

HARLOW TEMPLE

PRELIMINARY NOTES ON PROPOSED THREE CONSTRUCTION PHASES

INTRODUCTION

The suggestion that the building had three major construction phases rather than the two identified by WEAG in the 1960's is put forward in an attempt to make architectural sense of the remains of, especially, WEAG Phase 1b. The material published by WEAG has been re-examined as has the site archive and to this has been added a few further fragments of relevant features and material uncovered during the Museum excavations in the second half of the 1980's. The ancient disturbance to and extensive robbing and later excavations of the Roman structures make it unlikely that much more substantial evidence remains to be found. The preliminary reconstructions are far more lavish in form and decoration than previously suggested due mainly to the variety of carved architectural fragments mainly recovered in the 1980's, (see Stone Report). Unfortunately all these came from late destruction levels as far as can be ascertained and the periods to which they are assigned are tentative at best. The function and the position of the decorative features can also only be guessed at from a study of the objects themselves as find spots are of little help.

DATING

The periods to which the three places are assigned seem reasonably firm on present evidence though work is not yet completed on dating the 1980's contexts. Some of the features currently assigned to Phase III may in fact belong to the final alterations made during the pagan revival in the 4th century. As far as the overall history of the province of Britain is concerned, the phases fit well occurring as they do during periods of gubernatorial encouragement and specific imperial interest in the province.

PHASE I. FLAVIAN

The comparative scarcity of late 1st century finds, presumably because they were stored in the temple rather than buried helps support the idea of a Flavian date for the first masonry temple. This was a period when positive encouragement was given by the authorities for a policy of Romanisation. In his biography of Agricola, governor in the early 80's, Tacitus specifically mentions his support of building works, albeit in his usual supercilious manner. No doubt other governors of this period behaved in a similar manner. Harlow was by no means the only temple built during this period. Evidence from the recent excavations suggests the possibility of the cella and ambulatory having stone floors of the type widely used in the first century and noted especially at Fishbourne. In support of the WEAG excavations recorded few tesserae in the temple proper with tessellated floors only surviving in the east range and one of the flanking rooms of the Phase III rebuild. A handful of black and white cubes is the only evidence for even simple mosaic floors in contrast to the elaborate wall plaster of several phases which seems to have been used in virtually all interiors. The most elaborate part of the facade would almost certainly

have been the porch with small fragments of one or more columns and a possible pediment roundel being tentatively assigned to this period. Possible foundation trenches below the later porch suggest that the earlier one projected from the ambulatory facade in a similar manner to Caerwent I, Colchester 4 and 5, Irchester and Silchester 3 (Lewis). The substantial ambulatory foundations suggest solid walls rather than a colonnade. Very little window glass has been recovered but the carved stonework and painted plaster suggest the priests were well able to afford this refinement. Glazing, one suggests, would be essential especially in the windows of the cella tower in order to exclude both the weather and birds whose presence and deposits would detract somewhat from the spirituality of the sanctuary.

PHASE II. HADRIANIC

The dating of this phase is the most uncertain and the work may have extended to nearer the middle of the century. The evidence for the elaborate additions postulated for this period can best be described as thin. It is felt that the features excavated could be the scanty remains of a more elaborate series of structures than those suggested by the WEAG excavators. The principal remains from this period are a series of massive postholes interpreted by WEAG as being the remains of a fence surrounding the sacred area. This idea is contested on the grounds of their sheer size. Many were around 50cms in diameter and set at regular intervals of about 1½ metres or 3 dimaters apart. By any standards this is massive for a fence whose function was mainly symbolic and it is suggested that in the area south of the temple these lines represent the outer walls of buildings flanking the courtyard. The few found around the northern part of the courtyard are only slightly less substantial. Some smaller ones inside the presumed line across the north end might represent the remains of some structure built up against the fence though their general irregularity makes precise identification difficult. Architecturally the idea of a closed or open colonnade around the whole of the sacred area is attractive but there are reasons to suggest that this would not have been necessary in order to achieve a suitably spectacular effect for visitors.

More enigmatic is a, presumably incomplete, line of postholes running west from the east side which, if extended, would pass in front of the south face of the ambulatory. This extended line passes across the ends of the presumed foundation trenches of the projecting porch. Phase III reconstruction work has removed all traces of any posts that might have extended across the entrance face. It has previously been assumed that these posts formed part of a fence sub-dividing the courtyard as walls did in the later Phase III building. This would be a reasonable hypothesis had this feature been aligned with the south wall of the ambulatory rather than standing some 2 metres in front of it.

The WEAG excavation also uncovered a ditch or trench marking the southern limit of the courtyard with a few irregularly placed postholes surviving in it. These were smaller than the postholes along the sides. This could represent the remains of a timber fence subsequently replaced by a more substantial and visually impressive wall whose foundation trench only survives. The central section produced no evidence for a gateway as all traces were removed by the later, more massive Phase III structure. At the presumed west end of the eastern half of the ditch was a single posthole. This could represent part of the Phase II entrance though it does not line up exactly with the equivalent side of the porch. The N-S lines of postholes are also not exactly aligned on the building with the western line being further away from the western side

of the ambulatory than the eastern. Assuming the posthole mentioned also is part of the gate the error is of similar size and is around $\frac{1}{4}$ of a metre. Assuming also that the entrance though misaligned on the temple was placed symmetrically in the south wall it would have been a little over 3 metres wide, virtually the same width as the temple porch. When the phase III reconstruction took place this slight misalignment was partly corrected and reduced to about 30cms.

