

Livett 1889 G. M. Livett, 'Foundations of the Saxon cathedral church at Rochester', *Archaeologia Cantiana*, 18 (1889), 261--78.

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FOUNDATIONS OF THE SAXON CATHEDRAL  
CHURCH AT ROCHESTER.

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IN the autumn of the year 1888 the Dean and Chapter of Rochester, acting under the advice of Mr. J. L. Pearson, R. A., decided to proceed at once with the underpinning of the west front of the cathedral church, preparatory to its restoration. The work was put into the hands of Mr. John Thompson, contractor, of Peterborough. In the course of the excavations some important discoveries were made, and it is the object of this paper to record them, and to shew their relation to the history of the church. The present west front, which is Norman, marked in blue outline in the larger part of Plate I., was found to rest upon an earlier wall, also of Norman date, which had been demolished to within about 2 feet 6 inches of its foundations, marked red in the Plan. In this paper, therefore, I shall call the existing front Later-Norman work, and the remains of its predecessor I shall call Early-Norman. The Early-Norman work, however, must not be confused with the still earlier Norman of Bishop Gundulf, though it belongs to his time. Gundulf's work will be called by his name, excepting when the first Norman church is referred to as a whole, and then both works are to be included, since the Early Norman front was built to complete Gundulf's unfinished church. The remains of the Early-Norman west front were not the only interesting discovery we made. Running under and through its foundations, were discovered the foundations, and portions of the walls, of a building of far earlier date than the earliest of the Norman works. These older foundations underlie the northern half of the present west front, and are marked black in the Plan. They doubtless

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form part of the Saxon church, the documentary evidence for which Mr. W. H. St. John Hope has collected,<sup>/\*</sup> and the discovery of which Mr. J. T. Irvine, years ago, prophesied would be made, whenever the west front should be under-built.<sup>/†</sup>

The following table of the dates of the bishops who will be mentioned will clear the way for a description of the discoveries:

1. Justus (translated to Canterbury) 604—624
3. Paulinus (*olim* Bishop of York) 633—644
4. Ythamar the Englishman 644—655
9. Tobias the Learned 693—726
29. Gundulf (monk of Bec, and Lanfranc's chamberlain) 1077—1108
30. Ralph de Turbine (translated to Canterbury) 1108—1114
31. Ernulf (prior of Canterbury, and abbot of Peterborough) 1115—1124
32. John de Canterbury 1125—1137

## I. THE SAXON CHURCH.

The underpinning, of the west front, was carried out in sections. To attempt to describe the piecemeal discovery of the earlier foundations would be tedious and uninteresting. The reasons which lead us to identify these foundations with the Saxon church are threefold. In the first place, history tells us a church was built at Rochester in the year 604. Secondly, the character of the discovered masonry is what one would expect to see in work of that period, and the plan of the building could hardly belong to anything else than a church. And, lastly, the ground on the south and east of these foundations is full of graves, which lie exactly parallel to the axis or line of orientation of the building erected on the foundations.

*/\* See his Notes on the Architectural History of Rochester Cathedral Church, and a communication to the Society of Antiquaries entitled Gundulf's Tower at Rochester, and the first Norman Cathedral Church there.*

*† MS. notes. Mr. Irvine was Clerk of the Works to Sir G. G. Scott during the restoration of the cathedral which was carried out between the years 1871 and 1878. He is now superintending the work at Peterborough for Mr. Pearson. I am much indebted to Mr. Irvine for tracings, and for information of what was discovered at that time, over and above that supplied in his MS. notes.*

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1. In the year 604, seven years after his arrival in England, St. Augustine established the two sees of London and Rochester, and ordained Mellitus and Justus to fill them. King Æthelbert built the church of St. Andrew in Rochester, and endowed it with lands.<sup>/\*</sup> Bede tells us it was built *a fundamentis* (from the foundations): an expression which would refer to a building of stone rather than one of wood. Seventy years later, when the Mercians invaded Kent, the city was sacked and the church spoiled; but the actual fabric seems to have survived both this and later invasions, for no statement to the contrary is found. This view is confirmed by the fact that the sites of the graves of Paulinus and Ythamar, who were buried in the church, were known up to the eleventh century. Gundulf

found the Saxon Church almost a ruin, built a new church, and transferred into it the relics of Paulinus, whose grave up to that time had evidently not been disturbed. So much for the historical evidence, which certainly gives the Saxon church an unbroken existence from the seventh to the eleventh century.

