

The Ground Penetrating Radar survey in the Nave of Reading Abbey Church

John Mullaney (December 2016)

The West End

The anomalous GPR lines at the west end of the nave of the Abbey church.

When we first saw the GPR findings we were surprised to see the results at the west end of the nave (in the Forbury) which Stratascan classified as *probably archaeology feature(s) –possibly related to the Abbey*. — light blue on the map. I have marked these with two black arrows.



First of all it should be noted that these may be connected with some features totally unrelated to the Abbey. For instance they could be part of the defence system constructed during the 17th century Civil War. They may be footings of one of the walls that we know surrounded the late 18th century school next to the Inner Gateway (Jane Austen's school). It is possible that they are part of the foundations for some buildings, such as the greenhouses, that appear to have been erected in the Forbury botanic gardens during the second half of the 19th century.

However I have looked into the possibility that they may in fact be related to the Abbey; in other words whether there may be some explanation for their existence as part of the Abbey.

I must emphasise that any one, or none, of the above may be the explanation and without intrusive archaeology or the discovery of some documentation relating to them, it is unlikely that we will ever know what they truly represent.

CLUNIAC MONASTERIES FROM THE LATE 10TH TO THE 12TH CENTURIES

Although there are some generalisations that we can make about Cluniac buildings over this period, there is no evidence to assert that they all followed a strict pattern. To some extent the modern adage that *form should follow function* would appear to hold true for Cluniac Benedictine monasteries in the 10th, 11th and 12th centuries, as it does for some modern architecture today.

We should remember that one of the main functions of a Cluniac Benedictine monastery, unlike its Cistercian counterpart, was about engaging with the community. It looked, for example, to caring for the sick, the elderly and the traveller, especially the 'pilgrim'. In contrast to this it was also a place of retreat, prayer and individual contemplation. The very word *monk* derives from the Greek-Latin word *monachus*, meaning solitary. As such the other main work of the Cluniac monk was performing the liturgy, the *Opus Dei*: this consisted of prayer, individual and communal, such as the singing of the Divine Office, attending Mass and other services, and the production of copies of books and manuscripts, illuminated or otherwise.

Consequently Cluniac monasteries were designed to promote these primary aims. Examination of the many Cluniac houses throughout France, Spain and even England, arguably shows a degree of homogeneity in iconography and decoration. Is this equally true of their architectural design? It should be noted that there are over 1500 establishments which we can associate with the Cluniac movement. The chronicler Orderic in fact claims that there were over 2000.

Pertinent to Reading is a certain consistency in the ground plan of the houses throughout the whole Cluniac order. I would argue that the houses were designed to fulfil the functions mentioned above, and that form did indeed follow function.

The practices of the reformed Cluniac order in the late 10th century, and subsequently in the 11th and 12th centuries, following the Statutes of Peter the Venerable (Abbot of Cluny 1122-1156) in 1132, demanded a stricter observance of the monastic ideals, of the enclosed life, of prayer and service. But the Cluniacs were also conscious that part of this *service* was to the wider community. These twin ideals helped shape the architecture of Cluniac monasteries and churches.

It has been suggested that the design of the buildings followed a sort of 'master plan'. We know the names of key monks who are credited with playing a leading role in the design and building of the monasteries. One such is Hézelon (Etzelon) of Liège. Peter the Venerable in a letter to Alberon, Bishop of Liège, says Hézelon not only gave instructions on the way to build the church but 'constructed the actual fabric of the new church' of Cluny, (*corporalem novae ecclesiae fabricam ... construxit*). This hands-on interpretation has been questioned and it has been suggested that Hézelon was more a commissioning agent, raising finance and overseeing the progress of the work.

Peter in his 'Reformed Statutes' of 1132 describes how the workshops of the workmen at the new church at Cluny were exempt from the rule of silence whilst working. This would indicate that the workmen were associated with the monastery either as monks or lay-brothers. It is possible that monks or lay-brothers were involved in the construction of the monasteries, but certainly not in all cases.

