CURRENT ARCHÆOLOGY.

A Find of Bronze Implements near Bristol.

Some interesting ancient bronze implements were found by a boy in the picturesque little valley known as Combe Dingle, about four miles north-west of Bristol. The find consisted of a bronze chisel and three ornamented flanged celts,[1] varying from $5\frac{2}{3}$ inches to $3\frac{7}{8}$ inches in length, and from $13\frac{1}{4}$ oz. to $4\frac{3}{4}$ oz. in weight. The smallest was beautifully decorated with a pattern formed of diamond shaped markings shaded with crossed lines, enclosed in a similarly shaded shovel-shaped frame, with double zigzag lines on either side. It somewhat resembled one figured by Sir John Evans from the Isle of Lewis, but was much smaller. The most interesting object in the hoard was a chisel-like implement $6\frac{1}{4}$ inches long, which seems to belong to an undescribed type. Sir John Evans, to whom a sketch was sent, wrote :—"I do not remember anything like the tool. It is of the same class as Figs. 196 and 197 in *Ancient Bronze Implements*, but the point is more like that of Fig. 220. I doubt whether it was used to extract cores" (the suggested use of those figured in Sir John's book) "as the celts belong I believe to an age when coring was unknown." With the implements was found a curious looking stone ball, of extremely hard nature, which Mr. Gowland, F.S.A., found on analysis to consist of iron ore (hematite); it seems to have been buried with the tools, probably as a curiosity, not showing any traces of use as a stone hammer. The bronzes are now in the possession of the Rev. S. N. Tebbs, of Westbury-upon-Trym.

Caerwent.

The excavation of the remains of the Roman town of Isca Silurum, commenced in 1899 under the direction of

[1] Similar to Fig. 14 on p. 53 of Sir John Evans's *Ancient Bronze Implements, etc. of Great Britain and Ireland.*

a Committee of which Lord Tredegar is President, was continued during the summer and autumn of last year, and has resulted in the discovery of the remains of no less than six blocks or houses, of which only two have so far been completely explored. Of these "Block I" consisted of two rooms only, and an annexe supposed to be a latrine; in one of the rooms were remains of two furnaces of unusual construction, evidently for some trade or manufacture. "Block II," a large and important building, has not yet been completely excavated, but will be finished when work is resumed in the spring; several tesselated pavements and other interesting features have been found, which will have to be dealt with. The most interesting building is that named "Block III," a house of most unusual type, if not unique in England. It consists of no less than sixteen rooms, mostly of small size, grouped round a courtyard or peristyle, which was open to the air in the centre. The ambulatory was paved with red *tesserae*, and covered by a lean-to roof of stone slates supported on ten columns, of which fragments both of shafts and capitals were found. On the east side was a corridor running the whole depth of the building, and separating it from the street. The remains of a very large latrine on the south of the house were well preserved, and resemble one found in Hadrian's Villa near Rome.

The city walls are in very excellent condition, nearly a mile in circuit, and from 20 to 30 feet high. The small portions that have at present been explored, have revealed some very interesting features, but as it is intended to continue the examination of both the south and west walls shortly, no account of them will be given at present. The same may be said of the city gates, of which one, on the north, has been partially excavated. Numerous coins and small antiquities have been found, and are deposited in the local Museum. Among these may be mentioned a slab of stone with a portion of a well-cut inscription, a dagger of unusual type with a bone hilt, a sickle, bill-hook, knives, choppers, and various other objects of iron; bronze *fibulae*, buckles, pins, rings, etc.; three engraved gems from rings, a bone charm against the Evil Eye (in the shape

of a hand), and a very considerable quantity of painted wall-plaster, some of which still remained *in situ* to a height of 3 or 4 feet from the base of the wall. The Committee hope shortly to publish their first Report, containing an account of Blocks I and III, to be followed by an account of Block II, and of the south-western portion of the city wall. The Treasurer, Mr. Alfred Hudd, F.S.A., Clifton, Bristol, will be glad to receive contributions to the Exploration Fund, which are greatly needed.

RECENT EXCAVATIONS IN HERTFORDSHIRE.—RADLETT.

In December, 1898, a Romano-British potter's kiln was opened at Radlett, on the property of Sir Walter Phillimore, by Mr. W. Page, F.S.A. A small kiln was discovered in a sand pit, but was unfortunately destroyed, the workmen mistaking it for an old land drain. Sufficient, however, was left to show that it was similar to the kiln illustrated on Plate XXXVII, Fig. 3, of Mr. Charles Roach Smith's *Collectanea Antiqua*, Vol. VI. The second and larger kiln was found about 10 feet from the smaller. It was somewhat in the shape of a horseshoe, 6 feet at its greatest length inside and 5 feet 1 inch at its greatest width. It had a batter on the inside varying from 6 to 10 inches. The uppermost part existing was 3 feet 6 inches from the present ground level and about 1 foot 6 inches from the ground level of the Romano-British period. The kiln had evidently been constructed by cutting a hole in the sand, about 4 feet in depth, of the shape which it was to take, and against the sand there was built the wall of the kiln, consisting of small pieces of Roman bricks, varying in size, and set in clay, which was afterwards baked, making one solid piece of wall about 6 inches in thickness. The most interesting point with regard to these kilns is the fact that it was found possible to identify the name of the potter who worked there. This could be done from the large quantity of the impressions of his stamps, of which there were three varieties, all bearing the name *CASTUS*, upon the rims of *mortaria*.

Most of the pottery found is now by the kindness of

Sir Walter Phillimore preserved in the Hertfordshire County Museum, at St. Albans. For a full account of this discovery see *Proc. Soc. Antiq.*, XVII, No. II, 261.

Verulamium.

In the autumn of 1898, Mr. W. Page commenced some excavations in the glebe of St. Michael's vicarage, by kind permission and with the assistance of the Rev. C. V. Bicknell, the vicar, on the site of a large Romano-British building in Verulamium. A long wall 373 feet in length was opened, at each end of which were two walls 26 feet apart, evidently formerly an ambulatory, the inner walls of which showed the foundation for columns giving an inter-columniation of 13 feet 6 inches centre to centre. Connecting the ends of these ambulatories was the long wall above referred to, which was extremely massive, and was broken by two openings filled by a colonnade of five columns of peculiar construction. One of the bases of these columns remained; it was circular, 2 feet 10 inches in diameter, and was composed of Roman bricks triangular in shape, with one side curved to form the outside. A portion of a fluted column of the same diameter was also found. From the excavations, which were continued in the autumn of 1899, it appeared that this wall was the inner wall of a long ambulatory, 26 feet in width, backing upon which at the east end were a series of passages with coarse red tesselated floor 83 feet in length, and a large chamber 63 feet 9 inches in length, and 34 feet 6 inches in width internally, at the south end of which was an apse 17 feet across externally, and 26 feet in width, forming a platform 4 feet 8 inches above the floor of the chamber. The side walls of the chamber are of excellent construction, being as much as 9 feet 6 inches in thickness, and terminate with pilasters, the foundations of which are 5 feet by 4 feet, and are opposite to the similar foundations in the wall uncovered in the previous winter. These walls and that at the south end, all of which remain to a height of 2 feet and more above the floor level, were covered with plaster with the usual roll at the junction of the wall and floor. So far as the plaster remained in position

it was coloured a dark olive green, but detached pieces of it were found of various colours, and with fragments of designs upon them. Mr. G. E. Fox, F.S.A., suggests that having regard to the thickness of the walls, the chamber was vaulted, and probably with a barrel vault. Of this there was every appearance, for firstly, there were found three pieces of coloured wall plaster, the surfaces of which were very slightly concave, and which had possibly formed portions of the internal decoration of the vault; secondly, while on the floor of the ambulatory, and at the sides of the apse there was a layer of charcoal indicating the remains of a burnt wooden roof, in the chamber itself scarcely any charcoal was found; and, thirdly, the floor of the middle part of the chamber was mostly destroyed by bricks and flints which had evidently fallen from some height and had become embedded in the pavement in their fall.

