

## THE 2004 SEASON OF EXCAVATIONS

In 2004 the six-week summer season began with the formal opening of the depot doors on the 10<sup>th</sup> of July (Fig 11).



*Figure 11. Geoffrey and Françoise Summers, Mehmet Ayar, Cumhuri Sal and Memiş Gençarslan gathered to cut the seal on the depot door at the beginning of the summer season. (04dpjv0805)*

### **The Summer 2004 Activities**

Research was focused on further excavation at the Monumental Entrance to the Palace Complex (Figs 12 and 13). The main aim of these excavations was to recover further fragments of small-scale relief sculpture with associated inscription in the Old Phrygian language.

Additionally, three test trenches, each designed to section a street, were dug by Scott Branting as part of his programme of GIS studies on transportation reported in the following section of this report.

At the Cappadocia Gate it was deemed desirable to remove the poorly preserved tuff step on which the aniconic stele was set so that both could be reconstructed in the laboratory.

Conservation and restoration of finds, with particular emphasis on sculptural and architectural material, were conducted by Noel Siver. Catherine Draycott acted as registrar. Illustration of this same material was done by Judith Sellers while much progress in the finalisation of the first monograph was achieved by Isabelle Ruben.

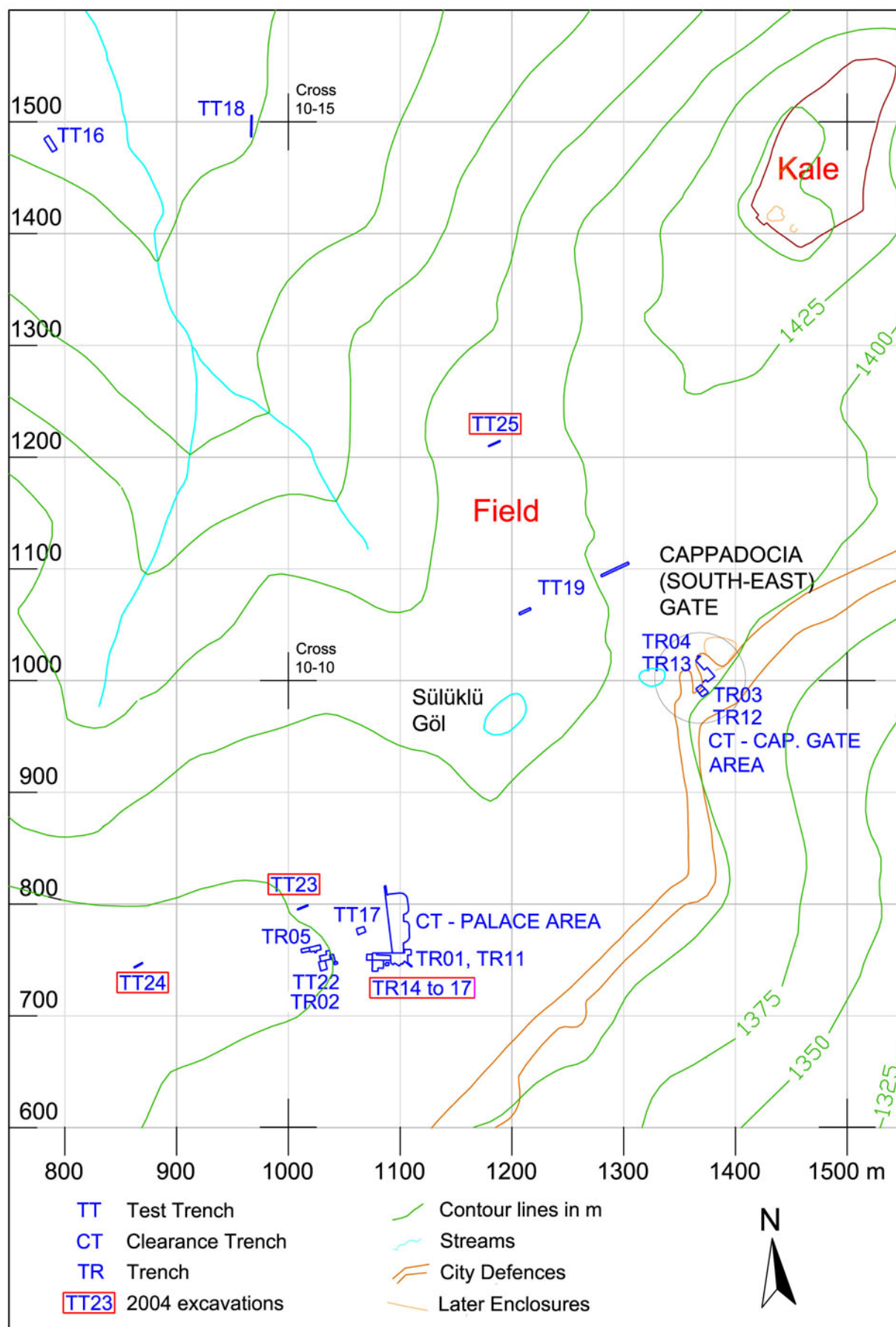


Figure 12. Map showing the 2004 excavation area.