The 1987 excavation produced a further feature that could have formed a part of the Hadrianic alterations though I would be happier however if it had been duplicated ideally on the same line and subsequently on the other side. This was a near circular foundation of flint and tile fragments with a slightly greater diameter than the largest postholes. It rested directly on the natural clay and contained a sherd of pottery of Hadrianic date. This feature lay on the west side of the courtyard a little under 5 metres from the western line of posts. This could possibly have been a column base. Just to the east of the western post line a small area of flooring was recorded by WEAG. Few details are given but as it is below what would have been the level of the Phase III tessellated pavement it is tentatively assigned to Phase II. The re-excavation of a major part of the west range in 1987 uncovered areas not cleared in the 1960's. To the west of the courtyard wall of the Phase III building 3 postholes were found running roughly parallel with it. The fill held no dating evidence but they were covered by the mortar of the Phase III floor. Making the large assumption that they belong to Phase II they could form part of the inner wall of a long, narrow range possibly sub-divided into several rooms like its successor. Assuming that this range and its companion on the other side were colonnaded they would have provided a visually impressive approach to the shrine. The floor fragment referred to above lay within the postulated lines of the two main walls. Amongst the rubble dumped as part of the Phase III building works, some of which may have come from the demolished Phase II structures, were patches of a distinctive yellow mortar which could be remains of the Hadrianic period floor.

HADRIANIC - PHASE II RECONSTRUCTION

This reconstruction, though far more speculative than is usual for such exercises, has been produced in order to suggest a coherent architectural explanation for the various scattered features recorded in the 1960's and 1980's. Roman temples in general were not noted for simple decoration and form and the priests at Harlow would seem to have had the resources to provide something better than a bare barn. Architectural expertise would have presented no problem for a site within reasonable distance of towns like Colchester, St. Albans and the provincial capital at London. Future research and discoveries will no doubt modify what is set out below. It should be borne in mind that although the alterations were all in timber the judicious application of plaster and paint could produce an effect of considerable splendour fairly rapidly.

The postholes running parallel with the ends of the foundation trenches of the Phase I porch could be the remains of a colonnade built across the front of the ambulatory. This would provide a striking means of linking the temple with its new flanking buildings. There is no evidence at all to suggest how such a feature was backed where it extends beyond the sides of the ambulatory. A wall of some sort would have provided a covered area of the type used in many parts of the Roman world for the display of sculptures and other items. Alternatively the posts could be the remains of a screen wall possibly decorated with pilasters. This would have been visually less impressive but the space behind would have

provided storage rooms for offerings and the rear courtyard would have been totally screened off. Virtually no excavation has been carried out in that area so we have no idea what it was used for. It could have been treated as formally as the rest of the site or it could have been perhaps the largest glory hole in Roman Harlow. Incomplete excavation and the destructive effects of the building of the Phase III rooms makes all details speculative but the posthole evidence for the end of the east range makes the existence of a rear wall east of the ambulatory less likely.

The features which suggest that the first buildings flanking the courtyard were built at this time are outlined above. A very elaborate conclusion has been drawn from two lines of substantial postholes plus a few others, a dated circular feature some bits of floor and a lot of rubble. A point in favour of the existence of such structures in the visual emphasis they give to the shrine and the (financially rewarding) accommodation they would provide for visiting pilgrims. Despite extensive excavations along both sides of the courtyard WEAG found no evidence for either a colonnade or the courtyard facing walls of these structures. The 1987 column base was found under the baulk between two WEAG trenches. Subsequently when the east range was excavated no equivalent features were found though the ground was so solid that a base could have been set directly on it. Neither range produced traces of possible courtyard walls apart from the postholes mentioned above whose attribution to this phase is not certain. The flanking buildings could have taken the form of either an open colonnade or a range of rooms fronted by a colonnade. If the latter was the case the roof structure could have been supported by the outer wall and columns thus enabling the inner wall to be a much lighter structure. If such walls existed all traces were probably removed by the Phase III rebuilding. In the west range faint evidence for Phase III cross walls was noted in 1987 and similar very insubstantial features were observed by WEAG excavators but not, apparently, recorded. Though the proposed column base had been dug down into natural elsewhere where it survived the Phase I cobbling extended to the outer lines of postholes. It is assumed, therefore, that like the courtyard facing walls the party walls were light framed structures set on sill beams.

The wall enclosing the south side of the courtyard seems to have been fairly substantial and may even have been masonry. Though nothing definite survives of the gate I think it can be assumed to have been a fairly elaborate structure of similar size and appearance to the temple porch. The extensive use of timber in these structures and the lack of interference with the earlier cobbles suggests fairly light structures that could have been built quite quickly. The suggestion is that these extensive additions were erected as a result of Hadrian's visit to Britain in the 120's. Evidence from all over the Empire shows that any imperial visit would lead to a great deal of rebuilding and general tidying up of the coal painting variety using a combination of private and public funds. It is surely no coincidence that all three phases of the Harlow Temple appear on present evidence to coincide with periods of exceptional gubernatorial and specific imperial interest in the province of Britain.

