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Chapter 4
The Brick Temples in Trench A

This chapter describes the excavation of the two Early Hindu brick temples in Trench A. These two temples were the focus of two key research objectives of the second stage of the project. The first was to take advantage of this rare opportunity to gain an understanding of the way in which Early Hindu brick temples such as these were laid out and constructed and to see whether they underwent any significant alterations to their plans or superstructures throughout their period of use. The second was to investigate the context of the construction and use of the two temples in relation to the stratigraphic history of the site, including the environmental and economic developments recorded in the adjoining excavated sequence. It was hoped that the answers to these questions would provide new insights into the changing nature of the relationship between religion, society and economy through this crucial period in India's history.

Most of the known temples of this early period are presented in the literature as complete and finished buildings that were planned and constructed exactly as they now are (e.g. Meister *et al*. 1988: 36–37). In fact, it is quite possible – even probable – that in many cases, these buildings underwent quite complex architectural developments through a number of phases of enlargement, alteration and adaptation. It is impossible to know, however, whether this is the case or not as very few Early Hindu temples have been excavated, recorded and analysed anywhere in India to the necessary level of detail. This is because relatively few temples remain, and many that do are still largely complete buildings, meaning that it is impossible to gain insights into the nature of their construction and into how their architectural layout might have changed through time. By contrast, the two Paithan temples had already been badly damaged by ancient brick robbing and the digging of foundation trenches for later Medieval buildings. For all the damage they have caused, these disturbances do provide some crucial 'windows' into the core of the structures, and it is these which have allowed the elucidation of the details of the construction and the architectural phases through which each of the temples passed. In addition, because the temples are no longer in use, it was possible to excavate soundings underneath the floor levels and up against the exterior walls, thereby gaining evidence for changing floor levels and the nature of the foundations that were put down during the temples' construction.

The archaeological techniques of meticulous, brick-by-brick recording and detailed, single-context excavation and planning used at Paithan provide crucial evidence which helps to elucidate the complex architectural development of the two temples. Although there are inevitably still many points of uncertainty, it will be seen that the work has provided numerous insights into their architectural development. These insights are unique and important; they not only are relevant to the history of the Paithan temples but also provide information that will improve our understanding of the development of the Early Hindu temple more generally. This is because these two structures, rather than being grand architectural projects and the focus of royal patronage, appear to have been modest buildings, typical of many thousands of such temples that must have been in use right across northern India at this time. Most importantly, it will be seen that the two temples were not static, but that they were dynamic structures that underwent constant and, in some cases, fairly major changes and alterations, changes that must have reflected the changing nature of temple practice as well as the requirements of the community that used them. The excavations have also served to illustrate the distinctive nature of the temples' physical construction and have provided a unique insight into the sophisticated nature of the foundations that were laid down underneath the two structures.

By necessity, this chapter goes into considerable archaeological detail in describing the temples' construction and the results of the excavations in words, drawings and photographs. For ease of use, the chapter is divided into two sections: the first gives a detailed description and overview of the development of each of the temples, and the second provides summaries of the excavated trenches that were written up by the individual excavators at the end of the fieldwork seasons;

it is envisaged that these reports will be of interest only to those with specific questions about the details of the excavation. In addition, Table 4.4 provides details of each of the 36 principal walls that were recorded. Reference is also made to Appendix I, where all the layers ('contexts') recorded by the excavation project are listed and described. Meanwhile, Chapter 14 presents further discussion of the context and significance of the two temples.

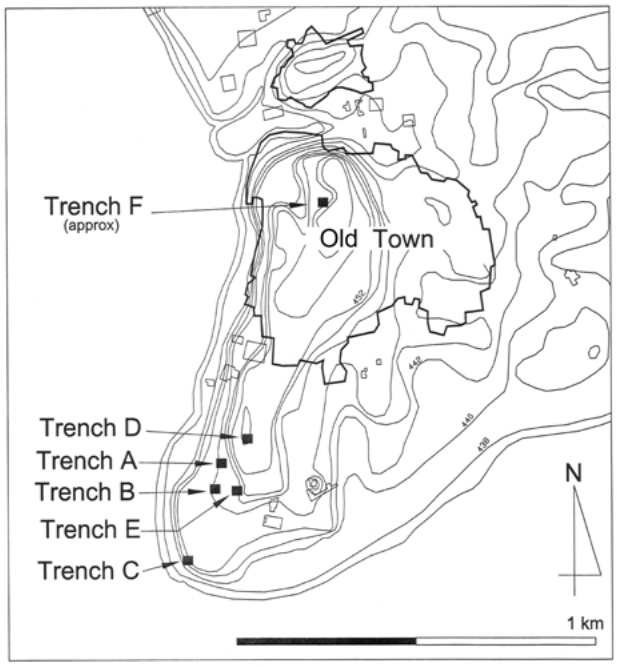

Fig. 4.1: Plan showing the central mound at Paithan and the location of the main trenches. Note that the trenches are not shown to scale in this plan.

Section 1: Trench A, The Brick Temples

Trench A was opened in the 1997 season in the remains of one of the larger of the four trenches that had been excavated by Syed Yusuf in 1937. It is located towards the northern extent of the area now administered by the ASI, close to the top of the steep slopes that drop down to the Godavari (Figs 4.1–4.3). Plates I and II in Yusuf's 1938 report appear to show the early stages of the excavation of this trench.

The photographs that Yusuf published of the same trench at the end of excavation suggest that the two brick structures that he uncovered at the lowest level of excavation were two early temples (Yusuf 1938: pl. V; 1939: pls XVb, XVIa, XVII a–b) (Fig. 4.4). As they were still visible in 1997, it was decided to clean, record and study what appeared to be two potentially very interesting and important monuments. The information published by Yusuf on the two temples was restricted to the two black-and-white photographs mentioned above, plus a brief paragraph containing a few details on brick sizes and construction (Yusuf 1938: 4; 1939: 41).

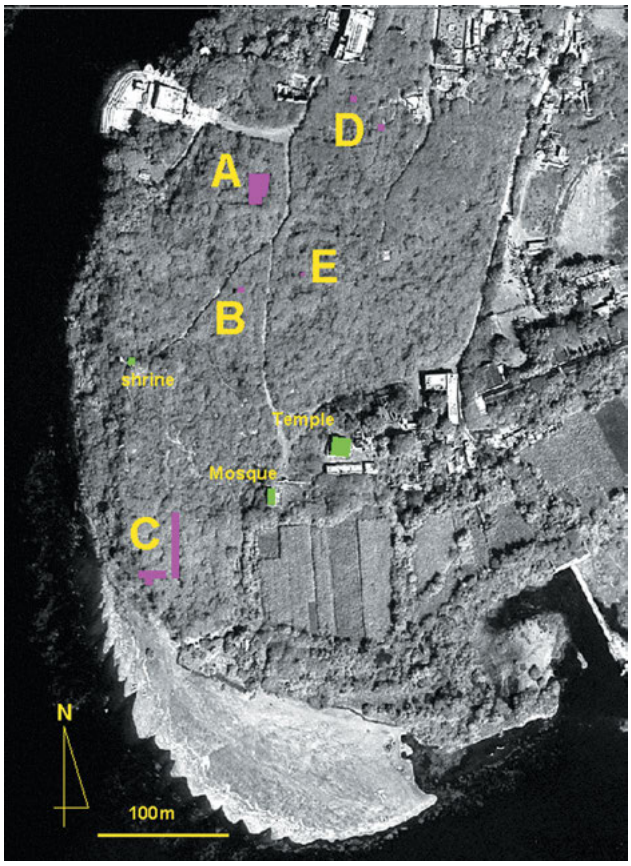

Fig. 4.2: Satellite image of the ASI protected area showing the location of the trenches.

Yusuf's trench originally measured about 30 metres along each side, with supplementary trenches going off to the south-west and the north-east, whereas Trench A of the present excavations was restricted to an irregularly shaped area with maximum dimensions of 23 m north-south and 15 m east-west centred around the two temples (Fig. 4.5).

In the 1998 season, the two temples were carefully cleaned (Fig. 4.6). Brick-by-brick plans and elevations were made of both of them at a scale of 1:20 using an archaeological drawing frame. The temples were photographed and studied in detail and a preliminary architectural phasing was worked out. In the 1999

Fig. 4.3: View of Trench A from the south-west at the end of the 1998 season.

Fig. 4.4: Yusuf's photograph of the 1937 excavations showing the two brick temples from the south (from Yusuf 1938: pl. v; 1939: pl. XVIIb).

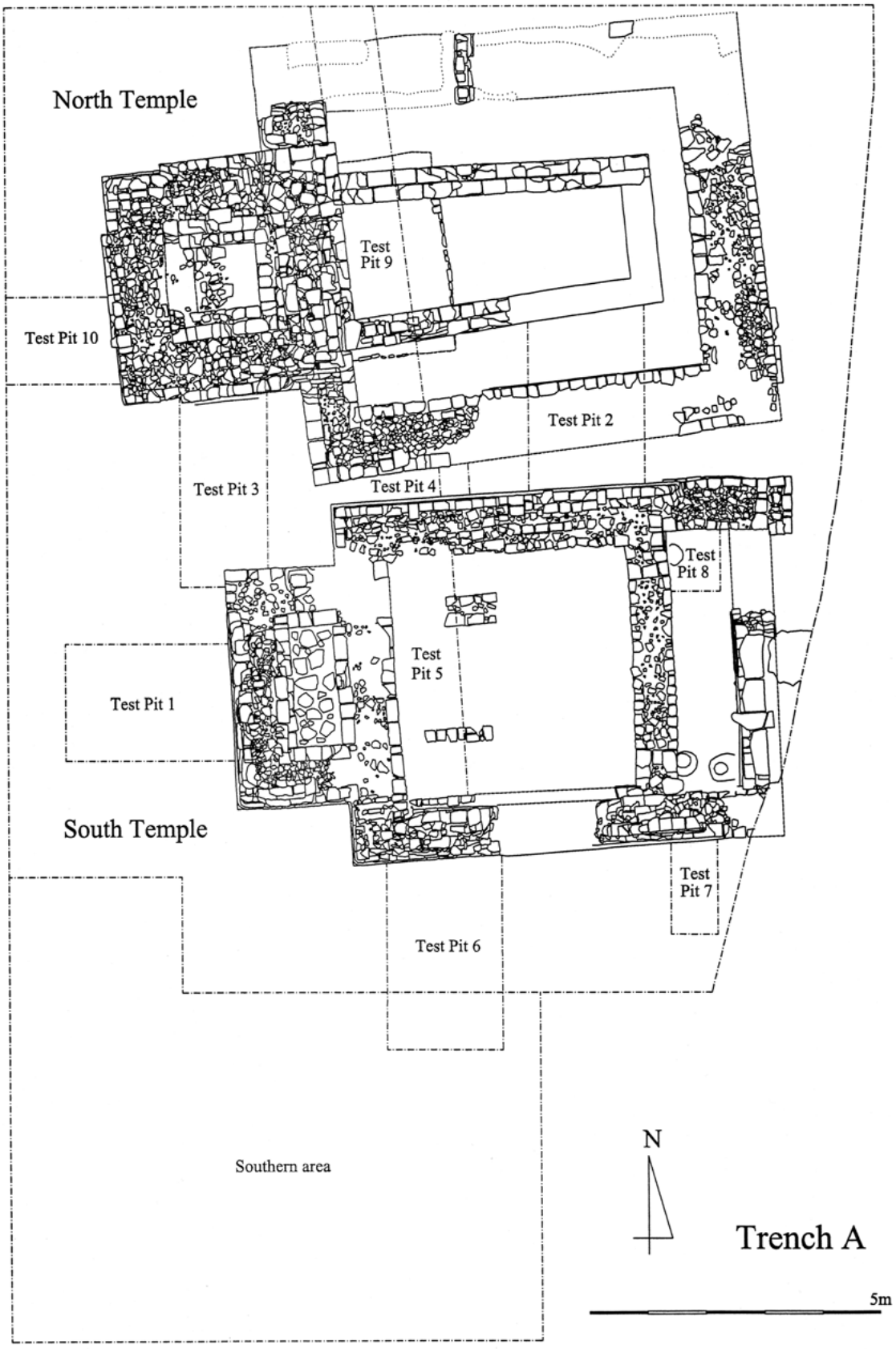

Fig. 4.5: Plan of Trench A showing the location of test pits and excavation areas.

season, efforts were directed towards excavation of 10 test pits in and around the structures together with some limited area-excavations adjacent to them. These soundings had numerous aims: the first was to elucidate details of the foundations and construction of the temples as well as to clarify any remaining uncertainties relating to the structural history of the two buildings; the second was to locate the temples within a stratified occupation sequence; and the third was to establish the nature and date of the pre-temple occupation in this part of the site. A brief report setting out the main findings of the excavations in Trench A has already been published (Kennet and Rao 2003).

Table 4.1: List of test pits and areas excavated in Trench A (see Section 2 of this chapter).

Area Code/Test Pit	Description
NWNT	Layers related to the robbing of the north wall of the North Temple.
EEST	Eastern end of the South Temple east of wall 344.
W Area	West of the North Temple.
South or Southern Area	An area 9 m × 6 to 8 m in the south of Trench A.
GG North	The *garbhagriha* of the North Temple.
S Wall of N	Limited excavation on the robbed-out south wall of the North Temple (later TP2).
S of S Temple	The area immediately to the south of the South Temple (later TP6).
TP1	To west of the South Temple to investigate stratigraphic sequence against and below temple.
TP2	To south of North Temple to investigate robbed out southern wall and possible stratigraphic relationship between temples (originally 'S Wall of N').
TP3	Between outer walls of *garbhagrihas* of both temples to investigate stratigraphic relationship between temples.
TP4	Between remaining walls of both temples to investigate stratigraphic relationship.
TP5	Across the interior of the *mandapa* of the South Temple to investigate flooring, wall construction and foundation deposits.
TP6	To south of South Temple to investigate deposition history in this area (originally 'S of S Temple').
TP7	Against the southern wall of the South Temple at east end to investigate the development of wall and foundations.
TP8	Inside the east end of the South Temple to investigate the relationship between walls.
TP9	Across the interior of the *mandapa* of the North Temple to investigate the succession of shrines, flooring, wall construction and foundation deposits.
TP10	To the western end of the North Temple to investigate stratigraphic accumulation against the temple wall.

Much of the work of the present project involved recording and removing layers that had been deposited since the temples went out of use. These can be divided into three groups: those resulting from the ancient collapse and robbing of the temple structures; those resulting from Yusuf's 1937 excavations or from the restoration of the temples that was carried out by the ASI in 1967; and deposits that have accumulated naturally over the structures since 1967.

One of the biggest problems faced by the present excavation was to distinguish between layers and other features that are a part of the temples' ancient history and those resulting more from the recent excavations and restoration. As far as the present authors are aware, no detailed documentation of either Yusuf's work or the 1967 restoration exists. Yusuf's work, particularly, removed almost all information relating to the later phases of use and abandonment of the temples. One especially significant problem is what at first appeared to be drainage ditches or wall-chasing trenches that had been excavated along the base of the outer walls of the temples, probably by Yusuf. These effectively sever

any stratigraphic connection between the foundation cuts of the temples and the uppermost layers through which they were cut, making it impossible to know precisely from which level the temples were constructed.

The two temples are referred to in this report as the 'North Temple' and the 'South Temple'. The locations of the test pits in Trench A are shown in Fig. 4.5, whilst the area-excavations and test-pits referred to in the text are listed in Table 4.1.

Descriptions of the two temples and their phasing are presented first, followed by more detailed field reports from the test pits and area-excavations in Section 2 of this chapter. Detailed descriptions of the principal walls are presented in numerical order in Table 4.4. Within the text, reference is made to the context numbers allocated to each of the layers, walls, cuts and features defined during excavation; a list of these can be found in Appendix I.

Fig. 4.6: General view of the temples from the north at the end of the 1998 season.

The North Temple

The North Temple consists of a square sanctum with a tapering *mandapa* attached to its eastern side (Figs 4.7 and 4.8). The *mandapa* is subdivided by an internal wall which abuts the eastern face of the sanctum and forms a narrow passageway between itself and the *mandapa* wall. The maximum dimensions of the whole structure are 11.30 m east-west and 7.64 m north-south. Full dimensions are given in Fig. 4.9. Although Yusuf states that a feature of both of these structures is that they were placed 'in strict regard to cardinal points' (Yusuf 1938: 4; 1939: 41), in fact each is on a slightly different orientation that, in the case of the North Temple, is just under five degrees south of magnetic west (265° measured with a prismatic compass in February 1998).

The temple is built entirely of fired bricks and mud mortar. In a few places, traces of lime mortar are present, but these are almost certainly the result of the 1967 restoration mentioned above. This is confirmed by Yusuf's statement that no mortar was found on either of the buildings in 1937 (Yusuf 1938: 4, 1939: 41). The state of preservation is variable; in some places, the walls are preserved to a height of 1.6 m, whilst in others, such as the north wall and parts of

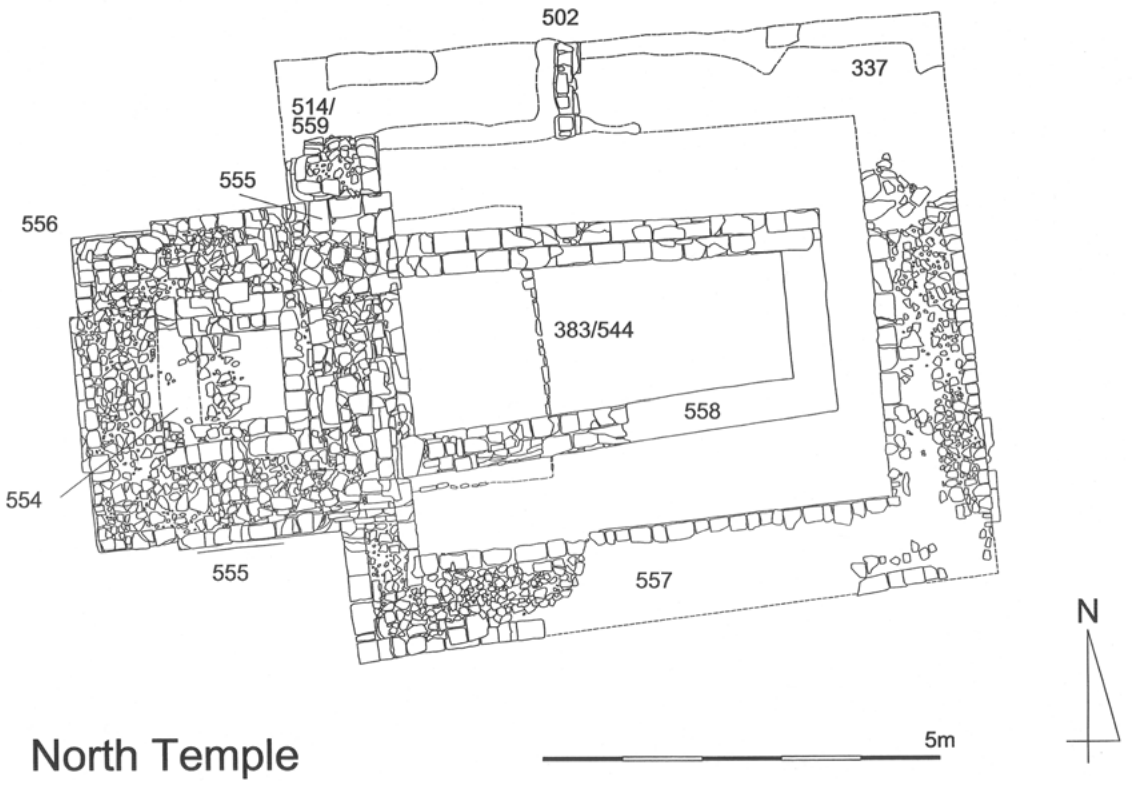

Fig. 4.7: Plan of the North Temple showing the locations of the main walls.

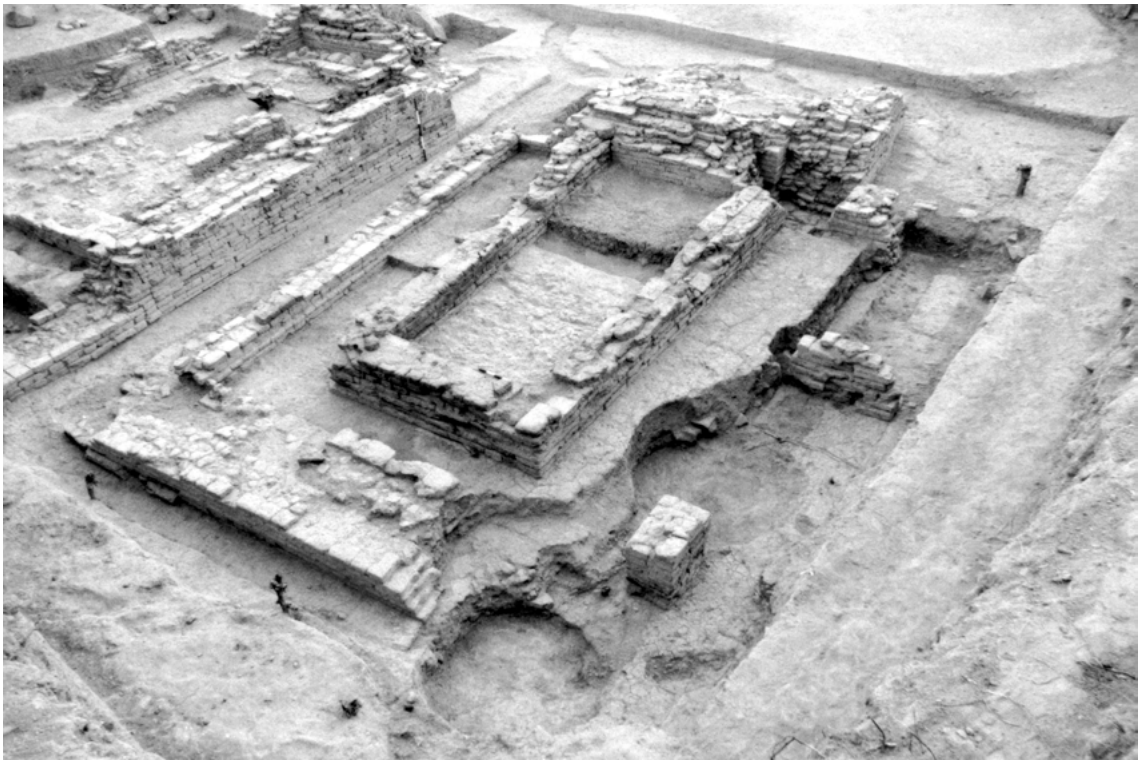

Fig. 4.8: The North Temple from the north-east.

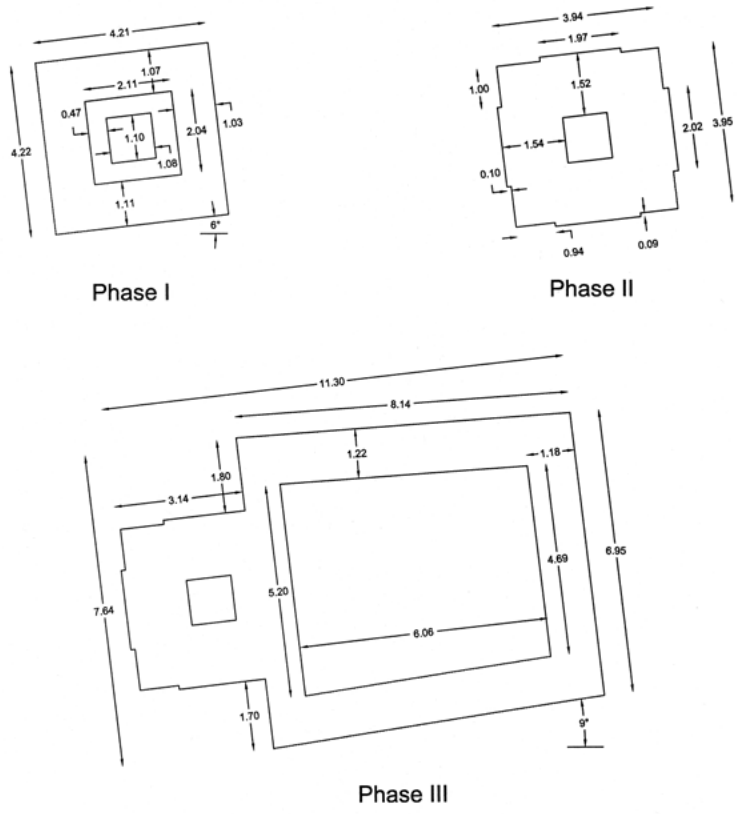

Fig. 4.9: Dimensions of the North Temple.

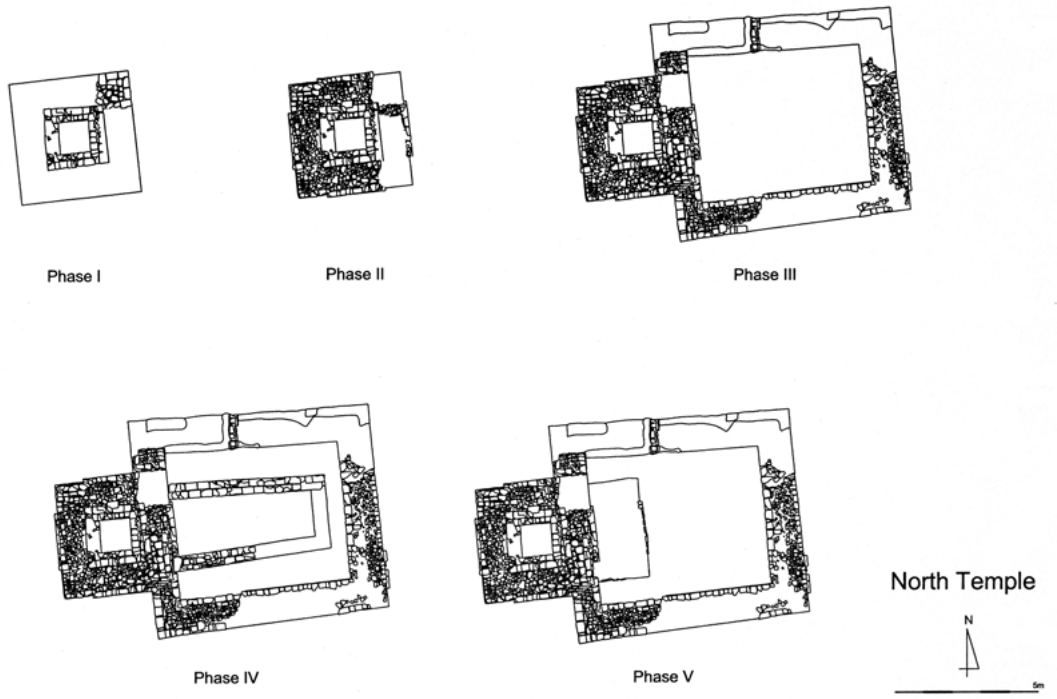

Fig. 4.10: Phases of the North Temple.

Fig. 4.11: The west end of the North Temple from the west.

the south wall of the *mandapa*, they have been completely removed by brick robbers and by pits and construction cuts from overlying occupation levels.

Five distinct phases of development can be discerned in the temple: Phases I to V (Fig. 4.10), and these are each described below.

Phase I

The earliest phase consists of a small square shrine (wall 554) measuring about 2 m along each side, which is situated in the centre of a square brick platform (walls 555, 969) that was 0.55 m high and 4.2 m along each side (Fig. 4.11). The original height of the shrine is unknown as only 20 courses of the wall are preserved and no indications remain of the way in which it was roofed. In fact not very much of the structure is now visible as it is largely concealed by the thick Phase II wall (556) that was built on top of it. A later pit (341), however, has cut into the north-east corner of the Phase II wall and has exposed the construction of the Phase I shrine and platform. In addition, excavation of the fill of the *garbhagriha* and the levels below it has exposed the foundations of the shrine, as has Test Pit 3 that was excavated against the south wall of the platform (see TP3 in Section 2 of this chapter). These insights provide enough information to compile the schematic section through the shrine and platform that is shown in Fig. 4.12.

The foundations of the shrine are of considerable interest. Before construction began, a large and probably square hole was excavated, measuring just over 6 m wide at the base and about 30 cm less at the top due to the fact that the sides slope inwards. The original depth of the hole was probably around 1.5 m, although Yusuf's excavations have removed any precise indication of the level from which the foundations were cut. The cut was deep enough to cut through all underlying layers containing anthropogenic deposits and to reach undisturbed natural soil.