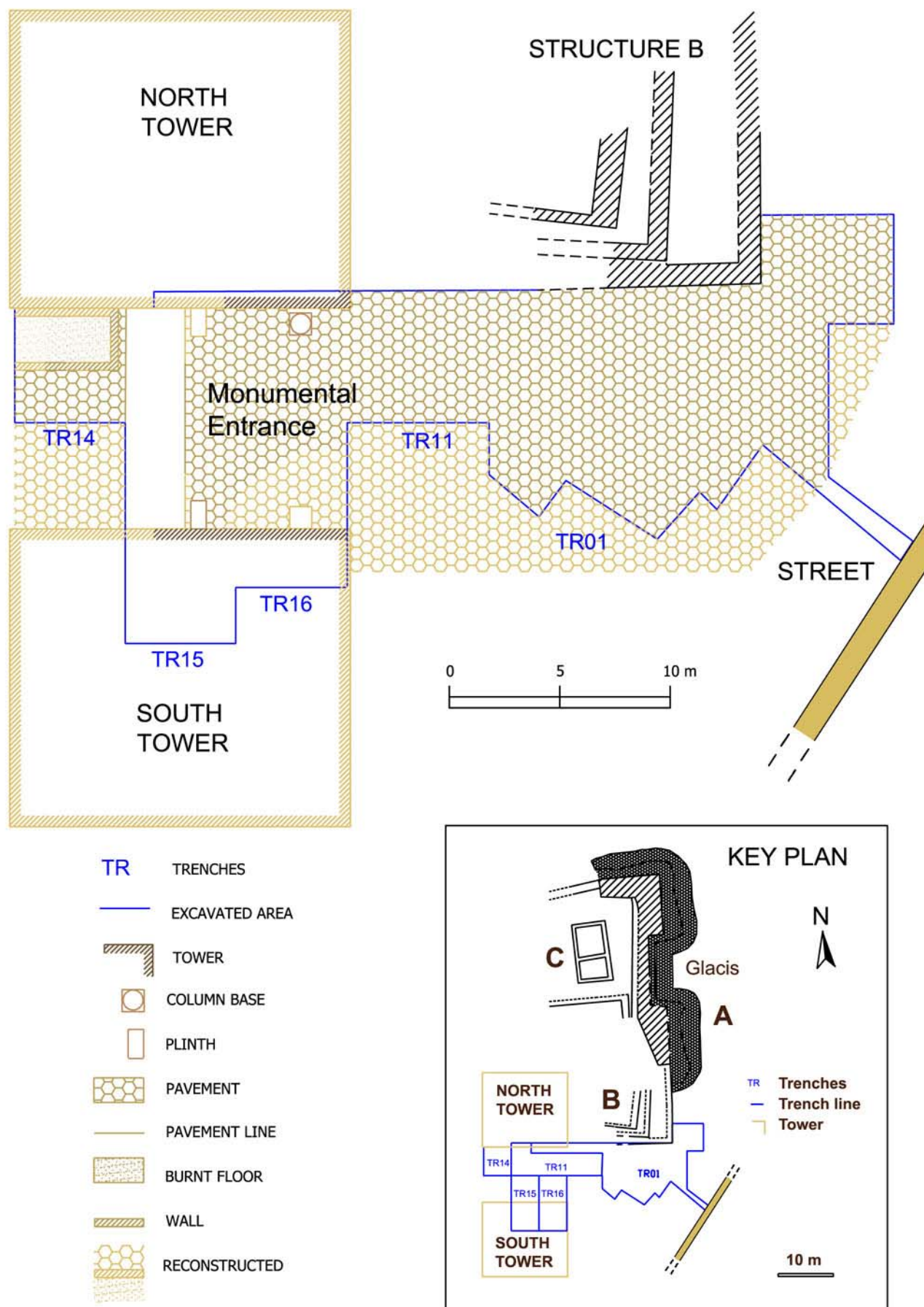


Figure 13. Tentative reconstruction of the Monumental Entrance to the Palace Complex.



### **The Monumental Entrance to the Palace Complex**

The Monumental Entrance to the Palace Complex (Figs 13, 14 and 15) was partially excavated in 2002 (TR01), 2003 (TR11) and 2004 (TR14, TR15 and TR16). The inclined stone paved entranceway, flanked by two massive towers, appears to run in a westerly direction towards the palatial 'Audience Hall' that was partially excavated in previous seasons (trenches TT22 and TR02). A large conglomerate plinth to the left of the doorway was perhaps the base for a lion or sphinx. The construction of the entrance formed part of a remodelling of the Complex in a scheme that involved cutting through the southern side of the stone glacis and blocking of the paved way that led to Structure A. The complexities of the phasing are not yet fully elucidated.



*Figure 14. The upper end of the pavement with the salt-encrusted north wall of the South Tower and the conglomerate plinth. The 1m scale rests on burnt debris at the base of which a layer of charred reeds can be seen in the shadow at left. Part of the city wall appears in the background. (04dpjv2505)*

### *The Pavement Leading to the Palace Entrance*

The stone paved area leading to the Palace Complex Entrance ended against a wide wooden partition which had burnt totally away leaving a void into which the burnt and fused superstructure of the towers collapsed. The position of the large pavers indicates the width of the double leaved doors and in the centre, where the trench is most restricted, they mark the front of the Monumental Entrance, beyond which setting lines in the earlier paving are on a different orientation (Fig. 15).

In 2002 the hindquarters of a pair of sheet-bronze ibex found on the pavement portended the discovery, in 2003, of sandstone architectural pieces together with sculpted reliefs inscribed in Old Phrygian from the entrance itself. In 2004 a smashed statue of a standing figure, one metre in height, was recovered from the fill of a robber pit.





*Figure 15. The inclined pavement looking east. Burnt and fused debris in the foreground indicates the position of a monumental wooden screen and large double leaved doors. The section behind the scale is entirely fill of the robber pit from which the statue fragments were recovered. (04dpjv2307)*



### *Building Methods and Materials*

An astounding variety of materials was found to have been used for the towers while sophisticated construction techniques were further elucidated. The lower courses were constructed of large granite blocks which were carefully faced. Above these was a course of large sandstone and conglomerate blocks, the top of which in the South Tower appears to have been level with the internal floors. A further course comprised equally large blocks of soft white limestone. Large beams of black pine, c. 0.25m deep, were laid horizontally between courses. These had burnt out leaving voids that filled with very loose rubble. Yet higher walling would probably have consisted of a timber frame filled with rubble. Lumps of burnt clay bearing impressions of reeds and wooden rafters perhaps attest flat roofs to the towers.