There can have been no entrance to the chamber from the east, south, or west side, as there is apparently no opening in the walls, which, as before stated, remain to some height above the floor level. On the north side, however, the wall has been destroyed down to a foot below this level, and from the smoothness of its upper surface Mr. Page is inclined to think it formed a bed for a continuous course of blocks of stone, and was merely a sleeper wall to carry columns. This is corroborated to a certain extent by the fact that the eastern side wall passes quite over it, and by the finding of a considerable number of the triangular tiles with one side curved, used as before stated in the construction of the columns. On the other hand, however, as there was a slight projection of 4 inches on the west side at the end of the east wall, 8 feet westward of which there was a small block of masonry, with a slight indication of a face on its eastern side, the space between these points may have formed a doorway, but the remains were so slight that it is impossible to make any definite statement, beyond pointing out that for the reasons before stated the entrance to the chamber must have been at the northern end.

The chamber had a tesselated floor, so far as could be ascertained, of an elaborate design. The pavement had

an outer border of coarse drab *tesserae*, each *tessera* about 1 inch by $1\frac{1}{4}$ inch, which extends from the side walls about 5 feet 6 inches, and rather more from the end walls. Within this was a border of a scale pattern in black and white, within which again was a very pretty wide braidwork design in black, red, drab, and white, then lines in black and white. The great depth of soil above the floor level, about 5 feet to 6 feet, prevented the uncovering of very much of the pavement, but it appeared that it was very fragmentary, by reason of the upper part of the building having fallen and become embedded in its surface. From what was found, however, the design appeared to be geometric, made up of a series of bands of a scroll pattern in red, white, yellow, and black. The foundations for the tesselated pavements were composed firstly of about a foot of rammed gravel, upon which were about 2 inches of rough concrete or rammed gravel mixed with lime, then came about an inch of *opus signinum*, upon which again was a thin layer of white cement forming a bed for the *tesserae*.

For full reports upon these excavations so far as they have been carried, see *Transactions of the St. Albans and Herts Arch. Soc.* for 1899–1900.

The Martin Effigy in Piddletown Church, Dorset.

In Vol. LV. of the *Archæological Journal*, at p. 119, is an account of this alabaster figure by Viscount Dillon, P.S.A., in which it is stated that the person represented was one of the Martin family, who was living in the time of Edward IV., but whose name had not, as yet, been identified, though a pedigree of the family would doubtless easily settle the point.

This has now been done, by the researches of the Rev. J. K. Floyer, and communicated to the *Journal* by Viscount Dillon. The effigy is proved to be that of Sir William Martin, who died in 1504, and is described in his will, dated 1503, as a Knight of the Bath. He directs that his body should be buried in the chapel of St. Mary Magdalen, Piddletown, in a place prepared for it. He married 1st, Isabel, daughter and heiress of Thomas

Ferendon, from whom he had Tincleton and other adjoining lands, and 2nd, Christian, daughter of Sir Amyas Paulet of Hinton St. George.

The tomb and effigy were therefore prepared nearly thirty years before the death of the person they commemorate, as both the details of the armour and the collar of suns and roses show. Viscount Dillon remarks that this collar would not have been carved later than the reign of Edward IV., or, with a white boar pendant, than that of Richard III.

Romsey Abbey, Hants.

In October and November, 1900, during the process of laying down a wood block floor in the nave and crossing of Romsey Abbey, the foundations of an apse were discovered under the central tower, and considerable remains of walls on the south side of the nave. The latter may be dealt with first, as they have no bearing on the structural history of the church, and the record of them is chiefly of value because they are now buried beneath 6 inches of concrete and a wood block floor, and will probably not be seen again for many years. They are of two dates, the wall running east and west being the older. This is 19 inches thick, of flint and stone rubble, and was traced from the eastern angle of the first nave pier to within 2 feet of the fourth, where it ends without a return. It is plastered on the north or inner face with a coat of rough yellowish plaster, continuous with a floor of the same character, 16 inches below the present pavement level, which is at the original level of that of the existing Norman nave. This plaster floor rests, as to its western part, on a layer of flints on the undisturbed soil, and extends along the whole length of the wall from east to west, and northwards as far as the digging went, that is, nearly to the south edge of the paving of the central alley of the nave. It is worked to a rough trowelled face, and was not intended to be exposed, being clearly the floor of the pit for the stalls, of which the rubble wall formed the southern side. The pit is of unusual width, and suggests that there must have been a wooden floor over the whole area of the stalls. The second wall, which runs north and south at right

angles to the first, is very roughly built, about 3 feet thick, and rests on the plaster floor just described. At about 8 feet from its junction with the first wall is a projection 2 feet 6 inches square, which is not the start of a return, as the wall continues northward beyond it. All the area to the east, as far as it was examined, has 8 inches of gravel concrete laid on the first plaster floor, and on that a second plaster floor very similar to the first. On this lies a layer of rubbish, chiefly bits of wood, carbonized by the damp, so that at first sight it looks like traces of a fire, which however is clearly not the case. Another coat of plaster has been put down over the rubbish, probably at no great interval from the laying of the second floor. It is further to be noted that the engaged shafts on the north faces of the second and third piers of the nave are in their lower part of new stone, the original shafts having doubtless been cut away for the backs of stalls. From all this it is clear that stalls extended into the fourth bay of the nave, and were subsequently shortened or moved eastward, the level of the floor of the pit being then raised 9 inches. The bits of wood are the carpenters' rubbish from the making of the second set of stalls. There is little evidence as to the date of all this. A few pieces of the early Norman stonework are used up in the first wall, and among the rubbish lying on the second plaster floor were found several pieces of plain yellow, green, and pale blue glass, of fourteenth century date. The first wall may be of the thirteenth century, and the second a hundred to a hundred and fifty years later.

