

THE ELEVENTH CENTURY EAST-ENDS OF ST. AUGUSTINE'S,  
CANTERBURY, AND ST. MARY'S, YORK.<sup>1</sup>

By JOHN BILSON, F.S.A.

The relations between the architecture of Normandy and England during the period immediately following the Norman Conquest were of so intimate a character that it is impossible adequately to study the one without the other. Architectural influence from Normandy had indeed been felt in England during the reign of Edward the Confessor, but when the Conqueror had made himself master in his new kingdom, cathedral and abbey churches were rebuilt on a scale hitherto unknown either in Normandy or England. Indeed there is reason to believe that, at the close of the eleventh century, England, rather than Normandy, had become the true *foyer* of the Norman school.

The recovery of the plans of any of these great churches must therefore be a matter of considerable advantage to architectural archaeology. Recent excavations have made known to us the plans of the chevets of the churches of two very important Benedictine abbeys in England, St. Augustine's, Canterbury, and St. Mary's, York, both of which were constructed between the Norman Conquest of England and the end of the eleventh century. Their plans illustrate two types of eastern termination which were adopted for the greater churches of England at this time. At St. Mary's, York, the aisles or chapels which flank the apsidal choir stop at the springing of the major apse. St. Augustine's, Canterbury, on the other hand, was planned with an ambulatory and radiating chapels.

I propose to notice here such of the remains of the eleventh century as have been discovered in the recent

<sup>1</sup> This paper, which was written for the *Société française d'archéologie*, was printed in the form of a translation by M. Emile Travers, the *directeur-adjoint* of the Society, in the *Bulletin*

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excavations on the sites of these two churches. On the accompanying plans,<sup>1</sup> walls and foundations of the eleventh century which have been uncovered are shown black, while conjectural parts of this period are hatched. Some later alterations have been suppressed in the plans.

### ST. AUGUSTINE'S, CANTERBURY.

The abbey of SS. Peter and Paul (which in later times became known as the abbey of St. Augustine<sup>2</sup>) was founded outside the walls of Canterbury by Augustine, the first archbishop of Canterbury, who was sent on a mission to England by Pope Gregory I. in 597, and who died between 604 and 610.<sup>3</sup> A chapel dedicated to the Virgin was built to the east of the abbey church between 616 and 618 by Eadbald, the son of Æthelbert. To the south-east was built the chapel of St. Pancras, probably by Augustine himself.<sup>4</sup> Abbot Wulfic, who died in 1059, took down the west part of the oratory of the Virgin, and the east end of the abbey church, and began to build between the two.<sup>5</sup> The building was stopped by his death, and remained unfinished when Scotland (*natione Normannus*<sup>6</sup>) became abbot in 1070. Scotland at once set about rebuilding the church on a larger scale. He pulled down the unfinished work of Wulfic, and, after having translated the relics of all those buried in the oratory of the Virgin, he built on its site a crypt dedicated to the Virgin, over which he erected the

<sup>1</sup> I owe these two plans to the kindness of two of my friends, that of St. Augustine's, Canterbury, to Mr. Harold Brakspear, F.S.A., and that of St. Mary's, York, to Mr. W. H. Brierley, F.S.A., who superintended the excavations.

<sup>2</sup> Not to be confused with Christ Church, the cathedral.

<sup>3</sup> [Augustinus) "fecit autem et monasterium non longe ab ipsa civitate ad orientem, in quo, ejus hortatu, Aedilbert ecclesiam beatorum apostolorum Petri et Pauli a fundamentis construxit, ac diversis donis ditavit, in qua et ipsius Augustini, et omnium episcoporum Doruvernensium, simul et regum Cantiae poni corpora possent. Quam tamen ecclesiam non ipse

Augustinus, sed successor ejus Laurentius consecravit." *Baedae Historia Ecclesiastica Gentis Anglorum*, lib. I, cap. xxxiii.

<sup>4</sup> The remains of the chapel of St. Pancras were investigated in 1900. They are fully described and illustrated in *Archaeologia Cantiana*, XXV, 222, by Mr. W. H. St. John Hope, M.A., to whom I am indebted for much information.