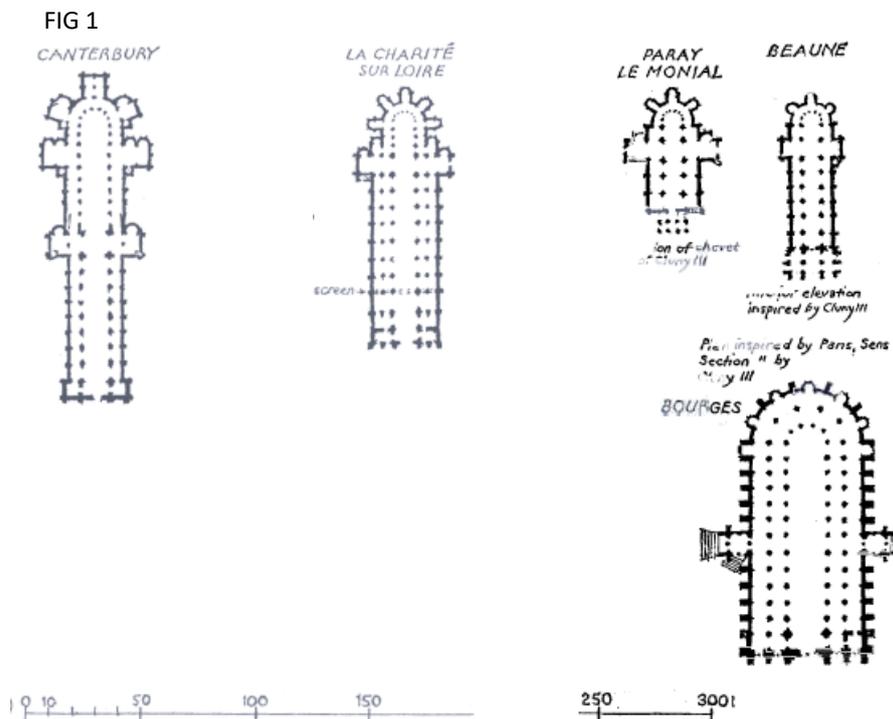
Whatever the truth of this, there does appear to be some consistency in the style of the abbeys which was remarkably similar to, if not based upon, the design of Cluny III (1088+).

THE DESIGN OF CLUNIAC MONASTERIES

Following the reforms of the 10th to 12th centuries, both Cluniac churches and abbeys were designed to accommodate the aspects of monastic life we saw above. Figure 1 shows both the diversity and the conformity that may be found in Cluniac buildings. If we look at the west ends, we see a variety of designs. There is however an underlying theme and that is their role as public places whereas the east end provided a communal monastic, or cenobitic, space for the *Opus Dei*.

Here was to be found the 'choir', an essential part of the *opus dei*, where the monks sang the divine office at appointed times of the day and night. Here also was the 'high altar' where the central part of the daily life of the monastery was focused on celebrating Mass. Here were the many chapels and shrines where again the monks could make their devotions and say their own daily Mass. It is interesting to note that in one of the *Consuetudines* (Rules) of the Cluniac order, monks were reminded not to kneel too long in front of any particular altar or shrine but to be mindful of others who might wish to say their prayers.

On occasion, probably more often as not, the east end was part of the *enclosure*, and so forbidden to laymen and certainly to women. When the number of monks became too great this section was even extended into the nave.



However we also know that visitors and pilgrims were sometimes allowed to pay their devotions at the various altars and shrines in that part of the church. Depending on the abbey, this may have been restricted to certain days when the relics of a particular saint were being venerated.

It was the function of welcoming visitors and pilgrims that accounts for the impressive naves of many abbeys. Their size was based on their function and this was to encourage lay participation in the life of the abbey, and one way this was achieved was through the celebration of holy days.

If we look at the plans in figure 1 it can be seen that they all follow the basilica pattern of side aisles with rows of pillars. It was along the aisles formed by these pillars that pilgrims would have been ushered as they went round the church towards the east end chapels, to venerate the relics and exit down the opposite aisle. The creation of aisles to the side of the choir and ambulatories behind the high altar allowed the laity to enter the east end of the church, thus maintaining the enclosed nature of the choir and sanctuary whilst at the same time allowing the laity access to much of the east end of the church.

Not all Cluniac churches followed this plan. In smaller country churches, such as Vianne or Mouthiers, where the church was catering to a local community, there was no call to provide such facilities and consequently these buildings consist of a simple nave, without aisles. Once again form followed function.