Turning now to the foundations of an apse east of the western piers of the crossing. The wall exists to within 7 inches of the present floor level in its northern portion, the east end was not uncovered, and the southern part was damaged by the workmen, who removed several stones before realising that they had come on part of a wall. One course of ashlar remains on the northern part, on the outer and inner faces alike, set in a fine lime mortar of a slightly reddish colour. At this level the wall is 4 feet 9 inches thick, and from the ashlar downwards is built of flint rubble in a grout of poorish brown mortar. A little Roman material is used, a nearly complete brick 11 inches square by $1\frac{5}{8}$ inches thick being found in the footings on

the inner side, and several blocks of oolite with Roman mortar on them. On the outer face the base of the wall was not uncovered at 4 feet 1 inch below the present floor level, but on the inside are footings projecting in all 1 foot 10 inches from the wall face, their bottom course being 4 feet below pavement level. The trenches are filled in with gravel, and probably no part of the wall which remains was intended to be seen above the ground. The ashlar course is rough and uneven, only the top bed being level. The stone is of two kinds, Isle of Wight or Quarr Abbey stone, which shows no tool marks, and a chalky limestone, which has diagonal tooling done with a pointed axe. The western piers of the crossing are built on the top of this wall, which was at any rate one course higher than now when they were built, as a second ashlar course remains under the north-west crossing pier, and can still be seen above the present pavement level, the Norman masonry being cut to fit over it. On the whole, the masonry of the apse has very much the look of Norman work. In the absence of any written history of Romsey Abbey, the evidence of the building itself is the only guide to an answer to the question as to the plan of the church of which this apse formed part. There are four dates of Norman work in the church, from early work of about 1090 to transitional of 1180. The last of these does not concern the argument, and may be left out of consideration. The earliest work is to be found in two bays of the south aisle of the nave, and two responds in the north aisle which very closely resemble the work in the south aisle, and are probably of the same date, about 1090 to 1100. The second work is the general rebuilding of the whole church, which was begun from the east about 1120, and extends westward to the fourth bay of the nave on the south side. This work covers a series of years, and was perhaps completed between 1150 and 1160. The third work is the lower part of the west wall of the south transept, and the two eastern bays of the south aisle of the nave. It must, however, be noted that these are not of one build, there being a straight joint between them, the aisle built first. The transept wall cannot be earlier than 1150, but does not range with the adjoining work, which must have been built by then,

either in masonry or design. The clerestory, however, is of exactly the same work all round the transept, and is clearly of one date. There may well have been an interval between the building of the two lower stages of the transepts and that of the clerestory, but it cannot be a long one, and in it this wall must have been built. Instead of two ranges of windows in the two lower stages it has a triplet of tall lights, the cills being about the level of the springing of the heads of the first stage windows elsewhere, showing that the wall was designed to form part of the eastern boundary of the cloister, and the cills kept up to clear the cloister roof. Was there, at the time of the building of the transept and nave, anything standing on the site of this third work, which could not be removed till the adjoining walls had been built up to the triforium level at any rate? The cloister is not likely to have been an afterthought. When the nave was being rebuilt new windows were inserted in the early work in the south aisle, but it was not otherwise altered, and seems to have regulated the spacing of the nave arcade. There is no reason to suppose that if the eastern part of the aisle wall had been of the same work it would have been treated differently. It seems to follow, therefore, that the early wall was built against an older building, which was not destroyed till 1150. Is the apse to be connected with this building, in spite of the Norman look of its masonry? It is, at any rate, of a date so near to that of the first Norman work that it must have some relation to that, and the thickness of their respective walls is 4 feet 9 inches and 4 feet 10 inches, and this, with the evidences in the north aisle wall, and the fact that the axis of the apse is only a few inches to the north of that of the present building, would suggest that what has been found is the eastern end of an aisled church, of which the work in the aisles is now the only part above ground, and which may have incorporated in its south aisle a fragment of the tenth century church, which was not destroyed till 1150. As to what this fragment was, the inference is that it was the south wall of the south transept. Given the tenth century as the date of this building, it should have a plan somewhat of the Dover or Repton type. (See Vol. LIII, 327, 329, of the *Journal*.)

Supposing this to have been its plan, it was not destroyed but enlarged after the Conquest, perhaps about 1086, when Christina, sister of Edgar Atheling, took the veil here, and no doubt brought an accession of wealth to the house, by the addition of north and south aisles of the width of the transepts. This would give a reason for the unusual plan of the first Norman church. Round this church to the east the second work was built, according to the usual custom of not destroying existing work till the new church destined to supersede it was sufficiently complete to be used. Then the Saxon transept wall was destroyed to make the eastern procession door, and the church took its present form, the apse having, of course, disappeared at the building of the crossing piers. Along the line of both nave arcades between the piers is a great deal of broken building material, which may be the remains of the Saxon nave walls, pierced with arches when the early Norman aisles were added, and destroyed at the building of the present nave. And on the line of the north arcade there is said to be the base of a wall still existing, which may of course be only a sleeper wall, but could also be the Saxon north wall.

As for the delay in building the west wall of the south transept, Mr. W. H. St. John Hope suggests that there were standing at the time the eastern range of the older monastic buildings, joining on to the south wall of the Saxon south transept, which, being in continuous use, could not be cleared away until their twelfth century successors were completed. This would account satisfactorily for the delay.

Romano-British Interment at West Wickham, Kent.

In the early part of the year 1899, the attention of Mr. G. Clinch was drawn to the fact that in a field at West Wickham, Kent, some unusually dark earth, of a bluish-black colour, had been turned up by the plough. The discoloured earth occurred in one or two small spaces about 10 feet in diameter, situated at or near the highest part of South Field, and less than a quarter of a mile to

the south-east of the now ruinous farm-house which once belonged to Waits Farm.

The fact that a good many fragments of Romano-British pottery had been found on the surface of South Field ten or twelve years earlier by the same gentleman, and the more recent information from Mr. G. W. Smith that he had found portions of roof-tiles there, made it desirable to examine the spot more carefully than had hitherto been done.

In April, 1899, after digging one or two experimental holes, Mr. Clinch found a large mass of compact and very dark earth filling a dish-shaped excavation in the ground 8 feet in diameter, and about 2 feet 3 inches deep in the centre, measuring from the present surface of the ploughed ground. Among the black earth were found a number of large and small fragments of pottery, a large proportion of which appears to have belonged to one earthen pot of unusually large size. Unfortunately the pot had been crushed before it was found. A number of vigorous roots from a neighbouring elm tree had encircled it, and so much destroyed its form that it was not found easy to restore it from the fragments preserved. In and around the pottery, and especially on the inside of the curved fragments of the pot, were sparsely scattered a few pieces of chalky-looking matter which may have been the remains of bones.

The composition of the pot is interesting and unusual. It may be briefly described as a coarse, imperfectly baked, dark-coloured clay, enclosing a somewhat large proportion of light-coloured fragments, which at first sight might be mistaken for pieces of calcined flint. Close examination, however, will show that they have a laminated, shelly structure. It is difficult to understand where shells for the potter's purpose in such abundance could have been obtained, unless they were procured from the fossiliferous bands in the Woolwich and Reading beds, which may be found not far off, and whence also he might have taken the clay of which the pot is made. The upper part of the funereal mound, which was probably placed above the buried pot, has apparently been levelled in the course of ploughing and other farming operations, and partly, perhaps, by rain-wash

Mr. Clinch considers that these remains mark the site of a cremation and interment of the Romano-British period, and this view is confirmed by the opinion of Mr. G. E. Fox, F.S.A., who strongly advises further excavation with the object of ascertaining something about the building or buildings, of which traces remain on the surface of the field. This it is hoped to do before long.

SILCHESTER. EXCAVATIONS DURING THE YEAR 1900.

The work of the past season, carried out by Mr. Mill Stephenson and Mr. Hope, comprised the examination of four *Insulae* at the northern end of the area enclosed by the city walls, being Nos. 23 to 26 on the plan published by the Excavation Committee. The results were of great, and in one case, to be referred to later, of exceptional interest.