2. The discoveries made indicate a building terminating towards the east in an apse, the width of the apse being almost as great as that of the building itself. A sleeper-wall lies along the chord of the apse. In the Plan, the foundations are hatched, and defined with a bounding line only where they were actually disclosed in the excavations. The wall, where seen, is marked in solid black, and the conjectured parts of it are cross-hatched. These foundations were first struck, by the workmen, along the southern half of the sleeper-wall on the chord of the apse. They were worked out to the bottom thereabouts, and probably a small part of the actual apse-wall disappeared in the process. I did not arrive on the scene until this had been done; and then I was told that the concrete was so hard that the ordi-

*/\* See Grant by Æthelbert, King of Kent, to St. Andrew's, Rochester, of land at Southgate, 28 April 604, which occupies a prominent place in Mr. Walter de Gray Birch's Cartularium Saxonicum. See also Thorpe's Registrum Roffense. The chief additional authorities for the history are: for the early Saxon period, the Eccles. Hist. of the Ven. Bede; for the early Norman period, Ernulf's Textus Roffensis, and a Vita Gundulfi, written by a monk of Rochester about 1115, or a little later, and printed by Wharton in his Anglia Sacra.*

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nary picks were not stout enough to deal with it, and that strong iron chisels had been especially made for the purpose. At the bottom of the foundations, at this point, a large "sarsen" stone was found, embedded in the mortar: it is now in my garden. Then followed the discovery of the foundations of the apse, inside the present building. Later on, the junction of the apse with the north end of the sleeper-wall was disclosed. The upper part of the internal quoin had been removed, to make way for a modern circular brick drain.<sup>/\*</sup> Lastly, the junction of the apse with the east end of the south wall of its nave was found. This was the most important "find" of all; and our thanks are due to the Dean and Chapter for the leave they gave me to have two days of extra digging to try to discover this junction. Its importance lies in the fact that it has afforded us the best example of the masonry of the actual walls. Even here the wall remained to a height of only about 1 ft. 8 in. above the foundations. A slight sketch of the masonry may be seen in Plate II., No. 3. The quoin consists of two ferruginous sandstones, faced, and of large size; the angles are much worn away. A suggestion of herring-bone work will be noticed, and also the use of an 11-inch Roman brick (of a drab colour). The work is exceedingly irregular, and the joints large. The

mortar is very hard, and made of a sharp flint sand, with a few shells and some charcoal in it. Sketch No. 3 also shews the two courses of Roman brick which alone remained to mark the line of the apse on this side. The Roman bricks were of different colours, drab, buff, and red, some broken, some whole. There was also a portion of a flue-tile. All these were evidently old materials, used again. Portions of the apse-wall remained on the foundations elsewhere, as shewn in the Plan, but they consisted merely of one course of long roughly-squared stones, some of tufa, others of Kentish rag. The walls were 2 feet 4 inches in thickness.

A section of the foundations is given in Plate II. (No. 6). The dimensions vary slightly, but the depth is about 4½ feet,

/\* Bodies were found near the centre of the sleeper-wall, which had apparently been partly worked away to receive them. It may be an error therefore, though it is convenient, to call this a sleeper-wall.

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and the width about 4 feet. On the inside the vertical wall of foundation-work is regular and fairly smooth; on the outside it is very rough and uneven. Where they pass under the north turret (from the inside) the foundations are wider at the top than at the bottom, as shewn in the section; on the opposite side the reverse is the case. The material is the same hard mortar already described, with small pebbles in it, and blocks of Kentish rag laid in, without attempt, it seems, at regular coursing. They rest, generally speaking, on the maiden soil, which is found about seven feet below the present level of the road in front of the cathedral. But the Saxon builders do not seem to have been very particular in this matter, for the eastern part of the apse-foundations, where they emerge from under the north-west turret on the inside, lies over a pit or ditch of soft black earth. The eastern side of this pit, or whatever it was, was very plainly seen in the excavation made in this corner. It ran about north and south. From the black mould right underneath the foundation-work, I extracted a piece of very rough pottery, a piece of Roman brick, oyster-shells, bones, and charcoal. It may be that this unsound bottom caused a settlement, which would account for a large crack that we saw in the foundation-concrete, extending right down to the bottom, just at the point where the Early-Norman respond-foundations run up to it. This fault must have occurred before the church was demolished in Norman times, and is a confirmation of the truth of the record which tells us that Gundulf found the church almost ruined from old age, *pœne vetustate dirutam*.