*Figure 16. The north wall of the South Tower is structurally unstable due to the burning of horizontal timbers between the courses of large blocks. A large conglomerate plinth set into the granite pavement and trimmed in situ, may have been the base for a lion or sphinx. (04dpjv2512)*

Use of different types of stone, namely granite, sandstone and limestone, in the construction of the massive tower walls, demonstrates some understanding of their differing properties as building materials. In addition, the contrasting natural colours of the freshly cut and unburnt stones, enhanced by the dark timber elements between the courses, would have produced a striking effect. In this respect it is worthy of note that stones of contrasting colour were used in the retaining wall of the (post destruction) approach to the gate on the city mound at Gordion and, of course, that alternating colours for carved orthostats are well known from Assyria and its neighbours.

Against the north wall of the passage and set in from the front, a large square block of coarse sandstone that has a shallow seating to retain a timber 1m in diameter was excavated in 2003. It is possible, indeed likely, that some of the large sandstone bolster fragments found

were once part of an ornate sandstone capital for this large wooden column, probably of similar general form to the smaller example (Figs 20 and 21). There is no evidence as to the pitch of the roof, or the height of the pediment apex above the pavement, but it is not unreasonable to suggest that the height would have been approximately the same as the width, i.e. 10m. The use of reed thatch, the burnt remains of which lay on the paving, would suggest a steep pitch to facilitate the runoff of rainwater and snow. The slope of the entrance passage would have necessitated a comparable slope in the roof ridge.

Excavation in 2003 revealed that the North Tower had four surviving courses of granite facing stones on the front (east) façade and that these stones were narrower than those in the south wall that formed the side of the passage which would have taken some of the load from the pitched roof covering the passage. At its eastern end, the surviving stretch of the passage wall comprises two courses of granite above which there must have been several courses of sandstone and soft white limestone blocks. The corner itself may have been entirely of granite, but this is not certain. It is therefore possible that use of the soft sandstone and limestone, both prone to rapid weathering, was restricted to the sidewalls covered by the passage roof.

In the north wall of the South Tower a square indent was carved out of one of the sandstone blocks presumably to take a vertical timber although it could perhaps have taken a floor beam (Fig. 17). The inner, hidden face of that same block has a mason's mark. The burning of the interlaced large timbers greatly damaged the stonework to the extent that little can be saved.



*Figure 17. A square cutting was carved out of one of the sandstone blocks of the South Tower wall presumably to locate either a vertical timber or a floor beam. To the left, a clamp cutting perhaps held a wooden clamp that tied the block to floor joists. The soft sandstone has been shattered by the fire and is encrusted with salts. (04dpjv2848)*

### *Clamps*

The wooden 'swallowtail' clamps used at Kerkenes display surprising variation in size and considerable irregularity, no use being made of templates (Figs 17, 18 and 19). The clamp cuttings appear to have been cut into the soft sandstone and conglomerate with simple woodworking tools, even though the row of cuttings for small mending clamps in a single granite block would have required more effort and different techniques. This use of wooden clamps reinforces the idea that the methods used for cutting the sandstone were essentially derived from carpentry. There is only one granite block with cuts for clamps, these clearly for mending a crack (Fig. 18). It would seem that on sometimes adjacent sandstone blocks were locked in place by wooden clamps which tied them together.



There is a good possibility that clamps were employed to tie sandstone blocks to large wooden floor joists in the South Tower of the Monumental Entrance (Fig. 13), perhaps indicating the technique of using clamps was not unknown to carpenters. If this could be substantiated it would demonstrate that the clamps were sometimes intended to provide structural strength and did not originate merely as a device for retaining stones in position during construction. It should be noted that, in addition to clamps, much use appears to have been made of squared wooden dowels.