<sup>5</sup> *Chronica Gul. Thorn de rebus gestis abbatum Sancti Augustini Cantuariæ* (in Twysden's *Historiae Anglicanae Scriptores Decem*, London, 1652), cap. vi, § 7. The chronicle written by William Thorne, who was a monk of the abbey, extends down to 1397.

<sup>6</sup> *Ibid.*, cap. vii, § 1.

shrines of St. Augustine and his fellows.<sup>1</sup> As we are told that Abbot Scotland previously went to Rome and obtained the consent of Pope Alexander II. to his proposed rebuilding and translation of the relics,<sup>2</sup> we may presume that the work was commenced between his election in 1070 and the death of the Pope in 1073. Before his death in 1087, Abbot Scotland had finished the new work from the oratory of the Virgin as far as the "porticus" of St. Augustine. The church was completed by his successor, Wydo, who died in 1091.<sup>3</sup>

In 1900 a field which included a large part of the site of the abbey buildings was purchased by a committee of archaeologists, and after investigating the remains of the chapel of St. Pancras, excavations were commenced which have resulted in the discovery of the lower parts of the walls of the choir and transept of the church built by Abbot Scotland, and completed by his successor, as well as some considerable remains of the conventual buildings.<sup>4</sup>

The plan of the church comprised an apsidal choir, with ambulatory and three radiating chapels, beneath all of which extended a crypt; a transept, with a single apsidal chapel on the east side of each arm; and a nave with aisles, which seems to have been twelve bays in length, including the two western towers.<sup>5</sup>

The walls of the crypt were found to be standing to a considerable height in some places, especially on the

<sup>1</sup> "In eodem loco cripta beatae virginis construitur, et super ipsam criptam thalamus sancti Augustini cum suis sociis transferendis et principum apostolorum domus cacuminatur sicuti nunc apparet. Perfecit autem Abbas Scotlandus ipsum opus novum incipiendo a supradicto virginis oratorio usque ad porticum sancti Augustini in qua antiquitus quiescebat. Verum ipsum Scotlandum ulterius in opus procedere mors obvia prohibebat. Cujus tamen successor Wydo tam in ecclesiae fabrica consummanda quam in sanctis transferendis quod ipse dimiserat strenuissime adimplevit." *Ibid.*, cap. vii, § 7.

<sup>2</sup> *Ibid.*, cap. vii, § 7.

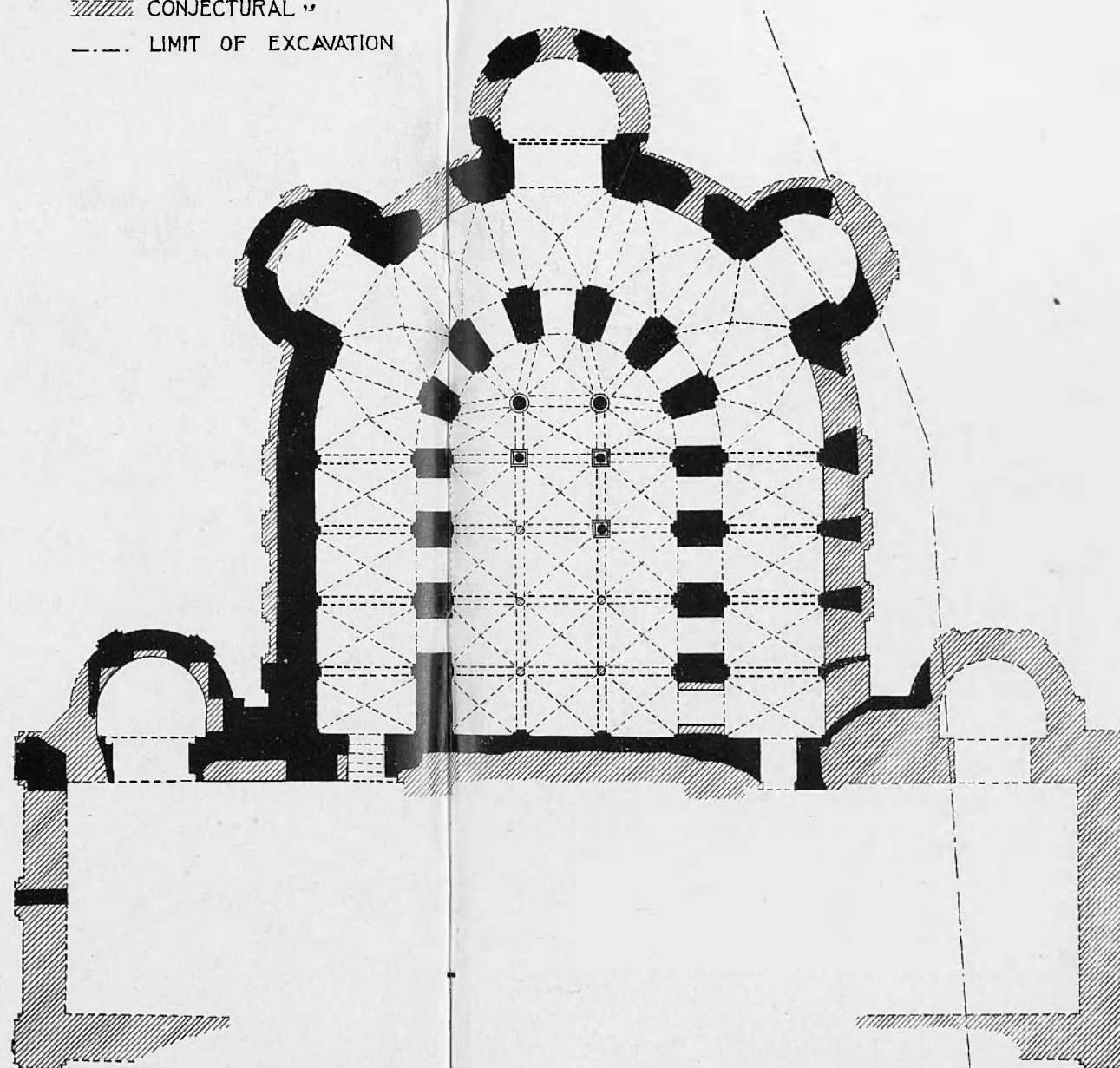
<sup>3</sup> "Anno Domini M.lxxxix Wydo hanc ecclesiam dignitate pastoralis gubernans ecclesiam suam quam prae-