However most of the Cluniac monasteries were, in one way or another, connected with pilgrimage and could expect sizeable numbers of visitors. One example of this is at Vézelay which famously burnt down in 1120 on the feast of Sainte Marie Madeleine (St Mary Magdalene), the patron saint of the Abbey. It was reported, probably dittographically, that 1120 people died in the fire. Whatever the true number, clearly the church was crowded for this occasion. Many Cluniac abbeys were built to accommodate the need of pilgrims such as those on their way to Compostela, let alone more local places of pilgrimage.

THE ENTRANCE TO THE ABBEY CHURCH - The Narthex and the Galilee Chapel

The design of Cluniac architecture therefore reflected the need to accommodate large numbers of visitors making the circuitous route around it, or attending services and other activities that took place in the nave.

The solution can be seen in the plans in figure 1. The west end had a narthex or porch area. In some cases these were named Galilees and designated for a specific uses, especially for pilgrims and women. For instance at Durham it was created for women who were not allowed near the tomb of St Cuthbert at the east end of the church.

There are several explanations for the term 'Galilee'. One is that it has its roots in the word 'gallery' (gallilea). Another, more liturgical, explanation is that it derived its name from the procession at Easter when the main celebrant of the Easter Mass, representing Christ, led the procession into the church, re-enacting Christ's journey after the Resurrection when he said 'I will go before you into Galilee'.

Whatever its origins, its usage was both liturgical and as a place where visitors could be accommodated prior to entering the church proper. Galilees could even be used for secular activities such as the signing of legal agreements and contracts. In some cases, as the plans show, they were very distinct parts of the building.

THE DESIGN OF THE NARTHEX AND GALILEE

In figure 2 we see an example of a quite common style of narthex; one where it is narrower than the main nave.

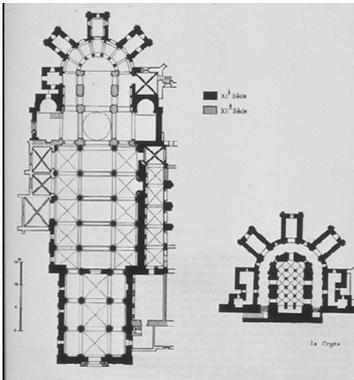


Fig. 2

Tournus (near Cluny,
Burgundy)

Cluny III itself had such an addition (Fig. 3)

Note the presence of towers at the west end.

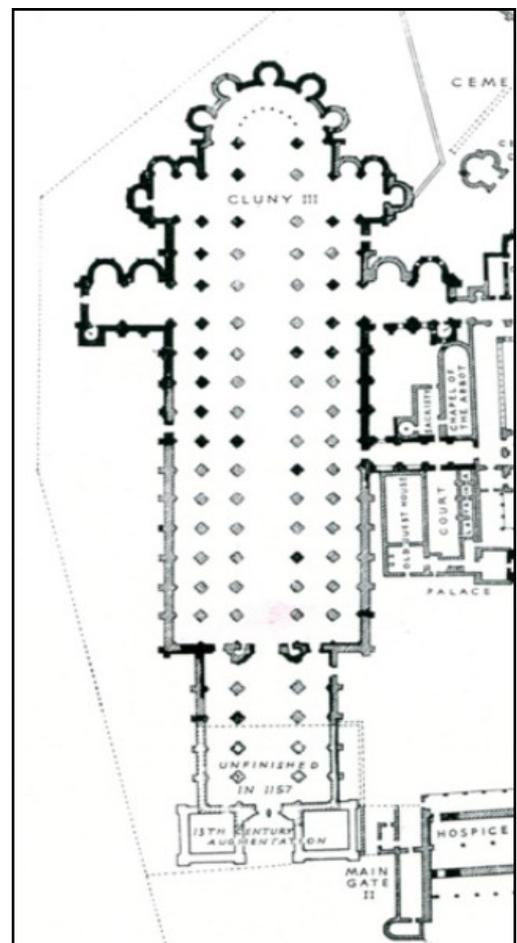


Fig. 3. Cluny III

An interesting feature, which may have relevance to Reading and the GPR scan, is that there is evidence that not all additions were necessarily in strict alignment with the rest of the building. This is clearly demonstrated by the plan for Payerne in Switzerland (Fig. 4).

