



Notre-Dame in Etampes, view into the choir and south transept from the nave

## Raising the capitals at Notre-Dame d'Etampes

John James

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The significant church of Notre-Dame-du-Fort in Etampes has intrigued scholars for decades, partly because it has been extremely difficult to analyse. In 1969 Bob Branner attempted to enthuse one of his students into undertaking a history, but it proved too much for Chris Crocket at that time. I sympathise with him, for with all my experience and years as an architect and historian, I remained stumped by this building for over thirty years. Then came two excellent doctoral theses by Sarah Thompson<sup>1</sup> in 2009 and Elise Baillieul<sup>2</sup> in 2012 that changed the way we look at the building. Afterwards, I organised a conference on site in 2017 when Chris Henige and I gathered additional information, photos and panoramas in order to create a digital model. The model was prepared by Alain Menager in Australia and presented to conference participants early in the Year of the Plague, 2020.<sup>3</sup>

The model has made it possible to explore alternative construction and design sequences, and many structural issues that had remained unresolved. One can see the building at every stage of construction, not complete and whole as we see it today, but in the process of creation. The many uncertainties the builders faced, the obstructions from earlier buildings, and the issues discussed by historians over the years, could be analysed. Alternative scenarios could be explored and, most importantly, the structural and erectional implications of the many changes analysed.

There were four distinct proposals for Notre-Dame, with enough major changes to make it a tricky subject to study.

The First Church would have had an apse over the crypt, following its outline. From a few hints that survive in the existing structure it may have had lateral chapels, though the nave that extended to the western tower is pure guesswork [next page, in red]. The image is derived from our best analysis of the model. I will be providing the evidentiary hints for this arrangement in a separate study.

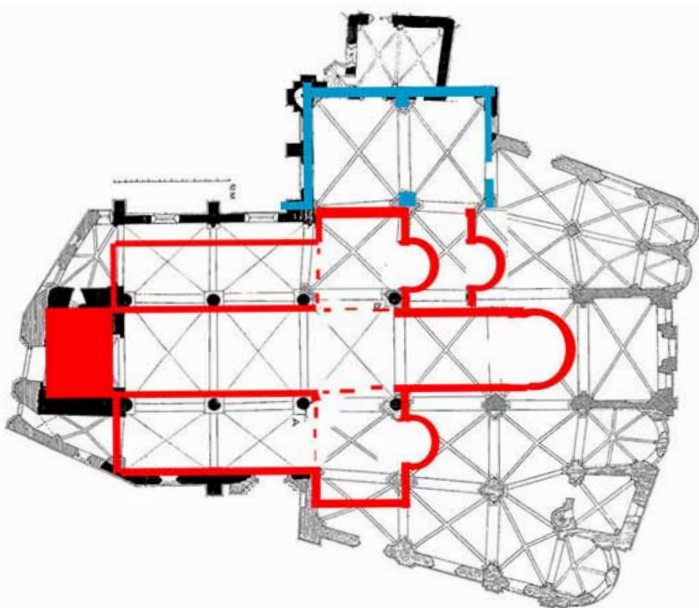
A large chamber had been added on the north side of the church, presumably for pilgrims [below, blue].<sup>4</sup> It connected the church to the earlier ossuary, and there are still remains for parts of walls, evidence for central supports for the roof and doorways to the north and west.

The Second Church had a three-bay nave with aisles to which was later added a matching three-bay choir with a square east end [next page]. The lateral chapels from the earlier church appear to have remained and been in the way, so the side chapels to the choir were not built, only starter blocks begun. This study will show that both nave and choir were built only to the height of the string course. Though incomplete, the design provided a considerable area for worship [green, bottom right]. The aisles of the nave were built around 1115, and the choir in the mid-20s.<sup>5</sup>

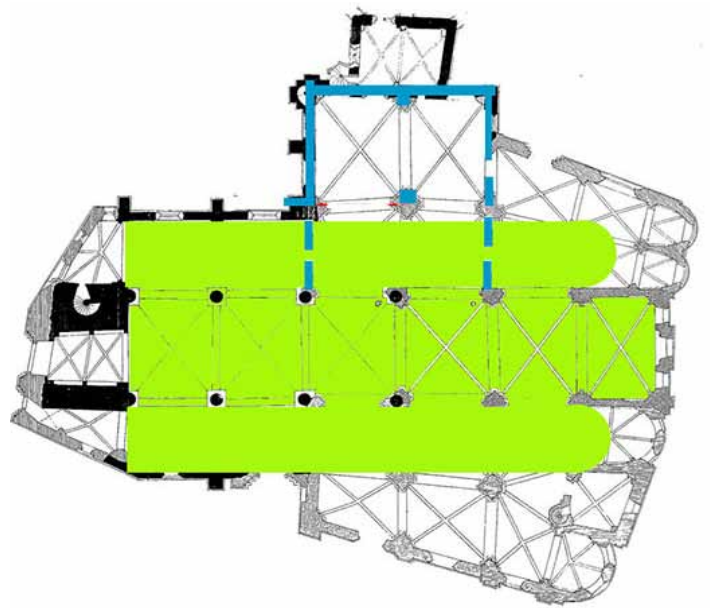
The Third Church with four eastern chapels that we know so well today, was built around the unfinished choir, and joined to the 4x4 bay chamber. This may have been in 1137 probably under royal patronage.<sup>6</sup> At the same time the south porch was added. A few years later the design was enlarged further by extending the chamber to the south into what we today call the transept. Wide double-bay transepts were extremely rare anywhere in Europe at this time.

The Fourth Church was sixty years later. The western tower was stabilised with massive encasing structures to support the spire and the nave clerestory completed. The work may have been to encourage the pilgrims coming down the main road on the far side of Saint-Basile's.<sup>7</sup>

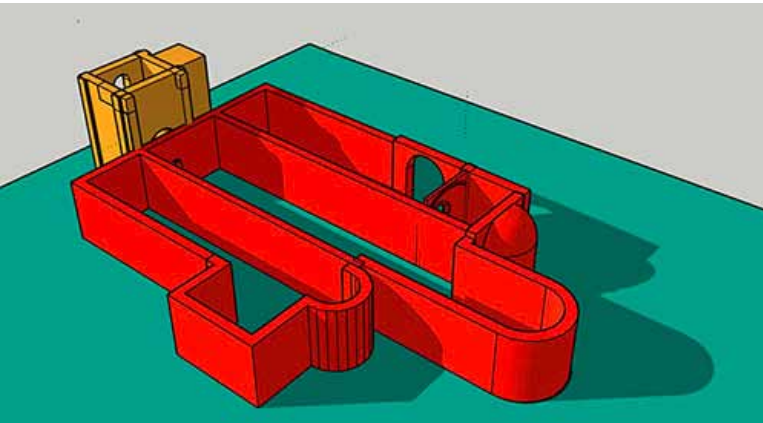
The four church designs have left many anomalies in the building, with indications for changes and intentions long forgotten. The seven items of evidence that the Second Church was raised eleven courses is itemised on page 5.



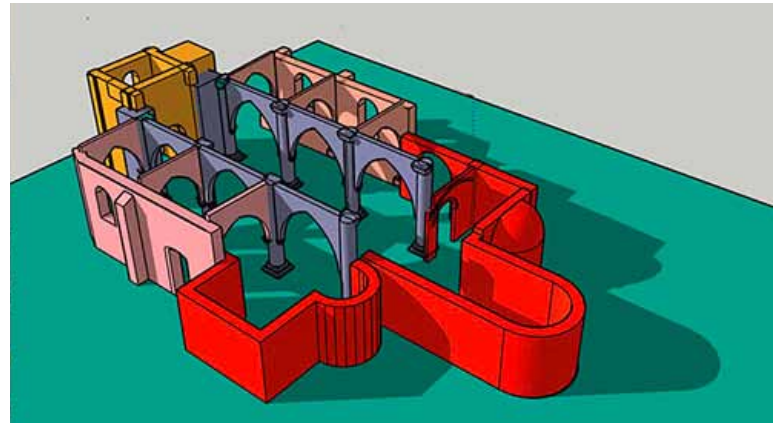
The First Church in red, the chamber in blue