The eastern and western limits of the foundations were not exposed, so it is impossible to be certain of the precise shape and size of the foundation trench. On the north side, the cut was exposed by Test Pit 9, where it has been shown to be 1.64 m from the corner of the platform (wall 969). This is more than twice the 80 cm distance on the southern side as exposed in Test Pit 3. The reason for this difference is not clear, but it may be that the cut had a different shape on the north

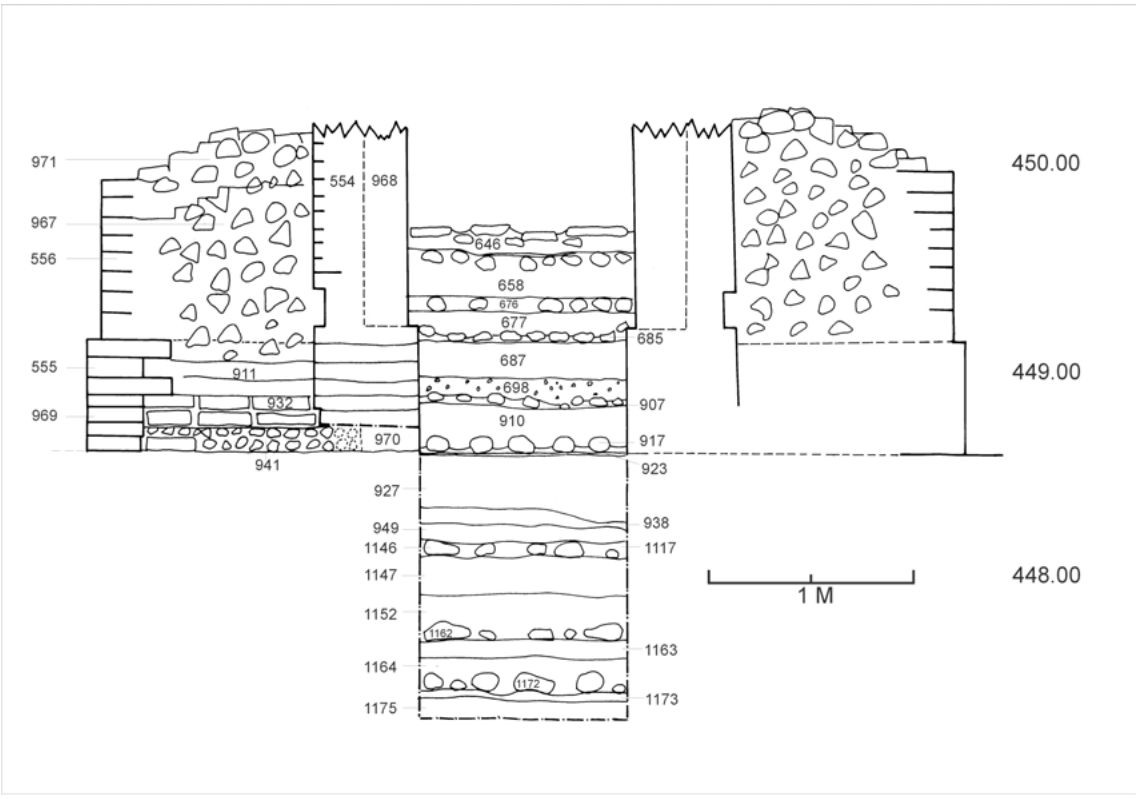

Fig. 4.12: Schematic section through the *garbhagriha* of the North Temple from the north.

side. Another possibility is that the foundation cut broadened out towards the east to incorporate a porch or *mandapa* that was attached to the original shrine and platform. It will be noted that the section line of Test Pit 9 is 1.5 m further east than the section in Test Pit 3. No evidence of any such structure has yet come to light, however. Unfortunately, time did not allow deeper excavation of Test Pit 9, which would certainly have clarified the shape of the Phase I foundation cut.

The foundation trench was then systematically filled with layers of subrounded cobbles and small boulders of igneous rock, on average 20 to 30 cm in size, in a matrix of loose silt alternating with layers of more compact silt. Some of these layers contained fragments of bricks and pottery and charcoal flecks, but on the whole, the anthropogenic content was lower than would be expected in a redeposited layer from an archaeological site, suggesting that the earth was excavated some distance away from any focus of occupation.

The surface of the topmost compact silty layer (927) preserves a shallow rectangular depression about 50 cm × 40 cm and less than 1 cm deep that is situated just towards the south-east corner of the *garbhagriha*. It seems as if something heavy must once have stood here, although this is more likely to have been during the construction of the temple than during its use, as this feature it is overlain by a brick-jelly layer (923) that underlies the walls of the *garbhagriha*. The foundation levels were then covered with the layer of brick-jelly (923), 3 cm thick, and it is onto this that the platform and shrine walls were built.

Construction probably began with the lowest two courses of wall 554 (labelled 970) where the solid brick wall is thinner than it is above and the lowest courses of wall 555 (labelled 969) (Fig. 4.12). Once these walls were in place, loose rubble made up of silt, stone and brick (941) was deposited in between them and flattened. The upper part of wall 554 was then constructed, against which a two-course brick surface (932) was put down on top of 941. It is possible that construction of the platform stopped at this point, at which time it would have been about 30 cm high, and that the upper part of wall 555 and the related fill (911) represent a later phase of construction. Alternatively, it is possible that the platform was simply built in two stages. The top of 911 was destroyed by the cut of the pit

that exposed it, so it is not possible to say how regular its upper brick surface was.

The bricks used in this phase measure, on average, 7 × 25 × 40 cm and are soft-fired and an orange or red colour.

Fig. 4.13: The Phase I structure of the North Temple showing wall 554 and the simple 'Ramtek-like' moulding exposed in a post-Medieval pit cut.

Wall 554, the wall of the central shrine or *garbhagriha*, presents two notable features. Firstly, the wall is two-bricks wide until the eighth course, at which point it thins to a single brick width, leaving a 26-cm-wide ledge on the interior that was later filled by wall 968, which, to judge by the bricks used, is of a much later date. At the same height, there is a simple two-brick-high recess running around the exterior of the shrine, which is 5 cm deep on the northern face and 2 cm deep on the eastern face (Figs 4.13 and 4.15). A decorative feature such as this almost certainly indicates that this wall was intended as a free-standing structure, although the outer surfaces of the bricks show no traces of weathering. This simple recess may represent an early stage in the development of *adhisthana* mouldings. It seems to be most closely paralleled at Ramtek, where, on the Kevala-Narasimha temple at least, it seems to be datable to the 5th century (Meister *et al*. 1988: fig. 30). This point is further discussed below.

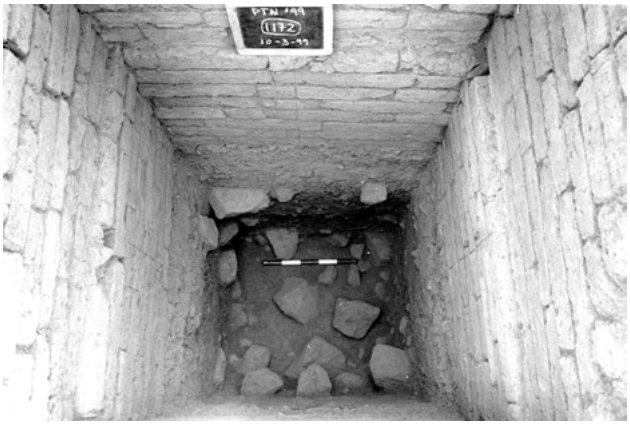

Fig. 4.14: The *garbhagriha* of the North Temple after excavation to the lowest foundation fill of boulders. Note the vertical incised lines in the middle of each wall beneath the level of the blackboard.

Shrine 554 measures 2.11 m east-west and 2.04 m north-south on the exterior whilst the interior space measures 1.08 m east-west and 1.10 m north-south. It still stands to a height of about 20 courses, although it must originally have stood much higher.

Once the shrine had been constructed, two thin lines were incised into the brick-jelly floor (923) of the *garbhagriha* interior, one crossing the centre of the *garbhagriha* between the middle of the north and south walls and the other, similarly, between the middle of the east and west walls, the two lines crossing in the centre of the chamber. The incised lines continue vertically up the middle of the walls to the eighth course (Fig. 4.14). The function of these lines is not clear, but they may have been related to the layout and definition of the sacred geometry of the temple.

The brick-jelly surface and incised lines were then covered with further fills within the *garbhagriha* consisting, once again, of alternating layers of stones and compact and loose silt at least up to the level of the eighth course of the wall. The stones used in these levels are somewhat smaller than those used in the lower foundations. These fills were probably intended as a base for the original floor of the shrine, but they may have been deposited at a much later date; it is impossible to be certain. There is certainly no evidence of floor surfaces

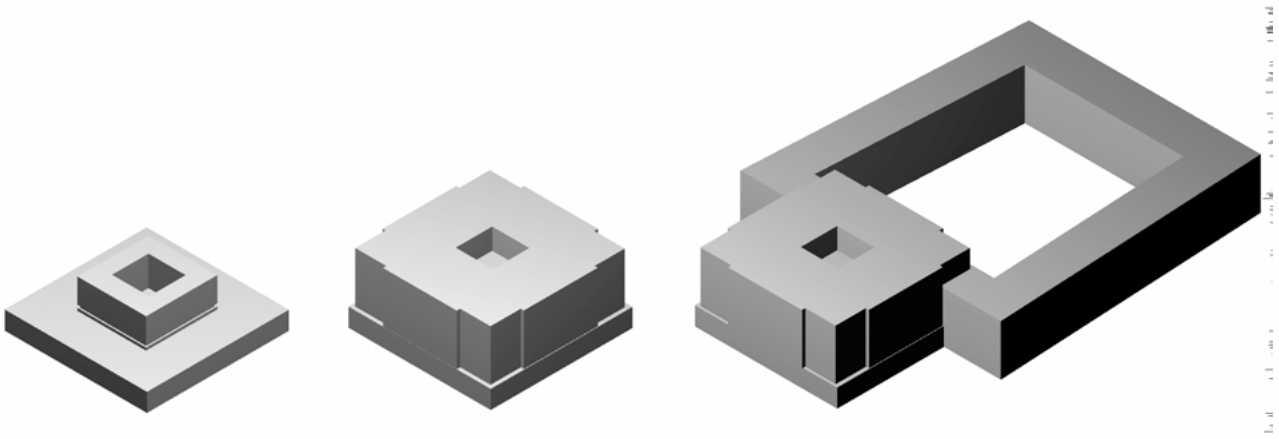

Fig. 4.15: Isometric reconstruction of Phases I, II and III of the North Temple from the south-west.

below this point – the brick-jelly surface 923 being too friable to have served as a floor. Above the eighth course of the wall, further stone/silt fills continue to about the 12th or 13th course, but these abut wall 968 and are therefore of a much later date.

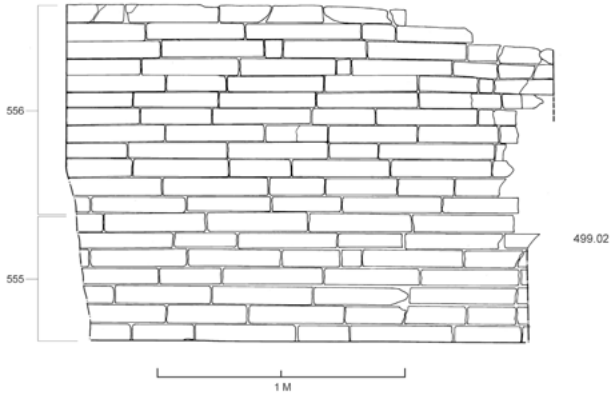

Fig. 4.16: Elevation of walls 555 and 556.

Having described the Phase I shrine, two key questions emerge. The first is from which direction was the original shrine entered? It is impossible to answer this question with any certainty because so little of the upper part of wall 554 is visible. Clearly, there was no opening in any direction below the eighth course of the wall as all four walls are clearly intact and interbonded up to this level. Above this, it seems that all four faces of the wall stand to at least about the 16th course, but it is impossible to be certain because, as has been mentioned, the inner face of the wall is concealed by later wall 968 above this point and the outer faces are concealed by the later Phase II wall. These later walls may conceal an original opening in the

Fig. 4.17: The robbing on the north side of the North Temple from the east.

garbhagriha that was subsequently sealed. Above this level, the *garbhagriha* may have been open to the west,

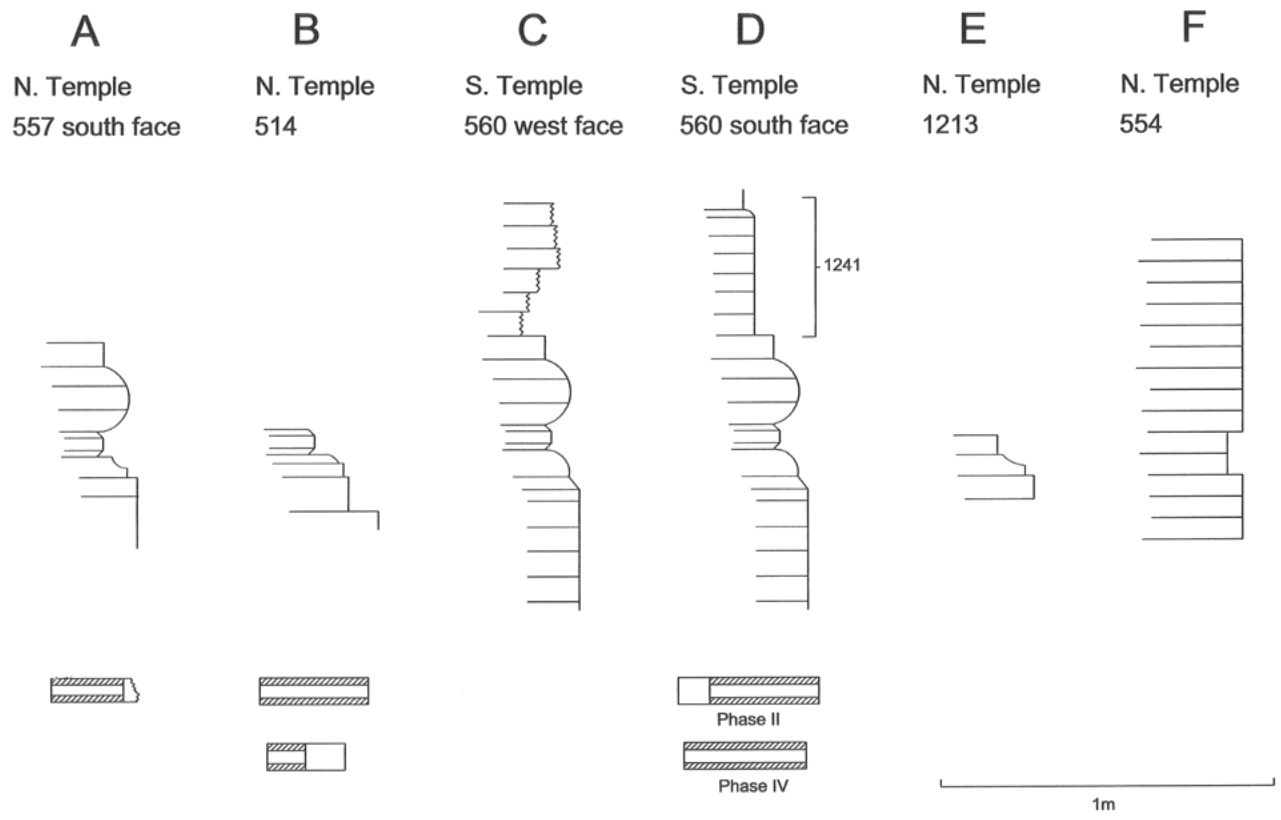

Fig. 4.18: Details of plinth mouldings from various walls from both the North and South Temples.

where the wall is now four of five courses lower than it is on the other three sides. It may also have been open to the east from a few courses higher, but the western wall of the Phase III *mandapa* stands to at least this height, demonstrating that there was clearly no communication between the *mandapa* and the *garbhagriha* at the time the *mandapa* was constructed. It is possible, although rather unlikely, that this Phase III wall may conceal an earlier opening to the east that was closed during Phase III or before (see discussion below under Phase III). So, although it therefore seems likely that the entrance to the *garbhagriha* was from the west, it is not possible to be certain of this. It is, however, possible to be certain that the floor level of the shrine would have been between 60 cm and 1 m higher than the ground surface surrounding the temple.

The second question regards whether or not there were two phases of construction in the Phase I platform (walls 969 and 555) or do these walls and their associated fills simply represent two stages in the construction of a single-phase platform. Unfortunately, it is impossible to answer this question without dismantling the whole shrine and it must therefore remain unanswered.

Phase II

Phase II represents the construction of a structure (556) directly upon the Phase I platform, encasing the free-standing *garbhagriha*. The resulting construction is square, about 4.2 m along each side, with a *triratha* pattern of 10-cm projections along the central two metres of each face (Figs 4.7, 4.9, 4.11, 4.15). The wall is one-brick thick and stands on the outer edge of the Phase I platform. The space between this wall and the wall of the Phase I *garbhagriha* is filled with a thick hearting of roughly coursed brick bats and silt, resulting in a wall with a total thickness of about 1.5 m. Up to 13 courses of the wall are preserved on the south face, the lowest course being a levelling course resting directly upon the Phase I platform, some of the bricks of which have been thinned in order to establish a level base. There is evidence of a later rebuilding in the upper courses of the wall, which is discussed below (see 'Later use and robbing').

The jointing of wall 556 is a little finer than that of the Phase I walls 554 and 555, the courses of fine silt measuring around 0.5 cm. The eastern face is well preserved, showing a pattern of predominantly stretchers (Fig.

4.16). There is a small offset of around 6 cm between the top of wall 555 and the base of 556. There also appears to be a slight difference in orientation of about 0º 43' between the two structures.

The bricks used in this phase are very similar in feel and firing to those used in Phase I, measuring, on average, 7 × 25 × 40 cm.

Phase II effectively represents the encasing of the Phase I *garbhagriha* and platform within a more substantial and elaborate *mulaprasada*, which continued to be free-standing and unattached to a *mandapa* so far as it is possible to tell. There is no indication of the nature of the roof, although the massive walls were possibly intended to support a fairly substantial superstructure such as a brick *shikhara*. Indeed, the completed temple may not have been dissimilar at this time to the well-known brick temple at Bhitargaon (Meister *et al*. 1988: 36–37), although, of course, on a much more modest scale.

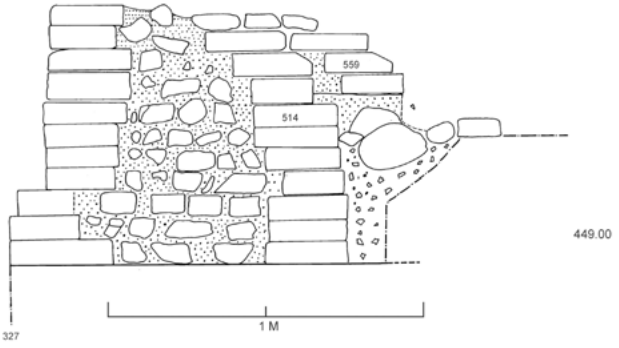

Fig. 4.19: East-west section through wall 514 showing extra face 559/1213.

The Phase II structure presents two questions, both quite similar to those posed by the Phase I shrine. The first is the question of the entrance to the shrine. As has been stated above, there is absolutely no sign within the fine brickwork of the eastern face of wall 556 that there could once have been an entrance in that wall. It must therefore be assumed that the entrance to the Phase II shrine was from the west (e.g. towards the river) in this phase.

The second question is whether the Phase I structure was ever actually used as a shrine or temple, or whether it simply represents a stage in the construction of the Phase II structure. It is difficult to be certain, but the absence of any inter-bonding between walls of the two phases, the slight difference in alignment and the difference in the quality of the brickwork and jointing all strongly suggest that the two phases are actually quite separate and that Phase I was a free-standing shrine for a period of time before Phase II was constructed.

Phase III

Phase III represents the addition of a substantial *mandapa* to the east of the Phase II shrine. The *mandapa* consists of a brick wall (557), 1.22 m thick, in the shape of a tapered rectangle enclosing an internal area that measures 5.20 m north-south at its widest point and 6.06 m east-west.

Wall 557 is preserved only in a few places. On the north side, it was removed by robbing, leaving only two stumps standing (502 and 514) (Fig. 4.17). The exact location of the original wall is, however, discernible due to the preservation of the lowest course of mud mortar in the bottom of the robber cut. At the east end, the wall has not been robbed but it has been damaged and partly concealed by later rebuilding and restoration. Along the south side, most of the south face of the wall has also been removed by robbing so that only two stretches of the original outer face are preserved. At the west end of the south side, where the wall abuts the Phase II structure, the wall is better preserved and stands a maximum of 11 courses high.

In this same south-west corner of the *mandapa*, a 24-cm-long section of *adhisthana* mouldings is preserved. The moulding is very similar to the better-preserved mouldings of Phase II/IV of the South Temple (Fig. 4.18A). A short section of the same moulding is also preserved on the small surviving section of the wall on the north side (514; Figs 4.18B and 4.19), suggesting that these are the remains of the original *mandapa* mouldings.

As can be seen in Fig. 4.19, a crude later facing (559) was added to wall 514 which included similar mouldings at the same height, although the base of the facing is much higher than the base of the original wall. This represents a later thickening of the wall to the west, the reason for which is not known. This part of the wall has had its stratigraphic relationships removed by robbing and later excavation, making it impossible to understand the circumstances or date of this development. There is no evidence for a similar thickening anywhere else on the wall.

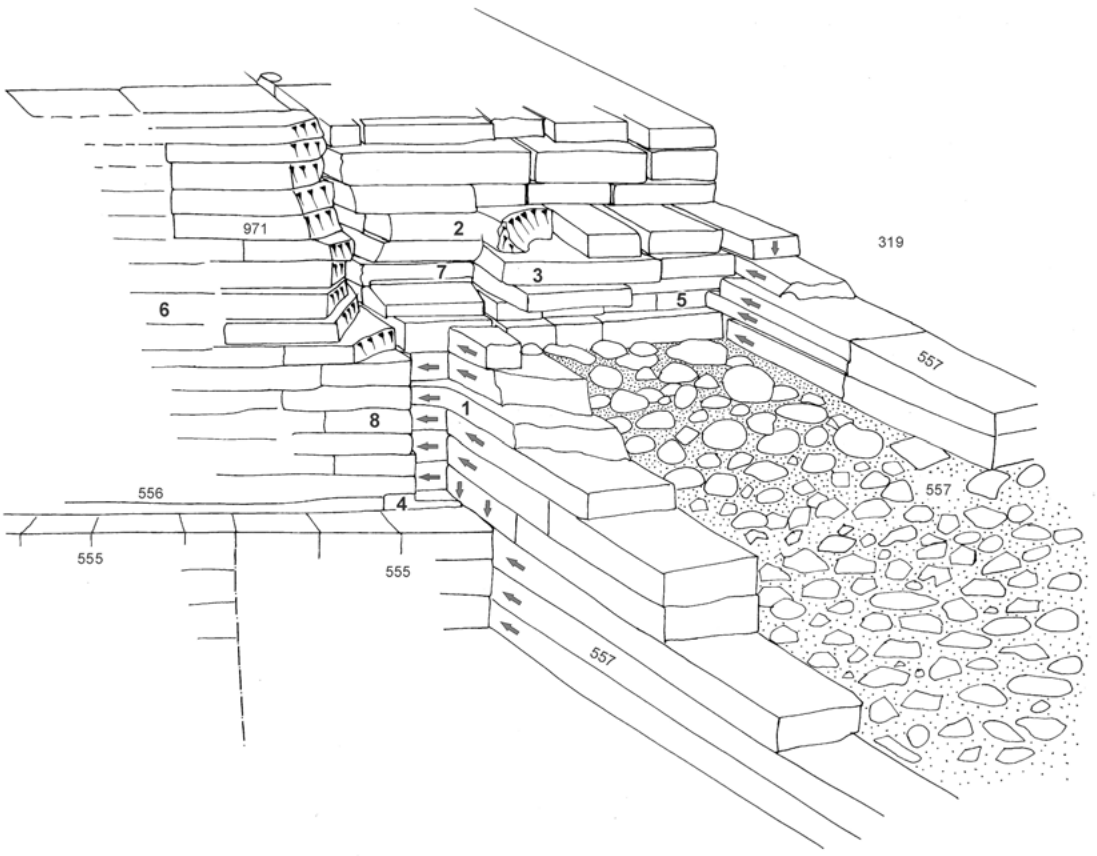

Fig. 4.20: Sketch of the joint between walls 556 and 557 at the southwest corner of the North Temple from the south-west. Arrows indicate where a brick abuts another.

1. This irregular 'T' or 'L' shaped brick with a curved corner protrudes from the west face of 557 and abuts the *triratha* offset of wall 556, the curve of the brick protruding out above the right-angled corner made by the lower three courses of 557 that abut 556 and sit on top of it. Is this simply poor finishing suggesting that these courses were originally below ground?
2. Although broken, this brick, in the middle of the curved moulding, is 'L' shaped, suggesting that it turned the corner from the south face to the west face. It is too broken to be certain.
3. Here, three bricks seem to make up a short section of the western face of the wall, which the moulding courses now abut (e.g. (7) and above). There is no suggestion of the mouldings turning to the west face of 557 here, but it is not clear how this would have been organized. The west face (3) is 18 cm to the east of the lower face of wall 557.
4. As in Fig. 4.21, the lower levelling course of wall 556 has been cut into to provide a base for wall 557.
5. Here, as can be seen in Fig. 4.21, the upper courses of wall 557 seem to have been inter-bonded/threaded into the face of wall 556. It is very difficult to understand which was the original face of wall 556. The question arises, was there an earlier *mandapa*-type structure built onto or with wall 556 underneath wall 557? As the northern relationship is destroyed, it is only here that the evidence remains but it is unclear.
6. The upper courses of purple bricks are clearly part of a later rebuilding (wall 971). The weathering suggests that these bricks have stood exposed for some time. The upper courses of wall 557 appear to abut this, but it seems difficult to imagine that this could have been the case.
7. This is a moulded brick with a 'hammer head' chamfer as on the plinth mouldings of the South Temple. It has been cut into to the west.
8. These bricks, which appear to be the eastern end of the *triratha* offset in wall 556, actually abut the face of wall 556. This is not the case on the west side of the *triratha* offset, where they are inter-bonded. This suggests a rebuilding or something more complicated which is hidden.

The overall impression is that wall 557 has been inter-bonded into wall 556, which required some rebuilding of wall 556 itself. It seems that wall 557 originally had mouldings on its outer face and there may be a more complicated sequence of phasing here that could only be unravelled by dismantling the structure.

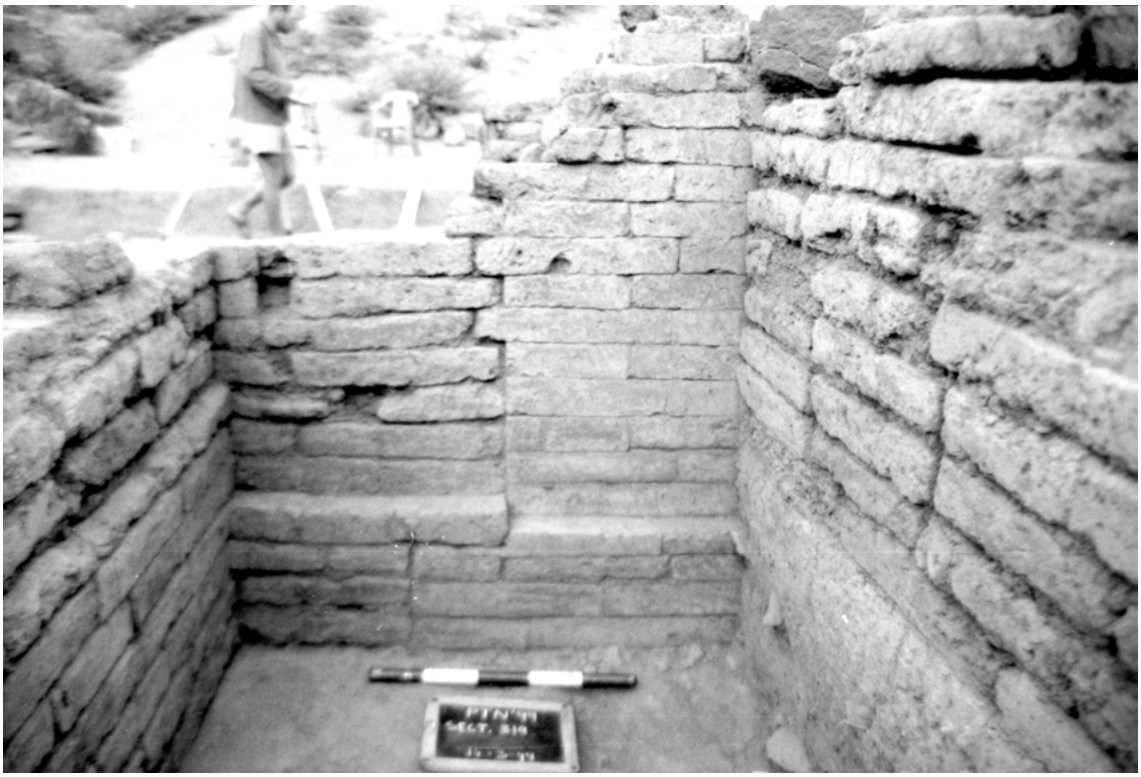

Fig. 4.21: The joint between the Phase II and Phase III brickwork of the North Temple, looking west in the southern half of the *mandapa*, with wall 558 to the immediate right.