Close examination of the narthex and the towers at Cluny (Fig. 3) likewise shows that they are not in alignment with the nave, or even with each other.

At Reading we have two potential examples of walls that were not in alignment with their counterparts. There is the apparent anomaly between the northern wall of the Lady Chapel and its counterpart in the main church. (See *Reading Abbey and the Forbury. Maps Surveys and Excavation no 6* in the 'Friends of Reading Abbey' website). Then on the GPR survey, in the west, there is the northerly blue line which does not run where it might be expected to be, but rather slightly to its north. Does this in fact show some correspondence with the Lady Chapel anomaly? As on the plan shown in figure 4, the north wall of the larger and newer nave (fainter on the diagram) is certainly neither straight nor in alignment with the north transept; nor is it parallel with the south wall. Likewise the dark lines of the older church show much irregularity

An examination of the all the diagrams shows that within the nave there was often a physical division between the body of the nave and the porch or narthex. Could this be an explanation for the lines found on the GPR scan at Reading within the nave, yet at quite a distance from its presumed end?

Even where a narrower addition to the west end is lacking there is ample evidence that the rear section of the nave was separated from its body and that it served as an entrance lobby or porch.

COMMENTS

1. This is not an exhaustive account of galilees, porches or narthexes, as found in Cluniac establishments. For instance one other important feature to be noted is that many had upper chapels. Some of these were substantial structures with pillars and vaulting. These would most probably have required appropriate foundations which would have to be laid within the nave.
2. The GPR survey at Reading shows traces of possible Abbey remains at the west end which do not fit in with the concept of a symmetrical plan. This does not, following the above observations, mean we have to discount their relevance. In fact I would say that the above observations give a justification for stating that these may be possible traces of the Abbey. It should be remembered that the exact footprint of the nave is unknown. There has never been any reliable drawing, and certainly no scientific excavation, of the nave in the Forbury. The map on which the GPR scan is superimposed is that of the OS 1879 survey. The outline of the Abbey on this map was based upon the work of FW Albury. (See *Reading Abbey and the Forbury. Maps Surveys and Excavation no 13* in the 'Friends of Reading Abbey' website)
3. I will reiterate my original caveat that this is only one explanation and others, some of which I mention at the beginning, are just as feasible. The north-south red line could be some such object.

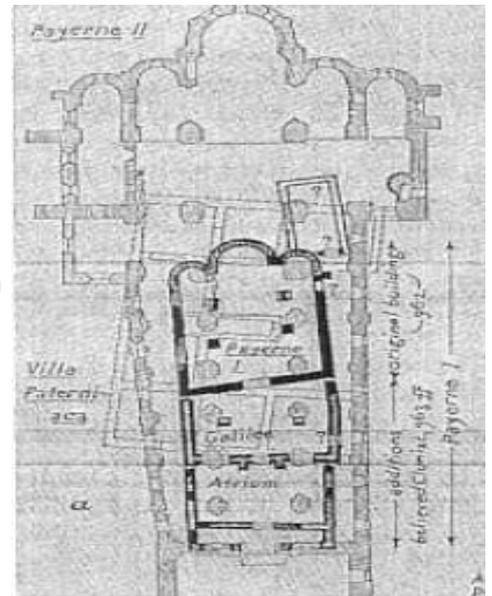


Fig. 4

Payerne, Switzerland Second half 11th c.

The East End of the Nave.

The interrelationship between the nave and the 'sacred space' around the altar changed and developed from the very beginnings of Christian places of worship and continues to do so up to modern times.

Before we look at how this relationship may have been interpreted at Reading Abbey it would be useful to take a quick look at how this evolved over time.

Background

The earliest churches and basilicas often had a plain rectangular choir in front of the apse where the altar would be found. This whole area is referred to as the 'sanctuary' (holy place) or 'presbytery' (the priests' area). From the 6th and 7th centuries, following the custom in the eastern Christian churches, such as Hagia Sophia in Constantinople, the sanctuary was physically separated from the main body of the church and so of its congregation. One such example was the introduction of the 'templon'. This was a small wall around the altar area as exemplified in figure 5.