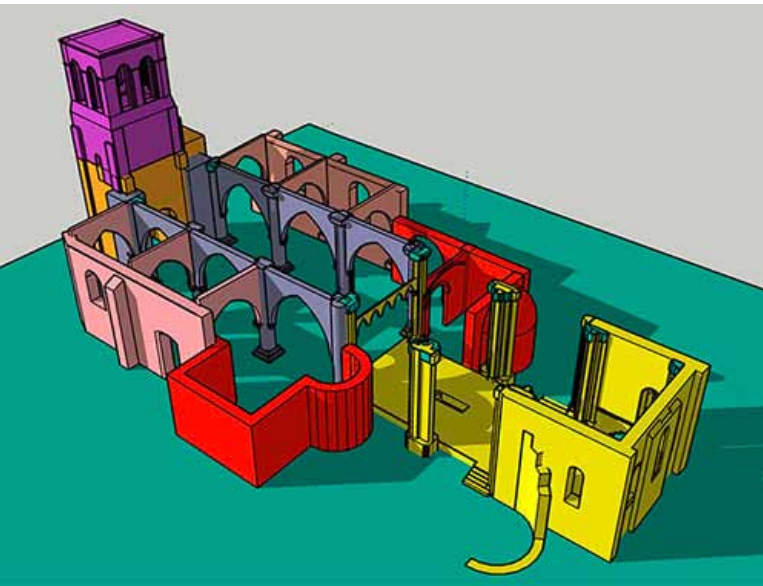
The intended Second Church in green, integrated with the chamber in blue



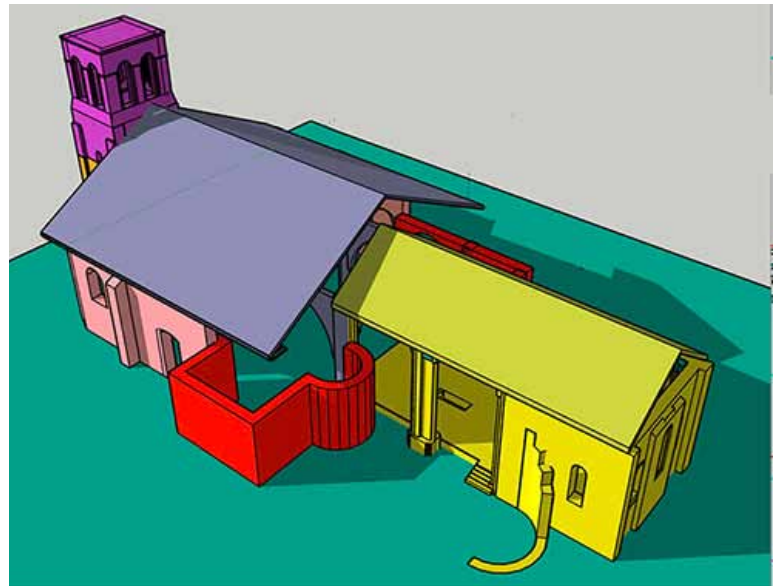
The First Church: choir and crypt, lateral chapels and nave against small tower.



Nave of Second Church of three bays with aisles.



Choir of Second Church with older side chapels retained. Third and fourth stages of the tower added, either before the nave, or just after.



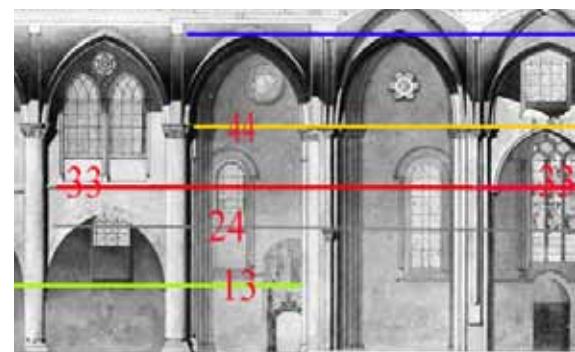
Roofs of some sort built over nave and choir to enable services to be continued in the new space.

***First issue: Confusion among the upper choir capitals***

The capitals in the upper choir clerestory of the Second Church are now on the 44th course [right]. The designs are in the same mode as those in the lower level under the arches into the side chapels, at the 33rd course. There are another two that frame the entry to the choir on the crossing piers, at the 24th course and two more flanking the entry into the southern nave on the 19th. Being in so many different places and separated by so many levels requires a little explanation.

All these capitals sit comfortably under appropriate imposts except those in the upper level of the choir. These capitals and their imposts are misplaced, altered in shape and size, and are often too small or too short for their location [next page]. The imposts are confused and mismatched to a degree that is unique in the church, for nowhere else has fine sculpture been so mistreated, nor has their relationship to their imposts been so ungainly.

In themselves, mismanagement is not sufficient evidence that the capitals had been moved. The misalignments and cutting could have been lack of experience or urgency.<sup>8</sup> The evidence that we need comes from six other parts of the building where construction was affected by that decision and has left traces.



Section with number of courses, and 66 to the roof.

4 RAISING THE CAPITALS AT NOTRE-DAME D'ETAMPES



EN1ne choir (+) capitals



EN2sw choir (+) capitals



ES4nw choir (+) capital



EN3ne choir (+) capitals



EN4sw choir (+) capital



ES3nw choir (+) capitals



ES1e choir (+) capitals

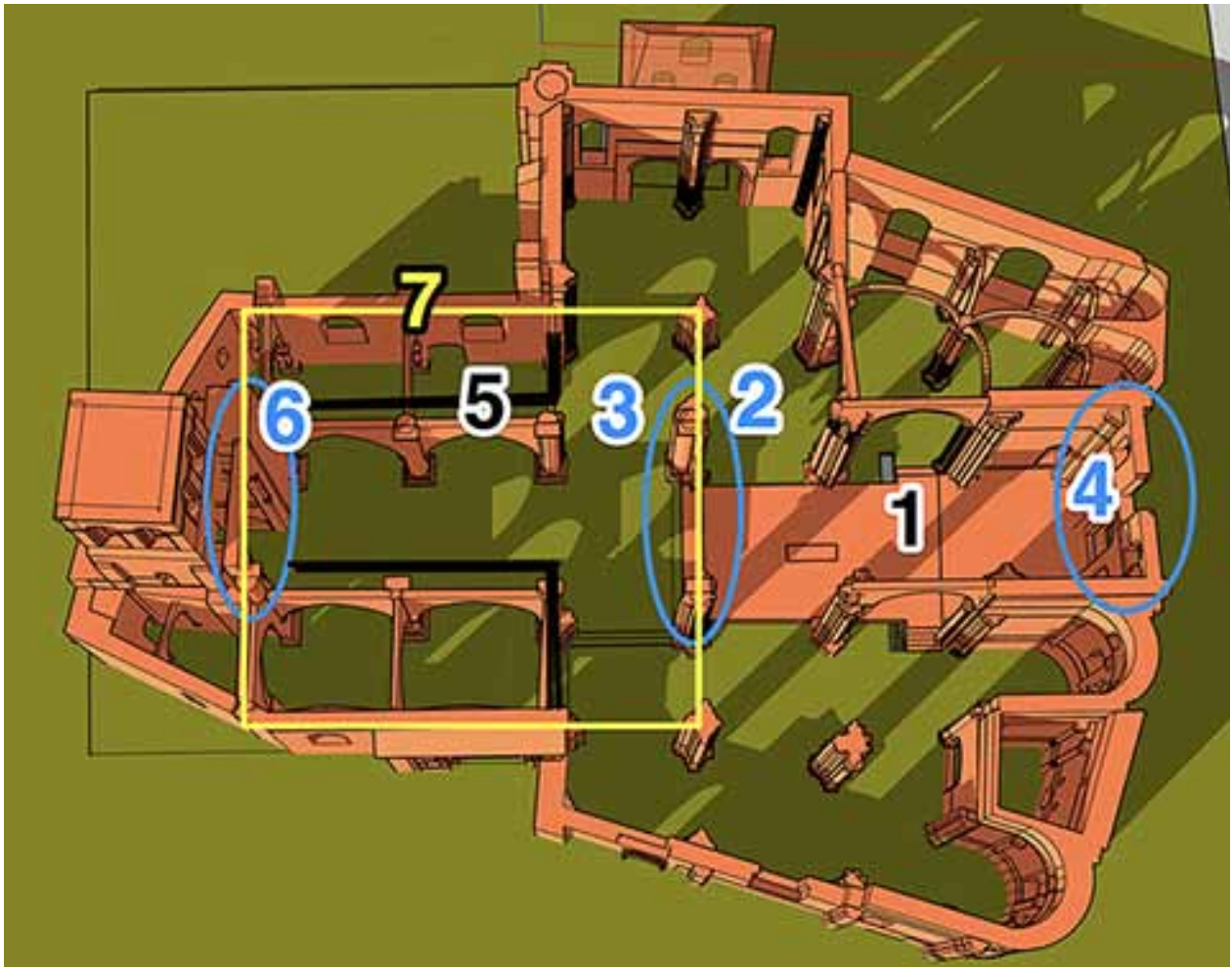


ES2nw choir (+) capitals

### *The location of the evidence*

The discrepancies in the choir capitals and their impostes could be explained in many ways. However, the lithic and constructional evidence in six other parts of the church show how the consequences of the decision to raise the height has affected the building. It left indelible indicators in the actions and adjustments the builders were forced to make. Each issue is marked and numbered in the image [below].