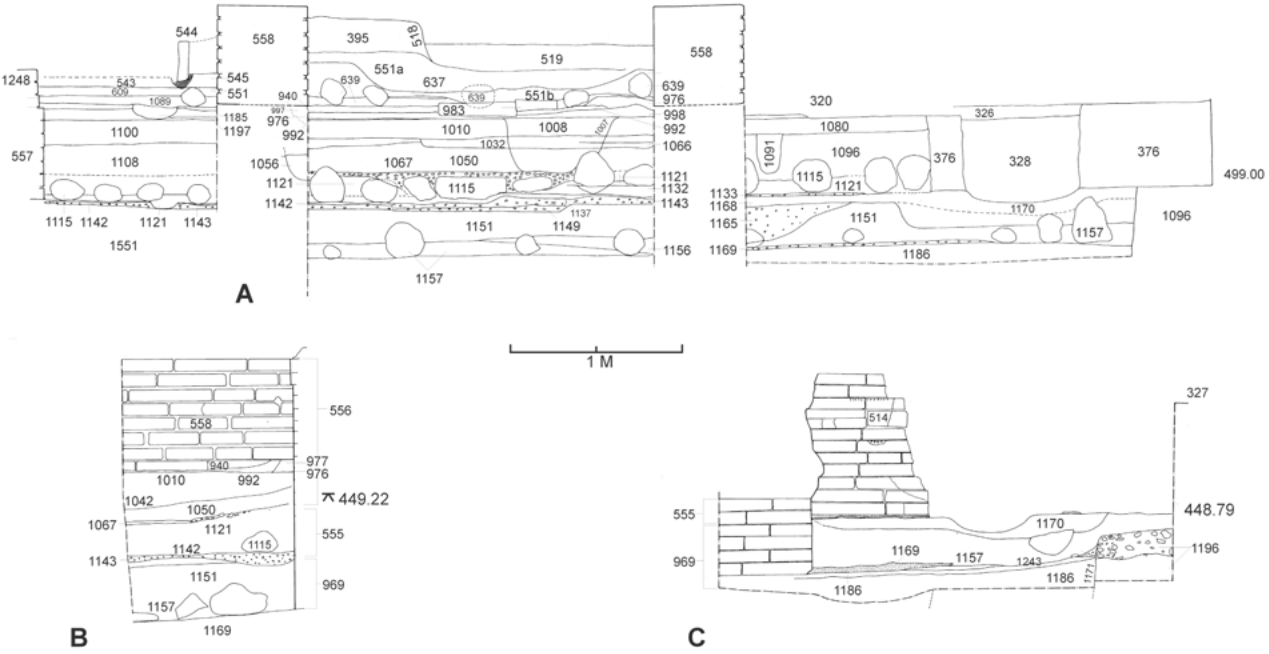

Fig. 4.22: Test Pit 9 sections. (A) Composite section across the whole test pit and the *mandapa* of the North Temple looking west. (B) East-west section against wall 556 below the southern part of wall 558 where it crosses the test pit. (C) The western section of the test pit to the north of the Phase I structure showing the edge of foundation cut 1171.

In the south-west corner of the *mandapa*, the join between the Phase II (556) and Phase III (557) walls is partly preserved. This is a complicated relationship, made more difficult to understand by later rebuildings of the upper courses of both walls, which have obscured or destroyed the original brickwork. The three-dimensional sketch in Fig. 4.20 shows the visible details as they are. It seems that wall 557 was keyed into wall 556 and this process involved the removal and replacement of bricks from some parts of the face of 556. Much later, the upper seven or eight courses of the eastern face of wall 557 appear to have been rebuilt, leaving only a thin face of this wall sandwiched between the rebuilding and a much later rebuilding of the upper 10 courses of wall 556 (971). There are some problems with this interpretation, however, such as the brick labelled '1' in Fig. 4.20, which must be a part of wall 557 but which projects beyond itswestern face.

Fig. 4.21 shows the same joint between the two phases, this time looking towards the west from the interior of the southern aisle of the *mandapa*. Here it can be seen that the lower courses of the *mandapa* clearly abut and overlie the Phase II wall and platform, with some brick cutting and inter-keying that must have been achieved by the removal and replacement of bricks in wall 556. In Fig. 4.21, a slight decline in the quality of the jointing of the Phase II brickwork is evident above about the 10th or 11th course, which may be indicative of a later rebuilding above at this point.

Although a relationship between the two phases has been proposed above, without dismantling the walls it is impossible to be certain of having a full understanding of this rather complex situation.

From the plan, it can be seen that the westerly face of 557 has a slightly different orientation from that of the original Phase I structure 554 (Fig. 4.7). This must be deliberate, but the reason for it is unknown.

Once again, the bricks used in this phase are very similar in feel and firing to those used in Phases I and II, measuring, on average, 7 × 25 × 40 cm.

The latest internal surface of the *mandapa* that was exposed by excavation was designated layer 550 along the north side of the temple. It appears to be the equivalent of surfaces 1010, 1100 and 1080 in Test Pit 9 and layer 319 in Test Pit 2. It consists of a compact grey silt with possible lime inclusions at a height of 449.42–449.47 in relation to the site datum. There may well have been later surfaces that were removed by Yusuf, and there certainly seem to have been earlier surfaces.

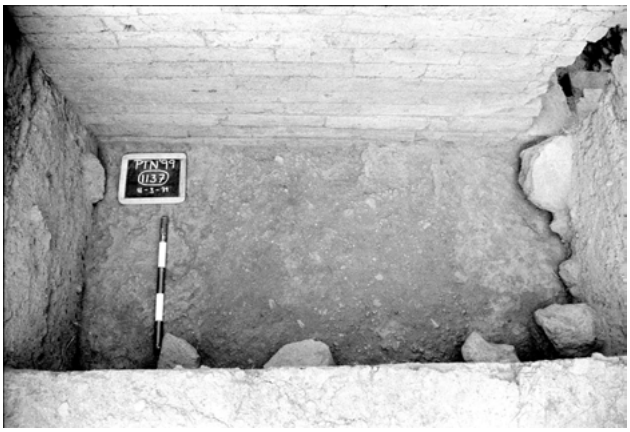

Fig. 4.23: Feature 1137, the earliest evidence for a possible shrine in the west end of the *mandapa* of the North Temple.

Fig. 4.24: North Temple, showing the remains of a possible simple shrine 983 against the western wall of the Phase III *mandapa*.

The addition of a *mandapa* to the east of the Phase II shrine is problematic because it would appear to indicate that the entrance to the Phase II shrine was from the same direction. As has been noted above, however, there is absolutely no evidence that the Phase II shrine was ever open to the east; indeed, it is more likely that the entrance was from the west, towards the river. In this respect, the traces of possible cultic activity uncovered by Test Pit 9 from the earliest levels inside the west end of the *mandapa* are very important (Fig. 4.22) (see Section 2 of this chapter). Although no sculpture has come to light, a stratigraphic succession of at least three rectangular impressions or arrangements of bricks against the eastern wall of the Phase II structure within the *mandapa* indicates that this place was most likely used for cultic activity, albeit consisting of simple, crude constructions. The earliest shrine (1137), a simple rectangular depression, is located directly on top of the *mandapa* foundation deposits (Fig. 4.23). Evidence for a second shrine was found immediately

above but higher up in the sequence (983). This indicates that the location was already being used for simple cultic activity immediately after construction of the *mandapa* and that it continued to be used for some time (Fig. 4.24). The third shrine (551) is again in the same location but is a part of Phase IV and will be discussed in the section below. The question posed by these shrines is, why should they have been located against the back of the Phase II structure? There are two obvious possibilities. One is the cultic activity originally related to a subsidiary deity that was located in a niche in the upper part of the outer walls of the Phase II structure. If this were the case, it is possible that this location at the back of the Phase II structure had already become important for worship before the construction of the *mandapa*. The *mandapa* may then have been constructed to formalise the cult and to enclose it within the temple. Unfortunately, it is impossible to know whether this is the case because the foundation cut for the *mandapa* would have destroyed any evidence for earlier cultic activity in this location. A second possibility is that, for some unknown reason, construction of the *mandapa* was deliberately intended to relocate worship to the eastern side of the Phase II structure, although it is notable that no attempt was made to open a connection between the *garbhagriha* and the *mandapa* during the Phase III construction. In the absence of any further evidence, this is the most that can be said about the rationale behind the Phase III *mandapa*.

The foundation cut for the *mandapa* was also revealed by Test Pit 9. It is much shallower than the foundation cut of the Phase I structure, although the precise level from which it was dug is not known as the relevant levels were destroyed by Yusuf's excavations. The foundations consist of only one layer of igneous rocks and silt, rather than the multiple sequence of silt/rocks/silt found in the Phase I foundations. The reason for this difference is not clear. It may be that the importance of such foundations had diminished by the time the *mandapa* was constructed. Alternatively, because the *mandapa* did not include a *garbhagriha*, it may have been felt that such elaborate foundations were unnecessary.

Fuller details of the shrines and the sequence excavated within the *mandapa*, as well as the foundations, are given in the Test Pit 9 report in Section 2 of this chapter.

Phase IV

Phase IV represents the subdivision of the interior of the *mandapa* by the construction of wall 558, creating what was either a trapezoidal inner chamber or a raised platform around the shrine and a narrow ambulatory between itself and the *mandapa* wall (Fig. 4.7). Wall 558 encloses a space measuring 2 m north-south at the widest point and 4.8 m east-west. The entrance was probably to the east, although no trace of it survives.

Fig. 4.25: Photo of the rectangular depression in layer 551 that might indicate the location of a shrine.

Fig. 4.26: Wall 383/544 of Phase IV in the North Temple before the excavation of Test Pit 9.

The wall is preserved up to seven courses high, although the entire south-east corner above the lowest two courses is part of the 1967 reconstruction. The wall is about 52 cm wide and is of a different type of construction to any of the earlier walls in the temple. It is a solid brick wall with no rubble fill, consisting of a double row of bricks. The silt jointing is quite crude – certainly much cruder than the Phase II wall. Most significantly, the bricks of this wall are of a larger size

than any used in the previous phases measuring 6.5 × 26 × 42/43 cm. The introduction of a new construction technique and a larger brick size is significant for linking together the chronology and phasing of the North and South Temples.

The construction of wall 558 follows the deliberate raising of the floor within the *mandapa* by about 50 cm to the level of surface 1010, which was achieved through the deposition of a further sequence of silt and stone foundation levels (1050, 1115). It is not certain, however, that the raising of the floor level and the construction of wall 558 occurred at the same time. The detailed stratigraphic evidence discussed under Phase III above, and also in the report on Test Pit 9 in Section 2 of this chapter, suggests that shrine 983 may have been in use on floor 1010 for a period of time before wall 558 was built. This suggests that wall 558 was built with the intention of enclosing the already existing shrine 983 or of raising a low platform on which the shrine could then be placed.

Shrine 983 was subsequently buried by the deliberate deposition of a further level of silt and stone foundation deposits (639) upon which a 20-cm-thick layer of black cotton soil was laid down (551). On the upper surface of 551, a large rectangular sunken area was noted against the western end of the *mandapa* (Figs 4.22 and 4.25). The sunken area measures 140 cm north-south by 90 cm east-west and is 15–20 cm in depth. It is thought that this represents the location of a large rectangular object or structure that must have been part of a third successive shrine in the same location. It is also possible, however, that layers 639 and 551 were deposited around the base of a shrine or idol that stood on bricks 983, and that the depression in 551 was caused by the removal of this object at a later date. To judge by the location of the stones in layer 639, the latter scenario appears to be more likely, but in effect, there is not much difference between the two interpretations; in both cases, the shrine continued to be used and the level of the interior of the *mandapa* continued to be raised.

Phase V

Elucidation of the developments of Phase V is extremely difficult, due partly to the nature of the relevant black cotton soil deposits (1252 and 395) and also to later disturbance. At some point, a crude wall (383/544) appears to have been constructed of brick bats and broken tiles in order to surround the earlier shrine within a small rectangle, apparently ignoring the existence of the Phase IV wall 558, which was probably therefore already destroyed. The area enclosed measures 3.40 m north-south and 1.70 m east-west.

The best record of this wall is the photograph taken by Yusuf in 1937 shortly after the structure was first revealed (Fig. 4.4). In this photograph, it is clear that wall 383/544 still stood higher than the top of wall 556. Since then, the wall has survived very badly, possibly because it was not well made in the first place, and all that remained to be recorded in 1998 was a row of

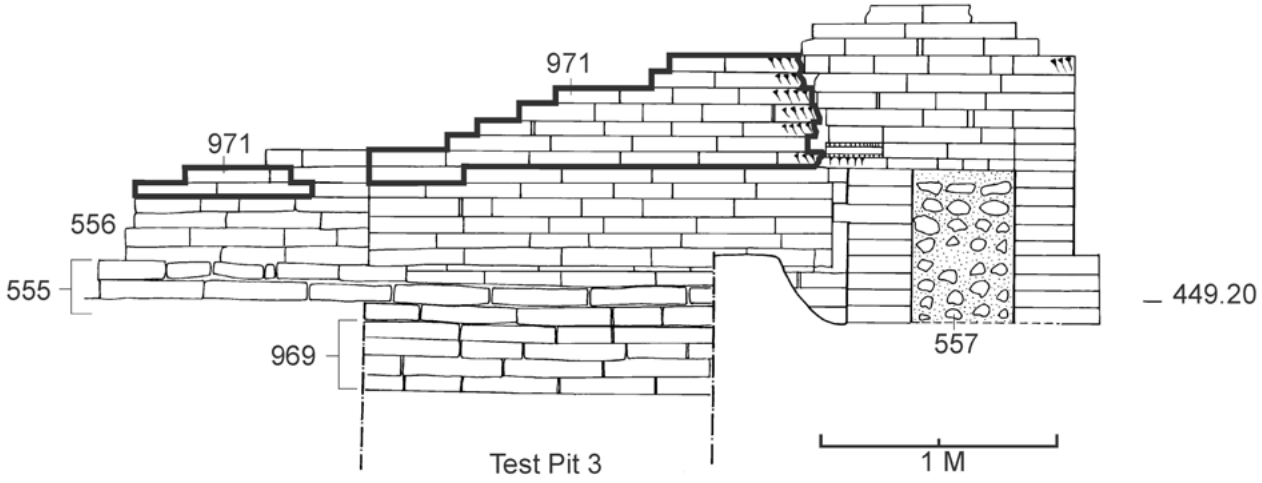

Fig. 4.27: Schematic section/view of the *garbhagriha* wall of the North Temple looking north showing the extent of later rebuild 971.

Fig. 4.28: The *garbhagriha* of the North Temple from the west showing possible evidence of late use.

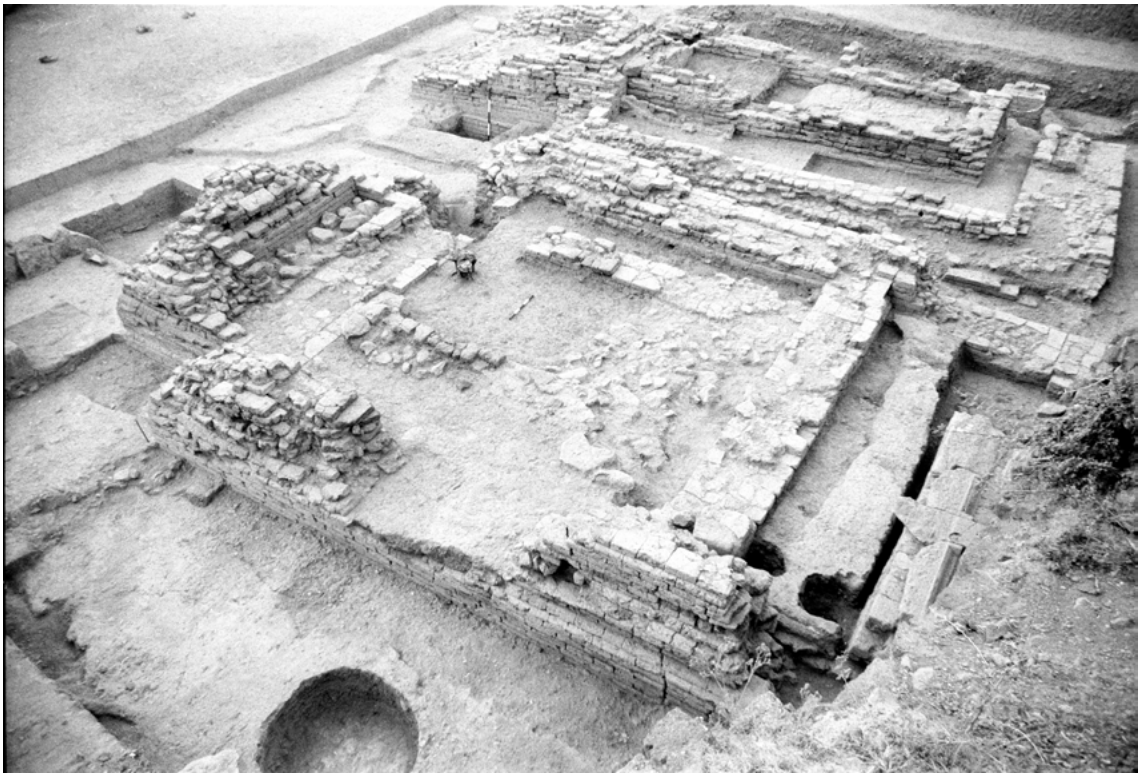

Fig. 4.29: General view of the South Temple from the southeast during excavation.

bricks and tiles standing on end in lime mortar within a shallow cut and a row of brick bats and tiles lying on the soil retained behind them (Figs 4.22 and 4.26). The presence of lime mortar demonstrates that these were placed here during the 1967 restoration and probably represent a rather desperate attempt to preserve an already very badly damaged structure. They serve only to indicate the approximate location of the wall, and perhaps the bricks and tiles from which it was built.

Whether this wall formed a small earth-filled platform, as seems most likely, or a small chamber is unknown. The platform would have effectively raised the level of the shrine by creating a raised surface that has now been completely destroyed. As has been stated, the fact that wall 383/544 ran over the top of the Phase IV wall 558 demonstrates that this earlier wall had already been destroyed and its upper courses had been removed by this time, but the condition of the rest of the temple during Phase V is unknown. It is probably no coincidence that wall 558 is much better preserved underneath the Phase V structure than it is to the east, as can be clearly seen in Fig. 4.26. This may indicate that the western part of the wall was incorporated into the Phase V structure and that the rest of the wall was removed.

It is impossible to know with certainty the nature of the temple during this latest phase of its use. The very fragile remains of Phase V have been exposed to 60 years of weathering and erosion as well as undocumented excavation and restoration. All that can be said with confidence is that the temple continued in use as a place of cultic activity through the construction of what was probably a crude earth-filled platform located against the eastern wall of the *garbhagriha* structure in a place that had already been in use as a shrine, possibly for as long as several hundred years, but that had certainly once seen distinctly better days. Wall 558 no longer existed, and it is impossible to be certain that rest of the *mandapa* walls were still standing – they may also have been demolished and robbed by this time. The crude Phase V structure seems most likely to represent rather sporadic and unstructured use of an already old and established shrine that was now located within the half-standing remains of an old, ruined temple.

Later use and robbing

There is evidence of later rebuilding of the upper courses of some of the temple walls, for example wall 1248, which is a rebuilding of the upper three courses of the south side of the Phase III *mandapa* wall 557, and wall 559, which is a later facing to *mandapa* wall 514. The most significant rebuilding is wall 971, which is a rebuild of the upper parts of the Phase II structure 556 (Figs 4.20 and 4.27). From around the seventh course of wall 556, the bricks are notably thicker, measuring 7/7.5 × 20 × 33/35 cm. They tend to have a purple colouration and are fired to a much higher temperature than the bricks in earlier parts of the temple. They also often show traces of vitrification on the surface. These bricks are similar to the bricks used in the rebuild of wall 561 of the South Temple and seem to represent a later phase of reconstruction and repair of both temples, the date of which is not known but which probably took place between the 9th and the 11th or 12th centuries, although it could have been later. Robbing and erosion of the structure make it impossible to say very much about the construction of which these bricks form part. They are found on the north, south and west sides of the Phase II structure but not on the east face. It is possible that the whole of the superstructure of the *garbhagriha* needed replacing at some point in time. The bricks of the rebuilding are now badly weathered, suggesting that they have been exposed to the elements for much longer than the lower parts of the structure.

Excavation along the course of the north wall of the *mandapa* has revealed that this wall was systematically robbed out after the temple fell into disuse. The date of the robbing is unknown, as is the level from which it occurred, as all related levels were removed by Yusuf's excavations. The precise course of the original wall is shown by the lowest level of mud mortar, which is still visible in the base of the robber cut (Fig. 4.17). The details of the robbing are discussed in Section 2 of this chapter (NWNT).

A series of rough brick-bat steps over the top of the remains of wall 556 indicate that there has been access to the ruined *garbhagriha* from the west or river side for some time (Figs 4.11 and 4.28). This may of course relate only to the period since the 1937 excavations, but the height of the walls surrounding the *garbhagriha* indicates that this is the only direction from which it could have been approached, at least during its final form. It therefore seems most likely that the shrine was also approached from this direction during its early stages of use, but it would be impossible to verify this without dismantling some of the later walls.

The last phase of activity identified in this temple is associated with the restoration of the buildings in 1967. At this time, a shallow scoop was dug against the

outside face of the eastern length of wall 557. It seems that along the line of the robbed wall, a shallow ditch was dug (337). The presence of lime-mortared bricks within this cut makes it clear that it results from the 1967 restoration. The surviving stumps of wall that were discovered along the length of the *mandapa* wall were also conserved with mortar pointing. After restoration, it appears that the related trenches were backfilled to some degree, after which silt had accumulated across the area to a depth of about 30 cm before the 1998 excavations began.

The South Temple

The South Temple consists of a rectangular *garbhagriha* with a rectangular *mandapa* attached to its eastern side (Figs 4.29 and 4.30). The *mandapa* was once subdivided by a north-south wall towards its eastern end, and the fragmentary remains of further internal walls are also preserved. The maximum dimensions of the whole structure are 9.4 m east-west and 6.25 m north-south (Fig. 4.31). As with the North Temple, this temple is not oriented precisely east-west. The main axis is oriented just under 4° south of magnetic west (266° measured with a prismatic compass in February 1998), which is about 1° different from the orientation of the North Temple. The reason for this difference is not clear. The South Temple is located immediately to the south of the North Temple, being separated by a minimum distance of less than 1 m from the southern wall of the North Temple.

As with the North Temple, this temple is built almost entirely of fired bricks and mud mortar, although stone has been used in some later parts of the structure. The state of preservation is also variable; in some places, the walls are preserved to a height of 1.35 m above the present ground surface, whilst in others, such as the eastern walls, they are preserved only in plan. In contrast to the North Temple, the outer walls of the *mandapa* are on the whole better preserved and have been less damaged by robbing, but the internal walls that once subdivided the interior of the *mandapa* are very badly preserved, having been almost completely removed by the foundations of much later post-Medieval houses that once stood on this spot.

Five distinct phases of development can be discerned in the temple's history: Phases I–V (Fig. 4.32). This is the same number of phases as the North Temple but this is purely coincidental because the temple underwent a very different set of developments to its northern neighbour and each of the South Temple phases is certainly not contemporary with the equivalent of the North Temple. The problem of the removal by Yusuf of archaeological deposits relating to the later periods of use and abandonment applies equally to this temple. The five phases are described in turn below.

Phase I

As with the North Temple, the foundations of the structure are of considerable interest. They consist of a large – presumably rectangular – pit that is just under 8 m wide and at least 9 m long, although the precise length is unknown. The sides of this pit slope steeply down to a flat bottom that is 6.9 m wide and 20–25 cm below the level at which layers of archaeological deposits of the surrounding area containing anthropogenic deposits sit upon underlying natural soil (Fig. 4.33). The pit was then carefully back-filled with a repeating sequence of layers of small boulders of igneous rock packed into a very clean silt matrix followed by a thinner compact clayey layer. This sequence was repeated five times before a thin, even mud surface was spread across the entire foundation trench and it is directly onto this surface that the temple walls were constructed (Figs 4.33–4.36). Once the walls had been completed, a further sequence of stone and silt layers was deposited inside them to raise up the interior level to what is thought to have been the floor of the Phase I temple. Outside the walls, the upper 50 cm of the foundation cut flares outwards and the resulting space between this and the outer face of the temple wall was filled with layers of silt or compact rubble.

Excavation below the base of the standing walls of the temple in Test Pit 5 during the 1999 season revealed the presence of an early phase (Phase I) that was not otherwise visible (Fig. 4.32). All that remains of the Phase I structure is a five or six course solid brick wall (1224) which sits directly on top of the mud surface on top of the foundation fills described above. During Phase I, the temple consisted of a large rectangular *garbhagriha* (2.7 m wide and 1.42 m deep) that was attached to an almost square *mandapa* (4.49 m wide and 4.08 m deep) which was open along most of its eastern face. The *garbhagriha* and the *mandapa* were connected by an opening 1.47 m wide. This opening, which is now completely buried, can be seen in Figs 4.37 and 4.38 underneath the Phase II walls. In the middle of it, a

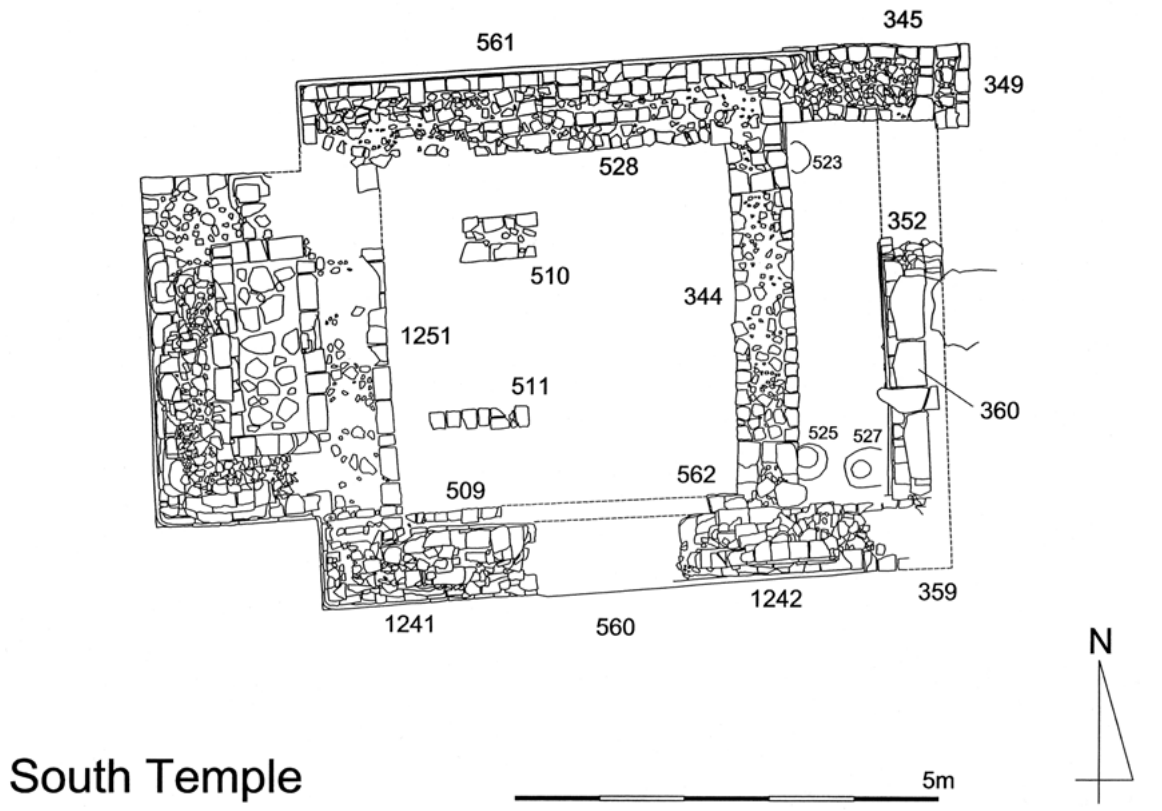

Fig. 4.30: Plan of the South Temple showing the location of the main walls.