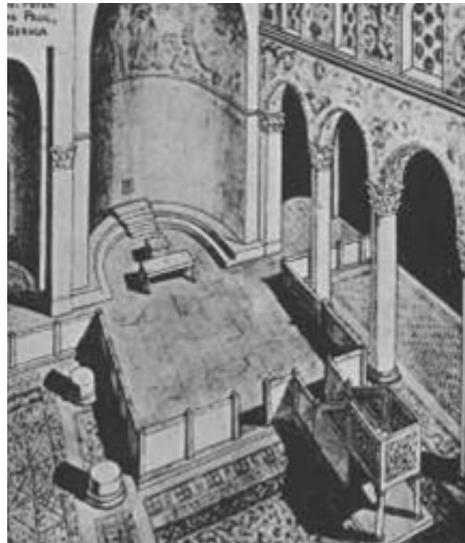


Fig. 5.

Left: S. Clemente, Rome
Right: Reconstruction of the
Templon in the church of St
Peter and St Paul

In time the barrier became more substantial. With the addition of statues of saints it developed into the iconostasis found in Orthodox Christian churches.

In western monastic establishments, such as that of the Cluniac order, the church comprised four main architectural elements; the apse, the choir, the crossing (transepts) and the nave.

The relationship between these fluctuated over time. In early churches (9th to 11th centuries) the choir is treated as a lesser nave with an arch, often unmoulded, over it. In fact the framing arches marked the division between the apse, the choir and the crossing (Fig. 6). In some rites (e.g. Sarum) curtains were sometimes drawn at different times in the liturgy to separate the congregation from the ceremonial.

It is worth noting the pointed arches in figure 6. The first pointed arches can be found at the Benedictine mother house of Monte Cassino and then at Cluny, both c.1087. These were *berceaux brisés*, (literally 'broken cradles'), of pointed section design. They first appeared in England at Durham, in 1130.

Fig. 6. Semur-en
Brionnais. Mid 12th



The fourth Lateran Council (1215) concentrated on imposing greater discipline and order throughout the Catholic church. Part of this concerned the use of churches. For instance the Council ordered that churches should not be used to store non religious, household belongings. Within the church building, greater respect for the consecrated sacrament was encouraged. This was sometimes interpreted by erecting a screen, or at least drawing a curtain, after the act of consecration at Mass. In time this evolved into a permanent structure. Rood screens, chancel screens and pulpita were erected; all designed to differentiate the various parts of the church, their functions and the personnel associated with them.

The pulpitum, derived from the Greco-Roman word for a platform, was a development of the 'templon'. The sanctuary was often a raised area, a platform, and hence its architectural marker assumed the name pulpitum. Over time this became increasingly elaborate and bigger. The pulpitum was usually placed at the western end of the choir to separate this from the people's area.

The rood screen, surmounted with the image of the crucifixion, or Calvary, was normally placed yet further to the west, separating this part of the nave from the more easterly section of the church.

The word chancel comes from *cancellus* (Latin 'gateway', 'barrier', 'lattice work') and served a similar purpose, but sometimes without the Calvary.

As seen, in monastic institutions, there would most probably have been an existing distinction between the parts of the church reserved for the monks and those allocated to the people. It is known, for instance that when the numbers of monks increased, the choir had to be extended; sometimes even into the body of the nave. This was rare but it demonstrates the flexibility of the system and we cannot be rigid in allocating various spaces in cathedrals, abbeys, minsters or churches, as we see them today, to definitive functions.

With the Protestant Reformation in the 16th century many images were destroyed or partly dismantled. Following the Council of Trent (1545-1563), sometimes known as the Council of the Catholic Counter-Reformation, such barriers, if not condemned, were not encouraged. In England, following the reforms of the Church of England, rood screens and pulpita were often destroyed, especially where there were statues and images which were the subject of devotional acts, such as the lighting of candles. In line with the mood of the times, as expressed in both Catholic and Protestant churches, there was a move towards greater congregational participation. The result was that in western Europe many of the physical barriers between the laity and the clergy were removed. In other words liturgical change was reflected in the architecture of the churches. The purpose of the building once again dictated its form.