decessor suus Scotlandus morte prohibente ad summum perficer: non potuit foeliciter consummavit et de transferendis sanctis efficaciter elaboravit." *Ibid.*, cap. viii, § 3.

<sup>4</sup> For a full description of these excavations, see a paper by Mr. Sebastian Evans, jun., in *Archaeologia Cantiana*, XXVI, 1. Some further remains of the conventual buildings have been discovered since Mr. Evans' paper was written.

<sup>5</sup> The site of the nave has not yet been excavated, but some remains of the wall of the north aisle are standing above ground. The aisle was covered with groined (unribbed) vaulting. See *Journal of the Royal Institute of British Architects*, Vol. VI (3rd series), 291.

■ EXISTING WALLS  
 ▨ CONJECTURAL  
 - - - - - LIMIT OF EXCAVATION



10 5 0 10 20 30 40 50 60 70 80 90 100 FEET

ST. AUGUSTINE'S, CANTERBURY. PLAN OF CRYPT, ETC. (From a plan by Mr. Harold Brakspear, F.S.A.)

south side, where the wall of the aisle remains up to some distance about the springing of the vaults. Much of the facing had been removed, but everywhere sufficient was left to enable a complete plan to be recovered. (Plate I.)

The crypt was entered by steps descending from the transept through two doorways, one at the end of each aisle. The crypt and its ambulatory comprised four straight bays and an apse of seven bays, with three apsidal chapels opening out of the alternate bays of the ambulatory. Of the windows which lighted the crypt, only one remains unaltered, that between the central and southern apsidal chapels; the others had been enlarged in the fourteenth century. The exterior of the walls of the ambulatory and of the apsidal chapels had pilaster buttresses of slight projection.