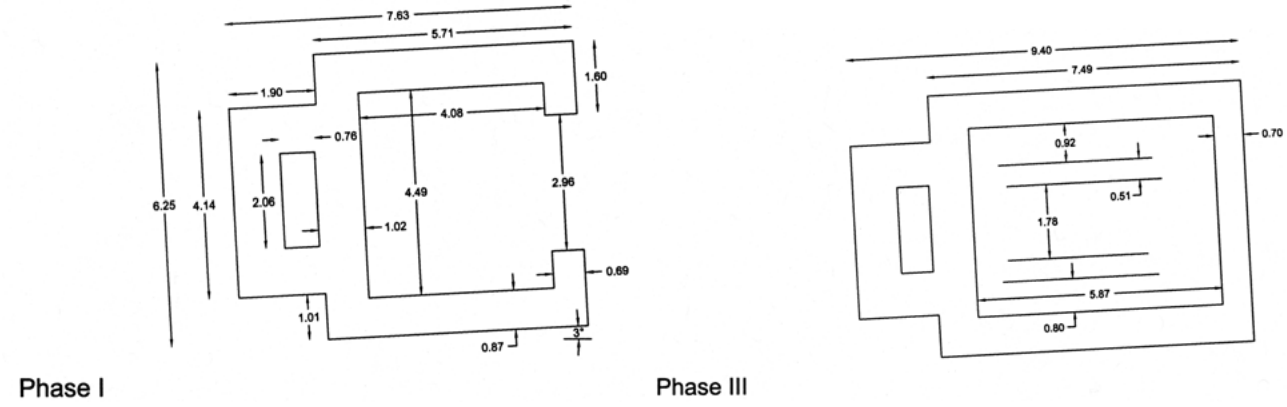

Fig. 4.31: Dimension plan of the South Temple.

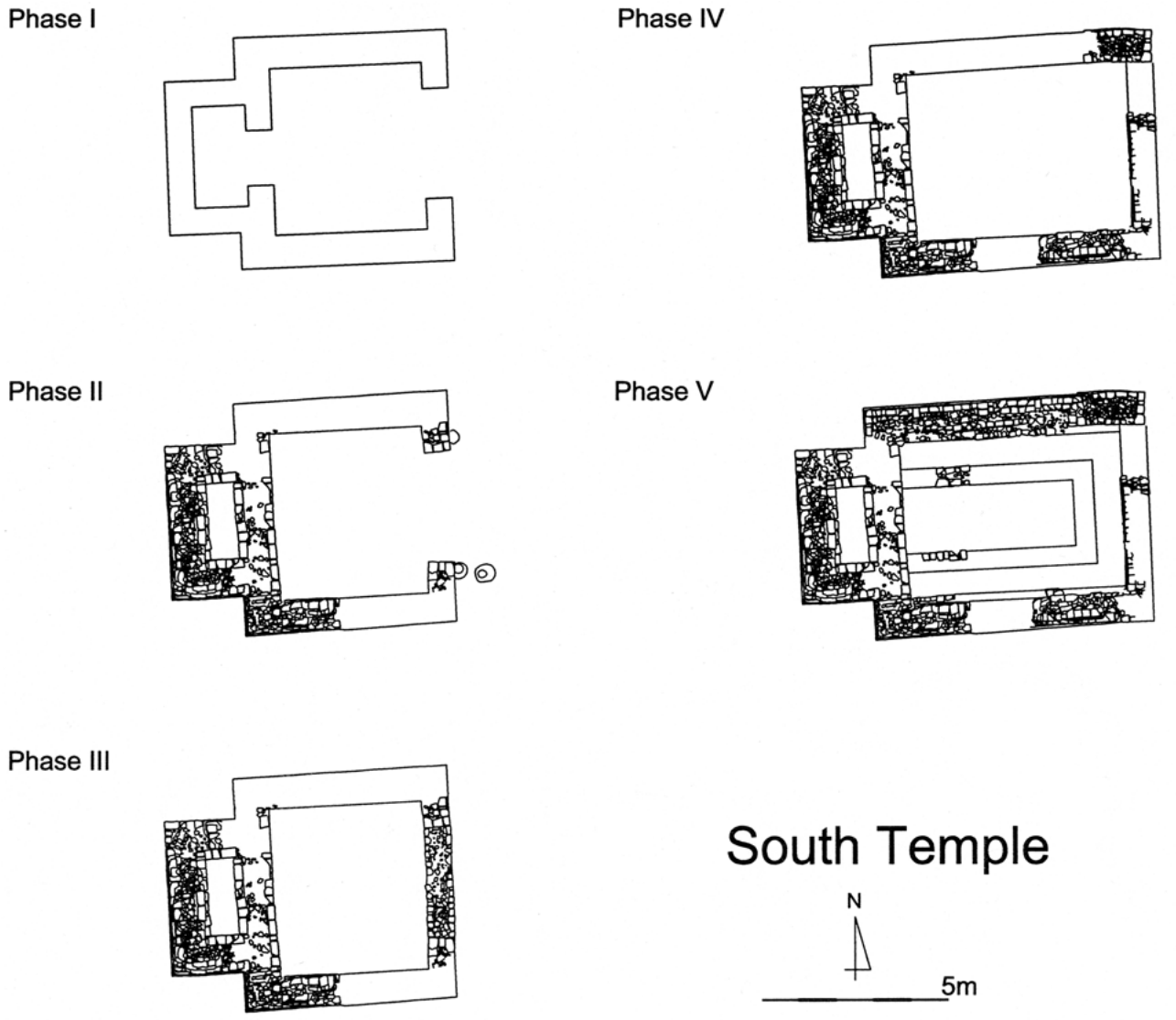

Fig. 4.32: Phases of the South Temple.

large, heavily vitrified brick is visible which may have been a step or part of a threshold between the two chambers. The layer underneath was probably the floor level related to this phase of the temple.

The brick masonry of the Phase I wall is similar to that of the later walls of the temple, and for the most part, the wall thickness is identical. In the area around the *garbhagriha*, the Phase I wall is, however, as much as 35 cm thinner than the later walls, which means that the interior space of the *garbhagriha* would have been up to 70 cm wider in Phase I than it was in Phase II. A section through these walls is shown in Figs 4.36 and 4.39.

It is important to note that Phase I is represented only by the foundation courses of the wall – absolutely no evidence of the superstructure remains. This is probably because the temple was completely rebuilt after this time, but it is not absolutely certain that a temple of this phase ever actually existed. There is a possibility that wall 1224 is simply the foundation course for the Phase II temple. This seems very unlikely, however, given the differences in plan between the structures of Phase I and those of Phase II, especially around the *garbhagriha*, unless the layout of the temple was changed halfway through construction. It seems most likely that the superstructure of the Phase I temple was completely dismantled before the Phase II temple was constructed.

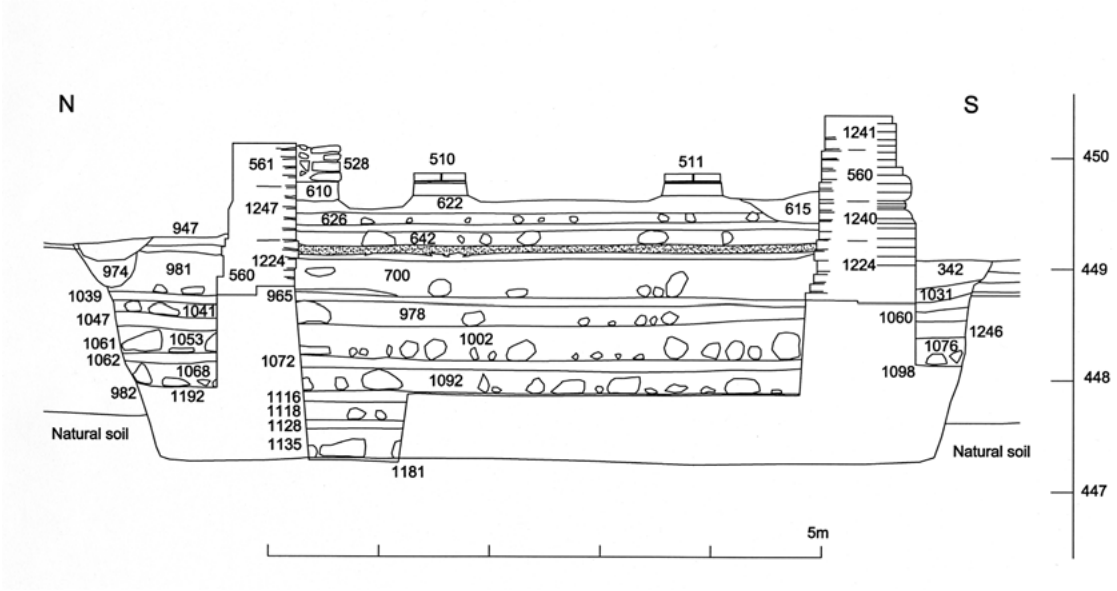

Fig. 4.33: West-facing composite section across the South Temple showing foundations.

Fig. 4.34: View of the eastern section of Test Pit 5 across the interior of the South Temple looking south-east showing the successive foundation fills.

Fig. 4.35: Interior of the South Temple during excavation of Test Pit 5 showing a level of foundation fill consisting of small boulders.

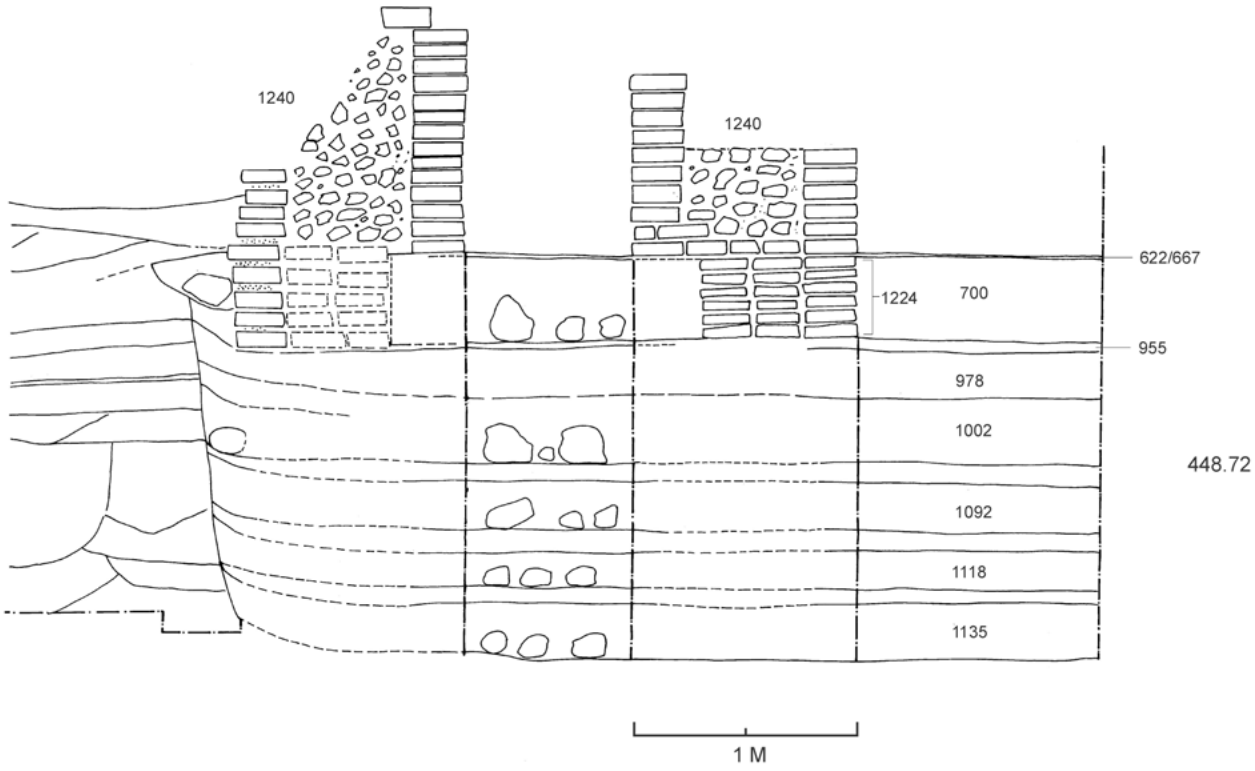

Fig. 4.36: Composite east-west section through the west end of the South Temple looking north.

Fig. 4.37: The wall between the *mandapa* and the *garbhagriha* in the South Temple looking west during the excavation of Test Pit 5. The Phase I gap in this wall can be clearly seen below the Phase II wall.

Phase II

Phase II of the South Temple consists of the reconstruction of the same temple on the foundation walls of the Phase I structure, but with some relatively minor changes to the layout.

Upon excavation, it became clear that the first four brick courses above foundation wall 1240 are built of a different masonry to the higher superstructure of the temple (Fig. 4.39). The lowest of these is a levelling course, using split or wedge-shaped bricks to create a level platform out of the Phase I wall. After the construction of the Phase II walls, the interior was raised using another sequence of silt/stone foundation layers similar to those described above, which was then capped by a floor, some 20 cm higher than the Phase I floor.

As has been mentioned above, the Phase II walls around the *garbhagriha* are as much as 35 cm thicker than the Phase I walls (Fig. 4.36). This caused the space within the *garbhagriha* to be considerably reduced during Phase II. In Phase I, there had also been a wide opening between the *garbhagriha* and the *mandapa*, but this opening may have been narrowed during Phase II by the construction of wall 1251, which probably supported the walls on either side of a doorway, but there is no trace of the doorway so it is impossible to know how wide the opening was during this phase.

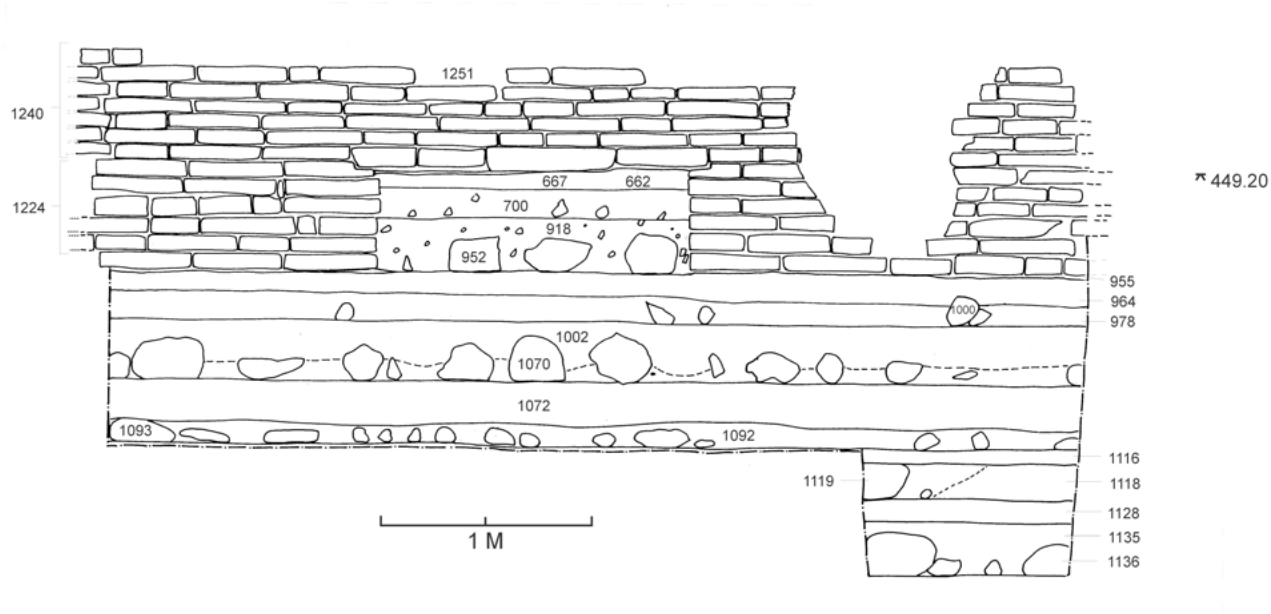

Fig. 4.38: Western section of Test Pit 5 across the South Temple in front of the wall between the *garbhagriha* and the *mandapa*.

Walls 1240/1247 and 1251 are crudely inter-bonded (Fig. 4.40), suggesting that the Phase II structure was built in stages, but it is difficult to establish exactly what the sequence was and why it should have been built in this way.

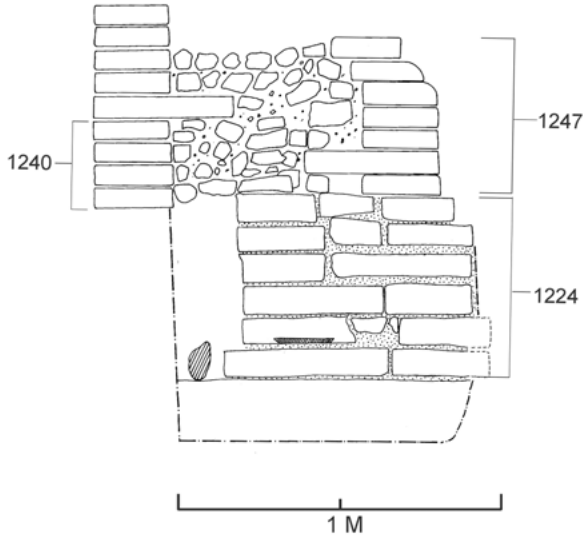

Fig. 4.39: Cross-section of walls 1247 and 1224 South Temple.

That the Phase II temple was adorned with *adhisthana* mouldings is made clear by the fact that three courses of them are preserved on the south-east corner of the temple and for short sections on either side of the opening in the eastern face (Fig. 4.41). In the south-east corner, three remaining courses of the mouldings can be seen (Fig. 4.42). Here they are abutted and overlain by the mouldings of the Phase IV rebuilding of

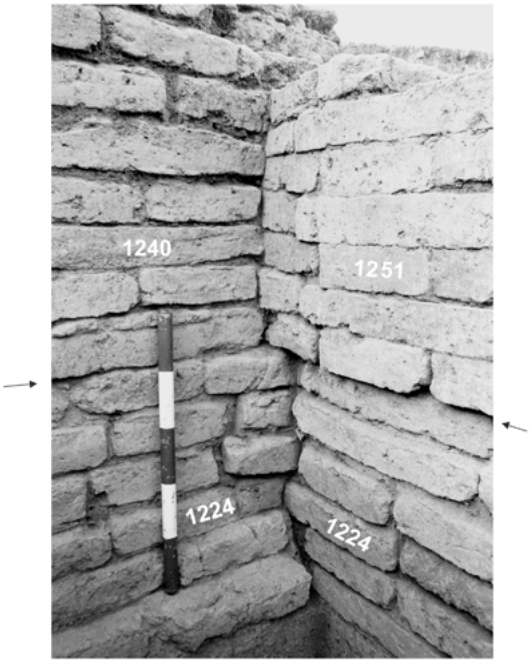

Fig. 4.40: View of the corner formed by walls 1240/1251 and 1224 in the southwest corner of Test Pit 5 looking southwest. The arrows show the boundaries between the upper and lower walls. The inter-bonding between walls 1240 and 1251 is clearly visible just to the right of the corner and the difference in the quality of the brickwork of the two walls is also clear.

the upper parts of the wall on this side of the temple. The Phase II mouldings ran around the corner onto the short walls on either side of the eastern face for about 111 cm (Fig. 4.43). There was then a 41-cm section of wall with no mouldings on either side of the entrance to the *mandapa*, which may have been left free for column bases to be placed against the wall. The mouldings appear to have had a very similar pattern to those of Phase IV, which are described in detail below.

Phase III

Phase III represents a relatively minor alteration to the Phase II temple. It involves the construction of a wall (344) across the eastern opening of the *mandapa*. This wall is of a much cruder construction than any that had been built up to this time in either of the two temples. It consists of two faces of brick bats rather than complete bricks, the space between them being filled with brick rubble and silt. The wall now survives to a height of four courses.

Fig. 4.41: Remains of mouldings in wall 1240 at the eastern end of the South Temple looking west.

The reason for the construction of this wall is not clear and, as will be noted below in the report on the eastern end of the South Temple (Section 2 below: EEST), neither is it absolutely clear to which phase it belongs. It may have been built to close off the wide eastern entrance to the *mandapa* completely, or as the foundation for a wall which included a narrower entranceway. No trace of any such entrance remains in the wall, however, so it is impossible to be certain of this or to have any idea how wide any such entrance may have been. The wall may not ever have been built beyond a few courses high and may have been intended only as a base to support a wooden screen or some such other arrangement for closing off the *mandapa* to the outside. This may explain its cruder construction style; alternatively, it may simply reflect the fact that it was built to less exacting standards.

It seems most likely that the wall was built before the eastern extension to the temple (Phase IV), and this is certainly what is indicated by the wall's stratigraphic relationship with compact silt surface 346 to its east (Section 2 below: EEST). It therefore seems sensible to include it as a separate phase in its own right, as it does reflect a significant re-design of the temple's layout.

During this phase, three post-holes were cut into the same silt surface 346 that abuts wall 344 outside the eastern end of the temple. These are numbered 358, 523 and 525. The two that have been excavated have revealed that they were the bases of posts measuring 20 to 25 cm across. It seems most likely that these were wooden posts, although there is no proof of this. Two of the posts were situated against the eastern face of the temple symmetrically on either side of the eastern opening to the *mandapa* and seem likely, therefore, to have been part of a wooden entrance or façade structure immediately in front of the temple. The third post is situated 70 cm or so in front of the temple to the south and it is not matched by another in a similar location to the north.

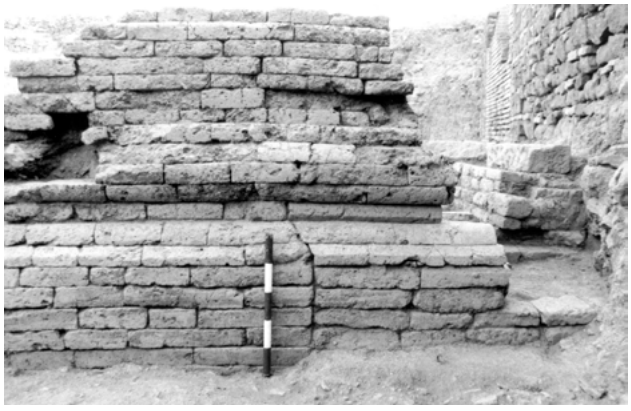

Fig. 4.42: View showing the eastern end of the south wall of the South Temple looking north (see Fig. 4.46 for a key to wall numbers).

By Phase III, the surface level of the building had clearly risen considerably since the time of the original construction, partly by natural accumulation and partly by deliberate raising. Surface 346, which was an external surface to the temple until it was enclosed by the Phase IV walls, is at a much higher level than the

surfaces outside the building that are assumed to be the original floor surfaces.

Phase IV

Of all the phases, Phase IV represents the most significant transformation of the South Temple's original plan. During this time, the temple was extended to the east by about 1.75 m, which involved the construction of extensions to the northern and southern walls of the *mandapa*, as well as a new eastern wall. It also appears to have involved reconstruction of substantial parts of the upper walls of much of the temple.

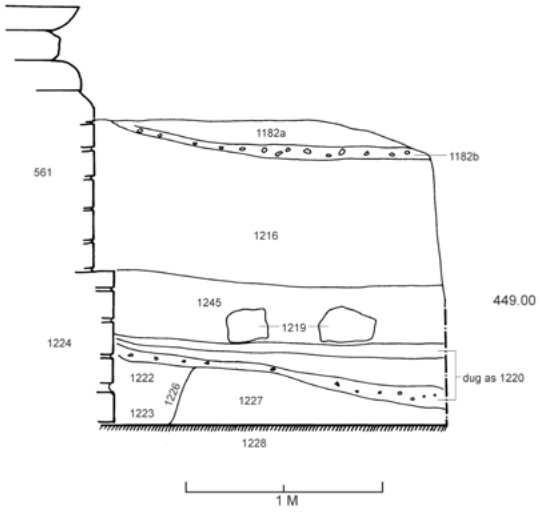

Fig. 4.43: South-facing section of Test Pit 8 showing the sequence of floors that abut the eastern face of the Phase I – III walls of the South Temple.

The three new walls to the east (345, 359 and 352) are all of roughly similar construction (Fig. 4.30). Although little is preserved of walls 345 and 352, it can be seen that the lower five courses are faced with crudely jointed brick bats above which the upper courses are of a much better construction with finer joins. Only wall 359 on the south side is preserved to any height; here, the lower courses are again crude and badly jointed, but those of the upper courses are finer and continue the Phase II mouldings. As can be seen in Fig. 4.42, wall 359 abuts wall 1247 of Phase II. However, the abutment does not continue above the chamfered course of the mouldings, which indicates that the whole of the wall was reconstructed from above this level after the construction of wall 359. This upper wall is labelled 560 in order to distinguish it stratigraphically. Although it is impossible to be certain, it seems most likely that this reconstruction happened at the same time as the Phase IV extension, although it could in fact have happened at any time thereafter. The most likely scenario seems to be that, at this time, the whole temple, or large parts of it, was dismantled down to about the height of the chamfered course of the mouldings. The three new extension walls were then built to the same height as the standing bases of the Phase II walls, and then the whole of the temple superstructure was rebuilt on top of this base (Fig. 4.44).

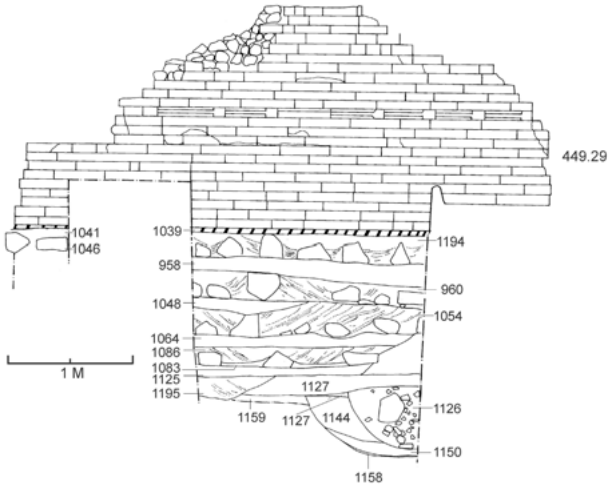

Fig. 4.44: Elevation of the western wall of the South Temple above the eastern section of Test Pit 1 showing the fills of the temple foundations.

Phase IV involved no discernible changes to the plan or size of the *garbhagriha*, but the shape and size of the *mandapa* were quite different. It now became a rectangle 4.49 m north-south by 5.87 m east-west. There is no trace or indication of the location or size of the entrance to the temple in the remains of wall 352, but the absence of any entrance in the north and south walls demonstrates that the entrance continued to be from the east, as may have been expected. The extension increased the internal space of the *mandapa* from 18.3 m^2 to 26.3 m^2. Why this was done is unknown, but it may be that much of the temple superstructure was in need of repair at this time and the extension was only a part of a bigger project of repair and rebuilding.

By Phase IV, the floor levels of the temple had once again risen, partly through natural accumulation and partly deliberately. This makes it likely that the remains of the Phase III wall 344 would already have been buried during Phase IV and would no longer

have been visible within the temple. A small section of brick-bat flooring (353) is preserved to the eastern side of wall 352, and this may indicate the floor level of Phase IV, although it may also be somewhat later. Wall 352 was much later robbed out along its northern half, revealing details of construction and foundation (Fig. 4.45).