In the 19th century, with the Gothic revival, the Oxford movement, the work of Pugin in England and Viollet-le-Duc in France, many of the rood screens and other medieval liturgical and architectural embellishments were reintroduced.

Consequently when today we enter a cathedral, especially one which was once a monastic church, and we look along a continuous open stretch from west to east, we cannot be sure that this is what a medieval visitor would have seen (Fig. 7). On the other hand the existence of a screen may be one that was erected in the 19th century.



Fig. 7

View looking east with uninterrupted view from the nave through the choir to the altar.

Dorchester Abbey.

Established as an Augustinian 'Abbey' in 1140.

READING - THE GPR FINDINGS TO THE WEST OF THE CROSSING (TRANSEPT)

The GPR findings at the west end of the crossing, and so to the east end of the nave, are marked on the map with two black arrows. They consist of two light blue lines. The more northerly one has a 90° return angle to the east. There is a gap between the northerly line and the southerly but it would appear that they are part of the same feature (Fig. 9).

In both cases they are in alignment with the west wall of the southern transept; also marked with an arrow.

If the findings are indeed showing a substructure of the Abbey then we have to ask what feature they may represent.

it would appear that there is a gap between the two sections. This may indicate that they are the footings of either a pulpitum or rood screen. The evidence leans towards its being a pulpitum as these invariably had a central opening leading into the choir (Fig. 10).

We have seen that the position of the choir itself could vary from east of the crossing, as at Ely, to as far west as being placed within the nave, as at Peterborough.

Most rood screens that we see today likewise have a central opening leading to the choir and altar area. This was not

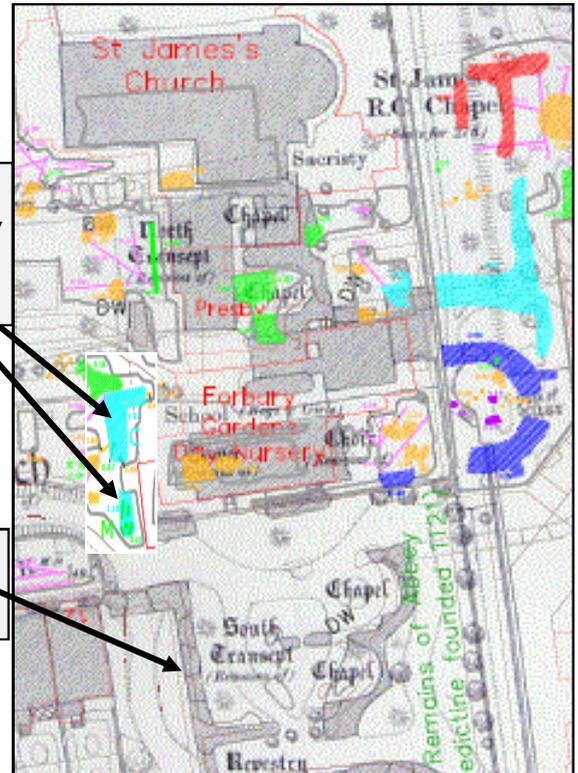


Fig. 9 GPR scan of Reading Abbey showing the east end, the crossing, the south transept and the modern buildings



Fig. 10. Ripon pulpitum with its central doorway

always the case. The rood screen delineated the line between the laity and the clerics. It consisted of a 'wall', frequently with an altar against it at its centre, for the lay people's Mass (Fig 11). Usually openings on either side



Fig. 11 Rood screen St Albans showing the altar between two doorways and against the west facing wall in the third bay of the nave from the choir.

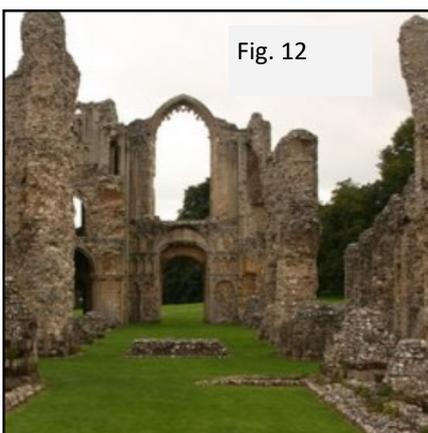


Fig. 12

led through to the intervening space before approaching the pulpitum and so the choir.