Insula 23 was first dealt with. It is a square of 394 feet, being thus considerably above the average size. But in spite of this it contained only two buildings of importance, with traces of a number of small structures in its northern portion. House No. 1, at the south-west corner, had been previously uncovered by the Rev. J. G. Joyce in 1865 and described by him, but several new points were brought to light during its re-examination. It is of the courtyard type, with the main chambers on the north and east, a corridor and entrance vestibule on the south, and the entrance to the courtyard on the west. It contained a large number of mosaic floors, mostly of simple character and without pattern. The entrance vestibule, however, had a floor of an unusual kind, probably unexampled in England outside Silchester, showing a combination of the two systems of paving, *opus sectile* and *opus tessellatum*. House No. 2, also of the courtyard type, is irregularly placed with regard to the lines of the streets, and shows by its plan that it has undergone a series of additions and alterations. Originally it was probably of the corridor type, and consisted of the western range only, but was converted to its present form by the addition of north and east wings. In one of the larger rooms was a mosaic floor with a geometrical centre of black and white fret and knot work, within a vandyked border of red and drab *tesserae*, all set in a red ground. Another room, with a pillared hypocaust under its eastern end, had a floor of red mosaic, enclosing a panel with a

border of braidwork and four compartments, one of which was destroyed; the others contained respectively a floral pattern, a vase, and a dolphin, on a ground of white chalk *tesserae*, which had almost entirely perished. Immediately to the south of this house was a small rectangular building standing east and west, 18 feet by 17 feet externally, with a porch-like projection on its eastern side built with a straight joint against the main structure, and clearly an addition to it. A chase for the plates of a wooden floor existed on three sides of the rectangle, which from other indications may have been a small temple or *ædicula* with two columns *in antis* on its eastern side. Wooden floors are exceedingly rare but not unknown in the buildings at Silchester. Foundations of a smaller and earlier rectangular building were discovered within the walls just described, having a different axis to them, but further excavation threw no light on its history. A first brass of Marcus Aurelius was found at the floor level of the earlier building. *Insula* 24, a long triangular area bounded on the north by the city wall, contained two houses, both close to the wall. House No. 1, of the corridor type, stood east and west, and was entered from the street by a short corridor and a vestibule. A number of square rooms with intermediate passages opening on to a corridor on the south side formed the body of the house and were chiefly remarkable from the complete absence of any remains of flooring, although the back walls were standing to a greater height than is usual at Silchester. Traces of both earlier and later buildings were found on the site. House No. 2 showed a remarkable plan, not paralleled by anything as yet found. Roughly speaking it was of the courtyard type, with the courtyard bisected by an entrance gallery. In the entrance vestibule was a pavement similar to that described in House 1, *Insula* 23, as a combination of the two systems of paving, and unexampled outside Silchester. The main body of the house consisted of a row of chambers and passages having corridors on either side, the southern being the principal and the northern probably a pentise only. The central group of chambers were planned with an eye to effect, at the end of the long gallery leading from the street. A vestibule with a

wide opening towards the gallery opened with a doorway in each of the three other sides into three rooms, two of which showed traces of fine mosaic panels in the centre of the floor, and the third gave another possible instance of that very rare feature, a wooden floor. Several other rooms in this house had floors partly of white and partly of red *tesserae*, so arranged as to suggest that the position of seats or pieces of furniture had dictated their plan. White chalk *tesserae* were extensively used in this house, which was remarkable not only for the large number of rooms with mosaic floors, but also for the traces of painted plaster from the walls of the winter rooms, and perhaps elsewhere. Brilliant red panels with purple borders seem to have covered the walls, while other fragments showed grounds of gold, blue, and green. Other specimens of plaster of a drab colour were met with, combed in various directions, apparently as a decoration, and not a key for a thinner surface coat. *Insula* 25, of small extent, and triangular in shape, forming the extreme north-west part of the area within the walls, contained remains of two buildings of minor importance, one of them having been probably used for dye works. *Insula* 26, south of the preceding, 395 feet east to west by 269 feet north to south, produced several interesting details, notably a circular foundation, 27 feet in diameter, of flint rubble with a floor of *opus signinum*. All round its vertical edge was a cutting in the gravel as if for the foundations of a timber construction enclosing the circle. A small segment on the east was cut off and the straight edge faced with tile. The use of this building is unknown. It was abandoned at an early date, for the foundations of a later building are driven through it and a pit sunk in it. Remains of three houses were found in this *Insula*, only one, No. 3, being of any size. No. 2 is exceedingly fragmentary and is chiefly of interest as being an additional proof that the many vacant sites in Silchester were not necessarily always in that condition, some buildings, evidently once considerable, having been so thoroughly destroyed that their very existence might be disputed, were it not for the evidence of similar houses in a slightly better state of preservation. House No. 3 was partly uncovered in 1866, and consisted of western and

southern ranges with corridors, and an added vestibule forming an entrance from the street.

Three wells were found during the season, two in *Insula* 23 and one in 26, all having timber framing towards the bottom. Of those in *Insula* 23, the first, 27 feet deep, contained a most interesting bronze bucket beaten up out of a single sheet of metal, 10 inches across and $7\frac{1}{2}$ inches deep, having originally had an iron handle. It was much patched and mended, and had evidently been in use a long time. The second well, $21\frac{1}{2}$ feet deep, yielded the most important find of the year, being a collection of iron tools, over 100 in number, forming a mass 7 feet thick, resting on 5 feet of black ash, and completely filling up the lower part of the well. After much careful and patient work in separating the mass, the collection was found to consist of a set of smith's tools and a number of articles forming his stock-in-trade. The tools include two striking hammers, ten small hammers, two pairs of tongs, two sates, a drift, a small chisel, a pair of wringers or hand levers, two pairs of dividers, and two instruments for making nails. Of tools belonging to different trades, there are an axe-head, three socketed chisels, an adze, and a centrebit; a shoemaker's hobbing-foot or anvil; three plough-coulters, a cotter, two forks, and eight mower's anvils, two being unfinished. Among the miscellaneous objects are knives and choppers, bucket-handles, shoes for staves, two files, two saws, a spear-head, a pocket knife, part of the binding of a large door $3\frac{1}{5}$ inches thick, a very large padlock of well known type, $20\frac{3}{4}$ inches long, and part of another, with pieces of chain, four copper cooking pans, a bronze steelyard weight in the form of a bust, now hollow, and a pottery jug and bowl. Perhaps the most important object is an iron instrument identified as a farrier's buttress, of which several examples have been found in France, and one from Pompeii is in the Naples Museum.

A large number of pits were found and excavated, producing a series of antiquities comprising glass, coins, beads, brooches, keys, rings, etc. and in this connection it is to be noted that the yield of complete pottery vessels, about 130 in number, is greatly in excess of other years' records.

The results of the season's work have been, as usual, exhibited at the rooms of the Society of Antiquaries.

The systematic excavation of Silchester has now been carried on for eleven seasons, and 73 acres out of the 100 within the walls have been examined, so that the completion of the work may fairly be said to be in view. The results, as evidenced by the Reading Museum and the published descriptions from year to year, speak for themselves, and the work, the largest and most important of its kind as yet undertaken in England, should command the support of every archæologist. Subscriptions may be sent to the Hon. Treasurer, F. G. Hilton Price, Esq., 17, Collingham Gardens, S. Kensington, or to the Hon. Secretary, W. H. St. John Hope, Esq., Burlington House, W.