PHASE III. SEVERAN

The general layout of the temple as uncovered during the 1960's and earlier has been modified to some degree by a combination of the re-examination of the site archive and the 1980's excavations. The suggested modifications to the published plan consist of at least one additional room on the S.E. corner of the ambulatory together with internal party walls in the side ranges. The east

range has also produced evidence for a doorway. The evidence of carved architectural fragments suggest a building of considerable external richness. An examination of the WEAG archive for trenches G1 and E2 (probably fully excavated) together with H1 and H17 (only partly excavated) suggests the existence of at least one additional room at the S.E. Corner balancing the two at the S.W. corner. The existence of this room or rooms should have been anticipated and checked as all other elements of the plan are symmetrical in the classical manner about a N.S. axis. Because of lack of excavation there is no evidence yet for a second room to the north which would provide a totally balanced plan. The existence of these additional rooms could have simplified the re-roofing on that side and given a fully balanced facade. Many of the more elaborate Romano-Celtic temples in Britain are fully symmetrical, e.g. Brean Down, Springhead 1 and 2 (recently reconstructed on the basis of Lewis type 2), Verulamium 1 and 2 (Lewis). Asymmetry exists at Frilford 2 and Lydney Phase 2. In this last case extensive, mainly internal, alterations were made to the earlier fully symmetrical building. Some equally symmetrical examples occur amongst the more elaborate Romano-Celtic temples of Gaul like Beauvray (508) and Eu B (517). Here, however such fully symmetrical elaborate Romano-Celtic types seem to be in a distinct minority (Rodwell BAR 77 (ii)).

There is no evidence for a continuous colonnade across the entire frontage as suggested for Phase II. Such a feature would have detracted from the new elaborately decorated and possibly inscribed porch whose width equalled that of the cella and which served as a backdrop to a large altar. There is also no evidence for the use of pilasters or other decorative features on the Phase III external wall. The presence of pronounced offsets on both faces of ambulatory and cella walls suggests that the existence of such features should not be totally excluded. The evidence for architectural decorations consists of fragments of various simple mouldings and of columns, a piece of a roundel, a piece of bead and reel moulding and pieces of a monumental inscription. (Stone Report). None of these can with confidence yet be assigned to any phase though it is suggested above that the roundel and a column fragment belong to Phase I on the evidence of their estimated sizes. The bead and reef fragment is more tantalising as this often forms only a minor part of substantial decorative mouldings and its discovery hints at formal classical decoration of considerable lavishness and size. Again suitable expertise would have been available from London or other towns.

The two buildings flanking the courtyard are now thought to be more elaborate than was previously thought. The almost total clearance of the courtyard sides of both ranges has produced no evidence for a colonnade though one would have been useful for both visual and practical reasons. (See the barn-like reconstruction in 'The Buildings of Roman Britain'). There is little doubt that each range was probably divided into at least four rooms. The evidence, in summary is as follows:- 1. The break in the surviving tessellated floor in the east range. 2. The placing of the buttresses in the east range. 3. The doorway area discovered in the east range in 1989. 4. The ephemeral possible party wall remains observed in the west range in the 1960's and 1980's. The six buttresses on the outside wall of the east range are something of a mystery. They were added after the building of the room originally, it was believed, to protect against the possibility of movement down the slope. No sign of any such movement was noticed. Work in 1989 suggests that they may have been added during the refurbishment of the building that took place during the late 4th century pagan revival.

Buttresses M. N. and P are thought to have been placed on the line of internal party walls and a few other fragments of evidence can be put forward to support this hypothesis. The tessellated pavement in the east range, though battered, showed no sign of extending past the line of buttress M. In the west range a line of flints and rubble virtually opposite buttress P in east range was thought to be the remains of a party wall but was not recorded. (Betty Gobel pers.comm.). The fragmentary evidence suggests that the room layout was the same in each range. In the east range the northernmost room may have been about 8 metres long and had a tessellated floor. The middle two rooms were about 4 metres long while the southernmost room was a little shorter and had decorated plaster. This room also, in 1989, provided the first evidence for a doorway on the courtyard side. The rooms, it is assumed, were for the accommodation of visiting pilgrims.

Little can presently be said about the final major element, the south wall and gate. Robbing had left nothing of the original gate though a large fallen section of the western half of the wall was observed in 1985 and was similar to another section further east observed by WEAG. The size of the foundation trench of the gate suggests it was similar in width to the temple porch which it may have resembled in appearance. None of the few fragments of worked and decorated stone recovered by WEAG came from anywhere near it. It is suggested that the thoroughness of the robbing coupled with the discovery of sherds of 17th century Metropolitan Ware in the pit and the survival of areas of collapsed wall adjacent to it indicate a substantial structure parts of which remained visible for several centuries after the site was abandoned. The thoroughness of the robbing could also suggest a structure containing a large amount of stone. Currently published reconstructions suggest a pedimented gateway matching the porch but the apparent massiveness of the foundations leaves open the possibility of a single opening arch. Of the few such arches in Roman Britain known in any detail, the London Arch could have filled the space quite neatly. Though not all this monument was discovered its base dimensions can be calculated quite accurately as 7.75m wide by 1.175 metres deep. The robbed out foundation of the temple gateway is approx. 7.87m by 1.98 metres. The height of such a feature is difficult to estimate but from a proportional point of view would need to be higher than the gable ends of the flanking buildings. The foundation trench was nearly 1m deep with the bottom being rammed pebbles and could have supported a gate of considerable size. None of the various pieces of building stone found to date appear to have formed part of an arch though a small fragment of tufa from the south of England of the sort used to reduce the weight of arches and vaults was recovered from the destruction levels in the 1980's. Twice as much of the foundation projects beyond the inside line of the wall as the outside. This is either just poor surveying or an indication that the most important features of the gate faced into the courtyard.