The straight part of the crypt had piers of oblong plan, to the north and south sides of which were attached pilasters which received the transverse arches of the vaults; these pilasters were flanked on each side by a secondary pilaster which received the groin. On the west wall of the central part of the crypt and on the walls of the aisles, the bays were divided by similar pilasters. The pilasters were surmounted by chamfered imposts. The groined vaults which covered the aisles were pronounced oblongs on plan, and enough remains on the south side to show that the curves of the transverse arches were depressed (*i.e.* lower than a semicircle). Doubtless the arches of the main arcades would be semicircular (perhaps stilted), and the depressed curve of the transverse arches would result from the Norman practice of keeping the crowns of their groined vaults at nearly the same level. The vaults were, as usual, constructed in rubble and plastered, but it is worthy of remark that the transverse arches were also constructed in rubble and plastered.<sup>1</sup>

The piers of the apse were of similar plan, but instead of being simple oblongs, their sides were oblique, radiating towards the centre of the apse. The vaults of

<sup>1</sup> The same method was employed in the vaults of the crypt of Worcester cathedral. See Professor Willis' paper

on this crypt in the *Transactions of the Royal Institute of British Architects*, 1862-3, p. 216.

the central part of the crypt were supported by two rows of columns, continued into the principal apse. The bases only of five of these columns remain; their shafts were cylindrical, the two easternmost being of greater diameter than the others. From fragments found in the excavations, the capitals of these shafts were evidently cushions, with the semicircular lines on the faces of the cubes and the mitre between the cones which are characteristic of the capitals at Winchester and other Anglo-Norman churches of the end of the eleventh century. This is worth notice, for several of the earliest churches in England after the Norman Conquest show, not the cushion form, but the volute capital,<sup>1</sup> which was the typical form in Normandy at this period. Of the vaults of the central part of the crypt, nothing remains, but the supports enable us to reconstitute their plan.

The pilasters attached to the inner side of the six piers of the principal apse are a little wider (1 foot 7 inches) than the pilasters attached to the piers of the straight part of the crypt and to the walls of the aisles (these are only 1 foot 1½ inches in width). The pilasters at the back of these six pillars are a little wider still (2 feet 4 inches), while those on the wall of the ambulatory are still wider (3 feet 6 inches). It follows that the radiating arches across the ambulatory must have had tapering sides, increasing in width towards the wall of the ambulatory.<sup>2</sup>

Of the three chapels which open out of the alternate bays of the ambulatory, the northern and southern are semicircular on plan. The eastern chapel is of greater projection, and its plan is of the horse-shoe form.

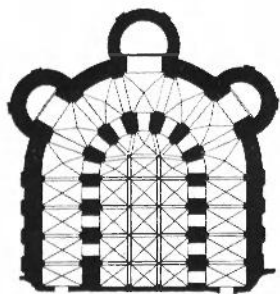
The grave of Abbot Scotland was found in the centre of the crypt, within the principal apse. Within the leaden coffin was found a plate bearing this inscription, in Lombardic characters :—

ANNO AB INCARNATIONE DOMINI MLXXXVII  
OBIIT SCOTLANDVS ABBAS V IDVS SEPTEMBRIS

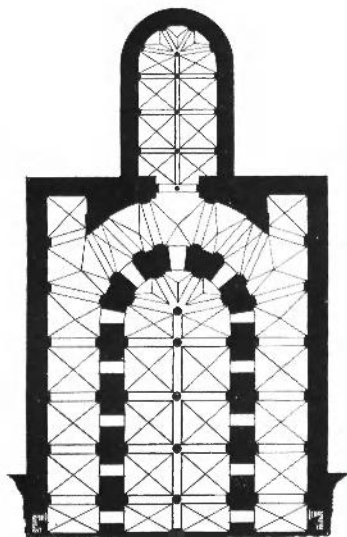
<sup>1</sup> Chapel in the Tower of London, Lincoln Cathedral (west front), Blyth and Lastingham.

<sup>2</sup> This is the case in the ambulatory

of the chapel in the Tower of London. See *Vetusta Monumenta*, Vol. IV, pl. 48.

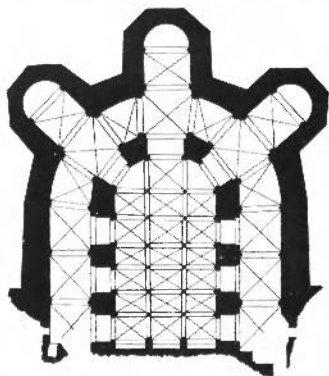
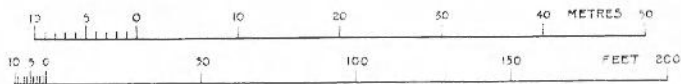


ST. AUGUSTINE'S, CANTERBURY.