Excavations at Waverley Abbey, Surrey, in 1900.

The excavations at Waverley Abbey were continued last summer by the Surrey Archæological Society, under the direction of the Rev. T. S. Cooper, M.A., F.S.A. The results were even more important and satisfactory than hitherto, although at times the work has been very perplexing, owing to the many unexpected walls and footings of the Norman abbey found mixed up with, and sometimes made use of in, the later buildings. In the previous year Mr. Harold Brakspear, F.S.A., who has brought his large experience to bear on doubtful and difficult points, discovered the little presbytery of the Norman church in and forming part of the south transept of the later magnificent church planned by William de Bradewater. The long, narrow Norman nave has now been traced below the cloister. The original cloister was at some time considerably enlarged and carried across the *cellarium* as well as the nave of the first church. The arrangement of the frater and its pulpit is interesting, as it shows the former to be of two dates at least. The plan of the infirmary hall and kitchen is now clear, and it has become evident that there was no building between this portion of the abbey and the river. Some interesting features have come to light in the direction of the monks' dormitory. Much of the

Norman work here remains, with the south wall on a line with that of the frater; later the dormitory was extended southwards at a higher level almost to the river bank. At the north end, the doorway leading from the cloister and the five broad steps ascending to the dormitory have been exposed, and close by a winding staircase, which probably formed the approach to the treasury. The plan of Bradewater's church also is now nearly complete. There is still a good deal to be done west of the *cellarium*, where the guest houses, the infirmary of the *conversi*, and possibly a gateway may be looked for. This is of almost greater importance than the work already done, since these buildings of the outer court have never been worked out properly anywhere. Both at Fountains and Furness the remains of them are anything but complete, and at the former it is known there were a number of buildings of which no trace can be found. In order that the opportunity may not be lost of adding materially to what is already known of a Cistercian abbey, it is hoped that the owner of the site will consent to the excavations being extended, and, in this event, that sufficient funds, which are at present urgently needed, may be subscribed to enable Mr. Cooper to carry to a satisfactory conclusion this most important work.

Paintings in Hardham Church.

Mr. P. M. Johnston sends the following notes on his paper printed at p. 62 of Vol. LVIII of the *Journal*:—

A later inspection of the paintings suggests the following *addenda et corrigenda*.

The subject of the painting on the northern half of the east side of the chancel arch is probably "Adam and Eve after the Expulsion." Adam is seen wrestling with gnarled branches of a tree in allusion to the text, "Thorns also and thistles shall it bring forth to thee" (Gen. iii, 18); while, below, Eve is milking a very weird-looking cow.

On the southern side of the same arch, below the subject of "The Fall," shown in the coloured plate, are the remains of another, evidently illustrating the text, "And the eyes of them both were opened, and they

knew that they were naked" (Gen. iii). Adam and Eve are depicted nude and with outstretched hands, in an attitude suggestive of shame and confusion. They stand against a yellow-diapered background, with a pink border on which is a larger diaper pattern.

In the painting of the Twenty-four Elders on the north side of the chancel they are shown with vials shaped like slender glass water-bottles, while on the opposite wall the vials are similar to the glass in an hour-glass. Their crowns are square in shape, like the carpenter's paper cap.

Underneath on the south wall is part of a series of paintings representing the Resurrection. One can distinguish the three Maries bringing spices to the tomb, on which is seated an angel, nimbed, with outstretched wings.

I can now clearly make out a figure crucified or bound to the wheel on the north wall of the nave; and there can be no doubt that this represents a scene in the martyrdom of St. George.

I think it right to add that, on a further close inspection, it appears more probable that the subject over the chancel arch, west face, was not, as shown on the plate, "The Adoration of the Lamb," but "The Veneration of the Cross." The object of the angels' worship, within the circle over the crown of the arch, whatever it was, has been almost entirely obliterated, but such traces as remain are more consistent with the figure of the Cross than with that of the Agnus Dei shown on my drawing.

Canterbury. St. Augustine's Abbey and St. Pancras' Church.

This site, which was last year rescued from the desecrated condition which has so long vexed the souls of antiquaries, is now in the possession of trustees, appointed to superintend a thorough examination of all the remains of building within its area, comprising the eastern part of the abbey church, with the eastern range of the conventual buildings and the infirmary, and the northern and eastern parts of the early church of

St. Pancras, the remaining portions of which have been cleared and planned some years ago.

Work was begun early in November under the superintendence of Mr. W. H. St. John Hope and Canon Routledge, and in view of the lateness of the season, it was thought better to complete the excavation of the church of St. Pancras, leaving the systematic clearing of the abbey buildings till the next season. A certain amount of digging was, however, carried out on the site of the abbey church, resulting in the discovery of part of a twelfth century apsidal chapel on the east of the north transept, and a few other details.

The results of the first season are of considerable importance. The plan of St. Pancras' Church is definitely ascertained, and shows that the eastern apse was elliptical, like that of the early church of Rochester, and not a semicircle, as had been conjectured. The site of the arcade between the nave and the presbytery has been cleared, and in the process a part of the arch which spanned the central opening has been found, lying as it fell on the floor of the church, and owing its preservation to the fact that it was worked into the foundations of the cottage which was built on the ruins of the church after the suppression, and is shown in Hollar's view of St. Augustine's Abbey of 1656.

The northern *porticus* of the nave has been completely destroyed, but clear evidence of the abutment of its walls remains.

But the most important result of the work, from the view of the history of the building, has come from an examination of the remains of the walling now fully exposed. The nave walls are built with a yellowish mortar, the southern and western *porticus* with a white mortar, and the lower parts of their walls are not bonded to those of the nave. But from the evidence of fallen masses of masonry from the upper part of the nave walls, it appears that only the eastern wall was carried to its full height in the yellow mortar, and that the western wall was not built up to a height of more than 3 feet in it; and further, some fragments of masonry, undoubtedly from the north and south walls of the nave, are set in the white mortar.

showing that the use of the yellow ceased before they reached their full height. The relation of the two periods of building is settled by the junction of the north wall of the west *porticus*, which remains to a height of over 11 feet, with the west wall of the nave. The straight joint between the two walls ceases at about 3 feet from the ground, and above that level they are bonded together and both built in white mortar, which overlies the yellow mortar of the lower part of the nave walls. It seems, therefore, that a very little time elapsed between the first and second periods of building, and that the *porticus*, though not of the first season's work, were in all probability parts of the original design.

Outside the lines of the nave a good deal of fallen masonry remains to be examined for traces of window openings or other features, and it is hoped that the present year's work will be successful in this respect.

Owing to the depth of soil overlying the eastern parts of the abbey church, the process of clearing will be slow, but if the results are at all commensurate with the importance of the site, which is that not only of St. Augustine's Shrine, but also of his own church of St. Peter and St. Paul, and of Eanbald's church of St. Mary, these excavations will make additions, the value of which can hardly be overestimated, to our knowledge of the earliest times of the reintroduction of Christianity to southern England.