1. Confusion among the capitals in the choir [previous page].
2. The remnants of drum capitals in the eastern crossing piers.
3. Upper courses of eastern drums built at same time as the pilasters.
4. Altered elevation for the east wall of the choir that was built with the shafts, course by course, yet finished with earlier capitals.
5. The rubble walls around two bays in the nave and the flanking walls of the transepts that were built later than the Third Church.
6. The west drums built with the organ loft and clerestory windows.
7. The low roof over the three-bay nave that obstructed the final completion of the transept.



Location of each constructional issue discussed in the following pages.

***Second issue: Remnants of drum capitals in eastern crossing piers***

The two drum piers that peek out of the eastern crossing are 44 courses high [green, right]. The style of the capitals is similar to one in particular in the northern nave aisle [b2], and suggests they were carved about the same time as the others in the nave aisle. Yet the clerestory capitals and their impostes are surrounded by other capitals and impostes from a much later period [below].

There is an enormous difference in height between the clerestory and the aisles. These two in the eastern crossing are in the 44th course, those in the nave aisle are in the 13th. The more than thirty courses between them would, at a normal rate of construction, have needed a number of years to complete.

One would not build drums to that height on their own without lateral support in case they shifted. Even though an arch of the arcade may have joined the lower courses of the drum to the rest of the nave, the upper courses would have been endangered by wind and rain. As further evidence, note that one of the capitals is twisted in relation to the impost [b1], just like the misplacements in the rest of the choir at this level.

I am not alone in thinking that the clerestory capitals had been originally placed on a lower level, and had been raised with the major work on the eastern end of the building some twenty years later. The evidence justifies their observations.



Prolongation of east crossing drums



Capitals in the ES1(c+) crossing pier, with part of the drum and its capital visible.

Capital in the EN1(c+) crossing pier



Capital in the WN1(a) nave aisle



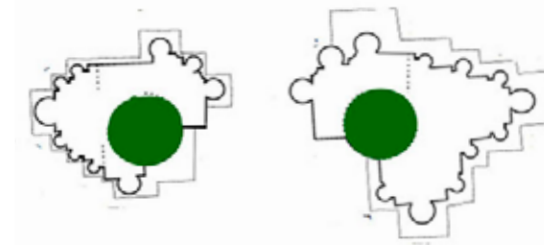
### *Third issue: Upper courses of drums built with the pilasters*

One presumes that the small curved sections in the eastern crossing piers are all that remains of fully-rounded drums. Stone sizes and quality suggest they were carved at the same time as those in the nave.

On three sides they are framed by pilasters that were added over the drums in various stages as the eastern end was reconstructed [right]. This was painstaking work to ensure the small blocks in the pilasters were properly attached to the drums and not likely to be dislodged and peel off under load.

Some of the upper pilaster courses are fully bonded into the drums. Each course is marked [below]. Therefore the bonded courses in the drums would have been laid at the same time as those in the pilasters. Let us not forget that medieval masters did not have foot rules, as we do, and as dimensions were derived geometrically the likelihood of cutting new blocks the same size as older ones is remote. The fact they accurately bonded as many as 25 courses shows that that the upper courses of the pilasters were built with the adjacent courses of the drums, and conversely, the higher courses of the drums were contemporary with the pilasters.

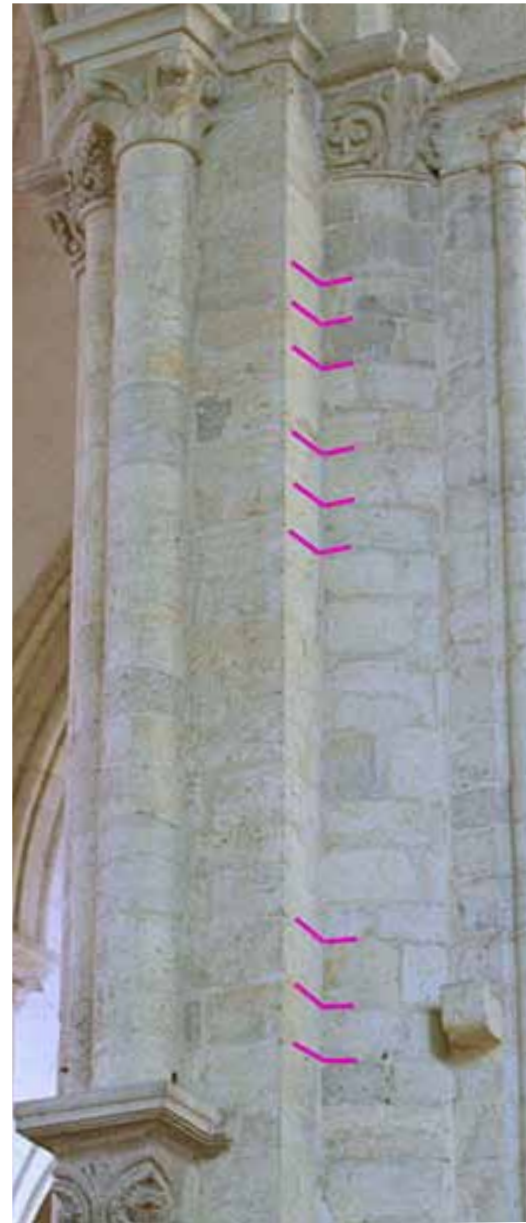
It may be argued that because a few of the same masons marks appear sporadically among all courses of the drums, the drums had been built full height from the beginning. Considering the sum of evidence presented



The eastern crossing piers with the full extent of the drums marked and the added pilasters



EN1 and ES1 piers with junctions between the pilaster and the drum marked where the coursing appears to be continuous.



here, it is more likely that some of the curved stones from the unseen side of the drums would have been removed and reused further up: hence the continuity of the masons marks. We should remember that carving curved stones was expensive as it took longer than squared ashlar, and that reuse was a valid economical option. Removing the facing from the drums would also have made it easier to bond the new work into the old.

**Fourth issue: Eastern choir capitals built with encasing walls**

In the choir the design of the upper eastern wall and the adjacent lateral windows are unlike the lower, suggesting a significant change to the design above the string course. Round arches compared to steeply pointed, and massive profiles compared to delicate window frames. The lower part is a more stubborn design compared to the elegance in the upper. It is pertinent that the string course between them is at the same level as the string under the nave clerestory windows.

There are also small oculi on the side walls of the eastern bay that seem uncomfortable [below left], Lateral chapels usually had lower vaults, and we can see that the oculi are off-centre to accommodate the chapel vault on the other side of the wall. There is even a small strip of stonework that could have been the starter blocks for these lateral chapels, but now tidied up and plastered over [below right].

Above the string course on the eastern wall the shafts supporting the two capitals from the 20s are directly bonded into the east wall [marked green, bottom], showing both were built together. Therefore,



Eastern wall of the choir



North wall of the east bay of the choir as built, and as it may have been intended.



North side of north wall, east bay of choir, with the outline of an intended side chapel outlined.



