly concentrated on the south-eastern tower. Here, in addition to partially restoring the glacis, part of the south-eastern walling tower itself was rebuilt so as to preserve the original structure and to improve safety. In both cases a full record has been made which distinguishes between original stonework, stones that have been reset in their original place and new stones used to fill holes and gaps. Following a general principle, all of the action that has been taken is reversible and all new stones are granite like the originals.

With regard to the flanking walls of the gate passage in trench TR12 and the walls of the gate chamber in trench TR13, stones that were found to have slipped and to be leaning dangerously were set back as far as was possible in their original positions. Where the original stones were too cracked and broken to be serviceable new stones were used. Here again a full record of original, reset and new stones was made. It is true that this procedure resulted in stones being moved before an accurate top plan had been made, but this expedient method meant that, wherever possible, the original stones were reset and also that the danger of accidents - while ever present - was minimised.

As to the stele, an aniconic representation of a Phrygian deity atop its stepped monument, the decision was taken to remove the badly shattered stone in as careful and systematic way as was possible in the expectation that it will prove possible to reconstitute the front of the stone with minimal loss.

At the end of the season, after recording, part of the surface of the gate passageway was covered with geotextile. Then the tall section through the very loose rubble fill of the gate passage that formed the north-eastern limit of trench TR12 was partially pulled down in a way that rendered it safe for both visitors and animals.

## *2. Work in the Gate Passage, Trench TR12*

A further section of the gate passage (Fig. 81) was cleared in 2003. This excavation, in trench TR12, extended trench TR03 excavated in 2002. Stones that had been piled up to retain one side of a very rough animal track, perhaps in the Byzantine period if the pottery from the fill is a secure guide, were recorded and removed.



*Figure 81. The section through the Gate Passage, trenches TR03 and TR12. The upper part of the eroded gully on the left has not been fully excavated. The three inclined stones in the section immediately right of the vertical pole c. 2m above the surface, represent the later pile of retaining stones. (03dpjv6237)*

On the north-west side of the passage it was found that before the destruction an eroded gully had threatened to undermine the passage wall (Fig. 81). In order to ward off this threat a row of four stones had been set in a line in such a way as to prevent further erosion and it is probable that other, less regularly laid, stone was employed for the same purpose. This stone feature has been preserved intact and much of the fill of the gully was left in place in order to preclude further erosion during the winter.

With regard to the plan of the 6m wide Gate Passage, no restriction was discovered. Further, it is notable that no further sandstone blocks were found, indicating that the use of this distinctive material was restricted to the uppermost course on the front of the gate towers. Nor, importantly, was there any indication that the portion of the gate passage in front (to the south-west) of the inner chamber of the gate had ever been roofed in any way. It was perhaps disappointing that no evidence for the existence of door sockets, nor of the doors themselves, has yet been recovered. This excavation of the Iron Age fill of the gate passage did not produce any objects, nor indeed any pottery sherds.



*Figure 82. The south-east wall of the Gate Passage. The junction between the glacis and the tower is clearly seen above which new stonework holds back the loose rubble. In 1999 sandstone blocks with graffiti were removed from the outer corner in order to prevent them being damaged. The intention is to cut new sandstone blocks that can be inserted in their place. (03dpjv6752)*

### *3. Work in the Gate Chamber, Trench TR13*

The stone fill of the gate chamber (Figs 83 and 84) has been lowered so that it is now more or less level with the present surface of the modern trackway that leads through the gate. This procedure has revealed some 2.00m of standing wall in the south-eastern corner of the gateway and it is estimated that a further 2.00m or remains to be exposed in the course of the next season. The only feature of note is a level row of small stones in the walling that is associated with clay and burnt debris. This structural element, which runs along the entire length of the south-western wall, part of the buttress wall at north-west and extends along some 3.00m of the north-east walling, appears to represent some form of intermediate flooring or balcony within the south-western portion of the internal gate chamber.