*Figure 18. A row of small clamp cuttings for mending the front of a split granite block in the north wall of the South Tower. This is probably a corner stone, the end being just beyond the baulk at right. (04dpjv2219)*

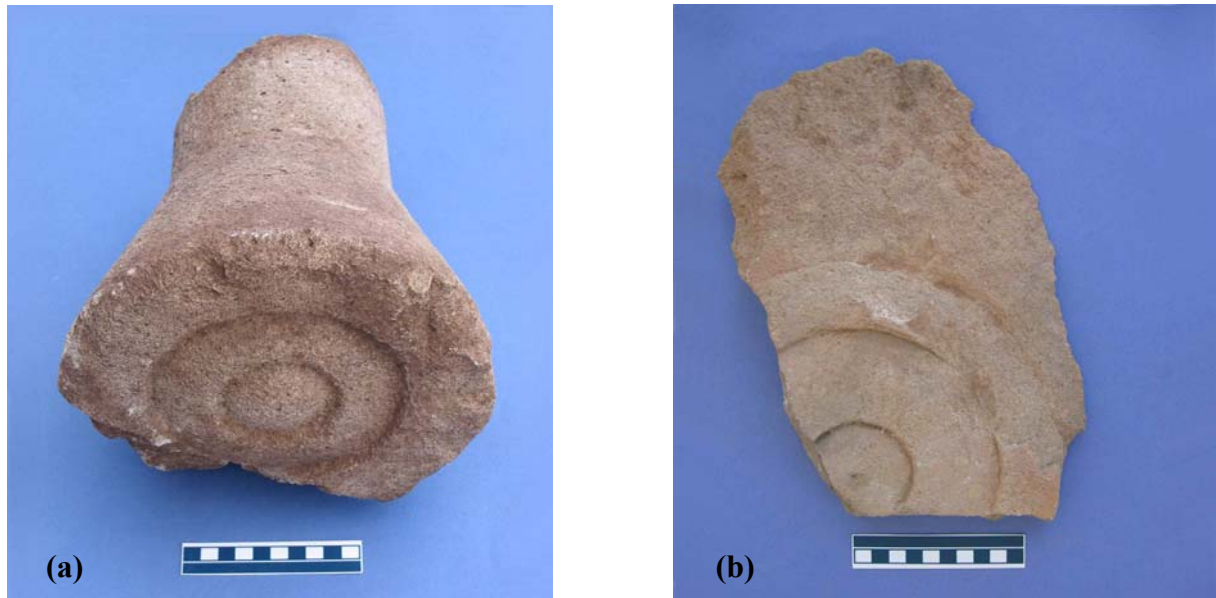


*Figure 19. A fallen block of conglomerate has two clamp cuttings, that on the top left being incomplete. The granite block seen in Fig. 10 is in situ in the tower wall behind. (04dpjv2215)*



### *Bolsters*

The term bolster has been adopted from the terminology long employed to describe similar elements, all be it on a much smaller scale, found on handles of bronze bowls and pottery from the Iron Age of Central Anatolia. In shape, the bolsters comprise conical elements at either end of a central cylinder. The end faces are decorated with compass-drawn concentric circles (Fig. 20a and 20b). Several pieces of bolsters were found in 2003 and 2004, a particularly well preserved examples (Fig. 20a) being added to the assemblage this year.



*Figure 20. (a) Part of a large three-quarter round bolster with bevelled edge. The scale is 10cm. (04dpcs0421)  
(b) Part of a large bolster end carved in relief. The scale is 10cm. (04dpcs0107)*

Smaller examples of bolsters belonging to a square sandstone block (Fig. 21) have a raised ridge or bead moulding around the centre of the cylinder. This architectural piece was embellished with three-quarter bolsters at every corner with concentric circles representing bolster ends between them. Additional fragments (not illustrated) were recovered in 2004.