3. A description of the graves and burial-ground remains to be given. Mr. Irvine tells me he found that the ditch of the foundations (Norman), of the north aisle-wall of the present church, cut through a Saxon burial-ground along its

whole length, and that it did not reach the bottom of the ground used for that purpose. In the recent excavations we found a somewhat remarkable Saxon grave, near the north-east corner of the north turret. It is marked in the Plan. It lay between 5 and 6 feet below the level of the roadway

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hard by./<sup>\*</sup> The sides were formed of large stones, three on one side and four on the other, set close together in a loose and soft mortar./<sup>†</sup> The stones did not extend the whole length of the grave, and there was none at the head or foot. The tops of the stones were on a level with one another, and there was mortar on them, suggesting the existence originally of a covering slab. It is possible that when this was removed some of the supports were removed also./<sup>‡</sup> The width of the grave inside was 1 foot 6 inches, and its depth 1 foot. The bottom was formed of a bed of mortar, on which there was a thick coating of brick-dust. On this the body lay, covered (when found) with mould. That this was a Christian burial is evident from the absence of any knives, weapons, or personal ornaments, usually found in the graves of pagan Saxons. Its character, its depth below the surface, its position in relation to the apse, all point to the likelihood of its having been one of the earliest of the Saxon burials./<sup>§</sup>

Another body was found under the steps inside the central west door, on the right hand side. This was one of the first discovered, and I did not see it. The fact, however, is worth recording.

The Saxon burial-ground was again tapped, when search was being made for old foundations, in front of the southern jamb of the central doorway. The underpinning of this part of the west front had been completed some time before, and the foreman distinctly remembered cutting through some masonry at a low level thereabouts, so I determined to use part

<sup>\*</sup> The surface of the graveyard, called in medieval times Green Church Haw, is now much higher than the road.

<sup>†</sup> At the foot of the grave there was much of this mortar, and in it two pieces of white plaster and some bits of a much harder mortar.

<sup>‡</sup> The faces of these stones are not rectangular: they taper slightly, like the voussoirs of an arch. The backs are roughly wedge-shaped, the line of the ridge running at right angles to the tapering sides. All this points to the fact that in this grave they were not serving the purpose for which they were made.

<sup>§</sup> I saw the Saxon grave in position, but I did not see the removal of the body, nor of some black mould which lay beneath the grave, and which contained some bones and shreds of rough black ware. Examining the spot afterwards, I clearly saw the maiden soil undisturbed *at the side of* the hole which had held the black mould and ware. At the bottom of the hole there were signs of burnt wood in a damp pasty condition. <sherds>

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of the two days of extra digging, allowed by the Dean and Chapter, in trying to rediscover it. The hole was dug so as to escape the concrete recently laid down. From 3¾ to 4 feet below the paving line we reached a bed of very rough mortar, varying in colour, but chiefly yellow, containing bits of tufa, of Roman brick, and Roman mortar. It was bedded upon a layer of chalk and flints. Charcoal was found plentifully strewn over it. On this bed rested bodies looking eastwards, and lying close up to the Saxon foundations. There were no weapons or personal ornaments./\*

/\* Underneath the bed of mortar on which the bodies lay there was a stratum of mould and rubbish, rather hard towards the bottom, and containing bits of Roman ware. It was from this level we got the Samian fragment which is figured in Plate II. (No. 7). It will be noticed that the potter's name, CINNA..., is worked into the pattern down the side of the vessel. From the black moist mould at the bottom, immediately above the maiden soil, which lies about 7 feet below the paving line, were taken up (in my absence) the pieces of a large urn of coarse ware, much broken by the workman's pick, but I do not think it was perfect. Among the fragments were the necks of at least three other urns, one fire-marked. The bottom of the large urn came out fairly complete, and in it there was a great number of minute bones (? Arvicola), together with the pieces of a small vessel of Upchurch ware of good quality. It had evidently been broken by the workman, and the foreman, Mr. Fitzjohn, who took great interest in these matters, worked away at the pieces, and contrived to restore the vessel almost complete. An outline sketch of it is given in Plate II. (No. 8). It stands 2¾ inches high, and measures 5 inches across the top.

In the level which I have just described we found the masonry we were looking for. Some of the bodies rested partly upon it. We first hit upon an external quoin, the faces of which happened to be nearly *right* with the direction of the Saxon church. The outline of the quoin is marked in the Plan. Its southern face disappeared into the modern concrete; its western face we followed up until it nearly reached the foundations of the south wall of the Saxon church. I could not interpret the evidence of the junction of the two works: it was very rough; nor could we ascertain the thickness of our new wall. Its foundations, measuring only 18 inches in depth, had been sunk through the black mould, and rested on maiden soil. They consisted of flints and rag-stones set in a yellow sea-shore mortar. Portions of the wall remained on them. Its mortar was harder and stronger. At the quoin two Roman bricks were set in the foundations with wide mortar-joints, and above them there remained one of the squared quoin-stones of tufa. The rubble wall was made of flints and rough blocks of tufa, one of which shewed a small portion of facing of a fine, compact, white plaster. This will be preserved in the crypt. It has the charcoal adhering to it on another side. The quoin was left *in situ*.