HARLOW TEMPLE. THEORETICAL RECONSTRUCTION BASED ON LEWIS TYPE II.

This type, in which a single roof covers both ambulatory and cella has found little favour among recent writers on the subject. This type has been suggested as a theoretical model for the reconstruction of those Romano-Celtic temples whose inner and other wall foundations are of the same thickness which could imply, among other things, that they were intended to carry the same load. The vast tower structures that survive at Autun and Perigieux could have been a grandiose development of a basically simpler building.

As can be seen all over the Empire the Romans were not as a rule accustomed to use the non-classical architectural forms they encountered among less advanced people. Instead their own architectural forms were introduced after with little or no modification, even where climate made such modifications useful. A good example of this is the palace at Fishbourn where the excavated living rooms in the assumed guest wing had no hypocaust heating to take the chill of uncarpeted stone mosaic floors. In one room attempts were later made to correct this deficiency. The exception to this rule is Egypt where for a combination of political and possible cultural inferiority reasons they, at least with temples, continued to build in the traditional style. As, for example the Temples at Derdera and Esna and the Kiosk of Trajan at Philae. Even here the classical style finally began to takeover outside Alexandria in the late period in places like Askmunin and its recropolis and even in the Great Temple at Luxor.

The general use of classical Roman architectural forms in local versions of both the simple and later more florid styles, somewhat akin to the later European Mannerist and Baroque, is to be expected especially in provinces with little or no architectural tradition as in Britain. The first generation of architects and engineers would be from Italy or other parts of the Empire and trained in the classical tradition. We can probably assume that a later school of native architects would develop who would naturally turn to existing buildings for their inspiration while adapting the forms to both local conditions and financial resources. The existence of schools of mosaicists based in the wealthier towns of the province suggests that architects may well have developed in the same way though no doubt the expertise available from the army also continued to be deployed.

Harlow is one of those temples whose plan suggests a degree of architectural sophistication with, in its final version, attention being given to the overall effect produced by the temple and the approach created by the outbuildings flanking the court. While the foundations suggest that the layout was conceived as a whole, we have no evidence to suggest if the architectural treatment of walls, pediments and roofs was similarly conceived as a unit.

We know virtually nothing of Romano-Celtic religious practises but it can be safely assumed that the arrangement of a covered if not totally enclosed ambulatory surrounding a nearly square cella was required for devotional reasons. As a temple plan it bears no relation to that used in the more developed part of the Empire excluding the rare circular temples c.f Rome and Tisoli, and the question arises as to how a Roman trained architect or builder could adapt the religious forms known to him to this shape. The tower did not play a major part in Roman religious architecture where all the visual effect was concentrated on the entrance facade. The facade of the Maison Carrée at Nîmes is a good example. That of the Pantheon in Rome a bad example where the unthinking application of a standard form makes something of an external mess of an incredible piece of engineering. Our limited evidence

only shows that the tower form was used on buildings of great size and I suggest it is worth considering that it could have developed from and been used alongside a building of ostensibly more classical appearance.

Assuming the architect was mainly concerned with the facade of a Romano-Celtic temple, the Lewis type II idea can be used to create quite an acceptable version of the classical type, if you ignore its lack of length. Assuming some degree of podium, which the foundations at Harlow would be quite able to contain, a facade somewhat larger in relation to its height than was usual on classical temples could easily be constructed. The roof would be pedimented at each end in the standard manner. Assuming the cubic cella as suggested by Lewis, the best proportioned form has the ambulatory walls rising as high as the width/length of the cella. Internally the cella walls could be carried up to roof beam height for extra emphasis. This would also give two points of support for each rafter, ensuring a better distribution of the roof weight and also permitting two pieces of timber to be used for each rafter. The pitch of the roof is approx. 24° , well below the slippage angle for the unfixed tiles. The resultant pediment is large and a central opening at least at the front is suggested to light the upper part of the cella. On this arrangement a hipped roof looks much less effective. The doorway is assumed to extend to almost the full height of the wall and with one of corresponding size in the cella would provide ample light when open as well as giving visitors a clean view of the cult statue.

There are several possibilities for the treatment of the facade. All 4 walls could be solid with windows and possibly pilasters. The front could be treated in a more dramatic and typical way using either a combination of plasters/engaged columns with windows or an open colonnade. If it followed the typical classical pattern for the small temple, the columned front would be accompanied by pilastered side and rear walls. Window openings in side and rear would be minimal because of the open front and additional light could reach the cella via windows in its lower wall, though this would tend to reduce the impact. No separate porch would be needed with this type of arrangement, indeed it would detract from it. Modifying the open front to accept the later flanking buildings would present no problems.