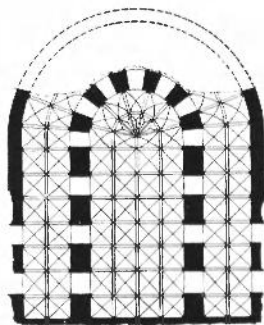


WINCHESTER.

COMPARATIVE I



GLOUCESTER.



WORCESTER.

PLANS OF CRYPTS.



It may be useful to add some general remarks on analogous plans of this period in England.

The abbey-church of Westminster, built by King Edward the Confessor (1041-1066), had an ambulatory, according to Mr. J. T. Micklethwaite.<sup>1</sup> After the Norman Conquest the ambulatory plan was adopted for several of the larger churches, of which St. Augustine's, Canterbury, would appear to be one of the earliest. Among the principal of these may be named the cathedral churches of Winchester (commenced in 1079), Worcester (commenced in 1084), and Norwich (commenced in 1096), and the abbey churches of Gloucester (commenced in 1089), Bury St. Edmunds (commenced by Baldwin, abbot from 1065 to 1097), and Tewkesbury (end of eleventh century, dedicated in 1123). The straight part of the choir of Winchester had four bays, Gloucester three, Worcester three, Norwich four, Bury St. Edmunds five, and Tewkesbury two. The apses of Winchester and Norwich each comprised five bays; of Gloucester, Bury St. Edmunds and Tewkesbury three; and of Worcester seven, as at St. Augustine's, Canterbury. Gloucester, Norwich, Bury St. Edmunds, and probably Worcester, had three radiating chapels. At Winchester there was an apsidal eastern chapel, but, instead of the usual radiating chapels, there was a curiously planned square-ended chapel on each side.

Three of these churches—Winchester, Gloucester, and Worcester—have, like St. Augustine's, Canterbury, vast crypts beneath their choirs, ambulatories and chapels.<sup>2</sup> For the purpose of comparison, I reproduce diagrams of the plans of these crypts in the accompanying illustration.<sup>3</sup> (Plate II.)

In all these crypts, the bays of the apse appear to be set out, not from the chord of the semicircle, but from the

<sup>1</sup> *Archaeological Journal*, LI, 14.

<sup>2</sup> Bury St. Edmunds also had such a crypt, but we only know its general form, and that it had twenty-four columns. The crypt of the Cathedral of Canterbury is of a period later than that here under consideration.

<sup>3</sup> The plan of the crypt of Winchester is taken from *History and Antiquities of the See and Cathedral Church of*

*Winchester*, by John Britton (1817); that of Gloucester from *Gloucester Cathedral, Notes and Sketches*, by Frederick S. Waller (1890); and that of Worcester from Professor Willis' plan (see above), and from Mr. Harold Brakspear's plan in *The Builder*, LXIII, 107. In the plans here reproduced the windows are omitted.

easternmost transverse arch of the straight part. The distance of the centre of the semicircle from this latter seems to be governed by the arrangement of the columns which support the vaults over the central part of the crypt. At St. Augustine's, Canterbury, the centre of the semicircle is only very little to the east of the easternmost transverse arch of the straight part; at Winchester and Worcester the distance is much greater. In the crypts of St. Augustine's and Gloucester, the two rows of columns which support the vaults of the central portion are continued in a direct line into the apse. At Winchester and Worcester the vaulting of the apse is arranged with radiating arches springing from a central column.<sup>1</sup> The plan of the ambulatory and radiating chapels of the crypt of Gloucester presents the closest analogy to that of St. Augustine's, Canterbury, though at Gloucester the principal apse has only three bays. The general plan of the east end of Norwich (which has no crypt) is very similar, but here the apse has five bays, and the flanking apsidal chapels are attached to the westernmost bay of the ambulatory, instead of to the second bay, as at St. Augustine's and Gloucester.

The crypt of St. Augustine's, Canterbury, is remarkable for the narrowness of its bays, which measure a little less than nine feet from centre to centre.<sup>2</sup> This narrow spacing of the bays suited the vaulting<sup>3</sup> of the crypt well enough, but it must have made the bays of the choir above inconveniently narrow.<sup>4</sup> In the crypt of Winchester this difficulty was met by dividing the central part by only a single row of columns, into two bays in width. In the crypt of Gloucester, the central part of which has

<sup>1</sup> See Professor Willis' paper on the crypt of Worcester (quoted above), p. 214.