In the course of the excavations many pieces of pottery of various kinds were found; also a boar's tusk and the core of horn of the *bos longifrons*; and many broken Roman bricks, flange tiles, and flue tiles. A very interesting fragment, measuring only 6 inches by 2½ to 3½, of a stone 3 inches thick, came from somewhere under the nave floor. It is rudely sculptured on both sides in what Mr. St. John Hope calls "strap pattern," and shews plain signs of red and brown colour, which is easily rubbed off. See Sketch No. 10. The lines on the bottom look like part of an inscription. It will be preserved with the other fragments in the crypt. Another stone of interest was found built into the Later-Norman plinth: it is a portion of a Saxon sepulchral slab, and shews an interlaced pattern and the hind-quarters of an animal sculptured on it (No. 9).

This is all I have to say now about the building and the burial-ground. Mr. Chas. Roach Smith kindly came to look at the masonry at the junction of the apse with the south wall, and he gave his opinion that it was "not Roman work, but close on Roman times." Mr. St. John Hope came down from London, and saw part of the apse and of the sleeper-wall, and he has since expressed to me a strong opinion that the remains formed part of the church of King Æthelbert./\* It is the only conclusion we can come to; and if the discovery from its limited nature is not very important, it is exceedingly interesting as giving us some knowledge at least of one of the very earliest churches built in our country. It was doubtless built by Saxon hands, though it shews some Roman influence, either traditional or direct. The materials probably came from destroyed Roman buildings; the foundations of such have at various times been found in two or three spots not far distant, at a low level in the ground. What the rest of the ground-plan of the church was, it would be impossible to say, with any certainty, from the existing data. The substantial foundations along the chord of the apse must have supported something, and I am inclined to think there may have been a chancel arch, as at Brixworth, but I have not ventured to indicate it in the Plan. At Brixworth, too, the aisles commenced some thirty feet west of the apse, and the apparent want of aisles at Rochester might be accounted for by a similar arrangement. The foundations run westward under the strip of grave-yard in front of the cathedral church. Perhaps a trench may at some future date be dug here and there in that ground, in order that the whole of the ground-plan may be recovered. It has been suggested that the outlines of the apse and walls should be marked, in some way, on the floor inside and on the pavement outside the west front, and that the following words from Beda should be inscribed, within the lines, on the floor inside: A.D. 604 REX ÆDILBERCT ECCLESIAM BEATI ANDREÆ APOSTOLI FECIT.

/\* Mr. A. A. Arnold, Mr. G. M. Arnold, and Mr. George Payne also saw portions of the work at different times.

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## II. THE EARLY-NORMAN WEST FRONT.

1. The first thing the great Norman architect Gundulf did, in the city of Rochester, was to build a massive square tower, at a distance of 150 feet from the Saxon church eastward. No one knows for certain what purpose the tower was meant to serve in the first instance, but seventy years later it was being used as a campanile. It is shewn in solid black in the small Plan of Plate I. Gundulf had been bishop only a few years when he replaced the four secular

canons who remained in the impoverished college by twenty Benedictine monks, and set about building a new and larger church for them.<sup>/\*</sup> He was enabled to do this by the recovery, with the king's help, of certain lands which Odo of Bayeux had usurped. "After a brief interval, therefore, when the old church had been demolished, the new one was begun; a circuit of offices [for the monks] was conveniently arranged; and the whole work finished within a few years by the munificent help of Lanfranc." So, with certain inaccuracies, wrote the monk of Rochester thirty or forty years afterwards; and he adds that when all things were ready Lanfranc went in solemn procession with the monks and clerks to the grave of Paulinus in the old church, and translated thence his sacred relics into the new church. This translation took place in the year 1087, which is doubtless the date of the close of Gundulf's building operations. Two other facts are equally certain: (i) the Saxon church was not demolished before the new one was begun; and (ii) Gundulf had not *finished* his church. So much as he did accomplish is shewn in solid black in the small Plan. Now arise the questions: (i) Why did Gundulf complete the south aisle wall and the great arcade on the south side of the nave, and stop half-way on the north side? (ii) When was the work taken up again and finished? The answer to these questions may be

<sup>/\*</sup> It will be noticed that the church orientates nearly due south-east. This is owing to the fact that Gundulf was in a strait for want of space: he could not go further north (towards the east) on account of his tower, so he arranged that the tower should fall into the corner, between his north transept and choir aisle walls, and he could not go further south (towards the west), or he would not have had room for his circuit of offices between the nave and the south wall of the city.