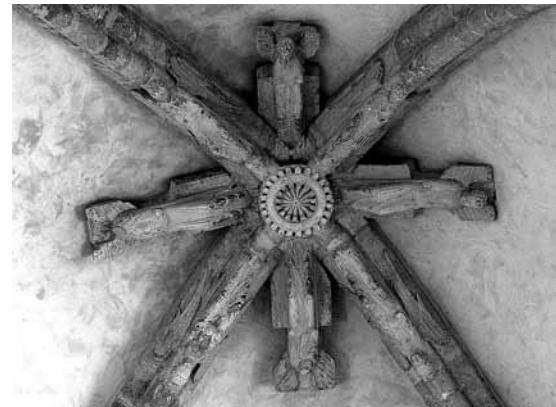
Capitals and supporting shafts on the eastern wall in the choir (c+). Green marks the courses that are bonded into the adjacent windows.



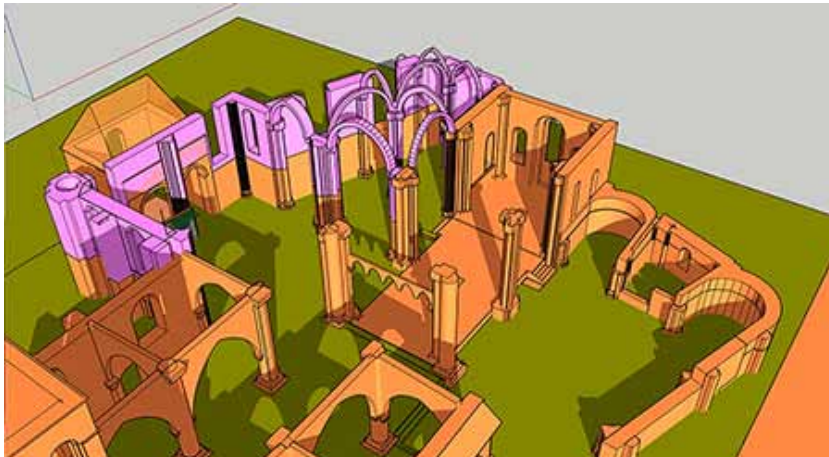
these 1120s-style capitals were placed when the wall and its windows was constructed twenty years later.

The first model [below] shows the choir as built in the 20s and the north catching up around 1140. The northern vaults with the four-king bosses (appropriate for a royal patron) could not be built until the eastern choir walls were ready to be raised, because they share the wall between them in the second model. The external coursing is continuous from the level of the vaults in the north across the upper eastern windows to the upper walls of the chapels in the south.

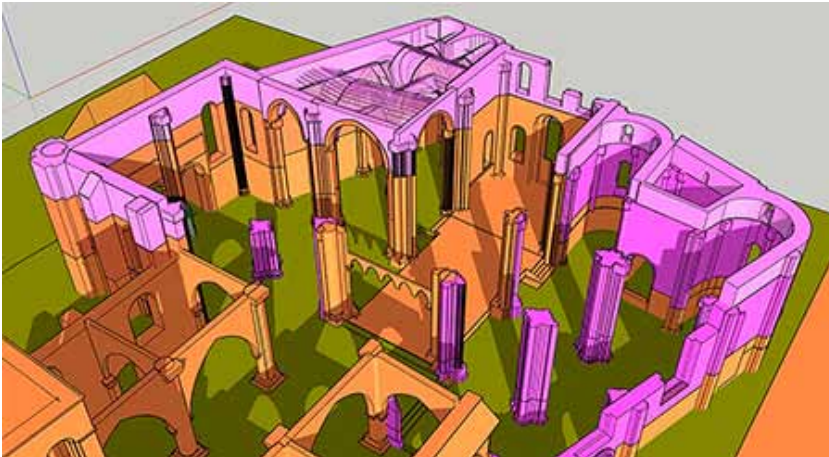
The third image shows the next stage in which the masonry on the two sides of the church is inextricably bound. The other choir capitals could



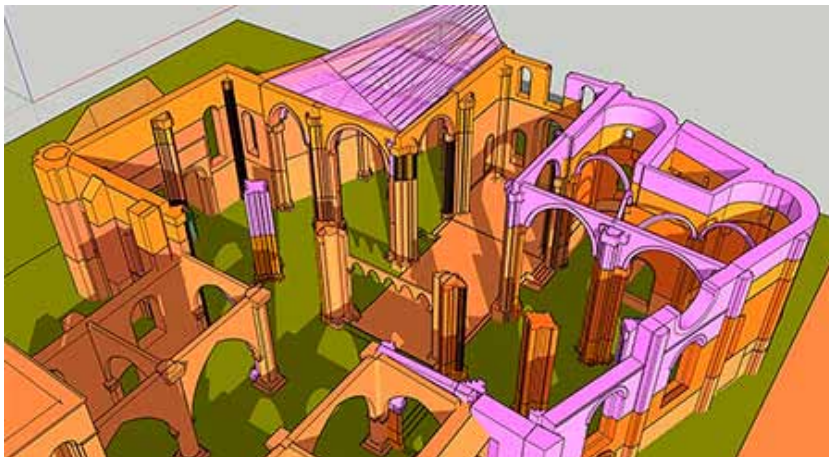
The two four-king bosses in the north, adjacent to the two eastern chapels. I would date them to just after 1140.



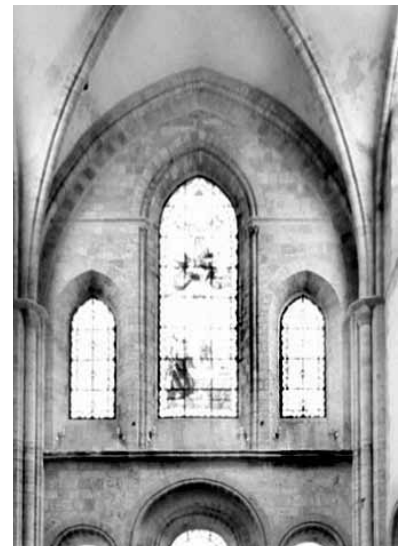
East end with the campaign in the northern chapels [pink], level with the top of the choir



Next campaign with the vaults in the north, continued across the choir to the upper walls in the south



Roof over northern chapels resting on recent wall in the choir, and continuation into the south



Upper windows in the eastern wall of the choir, capitals on the inside of the central window.

have been placed piecemeal as these walls and piers were raised, probably during the crusade or just after.

This is borne out by the style of the capitals in the treasury nearby that are in the manner of the 1140s [right top]. It is anomalous to have 1120s capitals in the corners at the same level. There are no other capitals nearby, but by following the coursing in the model [below], the upper clerestory capitals marked A are about the same level as those in the treasury marked B.

Continuing to the south, the same courses step down and show that the southern transept capitals and their vaults, and including in the lower courses the junction that returns into the corner of the nave and covers part of the south portal, were erected after the treasury. The carving style of these capitals seems more like the 50s.

Similarly, the upper window of the eastern choir marked C on the model [right, bottom] are ten courses higher than the A clerestory capitals in the choir at the (c+) level, and were therefore placed after all the walling around the southern chapels had been completed. This campaign would have been after that in the bottom image on the previous page where you can see that the arch over the middle window had not yet begun.

Therefore, the 1120s capitals now in the choir clerestory were placed at a higher level than the other work from that period. They would have been carved in the 20s, and placed or stored, but then raised to this higher level when the eastern window was constructed twenty years later.

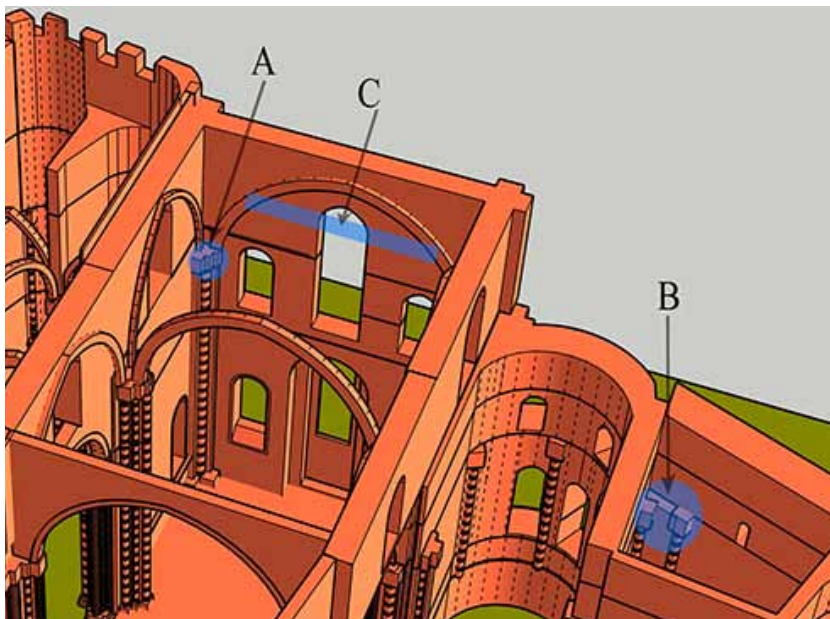
Also, little more could be done in the choir until the pilasters encasing the piers on the south side of the choir had been added. The model on the previous page makes the order clear. The pilasters formed the critical path for the upper work in the choir.