<sup>2</sup> They are even narrower than the bays of the crypt of the cathedral of Rochester, which measure about 11 feet 6 inches from centre to centre. Of this crypt, which was built by Gundulf (Bishop of Rochester 1077-1108) only the two western bays remain. Both the central part (which is divided by two rows of columns) and the aisles are covered with groined vaults, without transverse arches. See *The Architectural History of the Cathedral*

*Church and Monastery of St. Andrew at Rochester*, by W. H. St. John Hope, London, 1900.

<sup>3</sup> All the four crypts under consideration are covered with groined vaults with transverse arches.

<sup>4</sup> As nothing remains of the choir it is impossible to say anything of its design, but the plan of the crypt seems to indicate that the choir had the same number of bays as the crypt below. The bays of the nave (as indicated by the remains of the north aisle) were about 17 feet 5 inches in width from centre to centre.

two rows of columns, as at St. Augustine's, Canterbury, a different method was adopted; in the straight part of the crypt, while the bays of the aisles followed the spacing of the main piers, in the central part the vaults were arranged with one bay opposite the pier itself, and one bay opposite the arcade between the piers. A similar method was followed in the crypt of Worcester,<sup>1</sup> where the central part has three rows of columns, but here the spacing of the bays of the aisles corresponds with that of the central part, and the division of the aisles by a central row of columns into two bays in width rendered it possible to make the bays of their vaults approximately square. The eastern part of the ambulatory of the crypt of Worcester has not been recovered, but it is probable that it had three radiating chapels.

### ST. MARY'S, YORK.

The abbey of St. Mary, York, was founded towards the end of the reign of William the Conqueror. Certain monks, who had seceded from Whitby about 1078, began to build a monastic church at Lastingham, the crypt and other considerable parts of which still remain. They left this church unfinished, and came to York, where Alan of Brittany gave them the church of St. Olave and some land immediately outside the western angle of the Roman city. The historians of the abbey relate that King William Rufus visited the new monastery, and, finding its area too confined for the reception of the convent, he gave them more land, and in 1089 himself laid the foundations of a larger church.<sup>2</sup> It is the remains of this church which form the subject of this notice. In 1270, the reconstruction of the abbey church was commenced by Abbot Simon of Warwick. The plan of the thirteenth century church comprised a choir of nine bays with aisles,

<sup>1</sup> Compare the plan of the crypt of Saint-Philibert de Tournus (*Archives de la Commission des Monuments Historiques*, Vol. I).

<sup>2</sup> "Anno Domini millesimo octogesimo nono, Willelmus Rufus rex Angliae et filius Willelmi regis et conquestoris Angliae, anno regni sui secundo . . . ad monasterium sanctae

Mariae Eboraci accessit, vidensque ipsum nimis esse angustum, ecclesiam mutavit, et nomen ecclesiae, ipseque primum lapidem posuit, et pro nomine sancti Olavi, sanctae Mariae nomen contulit, et multa beneficia ac praedia dedit." *Monasticon Anglicanum* (London, 1821), Vol. III, p. 546.

transept of three bays to each arm with eastern aisle, and nave of eight bays with aisles.<sup>1</sup>

In 1901 and 1902 excavations were carried out by the Yorkshire Philosophical Society on the site of the eastern part of the church, in the course of which the lower parts of the walls of the northern half of the choir and of the eastern half of the north transept of the thirteenth century church were uncovered. These excavations also revealed the foundations of the eastern part of the church commenced in 1089, which are shown black on the plan. (Plate III.)

Some fragments of the buttresses incorporated in the gable-ends of the transepts prove that in the reconstruction of the thirteenth century the length of the earlier transept was retained (about 136 feet within the walls). The plan of the church of the eleventh century shows a central apse and six apsidal chapels opening on the transept. In the north transept the foundations of a narrow apsidal chapel were found next the gable-end. To the south of this were the foundations of another apsidal chapel of greater diameter and greater projection. These two apses were semi-circular both on the exterior and on the interior.<sup>2</sup> Next to this last chapel was a third, of slightly greater width and much greater projection, which was semi-circular internally and square externally. The straight part of the choir finished a little to the east of the external face of this inner chapel, with a thick foundation wall across the chord of the apse. The principal apse was semi-circular, its diameter being a little less than the width of the straight part of the choir. As nothing remained above the floor level, it is impossible to say whether the lateral walls of the choir were solid (as at Saint Albans and Cerisy-la-Forêt), or whether they were pierced by arcades, but if the latter was the case, there could scarcely have been width enough for more than one arch on each side.