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drawn from the fact that previous to the year 1423, when the church of St. Nicholas was built upon a piece of land in Green Church Haw, given by the monks for the purpose, the parishioners of St. Nicholas worshipped in the nave of the cathedral church. There is evidence in the *Registrum Roffense* that the altar of St. Nicholas, "parochial in the church of St. Andrew," existed towards the end of Gundulf's episcopacy. Doubtless this was only a fulfilment of Gundulf's original intention, that the nave or a part of it should be assigned to the parishioners, though such intention is not expressly recorded. This being the case it seems likely also, as Mr. St. John Hope has already pointed out, that Gundulf was content to build the monks' part only (except that he was obliged to complete the south aisle in order to have a wall against which to place the monks' cloister), and that he left it to the parishioners to build their part.<sup>/\*</sup>

The Early-Norman foundations we have discovered, belong to a building which is quite distinct from that of Gundulf; but they cannot be more than a few years later in date.



They are doubtless the work of the parishioners of St. Nicholas, undertaken, say, between the years 1095 and 1100.

Some twenty to twenty-five years later, when the Norman style had lost its early rude and plain character, the first Norman church was enriched, and partly rebuilt on the old lines. This work was probably begun by the great builder Ernulf, and completed by his successor John de Canterbury, for the church was dedicated in the year 1130 on Ascension Day. The Later-Norman front, which is built on the remains of its predecessor, was no doubt the latest work of this partial rebuilding of the first Norman church; a rebuilding which might be called the second Norman church. With regard to the Saxon church, it probably

*/\** The first site of the altar of St. Nicholas is not known. Early in the fourteenth century, it was *sub pulpito*, at the east end of the nave. Mr. St. John Hope reminds me that Gundulf must have built a certain amount west of the crossing to carry the thrusts of the crossing arches. Of course it is possible that he may have originally meant to build the whole church at once, and that he stopped, for want of funds, just the later Gothic builders stopped. It is clear that his plan and design were as plain and inexpensive as possible. For further information on the subject, and for a full account of the altar of St. Nicholas, I must refer the reader to Mr. St. John Hope's *Notes*.

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remained standing for the use of the parishioners until the building of the Early-Norman front made it necessary to demolish the eastern parts of it. The western part, however, was standing after that, for the remains of Bishop Ythamar, who, according to Weever, had been buried in the nave of the Saxon church, were not removed until the episcopate of John de Canterbury. This removal probably marks the final destruction of the old church.

2. In laying down the Early-Norman wall and foundations in the Plan, I have treated them in the same way as I treated the Saxon work. I did not see the excavations on the south side of the central doorway; sufficient signs of the position of the quoins on the outside remained after the holes had been filled up. On the inside, however, this was not the case, and, as no notes or drawings are forthcoming, I am obliged to assume that the Plan, corresponds with that of the north side except in one particular. It is said that some barrel-loads of loose chalk were taken up from under the respond of the great arcade. As Gundulf used loose chalk wherewith to fill his foundation-ditches, it seems likely that these came from the end of the sleeper-wall of his arcade. I have therefore indicated such a Gundulf sleeper-wall in the Plan by black dotted lines. It is also said that under the north side of the same respond there was a deep sinking of masonry. Not having sufficient data I could not indicate its position. It is possibly some Roman foundation-work made use of by Gundulf in connection with the sleeper-wall.*/\**

The longitudinal section, No. 4, Plate II., shews the junction of the two works in the foundation-ditch under the south aisle wall in the westernmost bay. Gundulf's ditch was not much more than three feet deep, and did not reach maiden soil. About one-third of it was filled with loose gravel, and then a quantity of chalk in small lumps, such as

*/\** Foundations of Roman walls were found by Mr. Irvine in front of the aisle wall. Mr. Roach Smith, too, tells me he has seen the foundations of a Roman wall running diagonally across Boley Hill, near the County Magistrates' office. There were doubtless several Roman buildings within the walls of the city, but their remains are too low down in the ground for us to be able to get to know much about them.

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could be dug with an ordinary garden spade, were thrown in.*/\**