*Figure 21. Part of an architectural block, with an offset recess and, on the underside, a square dowel cutting. Three-quarter round bolsters at each corner with pairs of bolster ends between. The scale is 10cm. (04dpcs1005)*

### *Looting and Post-Destruction Disturbances*

The absence of door sockets for the broad double leaved doors, together with damage to the stone pavement around their presumed positions, might suggest that these, if little else, were plundered from the debris before the masses of fused and melted walling fell into the void left by the reduction to ash of the partition. Whatever may have stood on the podium flanking the southern side of the doorway would also appear to have been removed. Whether the towers collapsed into the entranceway during the fire, as the timber framing in the walls burnt away, or whether there was an opportunity to pick through the debris after the fire, is not certain. One pointer might be that while a thick deposit of charred reed thatch lies on parts of the pavement (Fig. 15) there is no sign of the heavy roof beams that would have been required to span the 10m wide passage. This could be taken to suggest that the walls and the charred beams of the roof to some extent held up, their collapse perhaps being precipitated by looting. It does, however, seem that the collapse occurred very soon after the fire, there being no evidence of wash or silting between the layer of semi-burnt reed thatch and the masses of fused and melted walling and fragments of reed impressed clay from the flat tower roofs.

At some later date there was considerable robbing of the Monumental Entrance, and indeed of structures within the Palace Complex that, as earlier excavations have shown, included architraves, thresholds, column bases and cut blocks from both the "Ashlar Building" and the "Audience Hall" as well, doubtless, as other structures in the vicinity. That the bulk of this robbing and seeking after treasure took place in the early Byzantine period is supported by the recovery of a Justinianic coin in near mint condition in 2004 (Fig. 48) and, in 2003, a glass whorl of similar date. One of several intercutting robber pits was found to contain the burial of a young adult, apparently laid out in the partially filled robber pit and summarily covered with stones and earth. Whether all of the robbing took place within a short space of time some 1000 years after the destruction and abandonment of the city, or was carried out on a more piecemeal basis at various periods, has not been established, although the former might be favoured. The first to search for building stone and treasure would have doubtless seen the position of the uppermost surviving sandstone blocks on the South Tower of the Monumental Entrance, as well as stone column bases and cut blocks in the buildings already referred to. The extent of the looting suggests that some item or items of worth were recovered. It may also be surmised that the numerous stone cists of the Hellenistic period tumuli, perhaps of Galatian type, were also emptied at this time.

### **Architectural Reconstruction of the Monumental Entrance**

#### *Phases of Construction*

It has been demonstrated that there are a minimum of four recognisable phases of construction at the eastern end of the Palace Complex. These are:

1. Building of Structure A and its supporting glacis at the base of its northern, eastern and southern sides (shown on the key plan of Fig. 13). The paved way, edged with large stones on its north-eastern side, leading to Structure A (the south-eastern edge of which can be made out in Fig. 14 at top).
2. North-eastern extension to the paving, of inferior workmanship (at the far end of the excavation in Fig. 15 at top).
3. The construction of terraces, Structure B, built on top of the pavement and cut through Structure A (Fig 13).
4. Construction of the Monumental Entrance (Figs 13 and 14).

The stratigraphic, and therefore chronological, relationship between phases 3 and 4 of this scheme, i.e. between the Monumental Entrance and Structure B, is not (yet) known. Further, the precise number of phases in the laying of the stone pavement, as opposed to lines that merely represent working methods, is unclear. However, the alignment of setting lines within the paving (two of which are visible in the middle ground of Fig. 15) makes it highly



probable that all of the paving that lies to the east of the Monumental Entrance (without regard to the number of phases) predates its construction.

It remains to be demonstrated whether a part of the pavement leading up towards Structure A in front of the North Tower of the Monumental Entrance remained clear, or whether the construction of Structure B and associated modifications completely blocked this approach. A related and equally unresolved problem is the architectural form of Structure B. It might seem unlikely, however, that Structure B would have obscured much more than the base of the North Tower of the Monumental Entrance. If this was in fact the case the original height of Structure B would not have been significantly greater than the present re-building, less than 1.5m above the pavement level. In any case, the quantity of fallen stone was such that any walling that may have extended much above the level of reconstruction carried out in 2000 would presumably have been in mud-brick which, given the absence of burnt debris above the southern portion of the paving, seems not to have included significant timber elements. A more complex possibility would be that the construction of the Monumental Entrance also involved a remodelling of Structure B.