The Church of Hayles Abbey.[1]

The Abbey of Hayles was founded in 1246 by Richard earl of Cornwall, for monks of the Cistercian Order, and was colonised from the royal foundation of Beaulieu, in the New Forest, by twenty monks and ten *conversi*. In 1251 the work of building had so far progressed as to enable thirteen altars to be dedicated. In 1270 Edmund earl of Cornwall presented the famous relic of the Holy Blood. New work was immediately commenced, and was completed, together with the shrine to contain the relic, in 1277.

Before the excavations were undertaken last year upon the site of the abbey church at Hayles, very little was known respecting it.

All that remains above ground is part of the south aisle wall of the nave next the cloister. Now, from entire ignorance respecting the nature of the church, complete knowledge of the whole ground plan has been the reward of those engaged in the excavations.

More of the walls above the footings might have been left, but it is fortunate that the comparatively small amount that does remain enables the whole plan to be reconstructed without drawing anywhere upon the imagination.

The church that was commenced at the foundation of the abbey in 1246 was, as usual, cruciform in plan, and consisted of presbytery with aisles and a procession aisle with five chapels eastward, transepts with three eastern chapels to each, and a nave with aisles. All the main arcades were built upon sleeper walls as at the mother abbey of Beaulieu.

It would be natural to suppose that a daughter house would follow the plan of the parent; but Hayles, so far at any rate as the church is concerned, is an excellent

[1] Communicated by Harold Brakspear, F.S.A.

example to show that this was not the general custom, which is also borne out by the fact that Netley, the other daughter of Beaulieu, was neither like the parent nor its sister of Hayles. All three foundations are very late in the list of Cistercian houses in this country, and the universal similarity of the early plan had long before become anything but general owing to various causes.

At Hayles the presbytery was four bays in length, with the westernmost bay considerably narrower than the rest.

On the south side the plinths remain of two of the main arcade piers. The eastern one retains the draft lines of the bases, and the western the draft lines of the pier itself. The piers consisted of clusters of four large columns towards the cardinal points with smaller ones between. Each had a wide fillet in the centre. The arches were of three orders with a label (Fig. 1, Plate II). The main span was vaulted, with transverse and diagonal ribs, with large carved bosses at the intersection of the latter. There were no ridge ribs.

Between the piers and separating the aisles from the presbytery were solid walls 3 feet in thickness. Unlike the thirteenth century work at Fountains, Tintern, and other Cistercian abbeys, these walls were not provided for from the first, but subsequently built in between the piers.

On the north side the wall was subsequently narrowed over 12 inches,[1] but for what reason it is impossible to say.

The east gable, judging from the two projections in the footings, was pierced by three arches, probably in line with the arcades on either side.

The side aisles were mere passages to the eastern altars, and were vaulted with cross and diagonal ribs without bosses. Against the outer walls were stone seats upon which the vaulting shafts rested. At the east end of the north aisle the first course remains of the projecting pier to carry the cross arch in line with the east gable. The outer walls are of the unusual thickness

[1] This at any rate was the case in the second bay, as is shown by an added double row of tiles of different date from the original paving, and presumably the others were similarly altered.

of 5 feet, and the buttresses project another 6 feet, so that doubtless the main vault of the presbytery was supported over the aisles by flying buttresses. In line with the main east gable were large turrets, and the southern one, if not both, contained a vice or spiral staircase.

That there was an eastern termination containing chapels beyond the main gable is proved: 1, by the evidence of dedications of thirteen altars, which could not be accounted for without there being five in this position; 2, by the projecting base already noticed in the north aisle; and 3, by the footings of both aisle walls continuing across the later chapels to some 24 feet beyond the main east wall.

If this termination was merely a single aisle as at Byland and Waverley, it would be entirely occupied by the chapels and necessitate the procession path being within the main east gable, as it was in those two cases. But the high altar at Hayles occupied this position, so the procession path as well as the chapels would be eastward of the main east gable, as is the case at Dore, the eastern extension of which was being built at the same time.

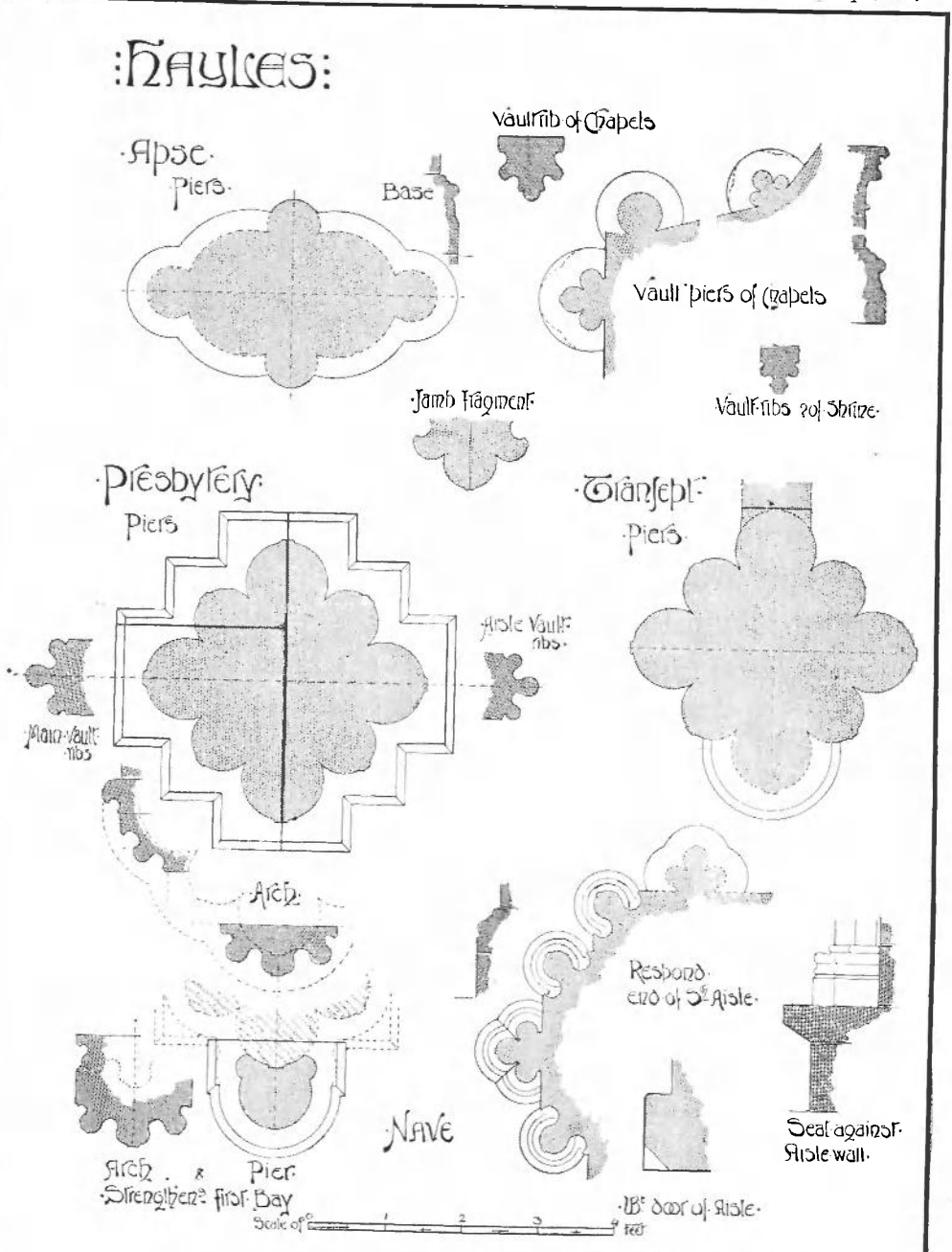
Of the crossing nothing remains beyond the footings of the great piers, but there are indications that the tower caused trouble early in its history, as will be shown later.