The Early-Norman builders went down deeper, and reached the reddish earthy river-sand, containing flints, which constitutes the maiden soil; and they adopted a new method of filling their ditch. First, a double layer of flints was laid in and covered with sand mixed with a little lime. Then the ditch was filled with four layers of chalk and sand. This, Mr. Irvine remarks, was evidently meant to be a great improvement on the old method, but the builders were probably using up materials left by Gundulf, for when the ditch was opened up again, by Mr. Thompson's men, under the west front, in the recess near the corner turret, they found the use of chalk abandoned, and flints used throughout in similar layers, and set in mortar and red mould alternately. The depth of this work varied from 3½ to 4 feet, and the thickness of the several layers varied considerably. The newer method was followed all along the west front.*†* A still further improvement was noticed under the north aisle wall in the first bay, where I had an opportunity of making a close examination of the foundations. The Early Normans widened their ditch here, and made its southern face run across to join the apse-foundations, as shewn by the dotted line in the Plan, Plate I. The plan of operations here (see Section 2) had been to lay down a bed of mortar some three inches in thickness, and on it to throw a layer of flints. This in turn was covered with red sandy mould, and the whole was rammed, and that so effectually that we found it very hard work to remove the flints with the pick. All this had been done four times, and then, at the top, came a layer of flints and mortar without mould, on which the foundation footing appeared. The mortar was very loose, and contained pieces of a fine white plaster in considerable quantities -- both wall and floor-plaster, apparently -- as well as a smaller number of fragments of thin

*/\** On the chalk two courses of stone foundation, 11 inches deep, were laid. These have disappeared from the south aisle wall (exterior), but Section 1 shews

them as they were found by Mr. Irvine under the north aisle wall.  
/† See Section No. 3 in Plate II.

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Roman stucco. Among the flints I found what appeared to be a portion of a Roman quern-stone.

I have described the contents of the Early-Norman ditch somewhat at length, first, because it indicates the progress of the work from the south side round to the north; and, secondly, because it proves beyond all doubt that it was quite distinct in point of time from Gundulf's work. The rubble walling is also distinctly of later character, though one could scarcely push its date into the twelfth century. Two bits of the wall are sketched in Plate II. (Nos. 2 and 4). The joints, filled with a fine yellow sand mortar, are wide and irregular. Otherwise there seems to be nothing calling for remark in the masonry, except it be the use of their bonding courses. In one of the examples this bonding course is slightly, but only slightly, suggestive of herring-bone work. The earlier rubble walling of Gundulf has much more strongly marked features. An example to be seen in the south aisle (interior) shews most decided herring-bone work, in addition to the courses of thin and also of bigger stones which occur in the Early-Norman work./\* A second example of Gundulf's may be seen in a portion of the north aisle wall (exterior), where the courses are much the same size, and all consist of stones set herring-bone-wise, with a larger stone set straight here and there only.

If these differences shew a distinction of date, there are enough points of likeness to bring the Early-Norman work close to that of Gundulf. In both cases the walls rest on a stone foundation (generally of two courses) of Kentish rag, which is only just wide enough to carry comfortably the pilaster buttresses. In both cases, walls and buttresses rise from the footings without plinths; and in both cases tufa is used for all the quoins, and Kentish rag for the faces of the rough walls and footings, with flints inside. The measurements correspond. The footing of the Early-Norman work is generally about 1 foot 4 inches in depth and about a foot wider than the wall on each side. Sometimes a third

/\* This bit of Gundulf's work is very similar to that of the same architect's walling in St. Leonard's Tower, Malling, which is figured in Parker's *Introduction to Gothic Architecture*. <Parker 1861:23 fig 15>

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and thin course is found between the two larger courses, as may be seen in Section 2. The Plan shews that at the end of the aisles the wall of the front is much thinner than elsewhere, and that the footing is correspondingly wider on the inside, and consists (as may be seen in Section 3) of a single course of stones of great size, very rough, the joints of which

contain flints. The projection of the buttresses is  $7\frac{1}{2}$  or 8 inches. That of the clasping buttresses of the corner pinnacles may have been slightly greater. They were not exposed at either end, but I conclude that the supports of the corner pinnacles of the west front were treated in this way (as shewn in the Plan), because it was the treatment which Mr. Irvine found adopted in the south transept of the first Norman church. The thinness of the wall at the end of the aisle would point to the same conclusion.

The ground-plan indicates a very plain front. Perhaps the most interesting of all our discoveries connected with it is that of the bases of the jamb-shafts of the central doorway, which was wider than its Later-Norman successor, but not so deeply recessed. There are two bases remaining on each side. The material is tufa. Those on the south side, by an arrangement of the new plinths, will remain, not always open to view, but accessible. Including the mortar-bed they stand about  $7\frac{1}{2}$  inches high. Base and quoin are worked together in one stone in the ordinary way. The plinths are square, the mouldings almost plain, and worked to a shallow central keel, suggestive of the double-ogee moulding so common in the perpendicular style, but reversed. The bases on the north side have of necessity been covered again. They are figured, however, in Plate II. (No. 1). One of them repeats the moulding just described, and the other shews two plain rounds. The mortar-joints are large, varying in width from 1 to  $1\frac{1}{2}$  inches. The bases stand upon the platform which carries the door-step. The bases of the shafts of the innermost order of the arch have disappeared, but the outlines of their mortar-beds could be traced on the door-step on each side, so that they must have stood higher than the others. The platform which carries the bases and the step is 18 inches wide, and about 20 inches above the