Additionally, as reported in previous seasons, the northern side of the glacis was cut through when the long northern wall of the Palace Complex was constructed. At the same time, or sometime thereafter, substantial modifications were made to the area west of Structure A. These included the raising of the ground level on the north, west and south sides of Structure C. It is difficult to assess whether these considerable modifications were made in association with one or two major schemes of improvement, or were of a more piecemeal nature.

### *The Monument*

Whatever the eventual resolution to the complexities of phasing may be, the overall architectural scheme of the Monumental Entrance (Fig. 22) is now emerging. Figure 13 provides a tentative reconstruction of the towered and paved entrance together with an inset key plan that shows the location of the trenches as well as the position of the Entrance in relation to both Structure A and the terraces of Structure B.



*Figure 22. The pavement running to the doorway of the Monumental Entrance marked by the large edge-stones. Burnt debris and ash on the pavement contain evidence for a pitched roof of thatch above the passage. (04dpjv2355)*

The planner or architect was faced with the challenge of designing a monumental device that confronted the problem of transition from a lower, external, elevation to a higher internal one. This objective included the provision of a wide, paved, approach which could be closed and, presumably, securely controlled. This entrance seems to be leading to a large two-roomed building, the 'Audience Hall', with pitched roof supported by two rows of wooden columns with sandstone bases. This building is thought to have been an Audience Hall because of its prominent public position within the so-called "Palace Complex" (Stronach and Summers 2003). It is thought that this designation carries the greatest probability, although there is a dearth of supporting evidence.

The sheer monumentality of the entrance under discussion, together with the huge area of the 'Palace Complex' that would appear to extend westwards for some 280m in a series of ever more discrete sets of buildings or walled terraces, might be thought a more appropriate scheme for secular palatial functions than for primarily religious ones. It can be assumed that the difference in elevation along the passage reflects natural topography and irregular outcrops of granite similar in nature to those that still exist on the slopes beyond the city wall. A 10m wide sloping pavement was laid between flanking towers. The lower portion of each tower, up to a height above that of the external paved area within the Palace Complex appears to be solid. It is likely that the four walls of each tower were built around the outcropping bedrock and the gaps within the base of each tower were filled with stone derived from levelling bedrock in the vicinity.

In plan, the wide entrance is simply flanked by two monumental square towers. In section, the paved passage inclined upwards at a gentle gradient from the forecourt outside to the Audience Hall. Between the towers midway along the entranceway was a massive timber construction that could have been closed with a set of large double leafed doors and which supported the end of the roof over the front half of the passage. This pitched roof, covered with reed thatch, must also have been inclined to match the gradient of the pavement. Whether or not the internal portion of the entrance was also roofed is less certain.

Because of later robbing it is doubtful that sufficient remains exist for the internal plans of the towers to be ascertained. They would presumably have been two storied and have possessed internal staircases leading to an upper floor and thence to the flat roof of reeds and mud on timber rafters, traces of which have been found amongst the burnt debris filling the entranceway.

The front elevation of the entire entrance would have looked nothing short of imposing. The fronts of the towers to either side would have stood no less than 6m. The lower portions, 2m or more in height, would have been of granite capped by contrasting sandstone, above which walling comprising a timber frame and mud-plastered rubble would have continued to rise. The entire structure was interlaced with large timbers. There may have been some use of paint. Huge timbers, the joints of which were strengthened with iron cramps, were supported by timber columns on either side, the sandstone bases for which indicate diameters of 1m. It is likely that the front pediment was adorned by a central tree of life flanked by rampant ibex. The lower halves of these animals, cut from sheet bronze, indicate that they approached three-quarter life-size. They would probably have been embellished with horns of gold, and perhaps with wings of precious metal.