This arrangement can be easily discerned in the ruins of Castle Acre (Fig. 12). Looking west, from the choir, the first transverse row is that of the pulpitum. Beyond is the base of the rood screen.

COMMENTS

1. If the features shown in the scan do belong to the Abbey they are consistent with known plans of medieval Abbeys. They could be the footings for either a pulpitum or a rood screen.
2. If they are one of these features the next question is to ascertain when they were built. They may have been part of the original construction or added at a later date. Many rood screens and pulpita, especially the more elaborate ones, can be dated to the 14th and 15th centuries.

One tantalising piece of information may found in the Miracles of the Hand of St James. This document, now in Gloucester Cathedral, was most probably written in Reading around the year 1200. It lists 27 miracles which Professor Kemp dates from between 1127 to around 1200. The 18th miracle makes reference to a pulpitum. The extract, first in Latin then in Kemp's English translation, is as follows:

Sequenti die dominus Gilbertus episcopus Londoniensis, pulpitum ascendens et manum sanctissimi apostoli de capsula veteri in novam tranferens, populum ex ea benedixit

On the following day the lord Gilbert, bishop of London, went up on to the screen and, as he transferred the hand of the most holy apostle from the old reliquary to the new one, he blessed the people with it.

This 'miracle story' can be dated to between 1163 and 1187 when Gilbert Foliot was bishop of London. The Latin word used is *pulpitum*. Whether this was technically the type of screen now referred to as a pulpitum or not, it shows that there was a screen substantial enough for the bishop to have to climb up so that he could place the hand reliquary on it.

This passage is also interesting as it would indicate that the Hand was kept on view, albeit in a reliquary, in the church, not locked away as has been suggested. Presumably it was taken down for the processions we read about elsewhere and no doubt for other special occasions.



Example of a 12th century hand reliquary.

3. Excavations would probably be able to tell us the likely date of construction. They may also help in identifying the feature to which they refer. Once the type of cement and the composition of the material used are discovered, it should be possible to come to a reasoned conclusion.

CONCLUSION

The various projects, archaeological investigations and pieces of historical research are helping to build a better picture of Reading Abbey. The conclusion to what I have written above, is that both the sets of blue lines are compatible with features that may have been found in a Benedictine monastery. As such, finding out more about these, certainly by verifying whether they are truly Abbey remains, would fulfil a significant archaeological and historical purpose.

The idea of a narthex, porch or Galilee chapel, is potentially an architecturally important addition to our understanding of how Reading Abbey would have operated. Only by invasive archaeology will we be able to determine if such existed, the nature of its design and when it was built.

It is likely that the Abbey church would have had a pulpitum and/or a rood screen. The reference to a 'pulpitum' in the 'Miracles of the Hand of St James' shows that some sort of screen existed in the late 12th century at Reading. Once again only by making a trench in the school playground at the point indicated in the GPR scan, will we be able to verify its existence and possibly date its construction.

In both cases, namely discovering more about the lines in the Forbury Gardens and those in the school playground, the aim would be to add to our overall understanding of what the Abbey would have looked like both externally and internally. In addition it would help create a better picture of how the Abbey operated.

The aim of the Hidden Abbey Project has always been to reveal the unseen aspects of the Abbey and complement the work of the Reading Abbey Revealed project. Both these have raised awareness of the importance of the Abbey in the history of the town. They have resulted in increased public and media interest in the Abbey and support for the projects surrounding it. The success of the play about Henry I, by *Reading Between the Lines* in St James' Church, was another demonstration of public engagement in the historic heritage of the town.

The public consultation and survey preceding the HLF bid showed that there was an overwhelming fascination with the life of the monastery. The two pieces of potential information from the scan, if they prove positive, would help further to engage the community in the work ahead.

I cannot end without mentioning Henry I and the reason the Abbey was built. In the Foundation Charter Henry says the Abbey was for 'the salvation of my soul ... and of all my antecedents and descendants'.

Human interest in Henry as the founder of the Abbey, and in his choice of Reading as his final resting place, has been at the very core of public awareness of the work being done to the Abbey and support for it. Discovering more about daily life in the Abbey will help stimulate continuing interest in our town's greatest historical treasure.