The transepts were both four bays in length, vaulted as the presbytery. The main east walls were carried on arcades with piers of the same plan as those of the presbytery, except that, judging from the lowest course of the one left in the south transept, they were without bases or plinths, except to the column on the west face, which had both (Fig. 2, Plate II). The chapels were divided from one another by walls 10 inches thick.

The south-east corner of the south transept has been completely destroyed together with its foundations.

The west wall is 8 feet thick and contained the night stairs to the dorter, which had a square vaulted lobby at the foot. The angle shaft with base and cap to carry the vault remains in the north-west corner of the lobby. This treatment of the night stairs is the same

To face page 352.



References to text: FIG. 1. PRESBYTERY PIERS. FIG. 2. TRANSEPT PIERS.
FIG. 3. RESPOND IN S. AISLE. FIG. 4. APSE PIERS.

as that at Beaulieu, but so far as is at present known there are no other examples in this country.[1]

The north transept would have, as usual, a doorway in the north gable, which apparently was subsequently used as the entrance for pilgrims to the shrine. Externally between the northernmost buttresses on the west side are the paving and remains of the walls of a small room 13 feet by 9, which was perhaps the checker of the sacrist or his assistant whose duty it was to conduct the visitors to and from the shrine.

Eastward of the chapels was another added chamber, but this has not yet been sufficiently excavated to show its character or how it was entered.

The nave was eight bays in length with north and south aisles, but so far as at present excavated, nothing beyond the south aisle wall remains above the footings. The easternmost bay was considerably wider than the others, but the arch into the aisles was of the same width as the rest.

The usual division walls between the nave and aisles of a Cistercian church certainly did not exist in this first bay, unless they were built, like those in the presbytery, independently of the main structure. For adjoining the place where the south-east respond should be is a semi-circular base that supported a curious three-quarter column with a couple of smaller shafts at the sides, shaped at the back to fit the mouldings of the older respond.[2] A number of long stones of this shape were found in this bay, but not elsewhere, showing that the easternmost pair of arches only were strengthened in this manner.

The arch was treated in the same way, but was further strengthened by the insertion of new bonding stones. This work must be little later than the main building, as the arch mould is exactly copied. A similar example of strengthening, but of later date, occurs in the same

[1] At the Austin canonesses' houses of Lacock and Burnham the stairs are similarly formed in a thickening of the dorter wall, but served the double purpose of day and night stairs, and are entered from the cloister and not from the church.

[2] The object of these was first pointed out by my friend Mr. W. H. St. John Hope, to the Rev. Canon Bazeley, before I visited the excavations.

position at Christchurch, Canterbury, there inserted on account of some settlement of the tower.

The nave aisles apparently were precisely similar to those of the presbytery. The south aisle wall remains to a considerable height. At the east end are the bases of the respond for the cross arch (Fig. 3, Plate II). The east bay contains the procession doorway to the cloister. Internally this is mostly destroyed, but it had nook shafts in the jambs and a draw-bar hole in the east jamb. The first vaulting shaft has been inserted, but is merely an alteration in design, as the base mouldings are precisely similar to all the others, except the third and seventh, which have different mouldings, but are apparently of the same date.

The second vaulting shaft was destroyed by the erection of a stone screen across the aisle. From this westward was a stone seat, which in the third bay has been cut down to the floor level, and again at the sixth bay.

In the westernmost bay is an inserted doorway from the cloister, of the fifteenth century, and immediately to the west is the moulded jamb of a doorway leading to a skew passage to the *cellarium* and the dorter of the lay brothers above.

At the west end of the aisle is a plain doorway of one chamfered member.

The west portion of the nave has yet to be excavated.

To revert to the east end and the alterations that were effected there for the accommodation of the shrine. As before stated, the original termination beyond the main east gable consisted of a procession aisle with five chapels eastward. Before any of the new work was commenced it is reasonable to suppose that the basement of the shrine was erected within the pre-existing chapel and part of the eastern aisle. This basement still exists to about 3 feet in height, built of rough hewn stone, and was evidently covered up from first to last with wainscot and tabernacle work. It is placed over 12 inches out of centre towards the north, which would hardly have happened if it had been erected after the new work was finished and the older had been removed.

From the plan it will be seen that the whole of the

new work could easily have been constructed round and over the centre division of the original eastern termination without interfering with the procession path to the shrine round the east end.

The *novum opus,* which took six years to build, consisted, on plan, of a five-sided apse, terminating the main walls, the aisles being continued around it as a procession path, with five semi-octagonal chapels radiating therefrom ; the whole bearing a marked resemblance to the work round the feretory of Edward the Confessor at Westminster built some twenty-five years before.

In addition to the footings, which remain complete, of the whole of this work, there exists a considerable amount of the first few courses of the walls of the two southern chapels, from which the whole plan can be reconstructed.

Each chapel contained an altar against the wall opposite the opening from the aisle, raised upon a single step,[1] and was vaulted with ribs springing from triple wall shafts in each angle, which met in the centre without a boss. Externally each angle had a large buttress. The footings of those to the centre chapel differ from the others in being wedge-shaped. Whether this indicates that the buttresses above followed these lines is impossible to say, as nothing remains above the footings.

The main apse was carried on clustered piers of a curious shape, which will be better understood from the detailed plan (Fig. 4, Plate II) than by description. The lowest course and part of the base of one of these piers remain towards the south-east.

The old east wall, with its three arches, was afterwards removed, as proved by the existence of stones similar to the inner member of the main arcade being used up in the pedestal of the lavatory in the south aisle, of which more hereafter.

To the west of the southernmost chapel is a small doorway opening outwards into what was apparently the passage to the infirmary.

With respect to the internal arrangements, the

[1] I beg to thank Mr. W. H. St. John Hope for pointing out the evidence of this step, which is clearly shown by a mortar line against the remaining portions of the walls.

excavations have been very successful, for whereas at Beaulieu and Waverley[1] not a sign has yet been found of any cross screens or quire stalls, here they have all revealed themselves with unusual clearness.

The high altar, as before stated, was immediately beneath the main east gable, but nothing remains of it except a rude mass of rubble foundations, which formed part of the platform. In the second bay on the south side the wall between the piers is thicker than in the others in order to accommodate the *sedilia* and *piscina*. In the westernmost bay on the north side is an interment once covered by a richly decorated monument.

The north aisle retains a considerable amount of its original tile paving; it had a wide band of tiles down the centre, evidently to guide the procession.