The rough quality around the choir capitals, as depicted on page 4, may have had something to do with the inevitable funding restrictions during the Crusade. If their placement had been during this lean time, we could hazard dates for as much of the Third Church as is shown on previous page being between 1137 and 1145. This was a construction rate of some seven or eight courses per year.<sup>9</sup>



The four capitals in the Treasury (c+) level

Model of the eastern choir with the roof removed. Connections to the adjacent chapel and treasury noted



The two choir clerestory window capitals





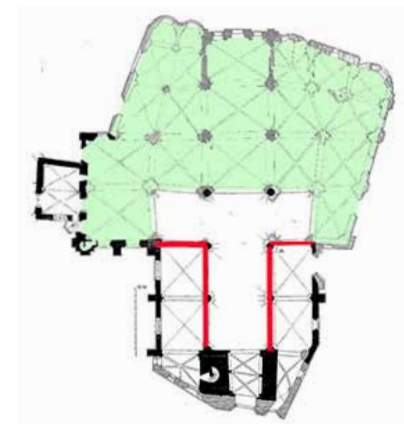
Rubble wall in first bay of north transept and the north wall of the nave

### ***Fifth issue: Rubble walls in the western clerestory***

During the fifty years that separated the nave aisles from the rubble construction a large space remained unfinished. For some two generations the clergy were able to continue with services in the Second Church with limited interruptions while the noise and dust of building work was concentrated on the construction of the Third Church [right, green].

Most of the upper church is constructed of excellent ashlar, except in the clerestory level of the nave and the adjacent bays of the transepts [marked red]. The exterior of these walls are built of rubble. They look contemporary, though you cannot be sure with rubble. The junctions between the rubble and the adjacent ashlar buttresses are butted, whereas if the wall and the buttress had been built together the ashlar would be toothed into the rubble to hold the two masses together. There are some 16 courses of ashlar in the flanking buttresses that are not bonded into the rubble, and the vertical joint suggests the ashlar was placed first.<sup>10</sup>

The clerestory of five bays in the nave and the transept, completed almost half the area of the church. The reason for rubble rather than ashlar may have been that smaller stones were easier to raise and handle when working above the earlier work.



Rubble walls red, partly completed Third Church green.

Rubble wall in first bay of south transept and south wall of the nave



***Sixth issue: Western drums built with the organ loft***

In the west the massive walling around and within the earlier tower was designed to reinforce the lower courses so they would support a very tall spire. At the lower level aisles were butted onto the tower for north-south stability, and in the other direction with a very thick wall and three portals. At the clerestory level the outside of the old tower was faced with new stonework expanded in all directions to help stiffen the structure. On the inside the walls were thickened, arches added and the organ loft vaulted to prevent the older work from buckling inwards under the intended loads.

The coursing in the walls and vaults of the organ loft is continuous around the corner into the western wall of the nave. These courses are bonded into the two corner drums above the level of the string course.<sup>11</sup> The bonded courses are marked on the photo [below left], and the green strip of decayed stone may have been the location of the earlier capital.

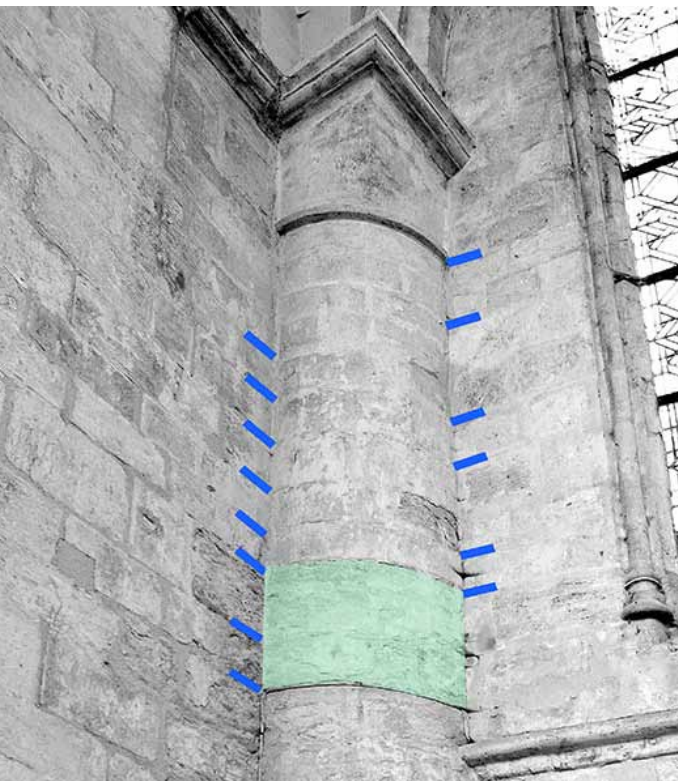
Therefore, the coursing shows that the drum was raised at the same time as the loft. More precisely, the lower courses of the drum were built with the walling behind the organ and the upper courses of the drum with the lower jambs of the huge nave clerestory windows. This could not have been done if the nave capitals had been originally built where they are now, and therefore we have to conclude they are now higher than they were intended to be when the nave was built.

The date for the west wall and the area behind the organ is around 1200, almost a century after the nave aisles and a half-century after the great works around the choir.<sup>12</sup> The sculpture over the western portals and the capitals supporting the vaults over the organ loft bear witness to that date [right].

Only the complex profile of the impost has anything to do with the profiles in the aisles, while the very simplified capital and all the surrounding masonry would be later work.



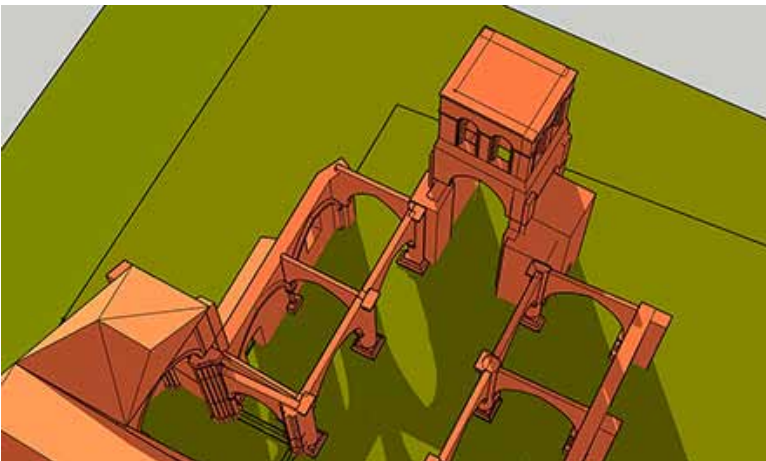
Organ loft, and below the west portals



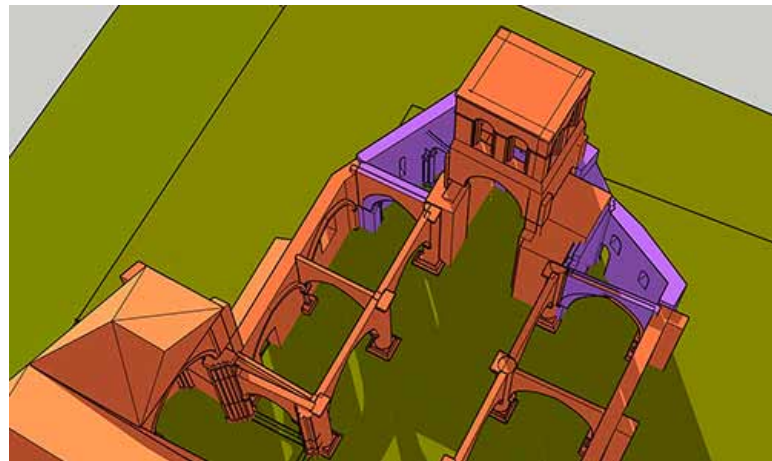
Drum in north-west corner of the nave, bonded coursing shows it was built with the organ loft. Stone with distemper marked green.