*Figure 83. Visitors from Sardis, Crawford H Greenewalt Jr and Colin Wright, view progress in the clearance of the inner chamber. (03dpjv6267)*



*Figure 84. Visitors in the partially excavated gate chamber provide a sense of the monumental scale. (03dpjv7514)*

#### *4. The Stepped Shrine with an Aniconic Stele of a Phrygian Deity*

Against the south-west face of the north-eastern tower, on the side of the innermost section of the gate passage, the unexpected discovery was made of a stepped monument supporting a partially preserved aniconic stele (Figs 85 and 86). This stele, which faces outwards, was removed although the stepped monument has not been fully exposed and problems concerning access to it remain to be investigated in 2004. As to the stele itself, it is carved from a very soft chalky limestone. The stone is not only badly shattered but many roots were seen to have penetrated into the cracks. Some of the interior of the stone has turned pink as a consequence of the fire. The back of the stele itself and the rear upper slab into which it was fitted are missing, presumably broken during the destruction of the gate. The uppermost step, which was recessed on top so as to retain the stele, was cut from the same chalky stone and has likewise shattered. The two lower steps that have been exposed are very rude and uneven and it seems probable that they were originally covered with mud plaster or perhaps wood. The stele was carefully lifted and awaits a detailed assessment of its condition and possible reconstruction in the Kerkenes laboratory in 2004.



*Figure 85. The aniconic stele of a Phrygian deity and the topmost step in which it was set was uncovered in the Cappadocia Gate, see also Fig. 86. (03dpjv6171)*



*Figure 86. The partially excavated stepped monument in the rear of the Cappadocia Gate Passage. The stele and the topmost step are both made of a soft chalky stone and very badly cracked. (03dpjv6167)*

## **FUTURE PROSPECTS**

### *1. Survey*

The excellent results from the spring season of resistivity survey, which are obtained at relatively little financial cost and are completely non-destructive, fully justify continuation over as much of the level and stone free areas as possible in future seasons.

### *2. The Main Focus of Excavation*

The unexpected and highly significant discoveries of relief sculpture and inscribed stone in the entrance to the Palace Complex, together with the good work that was achieved at the Cappadocia Gate, dictate that the greater part of the effort over the foreseeable future will be conducted in this area on the southern ridge. This program makes good sense in terms of day to day logistics during the main season and it will doubtless yield further results of wide interest even if, as seems likely, it will not be possible to excavate on such a large scale because of financial constraints and increasing costs.

### *3. Conservation and Enhancement*

Clearance at the Cappadocia Gate will be conducted in parallel with a program of architectural conservation and enhancement of this visually impressive monument.

At the Palace Complex it is expected that the gateway paving can be left open, although it might in a future season be expedient to provide a cover of geotextile during the winter if this would not be vandalised or stolen. As excavation proceeds into the complex we propose to continue the practice of earlier seasons and to back fill over original surfaces while putting several courses of new stone on top of the original walls. The rebuilding of low walls above unexcavated, buried, walls will also be continued where this would be advantageous to improving visitor comprehension.

## **CONCLUSIONS**

The 2003 season at Kerkenes has fulfilled our expectation and strongly confirmed our interpretation of the structures in the central portion of the city. The existence of true megarons, with open porches and central hearths, was confirmed while their particular importance was hinted at by the recovery of a number of three-footed sandstone bowls and, from an associated rectangular building, a pair of ornate sandstone bases. At the Cappadocia Gate an aniconic stele of Phrygian type added more evidence of western cultural influences. The climax of the season, however, was the completely unexpected discovery of fragments of relief sculpture with inscriptions in Phrygian characters. It may be seen, then, that further excavation in the lower central portion of the site could be conducted with great precision and would undoubtedly reveal more of the material culture together with details of the architecture and phases of construction. Important and interesting as that would be, in the short term it is incumbent upon us to finish the larger enterprises which have been initiated at both the Cappadocia gate and the Monumental Entrance to the Palace Complex. With special regard to the latter, it is imperative that investigations here be brought to a full and satisfactory conclusion, not only because of the extreme importance of the sculptural and inscribed fragments but also because of the vulnerability of the entrance to looters and vandals.

Understanding of the city on the Kerkenes Dağ is slowly developing. Of our earlier interpretations, some still appear to hold true whilst others have to be discarded. The date of the foundation of the city is one of the outstanding problems that further excavation can expect to establish while, at the same time, casting further light on the cultural affinities of the founders. A new 5-Year program of research is planned, and we have every expectation that the results will be every bit as astonishing as those from past campaigns.



# KERKENES DAĞ PROJECT PUBLICATIONS BY YEAR

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This site represents a major experiment in the electronic publication of an international archaeological project.

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