Fig. 4.45: The robbed-out wall 352 at the east end of the South Temple looking south.

Adhisthana mouldings

The earliest extant *adhisthana* mouldings on the exterior of the temple walls belong to Phase II. It is unknown whether or not the Phase I structure was adorned with them as nothing survives of the superstructure of this phase. However, only the lowest three courses of the chamfered bricks of the Phase II mouldings are preserved below the Phase IV rebuilding mentioned above, whereas the whole of the Phase IV mouldings are still extant (Fig. 4.42). It is also clear, as has been stated above, that the mouldings on the western and southern walls of the temple are most likely to date to the time of the Phase-IV extension and rebuilding (Fig. 4.18C and D). This is confirmed by the fact that the character of the brick masonry changes notably above the first inter-bonded course between the Phase II walls and the Phase IV extension. So far as it is possible to be certain, the Phase II and Phase IV mouldings were identical, with only one minor difference that will be described below.

The first 10 courses below the Phase IV mouldings have a Header-Stretcher-Stretcher-Header pattern which is varied at the corners, then, from the 11th course, the moulding consists of two courses of bricks with a single chamfer or curve on their upper edge, followed by one slightly recessed course with a double chamfer (one on the top and one on the bottom edge), above which is a three-course curved moulding (Figs 4.18D, 4.42 and 4.46). Above this, the wall is badly eroded but there are some indications that further mouldings were present.

It should be noted that the double chamfered bricks of the Phase II walls have a particular feature that is not present in the Phase IV mouldings. At one end of each brick, a short 9-cm section has been left unchamfered (Fig. 4.18D). This end is always laid towards the south on the west face and towards the east on the south face. These bricks have the appearance of a simple fluted pilaster with a square base laid on its side. The equivalent bricks of the Phase IV mouldings are chamfered along their whole length.

The mouldings are very similar to the small section of moulding preserved in Phase III of the North Temple (wall 514), with only a few minor differences.

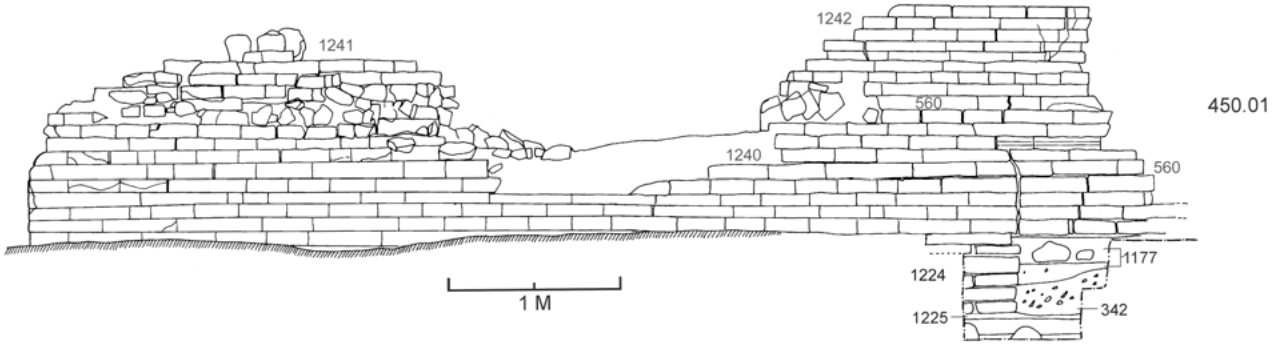

Fig. 4.46: Elevation of the southern face of the southern wall of the South Temple (wall 560).

Phase V

There are four walls inside the *mandapa* of the South Temple which all appear to belong to a final phase of internal re-organization. These consist of two fragmentary parallel internal walls (510 and 511), which divided the *mandapa* into three aisles, and an interior thickening of both the southern and the northern walls (509/562 on the south side and 528 on the north). These latter walls are each one-brick thick and the space between them and the original temple walls is filled with silt. Wall 562 seems to have been inter-bonded with the upper courses of the Phase IV wall 359, but the two walls are unlikely to be contemporary. The relationship between the Phase IV North Temple wall and Phase V wall 528 is not clear as the upper parts of the north wall have been reconstructed. The Phase V walls are of very poor construction and preservation: only one or two courses of each of them have been preserved. They are all built on rather shallow and crude foundations of clay and stone.

As can be seen in Fig. 4.33, all of these walls were constructed from around the same floor level and they appear to have been part of a crude re-organization of the internal space of the *mandapa* during the last period of the temple's use. It is not clear how far 510 and 511 originally extended to the east; in the reconstruction (Fig. 4.32), they are shown as forming an internal unit similar to wall 558 in Phase IV of the North Temple, but this is purely speculative based on comparison with the North Temple.

It is possible that Phase V should also include the later rebuilding of the upper courses of the external walls of the temple (561, 1241, 1242; see below), but this seems unlikely because a very different type of brick was used in these rebuildings, which have therefore been included in the next section 'Later use and robbing'.

It should be stressed that there is no stratigraphic evidence which proves that the Phase V walls are later than the Phase IV extension. Indeed, it should be noted that the internal thickening of the north and south walls (509/562 and 528) does not, at present, extend further east than the eastern end of the Phase III structure. This may be an accident of survival, as seems most likely, but it is nonetheless possible that Phase V is actually an internal re-organization of the Phase III structure and that it preceded the Phase IV extension. If this were the case, then walls 510/511 obviously would not have extended so far to the east as they are shown on the reconstruction. There is, unfortunately, no way of verifying the sequence and the order given here is based on relative floor levels and comparative quality of construction.

Later use and robbing

After Phase V, a number of minor changes and additions were made, before the temple finally fell into disrepair and was robbed of its building materials, buried and damaged by later construction activity on the site. As has already been stated, the latest phases of the temple's use are the least well understood because the related stratigraphic layers were largely removed by Yusuf's excavations in 1937.

There is evidence that substantial parts of the temple superstructure were rebuilt once again after the Phase IV rebuilding. The upper courses of the north wall (561) and the surviving upper parts the south wall (1241, 1242) are made of a very different type of brick to that used in earlier phases. These are 'purple' highly fired bricks of a notably smaller size than those used elsewhere in the building. They measure 6/7 × 17 × 27 cm and they are often so highly fired that they show signs of vitrification on the surface. Similar bricks, although of a slightly different size, were used in the latest rebuilding of the North Temple *garbhagriha* (wall 971). This late rebuilding of the north wall of the South Temple is interesting as it has a very simple type of moulding consisting of one brick with a deeply chamfered upper edge inset by about 4.5 cm, five courses above which there is a further 2 cm recess. This 'moulding' continues over the abutment between walls 560 and 345, thus proving that it occurred later than the Phase IV extension. The simple moulding seems to have been intended as a crude imitation of the original Phase II/IV mouldings, which are found at the same height on the other walls of the temple. From a photograph published by Yusuf (1939: pl. XVIIa), it is clear that this wall stood much higher at that time and had at least two more offsets in upper courses, which have collapsed or been removed since 1937.

It is impossible to suggest a date for this late rebuilding. So far as it is possible to tell, it did not involve any change in the plan of the temple, and it has not therefore been allocated a separate phase number. As was mentioned above, it is possible that the rebuilding is contemporary with the internal changes of Phase V, although this seems unlikely as the bricks used in the Phase V walls are of a completely different type.

As is described below in more detail, excavation at the eastern end of the South Temple (Section 2 below: EEST) revealed a number of features that provide some brief insights into further changes that took place during the very latest phases of the temple's life. They include a crude wall built of large architectural stone fragments on top of the Phase IV eastern wall 352. In addition, wall 349 is abutted to the east by a now fragmentary silt and brick-bat alignment (354) that once continued to the north and which may indicate that the South Temple was once incorporated into a larger architectural complex. There is also a group of large flat stones to the east of wall 352, which continue beyond the edge of the trench. The use or re-use of stone is important, as stone was not used as a building material in any of the temple's earlier phases. Where the re-used architectural fragments noted above came from is unknown, but it is possible that the two brick temples described here were in fact part of a larger temple complex, the rest of which still lies buried in the vicinity.

Once the temple had fallen out of use and been buried, occupation returned to the area in the form of large post-Medieval town houses, the fragmentary remains of which can be seen across the area today. The construction of these substantial houses involved the excavation of deep foundation trenches that caused a lot of damage to underlying archaeological layers.

The possible boundary wall

In the area to the south and west of the temples some rather fragmentary evidence has come to light of a possible stone boundary wall or walls that may have been built to surround the two temples at a late date (see Section 2 below: South Area and W Area; and context numbers 691, 699/578, 688, 671, 616, 903, 617) (Fig. 4.47). The evidence for the presence of walls is strong, but given the little that remains, the function of the walls, their date and the full plan of any complex that they may have been a part of are purely speculative. Fig. 4.48 shows these walls and gives some idea of their layout so far as it is known, but it should be remembered that these are badly disturbed levels where preservation is poor. It should also be noted that excavation to the north and east was not possible due to the limits of Yusuf's trench, and it is therefore quite possible that similar walls also existed on the other side of the two-temple complex but that they have not come to light. The walls that have been excavated clearly extend beyond the limits of the present excavation.

Fig. 4.47: Foundations of the Early Medieval perimeter wall 699 in the South Area of Trench A looking north. The stones of wall 691 are visible immediately to the west. At the top of the photograph, the foundations of 699 turn to butt the south-west corner of the South Temple.

These walls were constructed at least partly of stone, or so it seems, and they are obviously quite crude – they are not straight or regular and they have clearly not been carefully planned. They give the impression of a rather piecemeal construction. They were probably constructed very late in the temples' history and, if they did form a boundary to the complex, they may reflect some important changes in the way that the temples were used and considered.

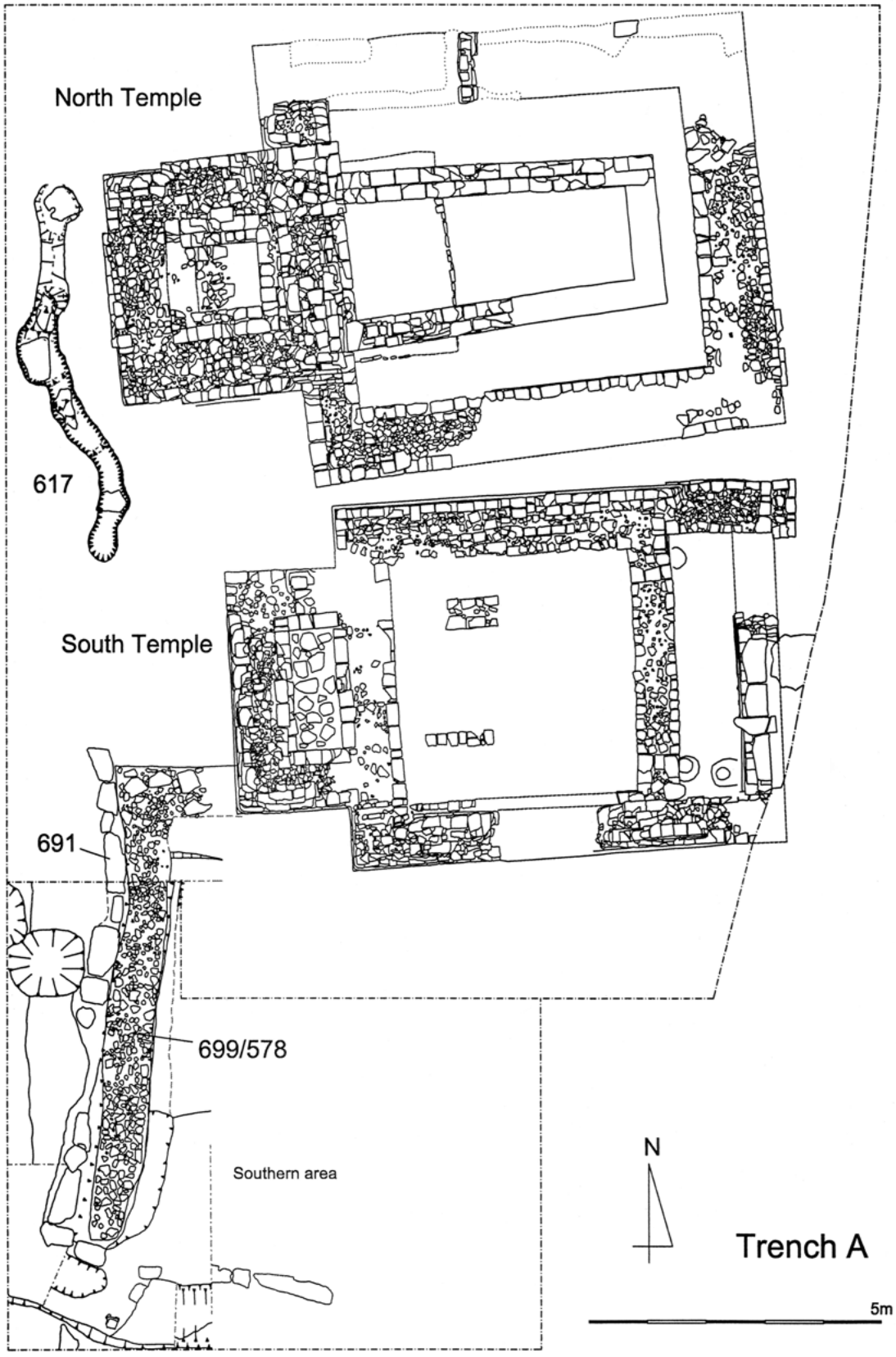

Fig. 4.48: Trench A showing the remains of the possible late enclosure walls 578/699 and 691 and associated features to the south of the South Temple and feature 617 to the west of the North Temple.

General discussion

Although no inscriptions or images were found directly in association with the two temples, either by the present excavations or by Yusuf, it seems fairly certain from their design and development that these are 'Early Hindu' temples – a term that is used with recognition of the associated terminological problems (see Flood 2003 for a discussion).

Having said this, a fragmentary stone sculpture of a female was found in Trench B, some 70 m to the south of Trench A, and the Balasaheb Patil Government Museum at Paithan contains a number of terracotta, kaolin and stone figurines that apparently come from Paithan, although it is not known exactly whereabouts they were found. These are illustrated in Chapter 8 (Figs 8.17 and 8.18) and Chapter 11 (Figs 11.6 and 11.7) and further discussed in Chapter 14.

Construction

Both of the temples are constructed entirely from fired brick and silt. Silt was used for the pointing of the bricks and there is no evidence for the use of lime mortar before the 1967 restoration. The only stone used was in the foundation deposits and in what are certainly later additions and alterations to the temples, such as some of the walls at the east end of the South Temple (EEST) and the possible boundary walls. The quality of the brickwork and jointing varied at different periods; the finest jointing is probably to be seen in the middle phases of the temples' lives, with the earlier and later work being of a lower quality. The crudest construction certainly occurred towards the end of the temples' lives in the later rebuildings and alterations, such as Phase V of the South Temple and Phase V of the North Temple, of which relatively little evidence remains. The size and type of bricks varied throughout the period that the temples were in use. The earliest bricks were smaller than those used in the middle period of the temples' lives, whilst the latest bricks used for rebuilding were not only the smallest used in the structures but also the highest fired. This subject of brick sizes is dealt with in more detail below as it is key to the linking of the phasing of the two structures.

There is no clear evidence to indicate how the temples were roofed. Some fragments of tiles were retrieved here and there during the excavation, but it seems likely that these were used for flooring rather than roofing as the quantity is so low. Had the temples been roofed by tile, a very large quantity of tile would have been expected.

Foundations

One of the most interesting insights into the construction of the temples that was discovered during the excavations relates to the foundations. In both temples it seems that the foundations are much more substantial than would be structurally required for brick buildings of this size. As has been stated, they consist of massive, vertically sided rectangular pits, in each case slightly larger than the temple (Fig. 4.49). The foundation pits are 2 m deep and are cut down into virgin soil. The foundation pits have been carefully back-filled with successive layers of boulders (up to about 30 cm) and silt, alternating with layers

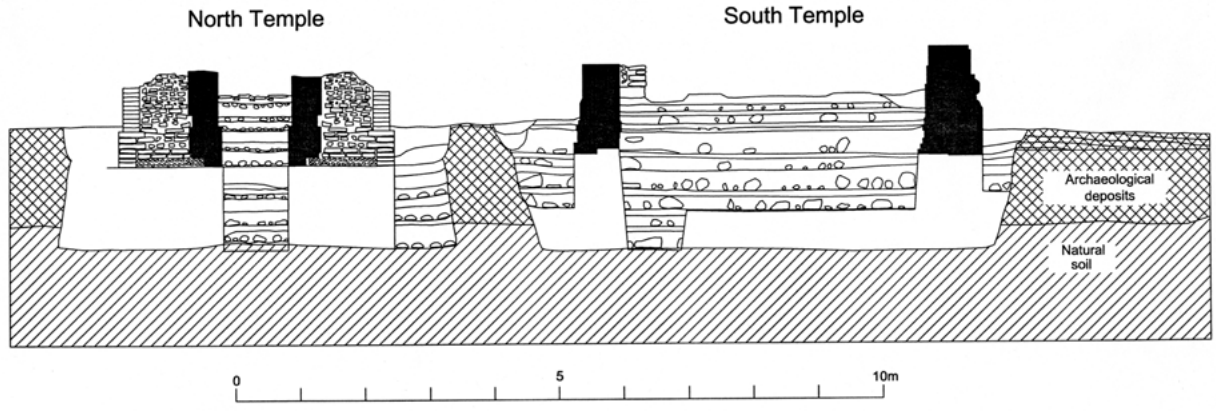

Fig. 4.49: A composite section through the two temples and their foundations.

of compact silt. This sequence of layers was repeated five times before the walls were constructed on the uppermost level of compact silt. After the construction of the walls, a further sequence of slightly thinner layers of boulders and silt was deposited within the temple before the floors were laid. Judging by the finds contained within the silt layers, the silt was dug from nearby on the site and incorporates residual artefacts such as pottery, bone and other materials that are commonplace in all soil at Paithan.

There are slight differences between the nature of the foundations of the North and South Temples. The stones used in the North Temple are smaller and more angular, and the silt surrounding them seems to be less compact and less pure than that used in the South Temple.

It seems certain that the rationale behind these very substantial foundations was sacred rather than structural. Indeed, it will be seen that the Paithan foundations follow the Brahminical literature precisely in all aspects. It is worth citing Kramrisch's translation of the relevant source to demonstrate this:

> *in extent the foundation pit is coterminous with the boundaries of the Prasada; in depth it is equal to the height of man standing with raised arms, or it is dug to the rock-bottom or until gravel is reached or the water level according to the geographical conditions of the site. After the pit is dug, it should be filled with pure earth, eight finger widths (angula) high; on this layer another one is placed, one cubit in height and composed of layers of strong stones each embedded in wet earth and separated one from the other by sand and earth; when the foundation has been laid so far, it is moistened with water, trodden by elephants, and levelled with heavy wooden stampers. On top of this, it is firmly packed and when one fourth of the pit remains the first bricks are laid.*
>
> (Kramrisch 1946, I: 105).

This passage is from the *Isanasivagurudevapaddhati* (vol. III). This is a *Paddhati*, or a ritual compendium in which all sorts of rituals are systematically treated and which is partly based on earlier texts such as *Agamas*. These *Paddhatis* served as handbooks for priests in the first place, but not so much for architects. They became popular from the 11th century onwards and the *Paddhati* at issue is probably dated to the 12th century and was probably written in South India.

There is a remarkable correspondence between the details given in this text and the foundations of the Paithan temples, even down to the proportions and heights given. Not only does this text therefore help to explain the complex nature of the Paithan foundations, but it also offers incontrovertible proof that the traditions that it sets out are clearly much older than the actual text itself. The text also suggests that there is significance in the fact the Paithan foundations are cut down to natural soil, thereby reaching pure earth uncontaminated with human artefacts.

This is not the first time that such elaborate, ritual foundations have been reported from the excavation of a temple in India. I. K. Sarma recorded similar foundation deposits below the Chalukyan Sangameshvara temple and Papanasi group of temples in Alampur district, Andhra Pradesh (Sarma 1993: 356–361) and similar foundations have also been reported, more recently, underneath a Rashtrakuta Jaina temple at Pattadakal in Karnataka (Venkateshaiah *et al*. 2006: 337–340). A search through the archaeological literature, however, also reveals that a less elaborate but otherwise very similar foundation technique had been used for domestic structures in the north-western Deccan since at least Early Historic times. For example at Brahmagiri (Kolhapur), the following description is given of the foundations of domestic structures of the Early Historic period.

> *Two or more sides of a house were raised on a foundation prepared by embedding large pebbles, in two layers at least, of sticky clay. The latter was either regur or brownish river mud. It has not been possible to ascertain whether these foundations were made by cutting a trench in the earth. Over these clay and pebble bases the brick walls were erected. In order to strengthen the building, and to have a hard level surface, the intervening space, between the four walls, was at times covered with roughly dressed stone slabs, and the whole filled up with layers of sticky clay, mixed with lumps of laterite up to a height of three to four feet above the foundation.*
>
> *It appears that this method of preparing the foundation was purely a local feature, and probably confined to the riverine tracts of the Deccan.*
>
> (Sankalia and Dikshit 1952: 135).

Sankalia and Dikshit then go on to describe a few similar types of foundations from other parts of India, such as Bihar, where slightly different materials were used but the concept was the same (Sankalia and Dikshit 1952: 135–137).

At Bhokardan a similar type of foundation was described for a platform structure of the Early Historic period:

> *Here was noticed a big platform paved with rubble rammed in black earth ... It consisted of 3 layers of rubble interspaced with black earth, the third layer of rubbles being comparatively of bigger size than those on the surface.*
>
> (Deo and Gupte 1974: 13).

And finally at Nevasa, 'elaborate foundations' are mentioned, again for domestic structures of the Early Historic period. These were much shallower than those brought to light at Paithan, but the concept is identical:

> *The foundation for these structures varied in depth between 1 ft. 7 in. and 1 ft. 2 in. The first course consisted of black sticky clay of a thickness of 4 in. to 7 in. Over this came the second course comprising undressed stones which were capped with black clay. The thickness of the latter was so adjusted as to present a level surface for laying the bricks.*
>
> (Sankalia *et al.* 1960: 53).

The evidence from these three sites suggests very strongly that the method of foundations used in the Paithan temples is a sacred elaboration of a domestic tradition that has been prevalent in this part of the Deccan since at least the Early Historic period. The fact that the foundation technique is so accurately described by the *Isanasivagurudevapaddhati* suggests that the rituals of temple construction as set out in the Brahminical literature are probably sacred formalisations of much older domestic construction techniques that, in this case at least, may have had a quite specific geographical origin. This is a potentially useful insight into how, and perhaps where, some of the Brahminical rules related to temple construction were developed.

At the same time, it should be noted that the more or less contemporary Gupta brick temples excavated at Bhitari appear to have quite different foundations. Temple 1 at Bhitari is partly constructed on a raised plinth created by a grid of brick walls, the spaces between the walls are filled with 60 cm of compact clay, whilst other parts of the temple have a foundation of eight courses of brick sunk into natural soil (Jayaswal 2001: 50, 73). The foundations of Structure 1 of Temple 2 at Bhitari, which shares close structural parallels with Phase II of the North Temple at Paithan, were not fully explored, however. It can be seen from Fig. 14 in the Bhitari publication (Jayaswal 2001: 84) that there is a foundation cut for the *trirathа* plan sanctum which cuts two layers, but unfortunately, it seems that excavation was not continued to a sufficient depth to ascertain whether or not the foundations are similar to those at Paithan.

Two further points need to be made in relation to the temple foundations. Firstly, no evidence of ritual offering was found beneath the *garbhagriha* of either temple, despite the fact that they were both completely excavated. Secondly, an examination of the section from Test Pit 3 shows that the top of the foundation cuts widen out quite markedly and this suggests that they may have been re-cut at a later date, perhaps in order to repair and re-point the lower part of the walls (Fig. 4.50). This is quite a common phenomenon, which unfortunately makes it impossible to establish from which level the original cuts were made. It will have been noted, however, that exactly the same form and depth of re-cut are a uniform feature of all of the foundation cuts on all sides of both temples; this suggests that these widenings might actually be part of the original foundation cuts.

The dating of the temples

Relative chronology

Both temples underwent five separate phases of development. Although the absolute dating evidence for these developments is still rather limited, it is possible to set out a relative chronology based on some aspects of the construction.

It has been noted above that the first three phases of the North Temple are built of bricks measuring 7 × 25 × 40 cm, but Phase IV was constructed of larger bricks measuring 6.5 × 26 × 42/43 cm. The larger sized bricks were also used to construct Phase I of the South Temple and all later phases of that temple. This suggests that Phase I of the South Temple was constructed later than Phase III of the North Temple, after the introduction of a larger brick size.

Brick sizes do not indicate whether Phase IV of the North Temple was built before or after Phase I of the South Temple. However, the walls dividing the interior of the *mandapa* in Phase IV of the North Temple are very similar to those of Phase V of the South Temple and are therefore likely to have been roughly contemporary. In addition, the *adhisthana* mouldings of Phase III of the North Temple are very similar to the mouldings of Phase IV of the South Temple, but it is possible that Phases I to III of the South Temple had similar mouldings. Based on these observations, a relative chronology has been set out in Table 4.2.

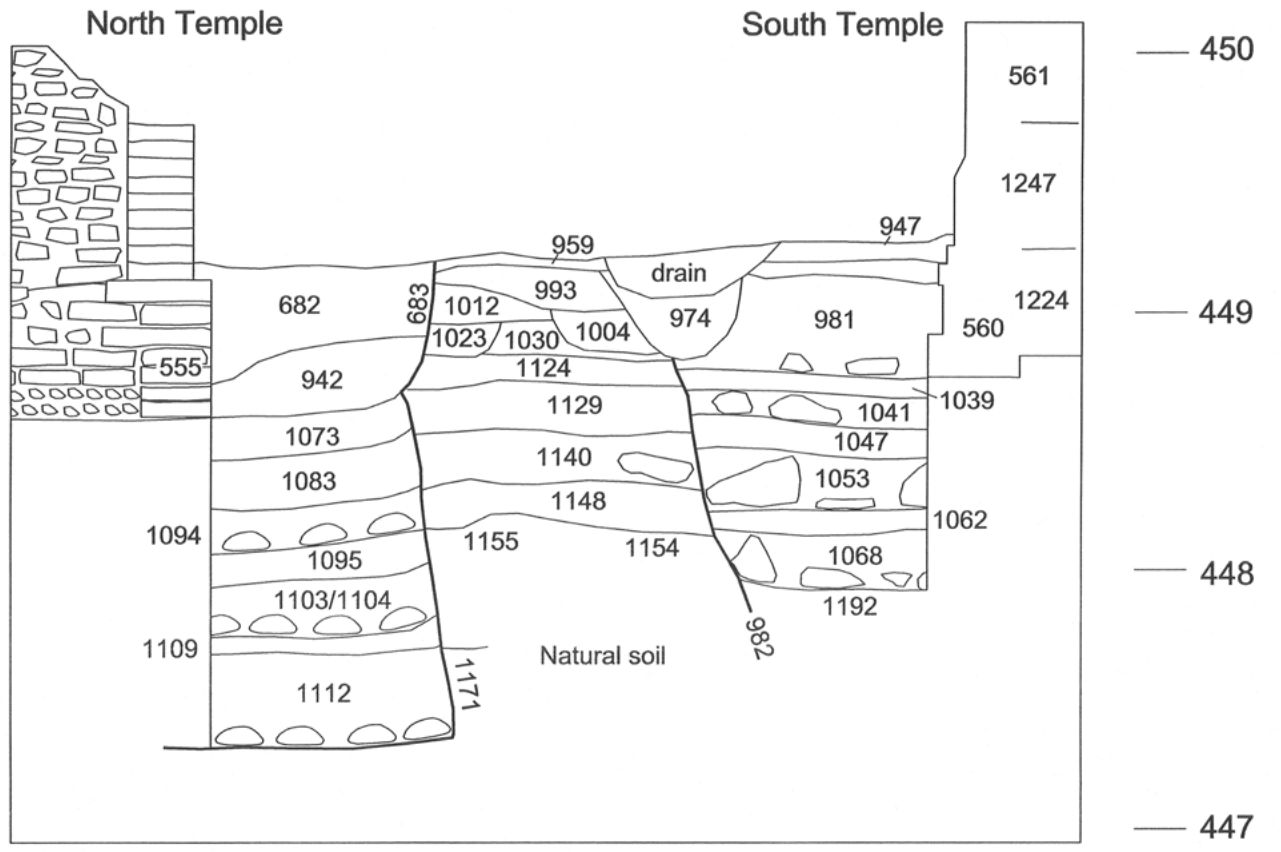

Fig. 4.50: West-facing section of Test Pit 3 showing the foundation cuts for both buildings.