With a fully enclosed ambulatory wall and especially if the roof was hipped there would be problems in lighting the cella. This could of course be solved by raising the cella walls, or lowering the ambulatory one, to permit the installation of clevestorey windows resulting in the type 1. This is, I feel, an acceptable modification to a design imposed from outside to make it more suitable. Once created such a striking vertical feature could soon, so to speak, takeover with the resulting vertical extension seen in the surviving examples. The higher you build the better of course your building standard must be, and the more expensive the operation becomes. This could be one of several reasons for the suggested rarity of the tower types. There is one small piece of evidence which could also suggest that these structures were rare - the lack of coin representations. The British Museum collection contains only two specimens apparently showing the tower type. They are from an eastern mint, exact location unknown. Pedimented cella, with door and clevestorey window with an open ambulatory, the roof of which is omitted, presumably because of the die cutters unfamiliarity with the type. A possible alternative interpretation of the columns is that they represent the colonnade of a court surrounding a free standing structure. When one considers the sheer mass of the Autun structure one would have expected more of these to survive. They are, after all, ideally suited for conversion into perfectly respectable strongholds. Remove the ambulatory, block door and windows as necessary, put in a few floors and you have an excellent castle!

The suggested reconstruction of stage 2 of the temple goes considerably further and assumes a considerable degree of architectural pretensions which I feel the general layout of the site warrants. I suggest that considerable care was taken in fitting on the additional rooms. When one looks at the careful symmetrical layout of the new outer gate and the flanking buildings and compares it with the symmetrical arrangement of the rooms added to the main temple it is evident that somehow these rooms would have to be screened from the casual visitor in order to avoid a visual nonsense. The presence of the external altar implying the public ceremonial use of the courtyard also suggests that a balanced facade of some sort would be needed. The arrangement of the rooms was presumably dictated by practical needs, aesthetics would demand that they be concealed as far as possible. The foundations suggest that the added walls were less substantial and presumably lower than the walls of the ambulatory and supported a lighter roof. If the additions were timber framed there arguments need not apply but I suggest that the very small number of large nails needed for main frames and rafter beams found could indicate that all the additions were masonry. Certainly the porch was because part of one of its side walls was found collapsed. The suggestion offered here is that a screen wall whose architectural decoration, if any, matched the main building was raised to a sufficient height to conceal the roofs of the extensions. The pitch of these roofs would be reduced as much as possible to reduce the amount of parapet required. This parapet could have been decorated externally to match the entablature above. The height of the porch would be determined by the ambulatory door as one assumes that whatever form the ceiling of the porch took, it would have been horizontal along the long axis of the structure. Fenestration could exactly match that of the main building with the windows of the two side rooms, especially the corner one, opening to the side. A doorway has been assumed in the screen wall at some point between temple and outbuildings and it could well have been balanced by an identical one on the other side. Such an arrangement could be useful for processions etc.

The long buildings flanking the courtyard could, I suggest, be rather more elaborate than the form suggested in the type I based reconstruction. The roofs could be pedimented and raised above the wall/parapet level. To an approaching visitor the pedimented gables would effectively flank the main bulk of the building which would be large enough not to suggest visually. They would also help emphasise the ceremonial gateway. The considerable size of these gate foundations, 8 metres long by approx 2.80 metres wide suggests a structure of considerable size and architectural pretensions. One could suggest an opening in the region of 6-7m wide and of a height equivalent to the temple porch which would have given the approaching visitor a splendid view. As with the type I reconstruction the degree that the gate foundation project inward from the temenos wall suggests a more elaborate internal finish. The decorations, if any, of the flanking buildings needs to be considered. An intriguing possibility emerges if the trench plans are examined in detail; this is the possibility of a portico along each side. It may be coincidence but a continuous baulk was left parallel with the front of each building at about the point where the foundations of a portico might be found, between 1½ and 2m from the wall line. Against this, however, is the fact that at one point cobbling identical to that in the west of the courtyard was found hard against the wall. Although a portico would have looked splendid, pilasters reflecting the possible arrangement on the facade of the temple itself would have done almost as well.

The presence of a colonnade would have caused few problems where it came to add the front buildings and create/extend the porch. The pillars could have been either plastered tile or timber as well as stone. They would have been left standing and the spaces infilled, leaving them as engaged columns. As they would continue to take the roof load, the infill walling could be relatively insubstantial. It is suggested in the drawings that two of the columns would have helped support the new porch structure.

EXTRACTS FROM VITRUVIUS "ON ARCHITECTURE."

BOOK I, CHAPTER VII

"But for the sacred buildings of the gods under whose protection the city most seems to be, both for Jupiter, Juno and Minerva, the sites are to be distributed on the highest ground"

BOOK IV, CHAPTER VIII

"The styles of buildings vary to suit the needs of sacrifice. For temples are not to be built to all the gods in the same styles. For the several gods by the variety of their worship give rise to different religious effects."

BOOK IV, CHAPTER IX

"Let the altars look to the east and be always placed lower than the images which shall be in the temple; so that those who pray and sacrifice may look up to the divinity from various levels as becomes each mans god."

BOOK III, CHAPTER IV

"And let walls be built upon the ground under the columns are half thicker than the columns are to be...."