The plan of the choir is a variation, less developed, of a plan which was general in the larger churches of

<sup>1</sup> The walls of the thirteenth century church are shown on the plan by dotted lines without hatching.


<sup>2</sup> The foundations of the two corresponding apsidal chapels on the east

side of the south transept were found in the excavations made between 1822 and 1829, and they are shown on the plan in *Vetusta Monumenta*, Vol. V, pl. 51.

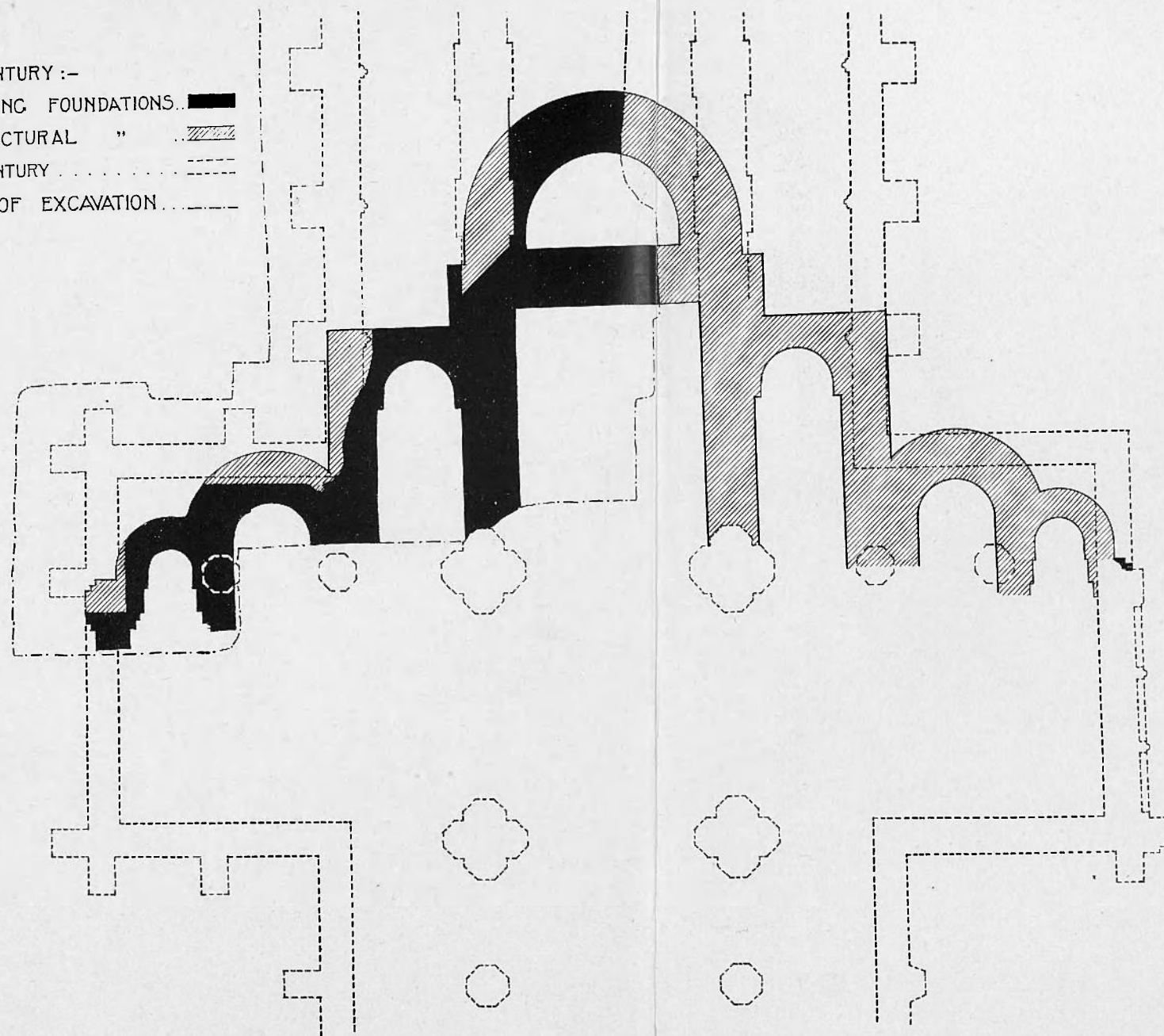
11<sup>th</sup> CENTURY :-

EXISTING FOUNDATIONS. 