Table 4.2: The proposed relative and absolute chronology of the two temples.

Phase	Development	Proposed date
North Temple Phase I	Simple shrine	5th century or earlier
North Temple Phase II	*Shikhara* construction	Mid–5th century
North Temple Phase III	*Mandapa* and *adhisthana* mouldings	Late 6th or early 7th century or later
South Temple Phase I	Change in brick size	7th century or later
South Temple Phase II		
South Temple Phase III		
South Temple Phase IV		
North Temple Phase IV and South Temple Phase V	Interior walls subdivide *mandapa* in both temples	
North Temple Phase V		
Abandonment		Later than the 8th century

This sequence is supported by the admittedly uncertain evidence from the test pits where it was shown to be most likely that the South Temple was built after the construction of Phase I of the North Temple. In Test Pit 3, to judge by the height of the Phase I wall and the level from which it was constructed, layers above 1129 or 1124 (probably including the latter) very possibly accumulated between the construction of the North

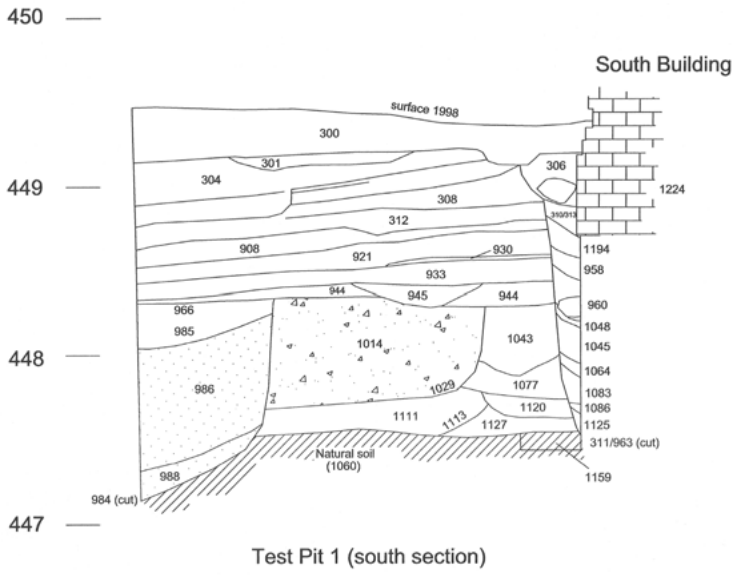

Fig. 4.51: South-facing section of Test Pit 1, Trench A, showing the foundation cut for the South Temple.

and South Temples, but there is no way of being absolutely certain of this. Unfortunately, the stratigraphy is not well enough preserved to contribute very much more to our understanding of the relative chronology of the two temples. It can, however, provide something of a broader context for the construction of the temples at this location. Test Pits 1 and 3 both revealed sections through the pre-temple deposits in the area of Trench A (see Section 2 below). These deposits were about 1.5 m deep (Fig. 4.51) and can be subdivided into two broad phases; the first deposits tend to be rich in brick rubble and other debris from construction or demolition activity. Above this, the deposits become silty and contain pottery and bone but little building material. Above these deposits, the temples were built. This evidence suggests that, although there was other building activity going on not far away, the temples are the earliest substantial constructions at this precise location. The silty deposits suggest a period of time when the area was a weed-covered dump close to a larger settlement immediately before the temples were built.

Absolute chronology

The absolute chronology of these structures and their sub-phases is problematic because almost all of the associated stratigraphic levels were removed without record by Yusuf's excavations, especially the stratigraphic connection between the excavation of the foundation cut for the temples and the surrounding pre-temple deposits.

At the very broadest level, the structures can be dated between the 4th/5th and the 8th centuries AD, during which time the architectural form of the Hindu temple emerged, but a more accurate chronology of the individual phases is required in order to situate their development within an historical context. This can only be achieved through parallels between architectural elements of the Paithan temples and dated buildings elsewhere. There are four stages in the development of the two temples for which such parallels can be proposed:

1. The recess in the wall of Phase I of the North Temple appears to be a very early form of plinth moulding that can be compared to the deep recesses in the mouldings of the Rudra-Narasimha, Bhogarama and Kevala-Narasimha temples at Ramtek, the latter of which is dated to the 5th century by an inscription (Fig. 4.52) (Meister *et al*. 1988: 66–70). A similar recess is also present in the earliest phase of the Kapoteshvara temple at Chejerla (Fig. 4.53), which I. K. Sarma has dated to between the 2nd and the 4th century AD, although he does not specify the evidence for this (1982: 138–139). The extreme simplicity of the Paithan moulding might suggest that Phase I of the North Temple should be dated to the early 5th century AD, or possibly somewhat earlier.

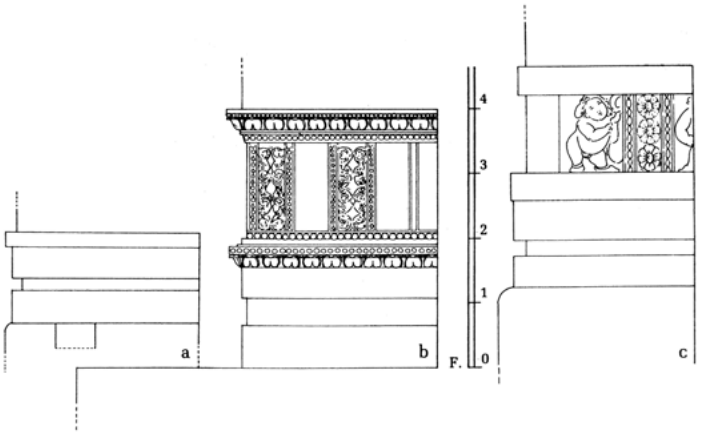

Fig. 4.52: Plinth mouldings from Ramtek: (a) Rudra-Narasimha temple; (b) Kevla-Narasimha temple; (c) Bhogarama temple (after Meister *et al.* 1988: fig. 40).

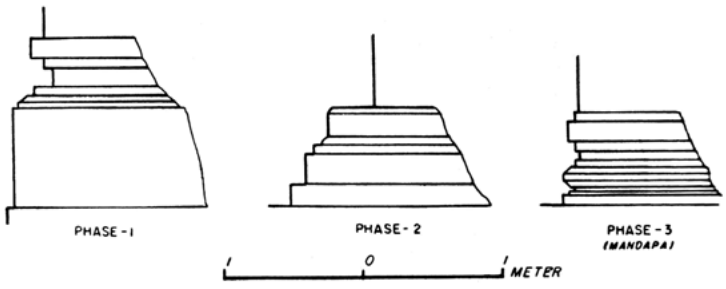

Fig. 4.53: Plinth mouldings on the main temple at Chejerla (from Sarma 1982: fig. 18).

2. The thickened walls of Phase II of the North Temple were clearly intended to support a *shikhara* over the *garbhagriha*. It has been suggested that the construction of *shikharas* is a stage of Gupta temple development that can be dated to the second half of the 5th century on the basis of parallels with Bhitargaon, Deogarh and the brick temple at Bodhgaya (Meister *et al*. 1988: 23). The *triratha* plan of Phase II of the North Temple is also closely comparable to Structure 1 of Temple 2 at Bhitari, which has been dated to the second half of the 5th century AD on the basis of similarities with the Parvati Temple of Nachana, as well as the re-use of broken bricks that, it is thought, were left over from the construction of nearby Temple 1 in the first half of the 5th century AD (Jayaswal 2001: 125–127).
3. The *adhisthana* mouldings in the walls of North Phase III and South Phases II to IV are quite sophisticated. In North India, the rounded *kumuda* (or *kalasa*) commonly occurs on structures dated towards the end of the 5th century AD or later, such as Nachana, Bhumara, Sakor, Elephanta Cave 1 and the stupa in Ajanta Cave 26 (Meister *et al*. 1988: 39–40, 52–54, 74–75, 90–91), whilst it does not appear to occur on structures built earlier than about 475 AD such as Bhitargaon, Kunda, Tigawa, Bhitari and Darra (Meister *et al*. 1988: 30–32, 35–37). This, however, serves only as a *terminus post quem* for the construction of the *mandapa* walls – the Paithan mouldings could have been built considerably later, because similar rounded *kumudas* continued to be built for some centuries. It is difficult to date the Paithan mouldings more accurately than this as the detailed scheme of development of *adhisthana* mouldings has not yet been fully elucidated in North India. Similar mouldings are known from the third stage of the Kapotesvara temple at Chejerla in Andhra Pradesh, where a date in the 7th century AD has been suggested, although there is no independent evidence for this (Longhurst 1917–1918). Similar mouldings

also can be seen on the pedestal in the sanctum of the Trivikrama temple at Ter, the precise date of which is also unknown (Mate 1957).

4. A date for the addition of a *mandapa* to the *mul-aprasada* in Phase III of the North Temple can also be suggested. It could be said that the earliest known *mandapas* are the *gudhamandapas* on the Rudra-Narasimha and Kevala-Narasimha temples at Ramtek, but these are quite particular, as they are part of the same structure as the *sandhara garbhagriha,* and can therefore be ignored as relevant parallels. The first *mandapas* that resemble Phase III of the North Temple at Paithan, in that the *mandapa* is more clearly separate from the *mul-aprasada*, first occurred at the end of the 6th or the early 7th century on temples such as the Laksmana and Rama temples at Sirpur, the Rajivalocana temple at Rajim, and the Parasuramesvara, Mohini, and Uttaresvara temples at Bhuvaneshvara (Meister *et al*. 1988: 230–236, 256–260, 265–267) in North India, and began to develop in the later 7th and early 8th centuries in the Karnata-Dravida tradition (Hardy 1995: 67, 71, fig. 46).

The presence of a degraded copy of the coins of the Sarvva-Bhattaraka and Maitraka dynasties in the foundation deposits of the South Temple (coin No. 34, context 700; see Chapter 9), which can be tentatively dated to the 7th century, provides a *terminus post quem* for the construction of this temple.

The final abandonment of the Paithan temples cannot be dated accurately because the relevant levels are so badly preserved. An impressionistic evaluation of the limited amount of pottery from the South Area, where a few layers related to the later use of the temples have been excavated, might suggest a date of about the 8th century AD for these levels, but it should be stressed that the pottery chronology for the Early Medieval period in India is still very imprecise and badly understood.

The proposed dating described above is incorporated into Table 4.2 to give a dated summary of the development of the two buildings. Further discussion of the significance of the Paithan temples can be found in Chapter 14.

Section 2: test pit and area-excavation reports from Trench A

After an initial cleaning and recording in the 1998 season, the full extent of Trench A was not excavated because it was too large to have been properly investigated with the time and resources available. Instead, targeted smaller-scale excavations were used to elucidate specific details of the temples' construction and phasing and to answer specific questions or to clarify areas of uncertainty. To this end, 10 test pits were excavated (Test Pits 1–10) (Fig. 4.5) and area-excavation was conducted in six different parts of the trench (see Table 4.1).

The reports presented below are edited versions of the end-of-season field reports written by the individual excavators after completion of excavation. They present the details of the stratigraphy which forms the basis for the more interpretive phasing and description of the temples that have been presented above. They also present the thoughts, impressions and doubts of the excavators. Numbers in brackets are excavation context numbers that are listed in Appendix I.

Test Pit 1 (TP1): the western wall of the South Temple (Figs 4.44, 4.51 and 4.54)

The sequence in this test pit was initially divided into a number of horizons, which are described below. These were then allocated to the site's periods as is described. The key layers mentioned in the description below are shown in Fig. 4.51.

This test pit was begun in the 1998 season during which time the upper 0.80 cm was excavated. The topmost layer consisted of fairly clean silt (300) that had probably been deposited since the 1937 excavations. Beneath this part of a collapsed brick wall was encountered (304) that looked like it might have fallen from the upper courses of the west wall of the South Temple. More horizontal layers were revealed below this that were cut by 311/963, the foundation cut of the South Temple. Deposits 300, 301, 304, 305 and 307 overlaid the foundation cut for the South Temple, whilst 306, 310 and 313 were fills within it. Layers 308, 312, 316 and 318 predate the foundation cut and are roughly equivalent to layers 908, 912, 913 and 922 that were excavated in 1999 (see Horizon 4 below).

Excavations were continued in Test Pit 1 in 1999 with the aim of investigating pre-temple deposits down

to natural soil. The following four horizons of deposition were noted:

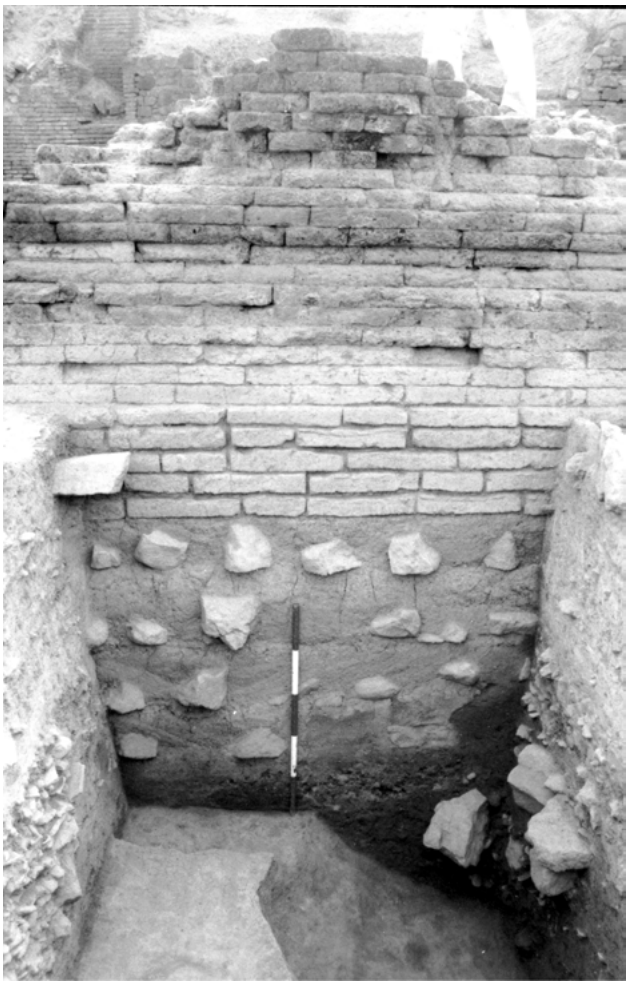

Fig. 4.54: Eastern section of Test Pit 1 showing the foundation fills under the west end of the South Temple.

Horizon 4, the latest horizon, marks a period of reduced human activity compared to the lower deposits. It consists of a series of water-deposited silt washes (908, 912, 913, 921 and 930) which contained occasional ash washes/dumps. Two top-soil-like deposits (933 and 922) were also noted. All of these deposits have been allocated to Period 4.

Horizon 3 marks the most intensive activity within this sequence. It is defined by a series of rubble layers into which a large number of pits were cut. The earliest of these was cut 1113 and sump 1114, which was filled with deposits rich in building debris (1110 and 1099). Two rubble deposits, 1077 and 1063/1052, accumulated prior to pits 1057 and 1075 being dug. Pit 1075 was filled with brick and tile (1074). More rubble layers (1040 and 1013) were dumped here before ash pits (e.g. 984), post-holes and pot/tile pits (e.g. 1029) were cut. Following this, more rubble layers were laid down (e.g. 966, 944). The upper surface (944) showed evidence of compaction and represents the only truly consolidated surface horizon identified in this area. A small ash pit (946) and ash dump (948) were recorded on this surface. The deposits of this horizon have been allocated to Period 2.

Horizon 2 consists of two clay-rich deposits with frequent grit and small stones (1127 and 1120). Deposit 1127 was cut by a large pit (1145). After this pit had been filled and covered, a second pit was cut (1131), which was filled with a pot and tile dump 1126. These deposits have been assigned a separate horizon principally due to the lack of brick in layers 1127 and 1120, as brick rubble is such a notable feature of the layers of Horizon 3 above. A small patch of burning (1141) was also noted next to pit 1131. Layers below 1127 in this horizon have been allocated to Period 1, whilst 1127 and the layers above have been allocated to Period 2.

Horizon 1, the earliest horizon, consisted of a black cotton soil with occasional pottery fragments (1159) to a depth of 0.44 m directly above natural soil (1160). It is thought that this may represent a buried plough soil.

The only additional feature excavated in this area was the foundation cut to the South Temple 963 (=982). This cut is slightly offset from the foundation courses, the southern end being closer to the building. It was filled with a number of alternating silt/stone and compact clay layers which formed a thick platform. This cut was not quite bottomed as it disappeared under the east section. It was, however, recorded as cutting a low ash layer 1159. Its greatest observed distance from the foundation courses of the wall was 0.14 m.

Test Pit 2 (TP2): the south wall of the North Temple

A test pit was opened over the remains of the south *mandapa* wall of the North Temple in order to investigate a possible robber trench. A sequence of very late surfaces and cuts was revealed.

Test Pit 3 (TP3): the foundation cuts of the two temples (Fig. 4.50)

The sequence in Test Pit 3 consists of a series of pre-temple deposits sandwiched between two cuts: the foundation cuts for Phase I of the North Temple (1171)

and the foundation cut of Phase I of the South Temple (982). The former is complicated by re-cut 683.

The top fill of the re-cut (682), a loose black cotton soil, seems to be cut by 339, which may be the foundation cut for the North Temple Phase III *mandapa* (see 'W Area' below). Below 682 is a brick-jelly fill (942) sitting over what were at first thought to be more layers extending over the length of the trench. It became apparent that this hard compact layer was itself a fill of a much deeper cut (1171), 683 being a re-cut more or less exactly on the same line and cut from 959, the highest homogenous layer. There is, however, some uncertainty about cut 339; firstly, it is not certain that it is the cut for the *mandapa* wall, and secondly, it is not absolutely certain that it cuts layer 682.

Similarly for the South Temple, after the removal of some superficial layers, a homogenous fill (981) was revealed. It was crammed full of pottery and the cut went down to a hard layer, at first thought to be the base of the feature. After allowing this to weather, it is fairly certain that feature 974/975 is actually the same as 981/982. In any case, both are cut from 993, although it was at first thought that 975 cut 981. A similar feature was found in Test Pits 1 and 5. Removing the hard layer 1039 revealed a repeating sequence of deposits familiar from other parts of the trench as temple foundation deposits, namely a silty-clay matrix surrounding small boulders, often with gravel tip lines, lying over a compacted clayey layer upon which the stones were set. Excavation was stopped at the third layer of boulders beneath the wall (1068/1069), revealing the next clay layer (1192). Therefore, cut 982 was not bottomed in this test pit.

Foundation cut 1171 showed a similar pattern. After removing the hard layer (1073), a sequence of a silty matrix surrounding boulders set on a more compact clayey layer followed. The third hard layer of boulders (1112) lay at the base of the cut. The foundation cut (1171) was originally dug 40 cm into natural soil.

The similarities between the two cuts are obvious; both contain the same broad sequence of deposits, both cut down into natural soil and both have a very compact upper layer on which the temple walls are built. The boulder layers in 1171, however, are much more patchy than in 982, while the layers in 1171 are more compact than in 982 and contain more small abraded brick fragments. Gravel tip lines in the silty-clay matrix are evident in the fills of 982, but not in 1171, and a break in the homogeneity of deposits in 1171 is shown in layer 1103/1104, which is a mixed layer of black cotton soil and a greenish-brown silty clay. While we can be fairly certain that 982 is cut from 993, it is not possible to be certain of this with 1171. All that can be said is that it can be no earlier than 1129, although comparison with Test Pit 10 may resolve this question. For what it is worth, it does seem that the cut curves inwards at the level of 1129 and probably was cut from about there.

The layers in between the two cuts form two distinct groups. The uppermost are quite disturbed by cuts (1011/1012, 1004/1005 and 994/993), coming down to an occupation layer (1030) cut by a series of features (1016, 1018, 1020, 1022, 1024, 1026 and 1028). Below 1030, the situation is simpler, consisting of thicker homogenous layers, e.g. 1124, 1129, 1140 and 1148, only one of which (1134) has a post-hole cutting it (1139). These layers are sometimes ashy (e.g. 1036, 1134) and sometimes result from a build-up of soil with rubble inclusions (e.g. 1148). Unfortunately, it was not possible to say much about them due to their being truncated by the two foundation cuts 982 and 1171. Excavation was stopped after the removal of layer 1148.

Test Pit 4 (TP4): the stratigraphic relationship between the two temples

Test Pit 4 was dug in an abortive attempt to establish the stratigraphic relationship between the foundation cuts of the North and South Temples. A 50-cm-wide sondage was excavated between the two buildings to a depth of about 50 cm. Work was abandoned when it became clear that no stratigraphic relationship remains between the two foundation cuts in this area, the crucial information having been removed by Yusuf's excavations. During the excavation of Test Pit 4, no context numbers were assigned or finds collected.

Test Pit 5 (TP5): the interior and foundations of the South Temple (Figs 4.33–4.38)

Two parallel foundation trenches belonging to post-Medieval buildings (594, 595) had disturbed the temple from above and had been mostly removed by Yusuf, but the bottom of their fills still remained. Their alignment and length were made clear by the cut into the south wall of the South Temple. A standing brick wall forms the eastern limit of Trench A running parallel to these cuts, and this wall was probably part of the same building for which the foundation trenches were dug. The relationship between westerly cut 594 and pit 335,

which cuts the north-west corner of the South Temple, was removed by Yusuf. The pit is probably earlier than the foundation cuts. It is similar to pit 341, which is cut into the north-west corner of North Temple, but this is probably coincidental.

The foundation cut for Phase I of the South Temple has been numbered 982, 1250 and 1181 in different places. It is a flat-bottomed cut with its base 20–25 cm below the level of natural soil (as seen in Test Pit 1 to the west of the temple). The first fill consisted of small boulders of igneous rock packed into a very clean silt matrix (Fig. 4.35). This was overlain by a thin (c. 10 cm) compact clayey layer containing numerous small weathered pottery and rubble fragments on to which a further layer of stones has been laid. The silt surrounding the stones is less compact and rammed level to prepare for the following stone layer. A total of five boulder/silt/compact clay sequences were laid down before a thin mud surface was spread across the entire foundation trench (953/955).

There were few notable differences in the boulder, silt or compact clayey layers throughout the fill, which was remarkably uniform. The first two stone layers consisted of tightly packed small to medium-sized boulders. The third and fourth layers consisted of evenly spaced larger boulders, each of which needed two people to lift. The fourth stone layer (1070/1071) was contained in compact silt (978/979) rather than a loose silt matrix. But the matrix of the fifth layer (1002/1003) was very loose by comparison. Upon this, an 8-cm-thick compact clayey silt layer (964/965) and mud surface were laid (953/955).

The foundation wall of the building (1224) is represented by the first six courses of brick, which were laid directly upon the mud surface covering the foundation fill. Above this within the *mandapa* walls, the nature of the foundation fill changes, becoming dirtier with numerous inclusions of rubble and broken pottery (952/918/700). The same is not true of the equivalent level within *garbhagriha* (919), which does not contain much pottery. This suggests that the fills are not the same and were deliberately kept separate from each other. A dark grey layer, 667, was deposited above 700 and runs underneath the Phase II walls (1240/1247), as can clearly be seen where there is a gap or entrance way in the Phase I wall (1224), which divided the *mandapa* from the *garbhagriha* (Fig. 4.37). Here, layer 667 abuts a large, heavily vitrified brick situated in the middle of the entrance, suggesting that the brick may have been a step or part of a threshold between the two spaces. This suggests that 667 must have been the floor level of Phase I of the temple.

Following this, the temple was reconstructed on a slightly different plan. The Phase I temple appears to have been knocked down, leaving only the lowest six courses remaining as a foundation base. Nothing therefore remains of the upper courses of the Phase I wall, and neither is there any concrete evidence that a temple of this phase ever existed, aside from the difference in plan between the Phase I wall and the Phase II walls (see discussion above).

Subsequently, the brick-jelly layer 661 must represent the rebuilding of the temple during Phase II, when walls 1240 and 1247 were constructed using the Phase I wall as a foundation. From the section, it is quite clear that the brick-jelly has been trampled into the clay surface 667, probably during the construction process.

After the construction of the Phase II walls, the interior was raised up to the level of mud floor 634 using a similar pattern of alternating boulder stones/loose silt/compact silt layers (654/642/638) that was capped by the floor. Through this process, the height of the floor was raised by 20 cm.

As can be seen in Fig. 4.36, the Phase II walls around the *garbhagriha* are as much as 35 cm thicker than the Phase I walls below them. This means that the interior width of the *garbhagriha* was reduced by 70 cm in Phase II. The *garbhagriha* was then filled with another sequence of stone and silt foundation layers (979/666/653). As they are physically separated from each other by the interior wall of the temple, it is not possible to say precisely how the layers in the *garbhagriha* relate to those in the *mandapa*. It is notable, however, that the fills within the *garbhagriha* are purer when compared to the construction fills inside the *mandapa*; that is to say they contain fewer pot sherds, stones and other inclusions (e.g. 642/638/626/622).

It proved to be much more difficult to isolate possible floor surfaces within the *garbhagriha* than within the *mandapa*. There are three 'stone and silt' foundation sequences in the Phase II *garbhagriha*, but there appears to be no definite surface between any of them.

Within the *mandapa*, there is evidence that the level was raised once more to create a floor using the same silt and stone foundation sequence (626/622). This later raising of the floor seems to relate to Phase V of the temple, a much later reorganization of the *mandapa* interior when the walls were thickened on the interior (509, 528). The south-side thickening is not shown in the section in Fig. 4.33 but a possible foun-

dation cut and fill (615/620) are visible. The two Phase V interior dividing walls (510, 511) are shown in Fig. 4.33. Other evidence relating to Phase V was removed by Yusuf's excavations.

Test Pit 6 (TP6): south of the South Temple (Fig. 4.55)

Test Pit 6 was opened against the southern wall of the South Temple in order to investigate the nature of the surfaces related to the temple and to reveal the foundation cut in this area.

The sequence revealed consists of a succession of hard clay/silt surfaces (650, 926, 373, 987) above some looser clayey silt deposits (1035, 1051). The lower of these are clearly cut by the foundation cut for the South Temple (1246 in this area), but because the upper portion of the foundations might have been disturbed by a possible later recut (372), it is impossible to be absolutely certain from which level the foundations were originally cut. Cut 372 describes the rubble-filled broadening out of the foundation cut in the top 20 cm. It is very similar to the form of temple foundation cuts in other parts of the trench (e.g. Test Pit 3; Fig. 4.50), and it is not clear whether this is a later re-cut or whether this was the original form of the foundation cut. Because the uppermost foundation fill (1031) that is clearly part of the original cut also seems to fill the lower part of 372, it seems likely that, in this case, this was the form of the original cut. In this case, most of the horizontal silt/clay deposits shown in Fig. 4.55 were deposited before the temple was constructed. The upper part of the foundation cut is filled with a compact rubble packing (342). Below this, a succession of silt/boulder stone foundation deposits fills the foundation trench, closely matching those uncovered in Test Pits 1 and 5.

A number of minor cut features such as pits and post-holes were cut into the pre-temple compact silt surfaces next to the temple, but nothing significant enough to warrant a fuller description was located. A thick, compact grey clayey siltwash (deposit 300) that has accumulated since Yusuf's excavations covered all the contexts in this area.

Test Pit 7 (TP7): the south-east corner of the South Temple

This small test pit was excavated to investigate the foundation cut of the eastern extension of the *mandapa* wall on the south side of the South Temple and also the original foundation cut for the Phase I wall. The test pit showed the existence of cut 372 which runs along the south wall of the temple, cutting surface 373. The stratigraphic relationship between this cut, the original foundation cut for the temple (1230) and the Phase IV *mandapa* extension cut (1178) was impossible to verify with certainty. It may be that cut 372 cuts 1230 and its later fills and is then cut by 1178. But it is impossible to be certain that cut 372 and the original temple foundation are not one and the same. Three hard surfaces (1190, 1191 and 1231) were noted underneath surface 373. The test pit was excavated only to a shallow depth due to lack of time and no further significant results were obtained.