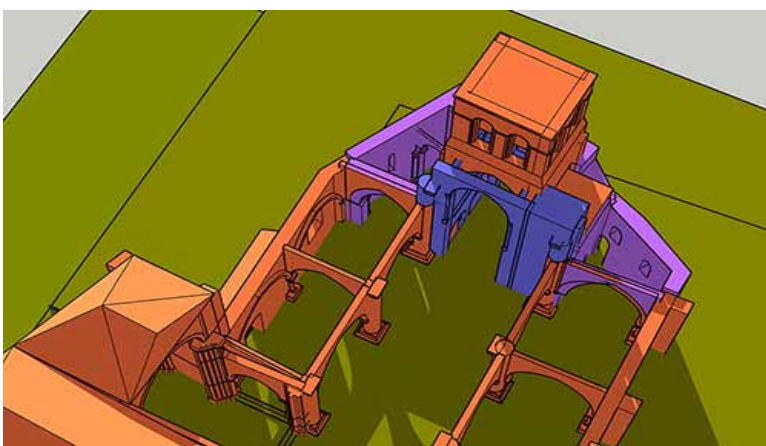
West wall of nave with opening into organ loft that was built with vaulted chamber behind.



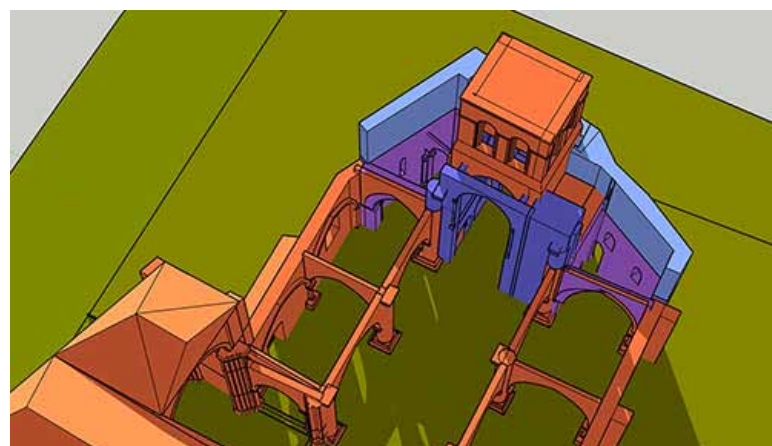
The tower from the First Church and three-bay nave of the Second Church



Completion of western aisles and the three portals on the facade



Strengthening the interior of the tower, walling and drums of the nave



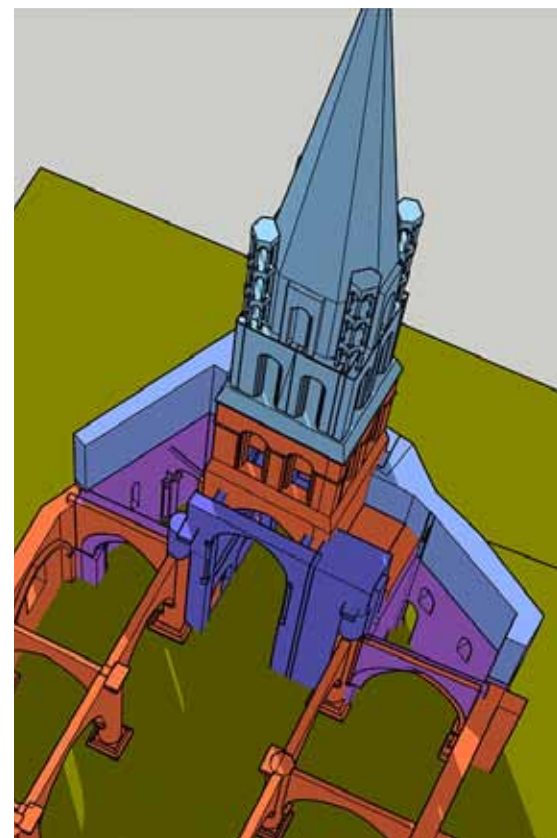
Upper walling and western window to buttress the spire

The four stages from the model [above left] show the state of the works with the roof removed from the nave, and the four levels of the tower as it would have been during the twelfth century,

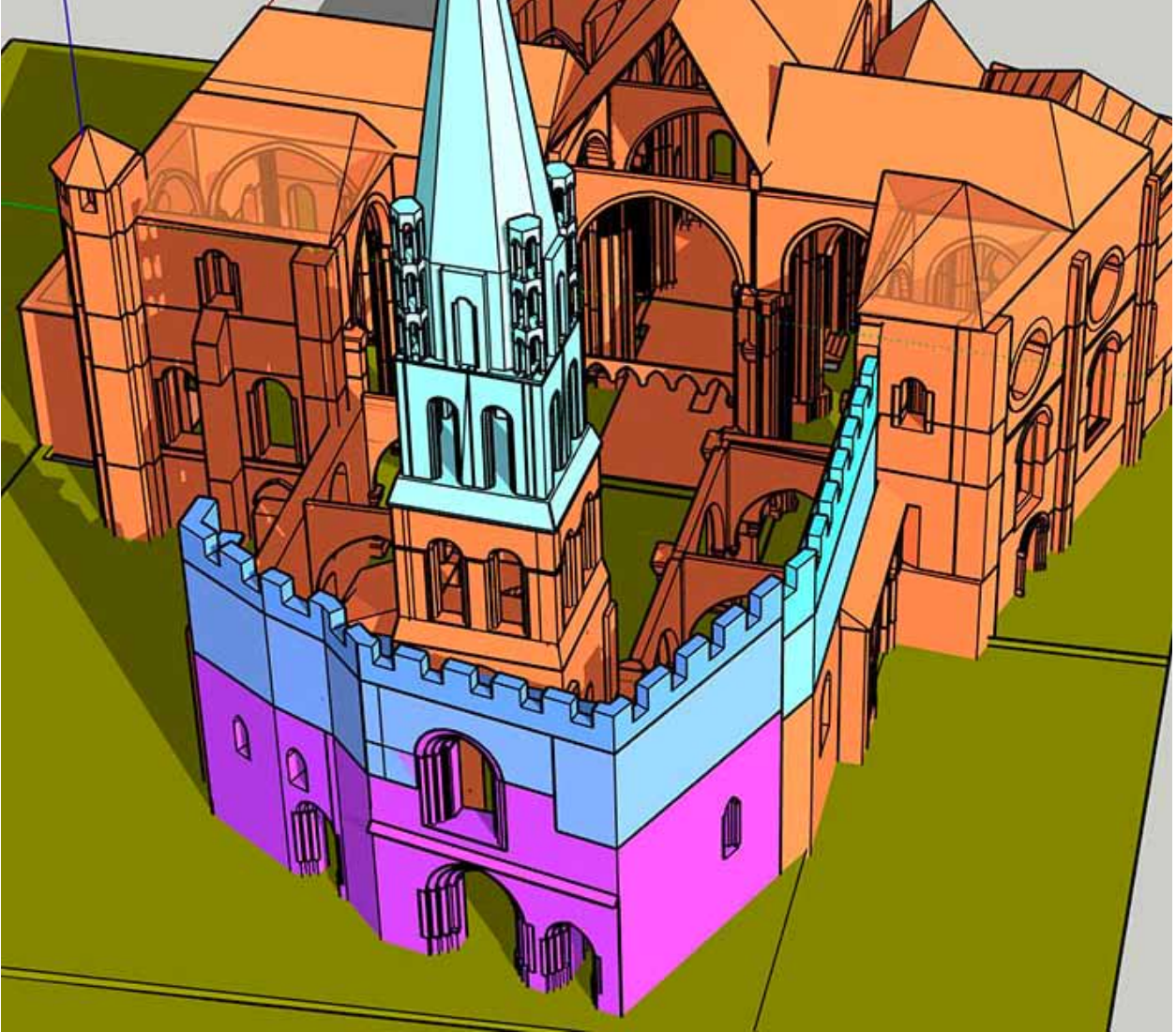
In the second, two aisles have been added at the western end, and at the same time in the third [lower left] two stories of masonry were inserted into the tower. There are arches in the lower level and vaults in the upper. It was at this time that the western nave clerestory capitals would have been raised [dark blue]. The inserted masonry may be more clearly seen from underneath with the floor removed [bottom, next page],

In the fourth image, weighty vaults and thick outer walls were added to hold the lower courses down, secured into the earth, as it were. This included the extension of the wall and the crenellations to both sides. They are pure showmanship that enlarged one's first impression of the church as approached from the pilgrim's route to the west, an advertisement, a competitive "showcase of the power of the chapter"<sup>13</sup> [top, next page].