This seems to be the only detailed comment he makes on foundations, there is nothing about thicknesses or depths in relation to wall height or construction. Assuming the rule given above was generally followed the thicknesses of the temple foundations would be suitable for columns of the estimated diameter of the fragments found. However the finish of the interiors of the temple as far as they can be established suggests that columns were limited to the porch and there were no open colonnades.

HARLOW TEMPLE RECONSTRUCTION - Notes and Building References.

or type II with pediment?

The Harlow Roman Temple is type 1c in Lewis's classification, with solid cella and ambulatory walls, apart from windows. The reconstructions use the system of proportions given in Lewis, producing a far more satisfactory form of building than in the reconstruction presently displayed in the museum. The evidence given in Lewis for the appearance of these buildings above foundation level is minimal. Two walls of the cella of the temple at Autun survive to full height - the door wall not being one of them. The interior walls had several niches for which no evidence survives at Harlow. A relief from Titelsberg and a Denarius of Augustus show the entrance fronts of Romano-Celtic Temples. The Titelsberg relief is structurally odd ~~as~~ regards its treatment of the ambulatory and the Denarius omits the ambulatory roof altogether - probably because the die cutter found he had run out of space. The cella roofs are a ridgeless hipped form and pedimental types respectively. Both have been employed in the draft restorations. Windows are based on Autun and those in the circular temple at Perigieux, which are rectangular with semicircular brick relieving arches above - these latter features being omitted at present. Cella door and Porch positions and relative sizes are based on plans where these features survive and an average size that seems to fit the building and allow visitors a clear view into the cella has been employed.

The major problem with this, as with other building restorations, is the degree of architectural decoration employed and the detailed form of the different parts of the building. In addition at Harlow there is the problem of cella and ambulatory walls being the same thickness approx for which one assumes there is a reason. In an area where even the basic supplies of flint and rubble for the building would take some collecting one can, I feel, assume that there were structural reasons for this. Both Cella and Ambulatory foundations were some 4' deep, representing a considerable effort. The indication is that the Ambulatory foundations could have carried a load equivalent to the Cella ones, hence the more massive roof suggested in reconstructions AD 80-2 and AD 200-2. This form has the great advantage of simplifying the roof structure and and tile layout (see below) and providing a visually more coherent and potentially spectacular approach. To the Classical architect and engineer, the roof just covered a building - it was not used as an architectural feature in its own right externally. Even the magnificent concrete dome of the Pantheon, which looks spectacular from the inside, is most unimpressive externally. The lack of a means of fixing tiles directly to rafters led to very low pitches. Vitruvius recommends 20° and the pitch of some tiled roofs in Pompeii and Herculaneum is low to the point of non-existence. (The 60° or more pitch of many early roofs in this county arose from the need to get rain off thatch as rapidly as possible).

Only one piece of stone that could be identified as an architectural fragment was recovered from the Harlow Temple. It came from the vicinity of the entrance and was probably a piece off a free-standing (or engaged) column. Assuming solid ambulatory walls with no portico this is the logical place from which to expect such a fragment. The same area yielded another clue. Part of the N.E. Wall of the room to the left of the porch had collapsed flat on the ground; the side facing the porch was covered with green painted plaster suggesting strongly that when the subsidiary rooms were built on, the porch was extended to the end of the new building line. Visually this would give a much neater and less bitty appearance than is shown in the Museum reconstruction. The total absence of any other recognisable architectural fragments, apart from a piece of possible cornice, window, door, or pilaster moulding suggests that little was employed and is the other reason, along with the thickness of its foundations, for assuming that the ambulatory wall was solid. Even the most efficiently demolished collonade should leave a few bits of

*ridge followed
in 11th cent.*

broken capital and possibly, as at the London Mithraeum, column bases which it was too much bother to prise out of the wall. The total lack of building stone in this area, of course, implies that demolition would be very thorough indeed!

Internally, excavation showed that the temple was elaborately decorated in the usual fashion with painted plaster, including some very elaborate patterns verging on the architectural (check!), in a wide range of colours. Both large red and small coloured tesserae indicated mosaic floors, though only red tesserae were found in situ in the courtyard flanking buildings. Some degree of lavish external decoration would be expected. Not only was it not Roman practise to leave such buildings unadorned, but a bare tiled barn of a building would reflect unfavourably both on the abilities of the god therein and the local pride of the inhabitants, (c.f. almost any Christian Church worth its salt and especially examples of Victorian Imperial Civic pride!). Add to this the fact that there was not much else, apart from themselves, that the priests could spend the money on! Finds made both in the Temple and the surrounding settlement indicate that money existed, at least, at the upper end of society, to buy lavishly. From the Temple came part of a large bronze candelabrum, lost it appears, before the C.AD 200 rebuilding and part of a gilt bronze, visor, possibly from the cult statue while from outside we have the Bacchus head tripod mount, a high quality import; the pipeclay theatre/ritual mask, again an import of quality, the expensive, mainly imported quality glassware from Felmongers (thrown away rather than re-used) and the white, presumably Italian, marble recorded from a site in Great Parndon (now lost). It is also worth mentioning that there were plenty of other temples in this part of Roman Britain, all no doubt competing for pilgrims and some, like the octagonal temple in Chelmsford, of considerable architectural pretensions. The considerable expansion of the Harlow Temple around AD 200 and the provision of what are usually assumed to be rooms for visiting pilgrims further suggests that ample resources were available for its beautification. The rooms in the first courtyard incidentally would add greatly to the visual impact of the temple structure proper by both framing it and leading the eye to it, which effects are spoilt if the approach terminates in the rather chaotic huddle shown in the original reconstruction. (See the reconstruction of Wroxeter I in Lewis for the spectacular use that could be made of such a form). None of the above cancels the fact that virtually no physical evidence was found, but it does, I think, provide a justification for the restorers' indulgence in some, hopefully controlled, architectural imaginings.