The south aisle had in its westernmost bay on the north side a lavatory with a small drain leading therefrom for a short distance. An exactly similar arrangement existed at Beaulieu, and its use was probably to receive any holy water that remained over after the Sunday procession. At Fountains it exists in the form of a piscina in the seat beneath the wall arcade, and at Furness just within the vestry. In all cases it seems an afterthought, and at Hayles the pedestal is formed of stones similar to the inner member of the main arcades.

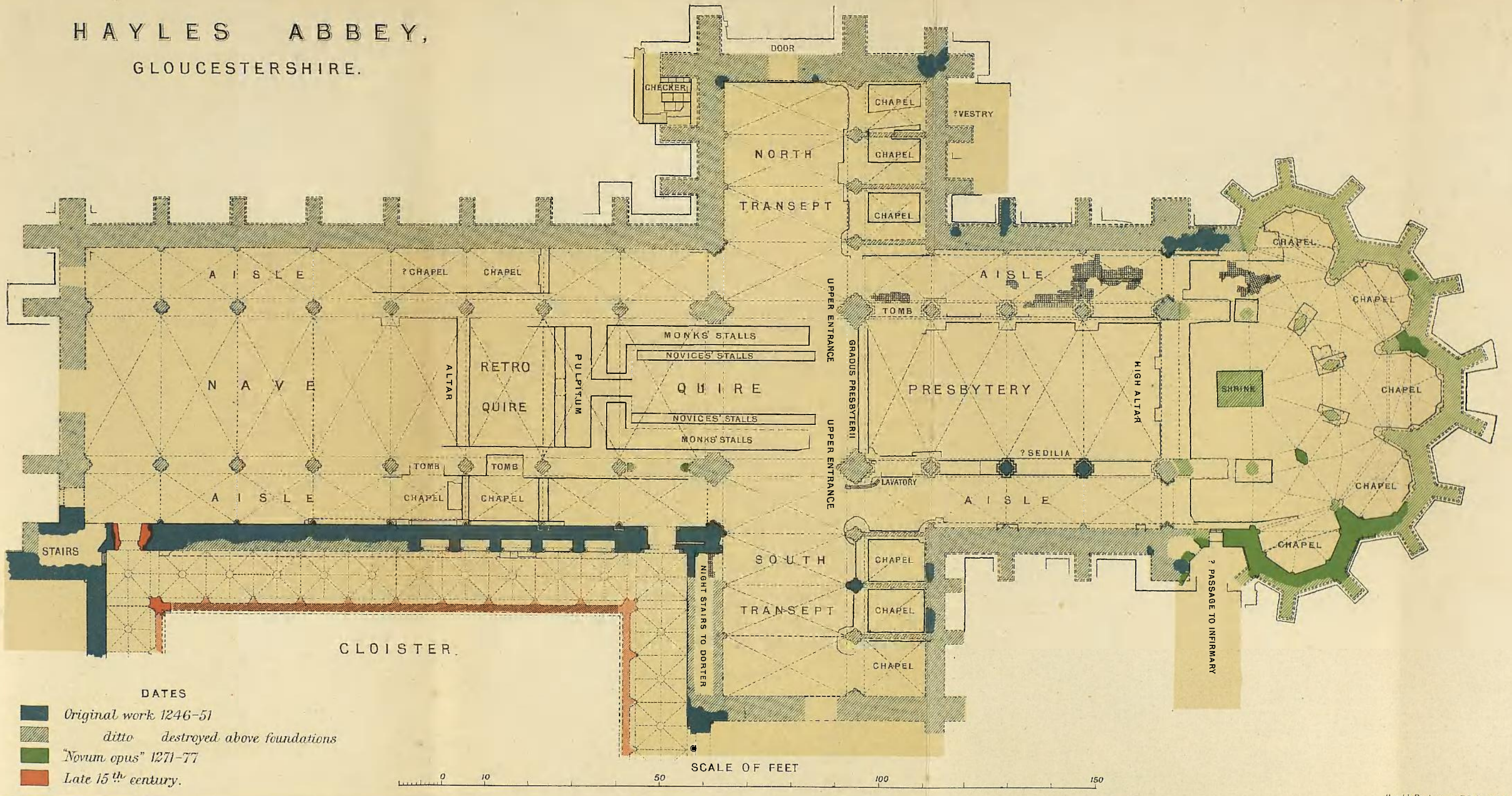
The transepts show little evidence of any arrangements except that the chapels were raised a step above the main floor and were enclosed by screens, probably of stone, between the arches.

The quire occupied part of the crossing and the first bay of the nave. The quire screen was of stone and placed slightly westward of the first pair of nave piers. Allowing the normal space for each seat, there appear to have been fifteen stalls to the north and south and three on either side the quire door facing east, making thirty-six in all. In front of the north and south ranges of stalls is a sunk trench $2\frac{1}{2}$ feet wide, which

[1] Since this was written a portion of the footings of the *pulpitum* has been found, and it is hoped that by further research other evidences of the arrangements may be traced.

HAYLES ABBEY,

GLOUCESTERSHIRE.



Harold Brakspear, F.S.A., mens. et del. 1900

C.F.KELL & SON, LITH.S, FURNIVAL ST HOLBORN, E.C.

was apparently the space beneath another range of seats for the novices.[1]

Besides the door through the screen at the west end of the quire, which was known as the lower entrance, there were other entrances on either side eastward of the stalls and immediately westward of the east crossing piers, known as the upper entrances. Between the eastern piers of the crossing were the *gradus presbyterii*.

Six feet westward of the quire screen in the nave was another transverse screen, and these two screens supported the *pulpitum*. The usual flanking altars on either side the quire door do not seem to have existed at Hayles, or if they did at first they were subsequently removed upon the erection of the nave altar.

Between the third pair of piers was another cross screen, upon which would stand the great rood, with the nave altar in front, flanked by two doorways through the screen.

Between this rood-screen and the *pulpitum* was the retro-quire, where the occupants of the infirmary attended to hear divine service.

The four westernmost bays of the nave were originally occupied by the quire of the lay brothers, as Mr. St. John Hope so clearly proves in his monograph on Fountains. It seems clear that at Hayles, as in other Cistercian houses in this country, the lay brothers' quire was subsequently disused and removed together with the solid walls under the main arcades at the back of the stalls.

In the north aisle opposite the second pier was a cross screen that apparently had an altar to the west, and in the south aisle was a corresponding screen, near which no remains of an altar are now to be found. At the next pier on this side was another cross screen with an altar, and in the third and fourth bays between the main piers are two interments formerly surmounted by very ornate canopied monuments.

[1] This was paved with large lozenge-shaped tiles some 12 inches beneath the floor level.

St. Mary's Church, Cardington.

An account of the "restoration" of this church recently appeared in the *Builder* (August 10th, 1901, p. 140). It seems to have been sufficiently drastic, comprising the demolition of the nave and tower, with the reconstruction of the chancel windows, "in precisely the same position as before." A new tower has been built at the west end of the new nave, opening into it by "the large Norman arch, which divided the old tower from the nave. It has been most carefully reconstructed stone by stone, the only change effected in it being the recessing of the edges, converting the arch into one of a double order." It is further to be noted that "a number of large and vigorously designed ancient gargoyles have been introduced into the external cornice of the chancel."

Such doings as these deserve to be recorded, if only to show that the spirit of the early "restorer" is yet with us; but it is disappointing to find these atrocities printed without a word of comment in the pages of one of the leading professional papers.