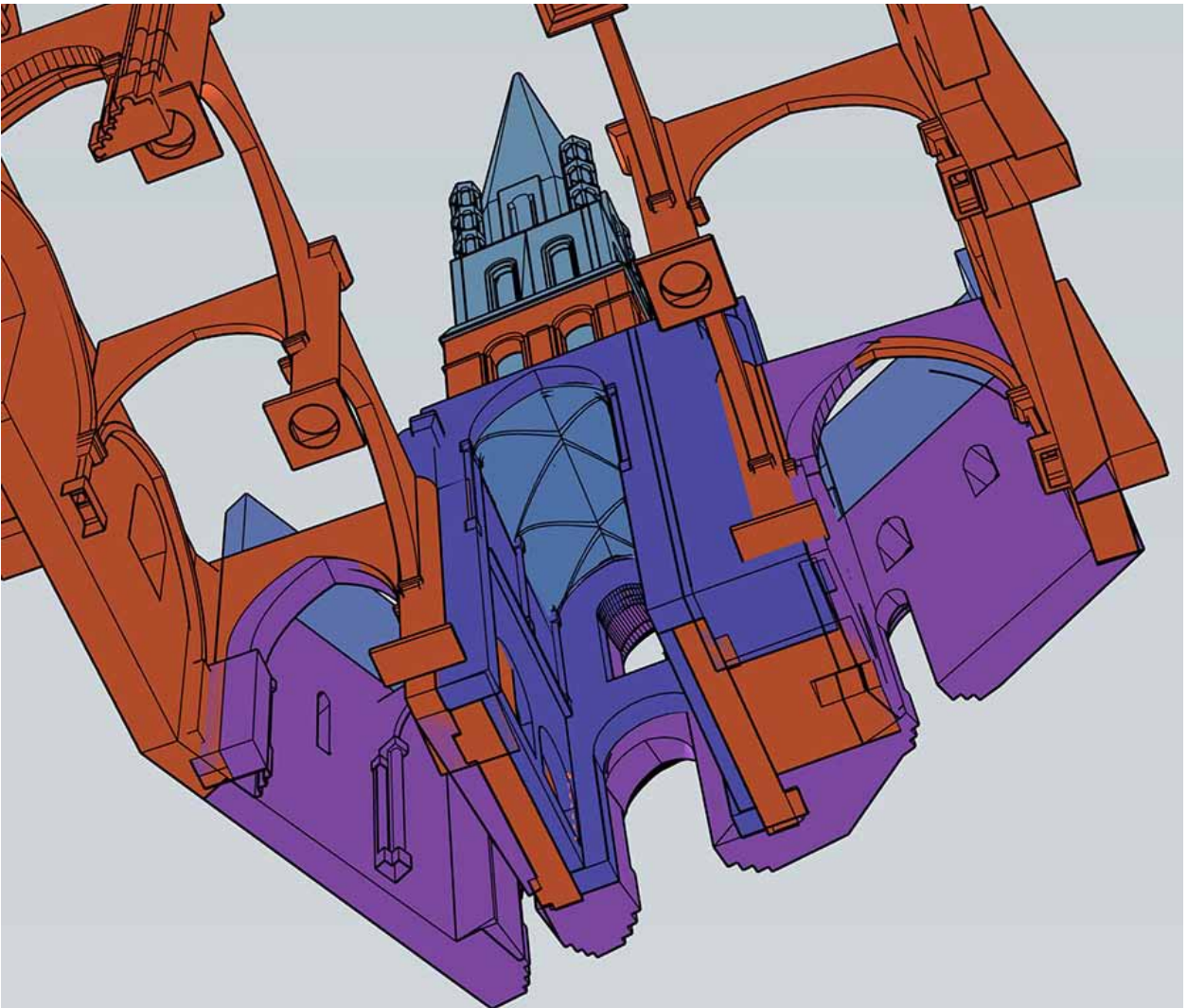
Philippe Auguste was less interested in Etampes than his predecessor, and seldom visited the town, and though he did become abbé around 1200 when this work was being undertaken, his parsimony is well-known.<sup>14</sup> Notre-Dame would have needed another source of income, and may have sought this in the pilgrim trade. Saint-Basile's had recently become independent of Notre-Dame, and being on the Rue St Jacques may have been the more convenient stop on the Way, and one asks whether the spire and the faux-facade were planned to draw the pilgrims off the main road and to Notre-Dame?<sup>15</sup>

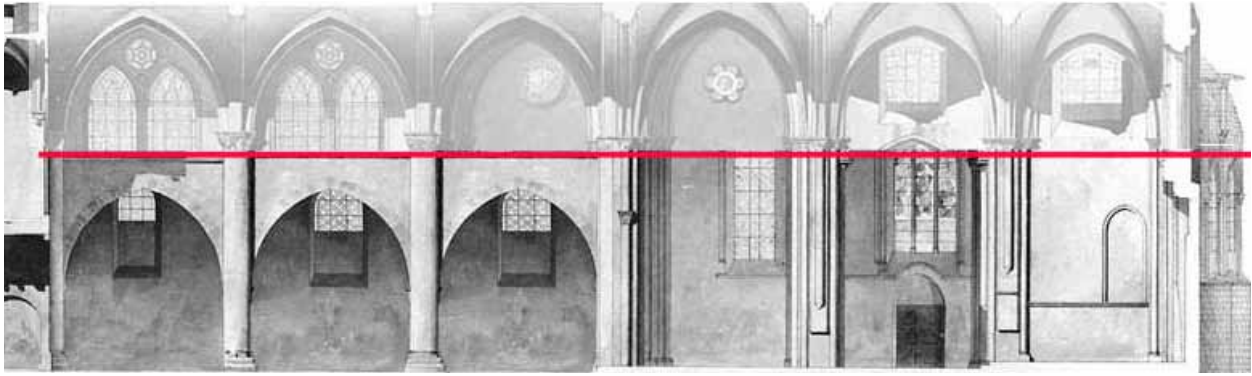


Completion of the Fourth Church with the spire



The massive underpinning on three sides needed to stabilise the spire (above) with the crenellations essential to monumentalising the facade. The detailed reinforcing on the interior of the tower and adjoining aisles (below).





Section through the Second Church with the level of the string course marked in red. The arcade arches for all three nave bays have been included

### *Seventh issue: The roof over the original three-bay nave*

The section [above] shows that before the east was enlarged in the later 1130s, the church consisted of a three-bay nave and a three-bay choir, without crossing or transepts, and with drum piers in the nave and simple compounds in the choir. The evidence for the arcade arches in the third bay has been lost behind the pilasters, though restoration of the north side in the 1840s did uncover possible springers for one arcade arch.<sup>16</sup>

All the above issues support the argument that there was something in the way that prevented the completion of the nave and three crossing bays at the same time as the eastern campaigns. The model showed that the simplest explanation was the roof over the nave that had been built only as high as the string course marked by the red line in the section, and the need to maintain services during construction. Above the red line are the vaults that may have been intended, shown faded. Because the nave was originally of three bays the roof also covered the three bays of the future transept [right].

Constructing a church to an intermediate height, as here, was a common procedure when funds were coming in bursts. All construction depended on funding with little expectation that one gift would be swiftly followed by another. It was therefore normal to cover the unfinished work with a roof so people could get on with their services.