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foundation-footing. This fact alone would tell us that some of the Early-Norman wall was underground from the first. Moreover, it is impossible that the surface of the ground should have risen two feet and more in twenty-five or thirty years -- the interval between the building of the early and later fronts./\*

A glance at Section 5, in Plate II., shews that the nearness of the remains of the Saxon wall to the Early-Norman doorway, and the height of those remains in the ground, together preclude all possibility of the surface of the ground being so low as the Early-Norman footing. Moreover, we found a pathway running right up to, and on a level with, the top of the door-step, which pathway, from its very position, must have been older than the Later-Norman work, and almost certainly coeval with the Early-Norman door-step. Its material, too, looked very much like that used in the Early-Norman foundations. It consisted of two layers

of plaster, with flints and red sandy mould between, the whole being about 8 inches thick. I unfortunately failed to see either of the bases actually cleared, and so can only suppose that the path sloped down on each side to allow the bases to be seen. On the interior, the original wall-plaster, a very firm and hard white plaster, was found on the Early-Norman wall running right down to the footing, so there must have been a considerable descent into the nave of the church. This awkward arrangement was perpetuated and exaggerated by the Later-Norman builders.

We found no signs of the respond of the Early-Norman arcade on the north side, but its foundations remain and were used to carry the Later-Norman respond. They run eastwards, and abut upon the foundations of the Saxon apse, indicating the line of the sleeper-wall of the arcade. I have ventured to shew this sleeper-wall beyond the apse "conjecturally." It is doubtful, however, whether the arcade itself was ever raised, for no signs of it have yet been found in the Later-Norman arcade, while on the south side the

/\* There is reason, however, to believe that it was in this interval that the little strip of ground between the west front (northern part) and the remains of the half demolished Saxon church was used as a burial-ground.

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Later-Norman arcade undoubtedly is in the main Gundulf's work./\* In fact, it is a question whether the Early Normans did after all quite finish their church. Perhaps funds failed, and they were content for a time with some temporary structure on the north side to support a temporary roof. It is significant that on the Early-Norman footing of the north aisle wall, as shewn in Section 2, there remain only two courses of the Early Norman walling, *not plastered*, and that between them and the overlying course there is at least an inch of mould. This overlying course is undoubtedly Later-Norman work. It is of tufa, and has in one spot some of the original plaster adhering to it. Its mortar is grey and shelly, and quite different from the yellow sand mortar used by the Early Normans in their walling. The work above this is modern. The question thus raised seems to be the only one of any real difficulty that has cropped up. It is not of any great importance to us now, but it should be borne in mind in future researches.

III. It has already been said that the Later-Norman front was the closing work of what was practically a rebuilding of the first Norman church. It has suffered considerably at the hands of restorers. The north pinnacle was rebuilt in its present odd octagonal shape in the sixteenth century. The north turret was rebuilt and finished off with a battlement at about half its original height in the worst style of the middle of the last century. At the same time, probably,

the bases of the central doorway and the double plinths throughout were restored away, and a single plinth substituted, leaving only a few of the original stones./† A little

/\* This was discovered by Mr. Irvine. The lower orders of the arches, and the upper orders also on the aisle side, are all of tufa, now plastered over.

/† It is this single plinth that is shewn in the Plan in blue. At the south-west corner the double plinth remained as a guide to the architect, and it has just been restored throughout. The bases, too, of the central doorway have been replaced. I was at first led to believe that the repairs which destroyed the bases and double plinth were made by Mr. Cottingham in 1826, but a list of Mr. Cottingham's work, which Mr. A. A. Arnold, the Chapter-clerk, handed to me, and of which I found a duplicate among some papers relating to the fabric which the Dean kindly allowed me to look through, makes no mention of any such repairs. The mortar used is most distinctive -- a very tough, white mortar with green vesicles in it -- and was found to have been used also for the two courses of

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later it was evidently found that the south turret was unsafe, and so little did the guardians of the fabric of that day appreciate their splendid inheritance from the past, or their grave responsibility to the future, that they adopted the ready cure of lopping off the top of it./\* The whole front, except perhaps the beautiful central doorway, is now in a perilously dangerous condition, and the hideous shores cannot be taken down before it has been wholly restored. The whole of the face of the wall up to a considerable height has broken away from the rubble core, and cracks are developing themselves in great numbers. The foundations were found in a most unsatisfactory state. The wall overlaps the Early-Norman wall on which it is built by as much as from 3½ to 4 feet along the southern part of the exterior. The Later-Norman builders, to widen the foundations, simply dug a trench along the earlier wall and foundations, but by no means to their full depth, and filled it with material of the same character as that of their predecessors, but less compact and serviceable./† The face of the wall above is very thin, seldom more than six inches, and scarcely bonded into the wall at all. One only wonders how any part of it has stood so long. The careless way in which the masons of that day put up their work is well illustrated by Section 3, which shews how they placed the materials of their walling on the footing, and against the face of the earlier work, without attempting to bond them in. Under