CONJECTURAL " 

13<sup>th</sup> CENTURY . . . . . 

LIMIT OF EXCAVATION . . . . . 



10 5 0 10 20 30 40 50 60 70 80 90 100 FEET

ST. MARY'S, YORK. PLAN SHOWING ORIGINAL EAST END. (From a plan by Mr. W. H. Brierley, F.S.A.)

Normandy at the end of the eleventh and beginning of the twelfth century, in which the choir, usually of two or more bays, with apse, was flanked by aisles terminated eastward by square ends, generally with apses internally.<sup>1</sup> It is found in the abbey church of Bernay; and was probably the original plan at Saint-Etienne, Caen; it still exists at Saint-Nicolas, Caen, at the abbey churches of Cerisy-la-Forêt (Manche), Lessay (Manche), and Saint-Georges-de-Boscherville (Seine-Inférieure), and at the priory church of Saint-Gabriel (Calvados). Recent investigations by M. Roger Martin du Gard have proved that the choir of Jumièges (commenced in 1040 and completed in 1052) had a plan of the same type.<sup>2</sup> In all these the choir is of two bays in length. The same plan occurs at Montivilliers (Seine-Inférieure) with a choir of three bays in length. In England it was probably the plan adopted by Lanfranc for the cathedral church of Canterbury, at the same time that St. Augustine's, Canterbury, was being built with an ambulatory; probably also at Lincoln (commenced c. 1075), and certainly at Selby (commencement of twelfth century), all these choirs being of two bays in length. The same plan is found, but with choirs of four bays in length, at St. Albans (commenced by Abbot Paul of Caen in 1077), Durham (commenced in 1093), and Peterborough (commenced in 1117); probably Ely (commenced c. 1080) also followed the same plan.

On the other hand, the plan of St. Mary's, York, displays in the chapels of the transept greater development than is usual. In the majority of examples where apsidal chapels open from the east side of the transept, there is only one to each arm.<sup>3</sup> In some of the larger English churches, the transepts have aisles instead of apsidal chapels. At Durham and Peterborough the transept has an eastern aisle. At Winchester and Ely the transept

<sup>1</sup> The plans of nine chevets of this type are given in my paper "On the recent discoveries at the east end of the Cathedral Church of Durham" (*Archaeological Journal*, LIII, 1-18, plates 1 and 3).

<sup>2</sup> *Etude archéologique des ruines de l'abbaye de Jumièges (Seine-Inférieure)*, by Roger Martin du Gard, in the

*Positions de Thèses de l'École des Chartes*, 1906.

<sup>3</sup> Bernay, Cerisy-la-Forêt, Saint-Nicolas, Caen, Mont Saint-Michel, Saint-Georges-de-Boscherville, Lessay, St. Augustine's, Canterbury, Chichester, Gloucester, Norwich, Selby, Southwell, etc.



has aisles on both the east and west sides, as well as a gallery across the gable ends. St. Albans, however, has two apsidal chapels *en échelon* to each arm of its transept,<sup>1</sup> as at St. Mary's, York, but at St. Albans a choir aisle of four bays in length takes the place of the third chapel, which gives the plan a different character.

<sup>1</sup> Compare the plans of Châteaumeillant (Cher) and Saint-Sever (Landes). For plan of the former, see *L'église Saint-Genès de Châteaumeillant*, by F. Deshoulières, in the *Bulletin Monumental*, LXX, 92. For plan of the latter, see *L'église*

*abbatiale de Saint-Sever*, by J. A. Brutails, in the *Bulletin archeologique*, 1900, p. 39. Compare also the original plan of La-Charité-sur-Loire (Nièvre). *L'église de la Charité-sur-Loire*, by A. Philippe, in the *Bulletin Monumental*, LXIX, 480.