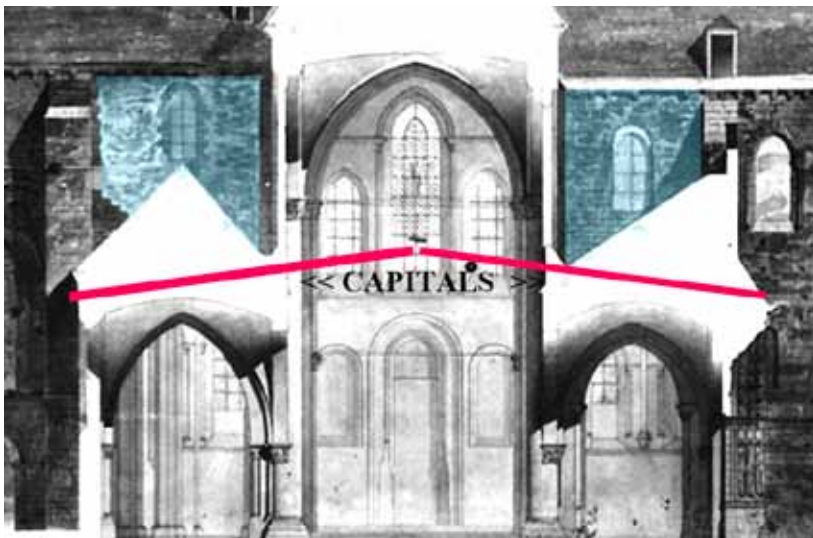
We should remember that once above the level of the aisle vaults construction costs would rise steeply, from scaffolding, time to raise materials, and the danger of being high up during inclement weather. The roof over the aisles was therefore a natural place to pause construction.

Returning to the panels of rubble, marked blue in the section [below], the height and mass of the temporary roof could have certainly delayed work in the west. It would have been natural to build these clerestory



Rubble walls in red, partly completed Third Church green.

Section through the nave showing an approximate location for the roof over the partially completed works.



walls at the same time as the works to the west, or shortly afterwards.

From one east to west the red line defines the (c) level on the 33rd course, and thus the lower silhouette of the building of the 1120s. These six bays and their flanking aisles - and let us not forget the chamber to the north - would have become the only available liturgical space while the new work was being built, for locals as well as pilgrims. Leaving the temporary roof in place for as long as possible to maintain services could have been the most economical and logical decision.

Clergy and parishioners would always have wanted to get into any new space as soon as they could. The moment the nave arcades were complete, they would have called the carpenters to build a roof, short-lived as it might be. Today, we expect to continue building, but the evidence from most of the smaller buildings from this period, and especially those that may not have been well-endowed, shows they were satisfied with constructing whatever and as much as the bequest would cover and then, without wasting a moment, were eager to get into it until the next bequest came along.

Visualise the three central bays of the choir brought to the same level as the nave, and roofed over (but not vaulted), for a temporary enclosure that would have been quite normal to everybody. Then consider the dilemma when, some years later, it was decided to enlarge the choir and raise the height to suit a royal patron, a decision that would involve prolonged construction, and yet no one would have wanted to disrupt services. How natural during the following years to leave the nave roofed until the new work had been completed. But, unforeseen, the roof ended up being an encumbrance for more than 50 years as it delayed the completion of the transepts and the nave.

### ***Possible timing, an imaginative postulate***

That the design for the smaller 6-bay church was not continued was, I am tempted to believe, a key decision taken by the newly-weds, Louis and Eleanor, as they passed through Etampes on their triumphal way home in 1137. One might surmise that, staying at the castle on the hill or in one of the two royal residences in the town (one of which was immediately opposite the south door) they may have celebrated their homecoming by deciding to enlarge Notre-Dame. Perhaps helped by Eleanor, it was decided to expand the church in both width and height, and to install a fine portal opposite the royal residence. In later years Louis maintained his connections with Notre-Dame, and its clergy had positions in the royal household until after the crusade.<sup>17</sup>

Great work was already proceeding 60 kilometres away, in the two western towers at Chartres where the Royal Portal was only being planned at that time. In my opinion, this could settle the discussion on which was primary, for the plinths in the Chartres portal can be dated close to 1139,<sup>18</sup> and the portal of Etampes could have been started about the same time, being just after Louis' arrival, or during his coronation in the next year. The two portals were, to all intentions, contemporary. The detailing in the lower courses suggests that the same master mason and his men worked on both buildings. The design of the plinths and the layout for the column statues are similar in both Etampes and Chartres, as are some of the foliate capitals. And, with no more than two days ride between the two towns it is hard to imagine the men had not visited each workshop and had discussions.



In the Etampes choir the clerestory capitals could have been moved up as each of the pilasters were completed, which were not at the same time. We need to consider the 44 courses in the pilasters and the extent of the scaffolding that would have been in the way. Also, the arches between the choir and lateral chapels at the lower (c) level had to be erected before the higher work in the choir could be touched. None of this would have been the work of a few weeks, but of years. The pilasters formed the critical path for the work.

Builders seldom constructed more than 8 or 10 courses in a year. In those few places where we have starting and end dates (Chartres after 1194, Saint-Denis mid-1120s to 1140) the rate was 5 in one and 8 courses in the other. We have English documents that command the masons to limit tower construction to no more than a dozen courses per year. When we apply these limits at Etampes from the assumed starting date of 1137, the most convenient date for moving the capitals would have been just before or during the Crusade.

Logic suggests that while all attention and funding was directed towards the Crusade there would have been a hiatus in construction throughout the realm. The pause would have started in 1145 and may have lasted until the mid-1150s while people paid off their debts and their ransoms. During this time, building teams may have been broken up and only occasional or local workmen were available for the delicate task of raising the capitals, sorting their locations and finding the right pieces of impost to put over them. There would have been enough confusion and ignorance in this scenario to explain the dishevelled collection of vault profiles in the clerestory level of the choir.

The evidence seems to show that the chapter had planned to raise the height of the choir from the moment it was decided to enlarge the smaller church. It would then have been only a matter of time and money, and the convenience of the builders, that would determine when the work would be executed.

1. Sarah Thompson, *Inventing 'Gothic: Notre-Dame d'Étampes and the Impact of Design Process on Architectural Change in the Île-de-France 1130-1160*, Ph.D. thesis, University of California at Santa Barbara, 2009. Sarah Thompson, "Adaptation and Audience: Remodelling Notre-Dame d'Étampes in the thirteenth century", *Avista Forum Journal*, 22, 2012, 57-70.
2. Elise Baillieul, *L'ancienne collégiale Notre-Dame d'Étampes, un monument du premier art gothique*, Ph D Thesis, University of Lille 3, 2012.
3. [www.creationofgothic.org](http://www.creationofgothic.org) (COGA)/Synopsis.php for Etampes
4. Elise, Baillieul, "Le bâtiment nord de la collégiale Notre-Dame d'Étampes," *Art et Architecture à Étampes au Moyen Âge, Actes de la Journée d'Études Internationale Tenu à Étampes le 20/12/08*, Dir. E. Baillieul, *Mémoires et Documents de la Société Historique et Archéologique de l'Essonne et du Hurepoix*, xx 2010, 85-106
5. See phase analyses in COGA/capitalphases.php for Etampes.
6. Discussed at the end of this article.
7. "Stormy relations" Baillieul 80, "nearest rival" Thompson 59.
8. Baillieul 2012, 276-77 correctly sees these disjunctions as "lack of experience", and correctly that in themselves they are not evidence for having been moved.
9. A normal rate of construction at that time, see COGA/articles/Construction timetables.pdf
10. Baillieul 2012, 80-86. Her conclusion was that the south nave clerestory is probably original, and that the north has had too much renovation for certainty. Very controversial. Some support from Anthyme Saint-Paul, "Notre-Dame d'Étampes", *Archaeological Gazette*, 1884, p. 211-223.
11. This affects the discussion on how much of the north clerestory was restored, and that the bases for the shafts around the windows were built with the loft. See Baillieul, 2012, 77-.
12. John James, *The Creation of Gothic Architecture - an Illustrated Thesaurus: The Ark of God*, 1-2, "The Evolution of Foliate Capitals in the Paris Basin 1170 to 1250", London and Hartley Vale, 2002, 11-37.
13. Baillieul, 2012, 77-
14. Considered by Baillieul, 2012, 79- and Thompson, 2009, 60.
15. Thompson, 2009.
16. Eugène Lefèvre-Pontalis, "Les campagnes de construction de Notre-Dame d'Étampes", *Bulletin monumental*, lxxiii 1909, 9.
17. Thompson, 2009.
18. John James, "La construction du narthex de la cathédrale de Chartres", *Bulletin de la Société Archéologique d'Eure-et-Loir*, lxxxvii 2006, 3-20. A more detailed analysis is being published in installments in COGA/The Project/Articles