In all reconstructions the pediment has been widely used serving as it does to orientate and unify the building, and make the roofers job easier. General Roman practise suggests that pediments on the outer gate, porch and cella roof are likely. The evidence for their employment in such positions would fill several volumes and, apart from the spectacular exception of Egypt, Roman architects were not in the habit, in the Imperial period, of borrowing the architectural features of conquered provinces. As the basic form of the Romano-Celtic temple shows, they were quite capable of adapting their forms to serve the needs of other peoples. The most contentious feature of the reconstruction is the spanning of the ambulatory with a pediment. (The entrance portico, pediment of Wroxeter I is, be it noted, some 55' long. ^{↑ propose a})

Assuming that the entrance front was an architectural whole, its possible decoration needs to be considered. The presence of walls extending right and left from the ends of the added rooms to the courtyard buildings suggests that this was the builders' intention. In most of the reconstruction drafts the front walls of these rooms were raised to ambulatory wall height which not only makes a unified facade easier to achieve, but also makes the combination of an adequate roof pitch and adequate headroom inside easier. The problem of what they did with the podium will be considered later - it causes problems! Although the form of the Romano-Celtic temple differs fundamentally from the Classical type, mainly because of the cella tower, there seems no reason to assume that Roman architects sought new

ways of decorating it. The farther down the scale of architectural competence they were, the more likely they would just apply known forms (c.f. the Victorians at their worst!) The reconstruction of Trier 2 in Lewis shows how far the forms of the Classical temple can be applied. - Nina - Diana !!

It is likely at Harlow that the only free-standing columns were in the temple porch and possibly the gateway. The suggestions here are that the porch was framed on each side with a pilaster (or half-column) with either a free-standing column alongside or two spaced equally. The former arrangement would permit a much better view through to the cult statue in the sanctuary. Further pilasters or half-columns would be sited in the centre and at the ends of the walls on either side with the windows of the subsidiary rooms between them. Such decoration was probably not taken around the sides or across the back, though it may have been extended across the screen walls, enabling the door(s) to be incorporated into the overall scheme. Some degree of decoration in the cella and porch pediments is also likely.

check.

The variety of reconstructions offered are caused by the need to investigate the different methods of dealing with the roof. The Roman roofing system used large units whose layout was relatively inflexible, particularly over small areas, without a great deal of cutting and fiddling unless you settle for a visual horror which could cause problems through uneven distribution of weight. Tegulae had an average size of 40 x 30 x 4cms though the specimens saved from the Temple show a considerable variety of thickness and may be clumsily made and finished which would have resulted in poor joints. The existing evidence allows for a wide range of roofing methods. Beam-holes at Autun indicate the ambulatory had a hipped roof and reconstructions treat the cella roof in identical fashion. The Titelsburg relief shows a hipped roof to the cella and possibly the same for the ambulatory. The Augustan denarius omits the ambulatory roof and places an elaborate pediment with statues, antefixes and a massive entablature, possibly based on the classical temple of Mars Ultor in Rome in the Forum of Augustus. Angled gabled roofs are frequently found in domestic architecture with examples surviving in Pompeii and Herculaneum. Here the 4 faces of the roof slope down towards the square or rectangular opening in the centre of the Atrium. A representation of the outward sloping form as used in most restorations comes from an Etruscan tomb at Corneto (Annister Flecher p.140 (F) where the ceiling is carved to represent the rafters of a roof sloping away on four sides from the central opening of the atrium. The beams appear to be set approx. 2 thicknesses apart suggesting that the tiles are laid 1 row to each pair of rafters.

Many reconstructions suggest 1 rafter per seam with neither battens nor planking. Peristyle roofs from Pompeii adopt this form. This leaves the tiler with little or no flexibility for layout and necessitates cutting tiles to fit the angles. The small sample from Harlow Temple shows no evidence for this. The lack of flexibility would make it impossible to use the method still used in Italy today (T.Rook) of using occasional rows of inverted imbreces to correct spacing. Such a method would also consume a vast amount of timber. In the 53 foot width of the cella of Autun there are 6 massive beam slots use uncertain, with 12/13 smaller ones immediately below, supporting approx 26 vertical rows of tiles (end to end of cella wall only). This suggests 1 rafter per 2 rows of tiles, a much more economical solution.

Wider spaced rafters in this fashion would need horizontal battens to support the ends of each tegula with alternate rows of imbreces lying on the rafters. This arrangement gives the tiler horizontal flexibility and scope for adjustment - the top and/or bottom row of tegulae and, imbreces, can always be shortened if necessary. The battens probably butted against each other as the rafters, if laid alongside as shown in some reconstructions (McWhinney) the symmetry of the

rows would have to be altered in order to ensure top and bottom support for each tile unless the battens were of considerable width. A proper water seal is only possible if the tegulae slot together exactly. This requires careful manufacture and especially trimmings of joints. The surviving Harlow Temple tiles suggest that such care was not always taken. Cement can, of course, be used to fill gaps, but this sort of roof bodging always causes problems. From below the resultant mixture of timber, tile and cement would look unsightly and a building with any architectural pretensions would need a ceiling. A fine example of a painted ceiling anchored to the rafter tie beams has been found at Verulamium.