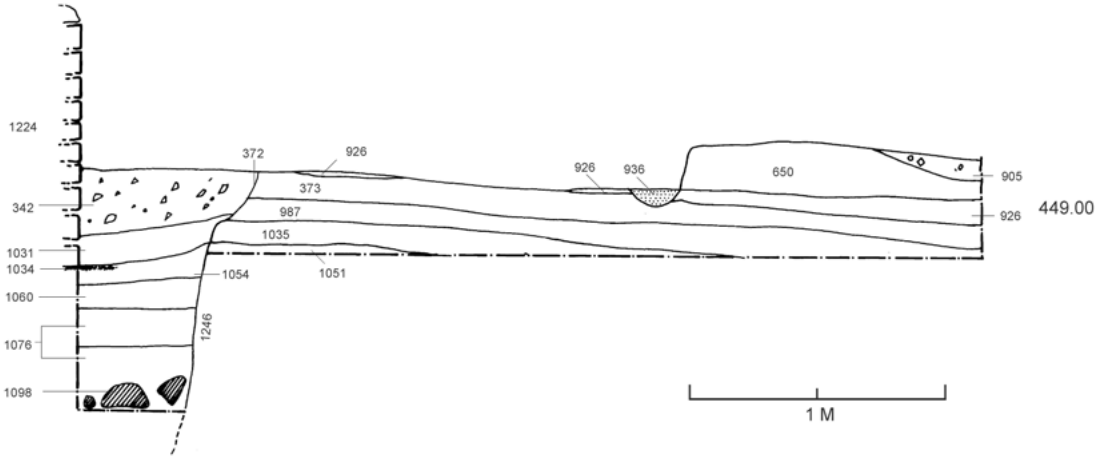

Fig. 4.55: South-facing section, Test Pit 6.

Test Pit 8 (TP8): the EEST (Fig. 4.43)

Test Pit 8 is a very small sounding that was excavated in 1999 in order to investigate the stratigraphic sequence against the eastern wall of the Phase I–III South Temple (Fig. 4.43). The uppermost level encountered below the level reached in the 1998 season was a hard floor (1182) that abuts the eastern face of Phase II wall just below the mouldings. This suggests that it is related to quite a late phase of use of the temple. It overlies packing 1216 that raised the level of the floor by about 70 cm. Below this, another compact floor surface (1245) was encountered, this time abutting the top course of the Phase I wall 1224, but which could be related to Phase I or to a later phase. It overlies packing 1219, which itself overlies an earlier floor (1220) that is also related to the Phase I temple or later. Below this, a number of thin silt and brick-jelly layers (dug as 1220) overlie another hard surface 1227, which must have originally abutted the Phase I wall 1224, but which has been cut by 1226. Surface 1227 is the earliest surface that was uncovered here and must relate to the initial use of the Phase I temple. Cut 1226, which was filled with rubble and stone layers 1222 and 1223, is a re-cut against the wall of the temple from slightly later in time. The reason for this re-cut is not clear. Underneath 1227, a flat compact layer, 1228, was revealed that underlies the Phase I wall and must therefore be the top fill of the original foundation cut of the temple, the precise location of which was not revealed in this small test pit.

Test Pit 9 (TP9): the *mandapa* of the North Temple (Figs 4.22–4.25)

In order to investigate the interior of the *mandapa* of the North Temple, a long, 1-m-wide slit trench was excavated across the building from the south wall, across the robber trench to the northern section of Trench A. The trench was positioned against the eastern wall of the Phase II structure (556). The sections in Fig. 4.22 show the stratigraphic contexts and their relationship to the Phase III, IV and V walls (557, 558 and 383/544, respectively).

The uppermost remaining layers in the interior of the *mandapa* were excavated in the 1998 season. At that time, Phase V walls 383/544 and the thick loose black cotton soil that it retained (395, 551, 1252) were removed. The presence of lime mortar in the crude Phase V wall 383/544 demonstrates that the 1967 restoration had disturbed this area, and this made it difficult to be certain which features originally related to the Phase V temple and which related to the restoration. These problems were compounded by the fact that the fills behind wall 383/544 were of loose black cotton soil within which it is difficult to discern cuts. Nonetheless, upon excavation, a large rectangular sunken area was located against the western end of the *mandapa* in the surface of deposit 551 (Figs 4.22A and 4.25). Measuring 140 cm north-south by 90 cm east-west and 15 to 20 cm in depth, it is thought that this depression may represent the location of a large rectangular object or structure that might have been part of a shrine. It is difficult to suggest another interpretation for it. It certainly abuts the Phase IV wall (558), but its stratigraphic relationship with wall 383/544 is much more difficult to ascertain for the reasons given above. It is thought most likely that shrine 551 was constructed within the space defined by wall 558 but that in Phase V wall 383/544 eventually enclosed this shrine or a later shrine on the same spot, possibly after the partial destruction of the Phase IV wall 558.

Below 551, a single course of boulder stones in loose silt was revealed (639). This is clearly a foundation deposit, similar to those that have been revealed in the North and South Temples. It abuts wall 558 and appears to have been laid down as a foundation for the 551 'shrine' described above.

Upon removal of 639 three bricks (983) were uncovered positioned close to the western wall 556 and associated with compact surface 940 (Fig. 4.24). They were situated upon some very distinctive deposits of compact, clean silt with green and red hues (976 and 977). It seems likely that these bricks and the associated surface and silts are the remains of an earlier shrine. This overlies a succession of trodden silt surfaces (1010) that accumulated over what appears to be another foundation sequence (1121, 1115, 1050) consisting of a layer of medium-sized, semi-rounded boulders of local igneous rock in a fine silt matrix similar to deposits found elsewhere in the foundations of both temples. It is possible that the upper level of 1050 was used as a surface for a period of time, but the related deposits (1049, 1032, etc.) do not offer conclusive proof of this. Before the bricks of the 983 shrine were laid down, a small cut (1007) was made against the wall through the trodden surface 1010. It is not known why this cut was made.

Wall 558, the Phase IV wall of the temple, was built from the level of layers 940 and 976. It was built directly on top of these layers without any foundations. It is impossible to be absolutely certain whether this wall

was built before or after the shrine 983. The wall overlies 940, which appears to abut the bricks of the shrine. Also, as can be seen from the east-west section along the face of the southern part of the wall (Fig. 4.22B), two bricks of the lowest course of the wall have been omitted, where it abuts wall 556, apparently to avoid disturbing deposit 976, which is associated with the shrine. This suggests that the wall was built after a shrine was already in use at this level; the wall being built perhaps to enclose the shrine.

The foundation deposits (1121, 1115, 1050) abut the *mandapa* wall 557 to the south and therefore can be regarded as packing for a major raising of the floor level of the *mandapa* (1010). Below these deposits, another surface came to light (1142), this time covered with a coarse brick-jelly (1132) within which a very clear 1-m-square impression (1137) is visible against the middle of the eastern face of wall 556 (Fig. 4.23). Again, this suggests that a large rectangular object was placed here against the western end of the *mandapa* and that surface 1142 accumulated against this object. The most obvious interpretation is that this results from the use of this location as a shrine. Surface 1142 is the first floor level of the *mandapa* that came to light in this sequence.

Below 1142, another foundation sequence of boulders and silt came to light (1151, 1157). This time these foundation deposits underlie *mandapa* wall 557, indicating that they are related to the original construction of the *mandapa*. They are deposited within cut 1243, which is the foundation cut for the *mandapa*. They directly overlie the upper foundation deposit for the Phase I structure (927/1186), the surface of which was cut by 1243. This demonstrates that the foundations of the Phase III *mandapa* were not excavated to the same depth as the Phase I foundations. This may be because the *mandapa* is later or because, as an addition to the *garbhagriha*, the sacred element of the construction may not have been taken so seriously.

The cut for the Phase III *mandapa* (1243) is shown in the northern part of the section of the test pit. On this side, the cut of the Phase I structure (1171) is 1.64 m from the corner of the Phase I wall, which is much further than the distance on the south side of the Phase I structure as exposed in Test Pit 3. The Phase III *mandapa* foundation cut was probably excavated from a higher level than the Phase I cut due to deposits that had accumulated in the intervening period. Unfortunately, these deposits were removed by Yusuf so it is now impossible to know from what height this cut was made. As is shown in Fig. 4.22C, cut 1243 is thought to have shaved the top corner of cut 1171 and then to have followed the uppermost deposit within the Phase I foundations (927). Unfortunately, time did not allow deeper excavation of Test Pit 9, which would have clarified the shape of both cuts and the relationship between them.

Table 4.3: Stages in the development and use of the shrine within the *mandapa* of the North Temple.

Stage	
1	Possible use of a shrine against the eastern wall of the Phase II structure before construction of the Phase III *mandapa*.
2	Phase III *mandapa* constructed.
3	Shrine 1137 was constructed on top of boulder/silt foundations within the *mandapa*.
4	Further stone/silt foundation sequence apparently in preparation for raising the interior floor to surface 1010. Possible use from the level of 1049 and above.
5	Accumulation of trodden surface 1010. The *mandapa* was clearly in use at this time but there is no evidence for a related shrine. Had it gone out of use or was there a shrine of which no trace remains?
6	Shrine 983 was constructed. This seems to have involved the cutting of a small pit 1007 against the eastern wall, the purpose of which is not known.
7	The Phase IV wall 558 was constructed around shrine 983 in order to enclose it.
9	Shrine 551 was constructed on top of stone/silt foundations within the Phase IV inner structure.
10	Phase V wall was constructed around shrine 551 or a later shrine, the remains of which have disappeared. It is possible that this occurred after the collapse and robbing of Phase IV wall 558.

On the south side of Test Pit 9, the join between walls 556 and 557 is exposed (Fig. 4.21). This demonstrates very clearly that wall 557 abuts wall 556 but that some of the bricks in the upper courses of wall 556 were removed in order to allow the much cruder brickwork of the *mandapa* wall 557 to be keyed into it. It can also be seen that one of the bricks in the lower courses of 556 has been cut into for the same reason.

The most important information to come from the excavation of Test Pit 9, apart from elucidating the construction of the Phase III *mandapa* and its physical relationship with the Phase II walls, is the evidence of at least three successive shrines within the western end of the *mandapa* against the wall of the Phase II structure. No evidence came to light to indicate that the eastern wall of the Phase II building had been used in this way before the construction of the *mandapa*, but any such evidence would in any case have been destroyed by the construction of the *mandapa*.

Table 4.3 sets out the probable sequence of developments related to this shrine.

Test Pit 10 (TP10): the west end of the North Temple

Test Pit 10 was opened to the west of the North Temple after the upper levels in the area had been subjected to an area-excavation (see 'W Area' below). The test pit was excavated to a maximum depth of 40 cm in order to explore a shallow cut (909) that runs along the western face of the Phase I structure. Three fills were removed from this cut (943, 928 and 920). The cut was shown to become shallower in the middle of the building, where an entrance to the structure might be expected (see also 617 in 'W Area' below). Excavation of the fills revealed what appears to be the foundation cut for the North Temple *garbhagriha* only 10 cm from the wall, which is markedly different from 1171 on the south side (see Test Pit 3 above). It was confirmed that the fill of the foundation cut (an un-numbered brick-rubble matrix) was sealed by the layer cut by 909 and that the foundation cut cuts an ashy matrix below it (un-numbered).

The *garbhagriha* of the North Temple (GG North) (Figs 4.11, 4.12 and 4.15)

In the 1999 season, investigation of the western end of the North Temple (Fig. 4.11) involved the excavation of the *garbhagriha* as well as cutting into the Phase I wall, where it had already been damaged by later robbing. Some limited cleaning and recording were also carried out on the western face of the structure.

The uppermost fill within the *garbhagriha* consisted of brick bats and silt (646). This layer seems to result from post-collapse, or possibly post-Yusuf use of the area. Beneath this layer begins a succession of silt/boulder foundation deposits similar to those in the foundations of the South Temple (see Test Pit 5 above). These consist of alternate layers of cobble-sized stones of igneous rock within a matrix of compact silt (Fig. 4.12). The stones are notably smaller than those used in the fill of the South Temple, and they are also smaller than those used further down in the foundation deposits of this building.

Having removed five successive silt/stone sequences (658/676, 677/685, 687/698/907, 910/917), a fine, compact clay surface 927 was exposed. This surface was covered with a dusting of brick-jelly less than 1 cm thick (923). Both 923 and 927 extended underneath the earliest wall of the Phase I shrine (970/554). Clearly incised into the four walls of the *garbhagriha* and onto the surface of 923 were four lines, running vertically down the middle of the interior face of each of the four walls and continuing across the surface of 923, forming a cross at the exact centre of the *garbhagriha*. These scratches are just visible on the walls in Fig. 4.14, below the blackboard. It seems that the scratches relate to the laying out of the sacred geometry of the *garbhagriha* and the marking of its precise centre.

Below this level, the silt/stone foundation layers extend underneath the walls of the shrine. A small trench was therefore cut by the present excavators from the base of the walls downwards for a further 1.2 m until natural soil was encountered. Within this 1.2-m sequence, three further successive silt/boulder sequences were revealed. The boulder stones in these layers are slightly larger than those in the layers above. Some minor variations in the composition and texture of the silt deposits were noted. These were given separate context numbers which are marked on the section. As can be seen in Fig. 4.49, this succession of layers links closely to that excavated to the south of the shrine in Test Pit 3 (see above). It is absolutely clear that these layers represent a deliberate filling of the large foundation cut 1171, which underlies the entire Phase I structure of the North Temple. The western, northern and southern limits of this cut were located, allowing the size to be calculated and to demonstrate that it may have been rather unevenly shaped and is at varying distances from the Phase I walls: about 80 cm

to the south, where it is most reliably defined, possibly 10 cm to the west and possibly 160 cm to the north. Once cut 1171 had been filled by silt/stone foundation sequences, the compact, level clay surface 927 was put down. This was then dusted with brick-jelly and the walls of the Phase I shrine (970, 554) were built in stages directly onto this. Once these had been completed, the platform wall was built, possibly in two distinct stages (969, 555) and the gap between the outer platform walls and the shrine walls was filled with brick-bat rubble (941) and layers of bricks (932, 911), thus completing the construction of the Phase I structure.

Robbing of the northern wall of the North Temple (NWNT) (Fig. 4.17)

Excavation along the northern wall of the North Temple demonstrated that after the temple had fallen into disuse the northern wall of the *mandapa* was completely robbed out.

The first activity after the abandonment of the North Temple was the cutting of two almost circular pits (533 and 541), each measuring about 1.50 m wide, both of which have been partly destroyed by the later robbing cut. The remains of one is visible to the left side of the main robber cut (Fig. 4.17), where it partly cuts into adjacent layers. Because the upper levels had been removed by Yusuf's excavations, it is not known from which height these were cut. Both had nearly vertical edges rounding to flat bases and were dug down to approximately the same level. Both had very similar fills, consisting of very soft, light grey, ashy silt containing large pieces of broken pottery. Across the base of both pits, a thin layer of white organic fibres was preserved. Both pits were severely truncated by later robbing of wall 557, and their shape was only evident as they were dug deeper than the lowest course of bricks in the wall.

In the size, shape and nature of their fills, these pits are very similar to pit 369 located to the south of the South Temple. Both pits cut into wall 557. The bricks of the wall were cut to maintain the circular shape of the pits, indicating that the pit diggers were not interested in robbing bricks. One slightly problematic aspect is that these pits cut into wall 557, although it is certain that the wall was still visible on the surface because it was laterrobbed out. The pits must therefore have been deliberately cut into a wall, but it is not clear why this should have been done.

A wide robber trench (377) was later dug along the entire length of wall 557 (Fig. 4.17). Due to later interventions, it is not possible to ascertain whether the robbing took out the upper courses of 557 in the east and it is also not known from what level the robber trench was dug. It seems to have been dug from the north side, as the southern edge was almost flush along the inner brick line of the wall. The robbing was very thorough; all but two or three bricks of the inner and outer wall face and the hearting material were robbed. A few of the bricks that were left *in situ* in the middle of the wall's length by the robbers were actually consolidated in their position with lime mortar during the 1967 restoration, probably because the restorers mistakenly believed that they were a free-standing wall (see 'wall' 502, which is visible in the background of Fig. 4.17). The precise location of the original *mandapa* wall is known because the lowest course of mud mortar is preserved in the bottom of the robber cut, within which the shapes of the bricks can still be seen.

The infilling of the robber trench follows broadly the same pattern along its length: firstly, a probably deliberate back-filling with a compact silt and rubble (fills: 549, 505, 535 and 529) was followed by a loosely compacted natural silting (fills: 327, 376). Where the robber trench cut through the softer fill of pit 541 some mixing of fills occurred.

To the west, a smaller robber trench (386) was cut into wall 557 just north-east of Phase II wall 556. The fill is very similar to the upper, looser silt fills in the main robber trench 377; it therefore seems likely that both robber trenches are contemporary. This robbing left a small section of the original *mandapa* wall *in situ*, and this has been numbered 514.

The robber trench had been completely backfilled before the next phase of activity took place in this area. A thin east-west trench (329, 396) was cut through the earlier robber trench fill along the same alignment. This cut ran from the north edge of the remaining stump of wall 557, eastwards to brick pedestal 375. The interpretation of this cut is problematic. It is most likely to have been cut by Yusuf or by the 1967 restorers hoping to locate the missing northern wall of the *mandapa*.

One feature that is not understood is the mysterious square brick pedestal 375, which stands exactly within the robber cut and which is visible in the foreground of Fig. 4.17. It is properly faced on all four sides and is clearly therefore not simply a remaining fragment of the robbed *mandapa* wall. It may be related to the foundations of much later post-Medieval build-

ings in the overlying layers. There is lime mortar in the upper four courses of this feature, indicating that it was partly consolidated by the 1967 restorers.

The area west of the temples (W Area) (Fig. 4.48)

After removing some superficial silt layers, several archaeological layers and features were revealed in the area to the immediate west of the North Temple. Layer 612/618/644 is an irregular deposit stretching along the west section. At one time in the past, it had been a muddy surface as a footprint was preserved in it. Removal revealed a very hard surface 657 into which two post-holes (656, 660) were cut. The surface appears to have been contemporary with a probable robbed-out stone wall that was originally contained within cut 617, but it also sealed part of the fill of the cut (616), though the remaining stones from the wall (903) jutted up through it. 'Wall' is probably the wrong description for 616/903/617 as the original form is unknown, it may have been the stone base of a fence or some similar boundary. Slightly S-shaped, it ran in a north-south direction to the west of the end of the Phase I/II walls of the North Temple and south towards the possible large stone enclosure wall excavated in the South Area (see below) (Fig. 4.48). It is possible that the two structures are contemporary and related. Interestingly, the cut became markedly shallower at just the point in front of the west end of the *garbhagriha* where an entrance way would have been expected. It is also notable that the stones of 903 on either side of this shallow section are very deeply set compared to the others in the possible wall, which were flat-bottomed. This might represent a gateway or passageway through the boundary wall, if that is what this is. The northernmost stone had a V-shaped socket cut in it.

Cut 681, aligned east-west, cut through the fill of the boundary wall. It is assumed that this was a later burial of some sort as a few fragments of human skull, although no other bones, were found in the fill (680).

Around the west, north and south sides of the North Temple *garbhagriha*, a peculiar square C-shaped cut was observed, two sections of which were excavated (909, 939). Layer 904 may have been a fill of this cut, but the first proper fill was 920, a brick rubble layer concentrated particularly on the west side of the *garbhagriha*. Very well structured, it was probably laid to provide a firm footing for access into the *garbhagriha*, although the number and quality of bricks peters out to the south. After removal, this feature was excavated in two segments in Test Pits 3 and 10 (see above). At the junction between the south wall of the *mandapa* of the North Temple and the *garbhagriha*, cut 339 had been partially excavated in 1998, removing fill 338 and leaving further probable brick rubble matrix 640. Although it is impossible to be certain, it seems possible that this was the foundation cut for the *mandapa*.

The southern wall of the North Temple (S Wall of N)

In this area, two cuts were identified relating to the south wall of the *mandapa*: 585 and 569, the former being on the south-east corner of the structure and the other, larger cut running along the central part of the wall. This cut contained two fills; a silty-clay loam (573), evidently backfill/in-wash material, and a rubble matrix (577), probably collapse from the wall's hearting. Cut 585 contained only one fill (584). Both were cut down to the bottom course of bricks in the wall and had thereby erased any evidence of the original foundation cut except for a thin yellowish brown silty clay lying directly beneath the lowest course of bricks. In the area between the two cuts, however, a narrow cut, filled with brick rubble, was visible.

The EEST (Figs 4.30 and 4.45)

During the 1998 season, cleaning and excavation of a number of features were undertaken at the eastern end of the South Temple, such as the foundation trench (347) of wall 352, and a few post-holes and cuts. This was followed in the 1999 season by the excavation of Test Pit 8 in this area, which has already been reported above.

The sequence in this area is key to the interpretation of Phases III and IV of the South Temple. Although the broader picture is fairly clear, there are still some unresolved stratigraphic relationships and interpretations. Essentially, over a period of time, four major walls were added to the eastern end of the temple: 344, 345, 352, and 359 adjoining the already existing Phase II walls 1240 and 1247 (Fig. 4.30).

The uncertainty revolves around the precise order in which these four walls were built. This is indicated, to some degree, by their stratigraphic relationship with a compact silt surface (346) that covers the interior of the eastern end of the temple. Walls 1240, 1247 and 344

are all abutted by surface 346 and are therefore obviously earlier than it, whilst walls 345, 352 and 359 are later as their foundation trenches can be seen cutting through the surface. The foundation trench for wall 352 was excavated and very clearly cuts through this floor. Cuts 521 and 527 of walls 345 and 359 respectively were not, however, excavated and it is not therefore possible to be absolutely certain that they are foundation cuts. They are very narrow (4 cm wide) and it is possible that they might have been cut to hold some sort of wooden facing against the walls, in which case the walls might be earlier than the surface. Given the fact that walls 359 and 352 are inter-bonded, albeit crudely, and the three walls obviously form part of single extension of the temple towards the east, this seems quite unlikely.

The sequence is thus reasonably certain; walls 345, 359 and 352 were added to the east of the temple to lengthen the structure. But wall 344 could have been built before, at the same time as or later than these walls and it is impossible to establish the order with certainty. It has been included as a separate phase, Phase III, because it does not seem to make sense anywhere else.

Three post-holes were then dug in this area. Two are almost certainly contemporary (523, 525) as they are located symmetrically on either side of the wide entrance to the *mandapa*. The posts they contained must have been part of some sort of entrance structure, again probably made of wood. The third post-hole (358) is not matched on the other side of the temple and may be related to something quite different. It is cut by the foundation cut for wall 352 (347).

In addition, a number of apparently later features in the area, mostly 'islands' of stratigraphy, now stand in isolation since they were revealed by Yusuf's excavations. It is therefore impossible to place them in a sequence or to link them together. They do, however, provide some useful insights into the latest phases of the temple's life. They include wall 360, which consists of some very large broken carved stone architectural fragments that have been placed on a layer of silt on top of wall 352 (Fig. 4.56), apparently as part of a crude rebuilding of the wall. There is a small rectangle of a solid brick wall (349) abutting the eastern end of wall 345, the purpose of which is unclear. It is also unclear whether it was matched by a similar wall against the eastern face of wall 359 on the south side – although it seems likely that it was – as this is outside the limits of the trench excavated by Yusuf. Wall 349 is likewise abutted to the east by a truncated silt and brickbat alignment (354) that once continued to the north. This may indicate that the South Temple was later incorporated into a larger architectural complex that extends beyond the limits of the trench. There is a small patch of a brick-bat and silt floor surface (353) abutting wall 352 to the east, indicating the level of at least one phase of later use. Finally, a series of large flat stones was recorded to the east of wall 352, where they disappear beyond the limits of the trench.

All of these features are clearly much later than Phases I–IV and give a limited and unfortunately rather fragmentary insight into the changing style of construction and manner of use of the temple in its latest phases.

The area to the south of the temples (South Area) (Fig. 4.48)

A large area was cleared to the south of the South Temple as there were some suggestions that this area preserved information relating to the later use of the temples and their surrounding area which had not been disturbed by Yusuf's excavations. The area is an irregular shape, measuring between 6 and 8 m north-south and 9 m east-west. Unfortunately, on excavation, it was found that the area had in fact been subject to Yusuf's excavations and probably also the 1967 restoration, one or both of which involved the cutting of 'wall-chasing' trenches, drains and other features. Nonetheless, excavation was continued in the hope that some useful information might be retrieved from the heavily truncated stratigraphy.

The deposits in the south-east consisted of a series of laminated water-sorted silts and coarse sands (592, 605, 635, 678 and 670) and a number of loose rubble tumble deposits (613, 619 and 663). These all existed east of a linear flat-bottomed cut, 692, which ran north-south along the entire length of this area. The slope-wash and rubble tumble deposits mentioned above all post-date this feature. It should be noted, however, that whilst this cut was clear in the north, its southern limit is obscure and difficult to define and was therefore not fully excavated. It is thought that this cut may represent an old section line or trench edge of Yusuf's excavations. It effectively divides the area into two sections to the east and west, each with a distinct depositional history.

The deposits to the east were markedly different, consisting of a number of architectural and negative features. The principal features of this area were two

parallel walls 691 and 699/578 (Fig. 4.47) and a ditch (688) with a re-cut (671) running parallel that may represent the line of another wall (Fig. 4.48). These features all semi-enclose an area to the south of the South Temple, although they were not visible in the west of the area, possibly because they were removed by Yusuf's excavations.

The two walls are of a very different nature; 691 consists of a single line of large semi-dressed igneous boulders set on their sides or ends. It starts 2.1 m west of the south-west corner of the South Temple and runs in a discontinuous line for 8.7 m roughly south before returning eastward for 4.6 m. It appears to have a foundation cut (673), although as this was not excavated, it remains unverified.

Wall 699, which was severely robbed by cut 577, runs approximately 0.1 m east of wall 691. It starts in the south-west corner of wall 691 and runs for 8.7 m, it then returns east to abut the south-west corner of the South Temple. It consists of a single course of broken bricks and stones, which are presumably the foundations of the original wall. This wall was left unexcavated. No relationship could be observed between the two walls due to disturbance by robbing activity, which appears to have removed the original foundation cut of wall (699), if one ever existed.

Another possible wall (578) was recorded superimposed on the alignment of wall 699 above the robber-cut fills 591 and 608. This was crudely constructed from sub-angular stones laid randomly and surviving to two courses in height. This is either a wall or the uppermost fill of the robbing cut 577 of wall 699.

To the west and south of the large boulder wall 691 was a shallow V-shaped ditch (688), 1 m wide by 0.2 m deep. Its primary fill was a thin calcareous wash (679), possibly resulting from the erosion of a plastered wall somewhere close by to the south. The ditch's other fills consisted of loose rubble (675 and 663). This ditch was only partially excavated. It was re-cut by ditch 671. It is thought that these ditches are later than boulder wall 691, as ditch 688 clearly cuts the foundation cut of 691.

All of the above features, with the possible exception of wall 578, are presumed to relate to a late period of use of the South Temple.

The abandonment of these features is marked by extensive pitting in this area. Two large round pits 628 and 631, filled with dumps rich in pottery sherds (fills 629 and 632 respectively), were cut into the top of the ashy fill (672) of ditch 671. Two amorphous pits were also cut into this ditch (623 and 669). Two small pottery-filled pits (588 and 587) were cut into the top of wall 578, as was a rectilinear pit 607. The fills of these pits contain Early Medieval grey wares (see Chapter 7: 'Thick Grey wares') and provide some indication of a possible *terminus ante quem* for the activity in this area.

It should be noted that some difficulty was experienced in understanding this complex and disturbed area, particularly in the south. Many of the early features were not excavated or were only semi-excavated and were interpreted through a section which was cut in the south-west corner of the area. No relationship could be established between walls 691 and 699 and the interpretation of cut 692 as the edge of Yusuf's 1937 excavation trench edge remains tentative.

The general sequence of events can, however, be given as follows with a fair degree of certainty:

An enclosure wall, either 691 or 699, whichever was earlier, was constructed to enclose an area to the south of the South Temple. This was consolidated or replaced by the addition of another wall (691 or 699). A ditch (688) was subsequently added on the outside of this enclosure. This was later re-cut (671).

Wall 699 was robbed by cut 577 sometime in this sequence, and possibly replaced by wall 578. The area then went out of use as an enclosure and this is marked by a sequence of pottery-filled pits. A large cut (692), possibly from the 1937 excavations, then truncated most of the deposits in the east of the area, which was then subsequently filled by a series of slope washes and rubble tumble deposits.