foundation-work under the north turret (see Section 7), and for the steps inside the small west door. Moreover, the tooling of the faced stone points to the last century. So that I have now to come to the conclusion that these repairs, traces of which may still be seen, are of the same date as the north turret; and this being the case, for the words, "Cottingham's plinths," in Sections 3 and 5, we must read, "eighteenth century plinths," and for "Cottingham's repairs" in Section 7, we must read, "and foundations." Cottingham's repairs at the west front consisted in taking down and rebuilding in Bath stone the great window and the battlements above, and of partially repairing the stone-work of the two

corner turrets. Cottingham's repairs here and elsewhere cost nearly £10,000.

/\* A great deal has been done in the present century (more than £30,000 has been expended by the Dean and Chapter since 1840), and much more remains to be done to make amends for the apathy and neglect of past ages, and to put the fabric into a condition of safety.

/† The material contained more Kentish rag than the Early Norman, evidently obtained from the destruction of the earlier wall. Some fragments of apparently unused Norman mouldings were found in this foundation-work. One fragment shewed a triple nebule moulding, and a second shewed a counter-compony. They are sketched in Plate II., Nos. 5 and 6.

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the north-west turret we found a stronger foundation than elsewhere, but even there it did not reach the solid ground./\* It consisted of great blocks of tufa and rag-stone, taken evidently from the destroyed Early-Norman front, and tallies with the mass of masonry which Mr. Irvine found in front of the north aisle wall in the first bay, and proves the correctness of his inference that the Later-Norman architect meant to flank his front with towers -- a design which he evidently abandoned later on. Mr. Irvine found no such preparation made on the south side.

It is perhaps worthy of remark that the walls of both the early and later fronts taper towards the north. The early builders worked by "rule of brow." The Later Normans used Caen-stone for all their facings and mouldings; and they used up all the tufa which their predecessors left behind them, but in no case did they use it where it would be seen. The plaster floor of the Later-Norman nave was cut through in several places during the excavations. A moveable slab has been laid down in the present floor near the respond of the north arcade, where the old floor may be seen seven inches below and running up to the bottom of the plinth of the respond. The plaster floor was very uneven. It was found upon the Early-Norman footing, inside the north-west doorway (as shewn in Section 3), from whence it ran up on to the foundations of the apse, over a triangular bit of foundation work inserted by the Later Normans into the corner, at the junction of the said footing and the apse, to support the turret.† Where there was no stone-work for it to rest upon, the soil was prepared by a layer of flints, on which the plaster, full of cockle-shells, was laid. It formed a hard and durable floor. Mr. Irvine found similar floors under the choir and transept-crossing.

So my task comes to an end. It only remains for me to thank Mr. W. H. St. John Hope and Mr. Irvine for information and advice, and Mr. Thompson and his foreman for the kind facilities they afforded me.

/\* See the interesting Section, No. 7, shewing works of three periods; but cf. note /†, p. 276.

/† The outline of this bit of foundation work is shewn by a three-dotted line in the Plan.

Livett 1895:18--19

... THE SAXON CATHEDRAL.

I am glad to have this early opportunity of describing the complete plan of Æthelbert's first cathedral Church, built in 604 and partly discovered in 1889 (*Arch. Cant.*, Vol. XVIII.). The north-east corner of the nave was disclosed in the summer of 1894, when a trench was dug, for the purpose of lowering the gas main, along the middle of the road that runs by the west front. At the same time the lines of the foundations of the nave walls were followed westwards, in the burial-ground, by means of a probe. The

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nave seems to have measured, in round figures, 42 feet by 28 feet. The foundations of the west wall seemed to line very nearly with the west side of the burial-ground. No signs of aisles, quasi-transepts, or porch were revealed. If a porch existed at the west end of the Church its foundations must be under the road and could only be discovered by excavation. ...



Hope 1898:212

... More recently, in the summer of 1894, excavation and probing have brought to light some additional facts,



which Mr. Livett has obligingly communicated to me. From the combined data it appears that this church consisted of an aisleless nave, in round numbers 42 feet long and 28 feet wide, with an eastern apse 24½ feet wide and 19 feet long. If there was a western apse/‡ or porch, the foundations of it lie under the street, and could not be looked for. ...

/‡ There was probably a second apse ...