If the rafters are totally planked before the tiles are laid, experiments have shown slippage is more likely with pitches in excess of 30° (Rook), but this need not concern us here as the evidence suggests a pitch in the low 20° . This system will give a better overall seal, give the tiler maximum flexibility, look better from below and can be painted/plastered direct if required. The job of laying the tiles is made much easier, no messing about with loose planks on a wide roof area, likewise there is no cement to clean off the floor below. Depending on the size of the timbers used surviving evidence, mainly domestic, suggests that with these last two types of roof structure rafter support is only needed every 2-5 tiles. Planking also prevents broken tiles dropping through ceilings or onto heads below. One of the tiles from Harlow appears to be covered in a cement wash over the entire underside and much of the rest, including its broken edges. This suggests that it could have been a tile from the hip angle possibly seated on planking using a thin wash to seal the seams.

Finds from other sites of appreciative quantities of different coloured tiles suggest the possibility of decorative *banding* on the roofs, either as a result of deliberate policy or as the neatest way of using the different coloured products from different kilns or firings. If there was any painted external decoration, even a single colour wash, rainwater running off the roof would cause maintenance problems, even with a substantial overhang, which fails to throw the water clear if any sort of wind is blowing. In Italy today inverted imbreces are used for guttering (Rook). No evidence has yet been noted for this in Roman Britain though the form of roofs and tiles would concentrate rainwater especially in places like the angle of porch roof and ambulatory roof. Water flowing down walls would also give rise to serious damp problems.

Reconstruction Viewpoint.

Most published reconstructions show the buildings from the air, advantageous to us, but the one angle which would never have entered into the Roman architects calculations. Regardless of the final view(s) adopted all draft reconstructions should be drawn from ground eye level to establish the visitor/builders eye view. This enables one to see if the reconstruction 'works' visually and will draw attention to those features which our knowledge of the buildings function suggests should be emphasised. At Harlow the emphasis should be, I suggest, on the main temple building with the later subsidiary buildings serving to focus the attention of the visitor towards entrance and altar. Roofs could be below temple/temenos wall level for instance.

Cella-Ambulatory walls of equal thickness - top reconstruction based on II 2.

Additions to Draft.

Much evidence exists for the use of brick and plaster for architectural decoration instead of stone, including columns c.f. Herculaneum and Pompeii especially. Again virtually nothing recognisable would survive. Square columns and pilasters could most easily, and cheaply, be built of such materials. Elaborate effects can come from simple materials.

Architects and Builders.

Native building expertise in this area in the years after the Conquest would be limited basically to carpentry and other skills needed for timber buildings. The construction of the masonry temple would involve both outside expertise and materials though presumably the labour was local. The first temple was built about AD 80 during Agricolas governorship. According to his biographer Tacitus, he made both money and expertise available to help the romanization process and the Harlow Temple probably stands as an example of this. There would, I think, have been no difficulty in finding the necessary architect and craftsmen. In the 20 years after ~~Boudicca~~ London, Colchester and Verulamium would have completed the major part of their rebuilding, while experts could also have come from nearer at hand from Chelmsford or Braughing. Assistance and encouragement from the Provincial Government and the use of the considerable number of skilled craftsmen available suggest that the first temple could have had some degree of architectural elaboration. Is it coincidence that the second rebuilding took place at about the time Septimus Severus was campaigning in Britain? People being people one can imagine that the Imperial presence would have a stimulating effect in addition to the money that a major expedition of that sort could inject into the provincial economy.

PORCH

Wall dividing east forecourt room from porch appears from photographs to be somewhat more substantial than the front and other end wall. Further evidence for the massive nature of the extended porch construction. Lack of forward projecting foundations apart from stub walls suggests that pilasters rather than columns framed the entry. Not only is there no trace of a pillar base but the corner does not seem substantial enough to take a column.

EAST COURT BUILDING.

The spacing of the buttresses could indicate room divisions if builders felt that support needed at party walls/main trusses. Spacing repeated gives four rooms of approx. 16-17 feet long and one at the temple end of about 25'. Recorded tessellated pavement does not extend beyond proposed first party wall.

ENTRANCE WALL.

Using gate foundation as module and assuming projection at South corner of west building to be a pilaster/ $\frac{1}{4}$ column base, one pilaster could be placed midway along the wall. As this would not fit in with the courtyard ends of the gables, suggests possibility that roof not taken above wall top. Pilasters placed $\frac{1}{4}$ way across spaces created do not fit exactly though the error is quite small between pilaster and gable end.

1927 STEREOSCOPIC PHOTOGRAPHS.

In the foreground of one are pieces of tile, brick and stone. One brick is roughly triangular in shape - possibly the type used in walls as banding courses - (check wall type) One rectangular piece of light coloured stone shaped something like a modern brick but with a possible taper along one side. Could be either a limestone or a sandstone - colour and grain size as far as they can be made out suggest the later.