Table 4.4 lists and describes the 36 principal walls that were defined in the description and excavation of the two temples in Trench A. The location of these walls can be seen in Fig. 4.7 and Fig. 4.30 and other figures where stated.

Fig. 4.56: View of wall 360, built from re-used stone architectural fragments above wall 352 at the east end of the South Temple from the north-west.

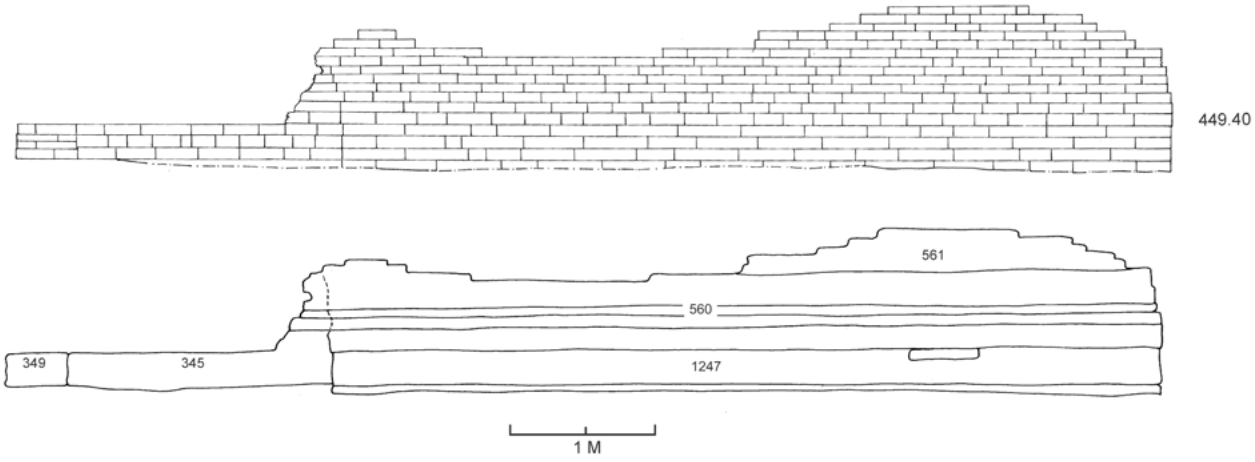

Fig. 4.57: Drawing of the north face of the north wall of the South Temple with an interpretive overlay.

Table 4.4: Detailed description of the principal walls in Trench A.

Wall Number	Temple/Area	Description	Phase	Brick size
344	S Temple	Phase III east wall of the South Temple.	South III	6/7.5 × ? × ? cm
This is a late addition blocking the opening in the east end of the Phase II South Temple. Only four courses survive; it is heavily restored and re-mortared and there may have been some reconstruction – it is now impossible to tell. The construction is crude, similar to 352, using mostly brick bats. The wall is 71 cm thick with c. 42 cm of rubble fill. Height as standing is 29 cm.				
345	A:S Temple	Phase IV extension to east end of north wall of South Temple.	South IV	Unclear
This is an eastern extension to the north side of the South Temple, equivalent to 359 on the south side. This wall extends the line of 560/561 to the east by 183 cm at the lowest course. For most of the wall's length, only the lowest three courses survive; at the west end, 11 courses are preserved, but above course five, the bricks are inter-bonded with wall 560. This demonstrates that the eastern extension was complete before the upper part of wall 561 was rebuilt. The most westerly five bricks of the lowest course are offset by about 5 cm in a very irregular fashion; the reason for this is not clear. The jointing is quite crude and the wall is made almost entirely of slightly weathered brick bats. The wall is between 89 and 92 cm wide with 55 cm of densely packed brick rubble in its core.				
349	A:S Temple	Short wall abutting wall 345 to east of South Temple (north side).	South – uncertain phase	Unclear
The width of this wall is 98 cm and the length 38 cm. It consists of four courses of brickwork which have been built on to the eastern end of wall 345. It is built of solid brick bats with no rubble fill.				
352	A:S Temple	Phase IV and V east wall of South Temple.	South IV South V	Variable
Eastern wall of Phases IV and V of the South Temple. The wall is robbed out along about 1.4 m at the north end and only about 2.4 m remain. It is overlain by a later stone alignment/wall 360. The wall is 70 cm in width with about 38 cm of brick bats and silt as a core. The wall has a stone foundation with a compact silt matrix (317) (Fig. 4.45). Only seven courses of the wall remain; the lowest five are foundation courses not intended for view and the bricks are variable in size and type and have crude jointing. The upper two courses are offset by about 3 cm and the silt jointing is a little finer. Still the brick types are quite variable and most of them appear to be brick bats rather than complete bricks. The largest are 24 cm in length.				
354	A:S Temple	Small, crude brick alignment abutting east end of wall 349.	South – uncertain phase	Unclear
Small alignment of brick bats abutting wall 349 at the eastern end of the South Temple. It is not clear if this is a wall or the remnant of a brick surface.				
359	A:S Temple	Phase IV extension to east of south wall of South Temple.	South IV	7 × 24 × 36 cm
Wall 560 was extended 1.56 m on the south side by the construction of this wall, which abuts 560 up to the 14th course, above which level it is inter-bonded (Fig. 4.42). The bricks of this wall are orange fired and measure 7 × 24/25 × 35/37 cm. This is the same size as the bricks of the inter-bonded courses above except that they are thinner (c. 6 cm). The jointing of these courses is also cruder than the inter-bonded courses above. The wall is 84 cm wide with about 40 cm of brick-bat and silt fill. The wall is inter-bonded with wall 252, which is of a slightly cruder construction.				
360	A:S Temple	Crude stone wall on top of wall 352, east of South Temple.	South IV South V	N/A
This wall consists of re-used carved stone architectural fragments lying in a rough alignment along the top of wall 352 (Fig. 4.56). It appears to be a late rebuild of wall 351 and may be related to the very latest phase of use of the temple. It is separated from wall 352 by a 5-cm deposit of silt, suggesting that the construction techniques of the period when the wall was built were extremely crude.				

Wall Number	Temple/Area	Description	Phase	Brick size
383	A: N Temple	Thin Phase V partition wall in west of *mandapa*, North Temple (equals 544).	North V	unclear
This wall consists of 10 or 11 brick bats crudely set on end into a thick, gravely mortar running across the *mandapa* of the North Temple, 1.64 m from the western end. The brick bats are of different heights but their bases are at roughly the same level. The wall continues to the south of wall 558 in the southern aisle of the *mandapa* as wall 544 where it turns and abuts the interior face of wall 557. The brick bats are 5.5/6.5 cm thick. The mortar must originate from the 1967 restoration of the temple because Yusuf clearly states that no mortar was used in the temple construction (Yusuf 1938: 4). But it is clear from his photograph (Fig. 4.4) that this structure existed and that it was considerably larger when it was first excavated in 1937. What remains now appears to be the 1967 restoration of a rather fragile structure excavated by Yusuf that acted as a retaining wall for a raised platform in the western part of the *mandapa*.				
509	A: TP5	Single course thickening of interior of south wall of South Temple.	South V	7 × 14 × 23 cm
Wall constructed against the interior face of the south wall of the South Temple as part of the Phase V alterations to the temple also involving walls 562 and 528. This is a one-brick wide wall constructed in a very crude fashion. Only about 17 bricks remain, not all of which are complete. There are four courses held together with a crude mud mortar. The face is irregular and badly laid. The wall is separated from the main temple wall by 7 cm of silt fill. Equals 562.				
510	A: TP5	Interior wall in South Temple *mandapa*.	South V	Unclear
Inside the *mandapa* of the South Temple, two badly preserved walls (510 and 511) appear to have originally subdivided the *mandapa* into three sections as part of the Phase V alterations. This wall is of a very crude construction, being built of brick bats on a rough, shallow foundation of small stones. The wall has been disturbed by later cutting from an unknown height and possibly also by Yusuf's excavations. Only one course of bricks now remains, none of which are complete. The wall is 50 cm wide.				
511	A: TP5	Interior wall in South Temple *mandapa*.	South V	Varies
Inside the *mandapa* of the South Temple, two badly preserved walls (510 and 511) appear to have originally subdivided the area into three sections as part of Phase V changes. Wall 511 is of a very crude construction, being built of brick bats on a rough, shallow foundation of small stones. The wall has been disturbed by later cutting from an unknown height and possibly also by Yusuf's excavations. Only two courses of bricks now remain, none of which are complete. The bricks are mixed, some being orange fired (7 × 22 × 38 cm) and some purple fired (7.5 × 20 × 33 cm). The wall is 50 cm wide.				
514	A:N Temple	Remaining portion of original northern wall abutting shrine, North Temple.	North III	Varies
This appears to be the original Phase III wall of the *mandapa* of the North Temple (557, see below). It is the only remaining section of this wall on the north side of the temple and is preserved between the edge of a robbing cut and a pit dug through the structure from above. The base of the wall is 107 cm wide thinning to 96 cm wide above the third course and 75 cm wide above the mouldings (Fig. 4.19). The wall consists of two brick faces with a 40-cm hearting of brick bats and silt. The northern face of the wall shows that it had *adhisthana* mouldings beginning with an offset in the eighth course, but these were later hidden by the addition of an outer face (wall 559/1213). Only the lowest three courses of the mouldings are preserved (Fig. 4.18B). The lowest courses of the wall are built of bricks 40/41 cm long, whilst the upper courses use variable brick sizes. The interior face of the wall is offset at the third course by 3 cm and at the fourth course by 9 cm. There is another very small offset of about 2 cm at the eighth course.				
528	A: TP5	Thickening to interior face of north wall, South Temple.	South V	Unclear
Wall constructed against the interior face of the north wall of the South Temple as part of the Phase V alterations to the temple also involving walls 562 and 509. This is a one-brick wide wall constructed in a very crude fashion from brick bats held together with a crude mud mortar on a thin foundation of small stones.				
544	A: N Temple	Thin Phase V partition wall in south aisle of *mandapa*, North Temple (equals 383).	North V	Unclear
See description of 383 above.				

Wall Number	Temple/Area	Description	Phase	Brick size
554	A:N Temple	Phase I wall, North Temple.	North I	7 × 25 × 40/41 & 33 cm

This is the wall of the shrine of Phase I of the North Temple. It is a solid brick wall, two-bricks wide at its base and one in the upper courses, with no hearting. The wall still stands to 19 or 20 courses or 160 cm high. The bricks are quite finely jointed with mud mortar, although only very little of this is exposed. The structure is quite complex (Fig. 4.12). The lowest two courses of the wall are only visible on the interior, on the exterior they cannot be seen because rubble fill 941 underlies the third course. This indicates that the construction of wall 554 and the deposition of 941 were simultaneous. The lowest two courses of 554 have therefore been labelled 970 (see below) in order to differentiate them stratigraphically. The width of 970 is not known as the outer face is not visible. Wall 554 is two-bricks, or 50 cm wide at its base, although the lowest (or 3rd on the interior) course is inset by about 3 cm on the exterior. Above the sixth (or eighth) course, the wall thins on the interior to a single brick thickness (about 30 cm) for the rest of its height, creating a 25-cm-wide ledge on the interior. Wall 968 (see below) was built into this space at a much later date to thicken the wall to 50 cm. The 7th and 8th (or 9th and 10th including 970) courses of the exterior are inset by 5 cm on the north face and 2 cm on the east face, creating what appears to have been a simple rectangular decorative inset moulding that probably ran around the whole shrine, although it is visible only in a limited area where it has been exposed by pit 341. The bricks are quite soft-fired and pinky-yellow or red in colour and vary in size, most measuring 7 × 25 × 40/41 cm, although some smaller examples measuring 7 × 25 × 33 cm were also noted. The coursing consists almost entirely of stretchers on the interior, which is the only face that is fully visible. The whole square structure measures 2.04 m N-S and 2.08 m E-W on the exterior, and the space in the centre measures 1.10 m N-S and 1.06 m E-W at the base. There is no discernible sign of weathering on the exterior wall surface that would demonstrate that the structure was exposed to the elements for any length of time.

555	A:N Temple	Phase I platform, North Temple.	North I	7 × 25 × 40.5 cm

Technically, this number refers only to the upper three brick courses of the platform of the Phase I shrine of the North Temple, although the number has also sometimes been used in general descriptions to refer more generally to the whole Phase I square platform including the lower part of the wall 969 (see below) and fills 941, 932 and 911 (see Fig. 4.12 and discussion). Wall 555 is exposed only in limited places. The bricks are soft and have a reddish colour and are jointed with a fine mud mortar less than 1 cm thick (Fig. 4.16). The top course is a levelling course in which the bricks are between 4.5 and 6 cm thick, suggesting that they have been deliberately thinned to level the surface of the platform. The wall retains a rubble fill that abuts wall 554, although it is not clear where the upper level of this fill originally was as it has been disturbed by the construction of wall 556 during Phase II. The platform measures 4.22 m N-S and 4.21 m E-W and is about 56 cm high, the upper 26 cm of which is technically wall 555.

556	A:N Temple	Phase II structure with offsets, North Temple.	North II	6.5 × 25 × 40 cm

Wall 556 refers to the Phase II *triratha* structure in the North Temple that is constructed upon the Phase I brick platform 555. The structure is square and about 20 cm smaller than platform 555, but the middle of each face projects out 10 cm along a 2-m section to the edge of platform 555 (Fig. 4.12). At least 13 courses of the outer structure are preserved, so that it stands 1.10 m above the top of platform 555. The wall consists of an outer face of brickwork, which is filled with a brick-bat and silt hearting. The lowest five courses of the wall are very finely jointed (less than 5 mm) using good-quality orange or orange-red bricks measuring 6.5 × 25 × 40 cm, although in the fifth or sixth course, the bricks are thicker (7 or 7.5 cm) but otherwise the same size. Above this course, 6 × 20 × 33 cm purple fired bricks with surface traces of vitrification are used and are part of a much later rebuild numbered 971 (see below). The bricks above this level are badly eroded, suggesting that they have been exposed for longer than the lower courses, perhaps since Yusuf's excavations. The coursing consists mostly of stretchers with occasional shorter bricks (Fig. 4.16). There are small offsets in the wall in some places, without apparent symmetry: there is a 3.5-cm offset above the third course at the south end of the west side and a 4 cm offset above the ninth course at the west end of the north side. The eastern side of the structure has been cut into above the sixth course for the addition of wall 557 (Phase III). This is a complex inter-bonding, that is discussed in more detail above.

557	A:N Temple	Phase III *mandapa* wall, North Temple.	North III	6.5 × 25 × 40 cm

This is the Phase III *mandapa* wall of the North Temple. It forms a large tapered rectangular structure that abuts wall 556 to the west. The wall is 120 cm thick along its south, east and north sides, but only 94 cm thick along the western side. The wall consists of two brick faces filled with a hearting of brick bats and silt. The bricks are orange and are finely jointed with silt. The wall has been almost completely robbed out along its northern side, the eastern side is preserved but has been built over during reconstruction and much of the south side has been robbed out or has been built over by reconstruction; the upper courses of the north face of this part of the wall consist of smaller-sized bricks jointed with mortar, almost certainly resulting from the 1967 restoration. It is not clear, however, if there was a later rebuild on top of this part of the wall before that time. This wall is the same as wall 514 (see above), which has a different number only because it has been isolated by later robbing. There is a 3-cm offset along the interior face above the seventh course which appears to run around the whole building. Above this offset, the jointing is noticeably cruder, especially at the west end, suggesting perhaps that the structure was rebuilt from this level. This is just above the later floor level (1010). *Adhisthana* mouldings are preserved along a 24-cm section of the west face (and also on the west face of wall 514), but probably once extended around the entire *mandapa*. The mouldings are of a very similar design to those on wall 560 of the South Temple (see Fig. 4.18A).

Wall Number	Temple/Area	Description	Phase	Brick size
558	A:N Temple	Phase IV interior wall, North Temple.	North IV	7 × 26 × 42 cm
This wall forms a sub-rectangular structure inside the *mandapa* of the North Temple and is part of the Phase IV alterations. The wall is 51–54 cm wide and consists of two rows of bricks with no hearting. The low-fired, crumbly orange bricks are quite crudely jointed with silt mortar (much cruder than wall 556). The wall sits on a compact clay foundation on the floor, which abuts wall 557. Wall 558 abuts wall 556 and 557 at the west end. At the west end of the south side of the wall, a 40-cm-long grey stone is built into the wall.				
559	A:N Temple	Rebuilding of outer face of wall 514.	North III?	Unclear
This wall (also numbered 1213) consists of three courses of soft-fired red bricks, finely jointed with a mud mortar, that have been added to the western face of wall 514. The bricks were clearly part of an *adhisthana* moulding, as they are offset and the brick in the middle course is chamfered (Fig. 4.19). The wall appears to have no substantial foundations, and the lowest brick sits on a deposit of silt that abuts the face of wall 519. The base of this wall is level with the eighth course of wall 514. This is a rather strange situation and it is difficult to understand, partly because only about 50 cm of this wall is preserved, and partly because the stratigraphic relationships and related deposits have been removed by previous excavations. This wall appears to represent a thickening of wall 514 by about 30 cm towards the west that preserves the mouldings. The chamfered course in the mouldings is at exactly the same level as the same course in wall 514. No similar thickening was observed on the opposite side of the temple.				
560	A:S Temple	Phase II wall of South Temple.	South II	6/7 × 22/24 × 43 cm
This is the upper part of the main wall of Phase IV of the South Temple. It is partly constructed upon the Phase II walls 1240 and 1247 (see below and the section in Fig. 4.33), except in the eastern extension, where it would have been constructed on top of walls 345, 359 and 352. This wall was originally numbered 351 (south side) and 361 (north side), and in the site documentation before Test Pit 5 was excavated, walls 560, 1224 and 1240 were considered to be the same. The wall is about 101 cm thick and has a 50–55-cm thick rubble hearting consisting of brick bats and silt. About five brick courses of wall 560 survive above wall 1247, although this may vary across the structure, with *adhisthana* mouldings beginning with a chamfered brick in the second course (Fig. 4.18C–D). The bricks of the moulding courses are slightly thicker than in the rest of the wall (7 × 22 × 40 cm), and appear to be slightly higher fired. See also elevations of the wall from different directions (Fig. 4.46). The jointing is cruder than 1240/1247 and the coursing consists mostly of headers. It is assumed that the top of the vertical abutment at the eastern end of the south wall marks the distinction between walls 560 and 1240/1247 (Fig. 4.42), but this is far from certain and it is impossible to verify because not all faces of the wall are exposed, and the difference between the two walls is not always apparent. It is also more than likely that the construction of wall 560 took place from slightly different levels across the trench and from different levels on the interior and exterior face of wall 1240/1247. That is to say that the top of 1240/1247 may not have been level when 560 was built upon it.				
561	A:S Temple	Late rebuilding of north wall, South Temple.	South V?	6 × 16 × 27 cm
This represents a late rebuild of wall 560 along the north side of the South Temple. The reconstruction took place from the 12th or 13th brick course above the lowest course of wall 1247 (Fig. 4.57). Above this level, the bricks are hard-fired and purple coloured with frequent signs of vitrification on the surface. These bricks are smaller than those used in the earlier walls. The jointing is quite fine. The lowest two courses are a little larger and these may represent an earlier rebuild of which no other evidence survives. The coursing pattern is HSSSSSHSSSSSH or HSSSSHSSSSH. There is a 2-cm offset in the sixth course of 561 that runs along the whole wall. Wall 561 has removed the upper courses of the *adhisthana* mouldings of wall 560 below, leaving only the first chamfered course, but no attempt has been made to re-create the mouldings. The type of bricks used in wall 561 is similar to those used in apparently later rebuilds of parts of the *garbhagriha* structure of the North Temple (see wall 971 below).				
562	A:S Temple	Phase V thickening of inner face of south wall, South Temple.	South V	7 × 18 × 35 cm
This wall consists of four courses of bricks built against the inner face of wall 560 and 359 on the south side of the South Temple *mandapa*. The wall is only one-brick wide and is separated from wall 560 by a 5-cm-thick silt deposit. One of the bricks is intact enough to measure and is 7 × 18 × 35 cm. The upper two courses of this wall are inter-bonded with wall 359, suggesting that some reconstruction of the temple superstructure occurred during the Phase V alterations. The base of the wall appears to rest on silt, although this was not excavated and it is likely that there is a shallow foundation deposit below as there is for wall 509. This wall is almost certainly the same as 509, but the two parts have been separated by the destruction of the middle part of the south wall.				
578	A:South Area	Wall foundation in cut 577.		N/A
691	A:South Area	Wall of large irregular igneous boulders.		N/A

Wall Number	Temple/Area	Description	Phase	Brick size
699	A:South Area	Broken-brick wall foundation cut by 577.		N/A
Together, these three deposits (578, 691, 699) represent a now completely robbed stone enclosure wall that appears to have abutted the south-west corner of the South Temple and then turned sharply towards the south, where it disappears out of the excavated area (Fig. 4.48). Deposit 578 consists of a very crude alignment of angular igneous rocks that were found within robber cut 577. It seems most likely that they represent some of the stones from the original wall that were left behind by the robbing and have been buried within the fill of the robber trench. What appears to have been the foundation of the original wall is represented by 699, a compact deposit of brick bats and stones at the base of the robber trench beneath 578 (Fig. 4.47). To the immediate west of the robber trench is another crude and discontinuous alignment of large stones (691) that may represent the course of a parallel wall or which may have been robbed from wall 578/699 but which were left at the site. There are two further cuts (671 and 688) close by and on the same alignment that might be the foundation cuts or robber cuts of related walls that have now completely disappeared. That there was a wall (or walls) here is in no doubt as the robbing and the foundations clearly show its course. Whether it was brick or stone is not certain, but the large amount of stone that is found in deposits 578 and 691 suggests that the wall was constructed of large blocks of igneous rock.				
968	A:GG North	Internal thickening of wall 554 of *garbhagriha*, North Temple.	North – uncertain phase	7.5/8 × 18/19 × 25/26 cm
This wall is an internal thickening of the Phase I *garbhagriha* wall of the North Temple (554). It is constructed on the internal inset in the eighth course wall 554 and continues to the height to which the *garbhagriha* is preserved today (Fig. 4.12). Ten courses of this wall are preserved standing to a height of 78 cm. The wall is built of bricks which are crudely jointed with silt. The construction is not of good quality, mostly stretchers are visible on the interior and they are not neatly arranged. The small brick size suggests a fairly late date of construction through comparison with other bricks in the two temples.				
969	A:GG North	Possible earlier phase of wall 555, North Temple.	North I	6.5/7 × 24/25 × 39/40 cm
This wall is the lower four courses of the outer edge of the Phase I platform of the North Temple 555 (Fig. 4.12). It forms a square exactly the same dimensions as 555 (4.22 m N-S and 4.21 m E-W). The build is exactly the same as 555 and it may have been built at the same time. It is built of bricks that are finely jointed with silt mortar. The top of the wall is level with the possible brick surface 932 with which one brick is inter-bonded. It is not clear whether this wall is separate from 555, in which case it represents an earlier, lower, platform of the Phase I shrine, or whether it is simply a stage in the construction of the Phase I platform.				
970	A:GG North	First two courses of wall 554, North Temple.	North I	Unclear
This wall is the lowest two-brick courses of wall 554. They are thinner than the upper courses of 554, although it is impossible to say by how much as the outer face of 970 is not visible. The wall was defined on a stratigraphic technicality because these bricks are clearly abutted by fill 941 upon which the upper courses of wall 554 rest. Whilst in reality the whole Phase I platform structure was probably constructed together, technically these two courses are an earlier part of the construction (see Fig. 4.12). Equals 554.				
971	A:GG North	Rebuilds to wall 556, North Temple using purple bricks.	North – uncertain phase	6.5 × 18/24 × 35/36 cm
Above the seventh or eighth course of the Phase II wall of the North Temple (556), the bricks change from softer-fired, larger orange bricks to smaller, harder-fired purple bricks similar in aspect but of a different size to those used in the construction of wall 561 on the South Temple (Fig. 4.27). Robbing and erosion of the structure make it impossible to say anything about the nature of the construction of which these bricks form a part. They are found on the north, south and west sides of the Phase II structure but not on the east face. The bricks are badly weathered, suggesting that they have been exposed to the elements for longer than the lower part of the structure.				
1213	See 559			
1224	A:S Temple	Foundation wall for Phase I of South Temple.	South I	6.5/7 × 24 × 42/43 cm
Wall 1224 is the lowest five or six courses of the Phase I walls of the South Temple (Fig. 4.39). The wall is 70 cm wide and is made of solid brick, three bricks wide, with no hearting. The bricks are orange or yellow in colour and are quite crude and soft-fired. They are quite crudely jointed with 2-cm-thick mud mortar. Certainly, the jointing is cruder than walls 1240/1247 and 560. Mostly, the courses are either completely headers or stretchers, but there is no apparent pattern in some places. In some places, the wall is 35 cm thinner than walls 1240 and 1247 that are built on top of it.				

Wall Number	Temple/Area	Description	Phase	Brick size
1240	A:S Temple	South Temple Phase II wall – north side.	South II	6.5 × 24 × 43/44 cm
Upon excavation, it became clear that the first four brick courses above foundation wall 1224 are built of a different masonry to the upper part of the wall. These courses are also crudely inter-bonded with wall 1251 (Fig. 4.40). The bricks are soft-fired and orange yellow in colour and measure 6.5 × 24 × 43/44 cm. The silt jointing is quite fine. The wall consists of two brick faces filled with brick-bat and silt hearting. The interior face shows mostly stretchers. The wall is 80 cm wide and is constructed upon wall 1224 (see above and the section in Fig. 4.39). The lowest course is a levelling course, using split or wedge-shaped bricks. It seems likely that the wall below the rebuild evident on the outer face of the south wall must be 1240 (Fig. 4.42). The original *adhisthana* mouldings in this wall continue around the corner of the eastern end of the Phase II temple, for a distance of about 111 cm, then there is a break of 41 cm before the entrance gap that is now filled by wall 344. These mouldings have been partly concealed by the later construction of walls 345 and 359 that extended the temple to the east during Phase IV. Equals 1247 on the south side.				
1241/ 1242	A:S Temple	Late rebuilding of south wall, South Temple.	South V?	6.5 × 24 × 33/34 cm
Wall 1241/1242 is the uppermost four to seven courses of the southern wall of the South Temple (Fig. 4.30). The two walls were clearly once part of the same rebuild but they are now separated by cut 595. The bricks on these walls are small and higher fired than those used in wall 560. The colour is slightly purple. The two walls appear to be on a slightly different alignment to wall 560 below, being a few degrees to the west. There are no associated floor levels, but it seems quite likely that the upper rebuild of the north wall (561) is part of the same rebuilding as these two walls.				
1247	A:S Temple	South Temple Phase II wall, south side.	South II	6.5 × 24 × 43/44 cm
This is the same wall as 1240 but on the south side of the temple. Although no visible join between the two walls has been exposed, it is clear that they must be part of the same wall. On this side of the temple the wall is directly overlain by wall 560.				
1248	A:N Temple	Late rebuild of *mandapa* wall 557, south side North Temple.	North – uncertain phase	7 × 25 × 42/43 cm
This is a late rebuild of the upper courses of wall 557 on the south side. Very little of this rebuild remains. The jointing is cruder than in the lower levels, but the bricks are not the vitrified purple variety used in very later rebuilds. Up to three courses remain.				
1251	A:S Temple	Phase II wall of *garbhagriha* of South Temple.	South II	6.5 × 24 × 43/44 cm
This wall was initially numbered 1240 until the join with 1240 was seen during excavation of TP5 (Figs 4.38 and 4.40). The wall is shown to have better quality masonry than 1240 and to be inter-bonded with it, 1251 having been constructed first, leaving open teeth at the ends into which bricks have been crudely slotted to bond 1240 to this wall. The jointing is very fine (<5 mm) and the bricks are the same size as wall 1240 being laid as stretchers with only occasional headers. As can be seen in Fig. 4.38, the wall incorporates a few vitrified bricks and some fragments of stone, most notably a large piece in the middle of the older entrance to the *garbhagriha* in wall 1240 that this wall effectively closes. A number of cut bricks are also evident where this wall was fitted onto wall 1240 below it. It is assumed that the wall encloses the whole of the *garbhagriha*, but each of the sections of wall abuts each other in the corners of the *garbhagriha*, at least on the outer face. This probably reflects the method of construction.				