As to the position of the doors, the existence of which would seem to be attested by the remains of two long iron strips with holes pierced to accommodate large dome-headed nails, it is not implausible that their fixture was associated with the straight end of the stone paving in the centre of the passage towards the upper, western, end of Trench TR11. It is possible that the 10m wide passage was restricted in some way at this point. Because of the slope of the pavement any doors in this position would, of necessity, have opened outwards. It is reasonable to assume that there were large double-leaved doors of wood, and that the two iron strips recovered in 2003, the larger of which is some 2m in length, and the large dome-headed nails with which it was affixed, came from the doors. In this case it might easily be imagined



that the doors themselves were constructed from horizontal planks, in similar manner to the Balawat Gates, and that the larger iron strip ran vertically down the outer edge so as to hold the planks in position. It is to be hoped that the door sockets will yet be discovered, although they are likely to have been a target of the robbers.

Beyond the central screen and doors a room was constructed on the northern side of the entrance, against, presumably, the southern wall of the North Tower. This structure, which had a clay floor and an external bin appended to its eastern side, was devoid of internal features and objects.

## **Architectural Parallels and Chronological Implications**

### *Freestanding Buildings and Pitched Roofs*

Pitched roofs do not have Bronze Age antecedents on the central plateau of Anatolia. Their presence at Kerkenes, together with the tradition of freestanding two-roomed buildings would seem, therefore, to indicate the importation of new architectural concepts. The monumentality of both the Entrance to the Palace Complex and the columned halls suggests that origins should perhaps be sought in the west rather than, for instance, in the Pontic region.

### *Parallels for Clamps*

No evidence for the use of clamps has been reported on the Anatolian Plateau (e.g. Boğazköy, the city mound and tumuli at Gordion or the Phrygian Highlands) before the Hellenistic period. Their earliest known use in the Aegean is apparently in the tomb of Alyattes at Sardis, dated to the first half of the sixth century BC. The use of clamps at Kerkenes would, then, indicate their introduction from outside, plausibly from the west or southwest, carrying with it the implication that foreign craftsmen might have been drafted in.

### *Parallels for Bolsters*

Close parallels to the smaller bolsters are found in architectural terracotta elements from Pazarlı (Koşay 1941, Pls XXXIII top, XL, LX) now on display in the Museum of Anatolian Civilisations at Ankara. The ends of these bolsters, however, carry painted designs rather than concentric circles. Mahmut Akok's brilliant reconstruction of the tiled façade with its grilled window represents only one possible way in which these architectural terracotta elements might have been used. Yet closer parallels for the smaller bolsters and their arrangement can be seen on the rock-cut monument known as Bahşayış, at Gökbağçe in the Phrygian Highlands (Berndt-Ersöz 2003 no. 28, 280-81 and fig 32, also 137 and 141; Sivas 1999 71-79, 241 tablo Vb, lev. 30-41). The arrangement of bolsters on the Bahşayış monument, where they are depicted on the sides and the front of the king post as well as on corners of the façade, while perhaps somewhat fanciful does indicate a variety of possible arrangements for the pieces found at Kerkenes. Larger but not dissimilar elements, also with concentric circles on the ends, protrude above the niche on the rock-cut façade of Mal Taş in the Köhnüş valley (Berndt-Ersöz 2003, no. 24). Unfortunately these are no longer visible. Similar bolsters appear on the shoulder of the aniconic stele in the Cappadocia Gate (see Fig. 40) with a close parallel from Tumulus B at Gordion (Kohler 1995, TumB 17). Bolsters may also be echoed on the silver foil disk (Figs 1 and 46).

The use of architectural bolsters at Kerkenes represents yet another clear instance of the importation of building practices from the western plateau. There are, in addition, important chronological implications. All that need be said here, however, is that these western parallels are entirely consistent with a date for the construction of the Monumental Entrance to the Palace complex at Kerkenes in the first half of the sixth century. Precise chronology of the Mal Taş and Bahşayış monuments is a matter of discussion, but the parallels with Kerkenes confirm a sixth century date.