

GLASTONBURY ABBEY. The North Porch, as marked out on the ground level over the original footings.  
S. view, looking north, showing plan of east and west walls of Porch from their junction  
with the north aisle wall (not yet marked).

## Glastonbury Abbey.

### FIFTH REPORT ON THE DISCOVERIES MADE DURING THE EXCAVATIONS.

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BY F. BLIGH BOND, F.R.I.B.A.

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#### THE NORTH PORCH.

THE spring of 1911 witnessed a transfer of operations to the north side of the Nave, the object of research being primarily to discover and to locate the position of the great Porch, whose existence had been inferred from the writings of William Wyrcestre, the XV Century monastic chronicler.

This writer, in his detailed notice of parts and features of the Abbey, mentions a "Porticus introitus ad magnam ecclesiam, continet ejus longitudo videlicet 15 virgas, et ejus latitudo 8 virgas."

This porch Willis imagined to have been placed in a similar position to that of Wells, on the north side of the nave, and therefore opposite to the principal gate of the Abbey, which Hollar shows on the north side of the cemetery of the laity, and at the end of a short lane opening from the great street opposite the parish church of St. John.

This assumption, strictly followed out, would bring the porch a good deal to the westward of the position he gives it in the plan which accompanies his *Architectural History*.

In contrast with Professor Willis's suggestions, we have the opinion of Mr. W. H. St. John Hope, who in 1904 visited Glastonbury and enquired into this particular question. Being



unsuccessful in finding any traces of the building below ground, he says in his paper on the Abbey,<sup>1</sup> "I find it hard to believe that a porch of such dimensions would have been attached to an aisle of which the bays were only 20ft. long, and the interval between the buttresses barely 14ft.; and I would suggest that the porch to which William Wyrcestre refers was actually at the west end of the Church, between the nave and the Lady Chapel (Mr. Hope here refers to the Galilee). Its width is exactly 24ft., and its length 51½ft." The porch described by William Wyrcestre is 24ft. broad by 45ft. long, and Mr. Hope accounts for the difference in length by the suggestion that a part of it may have been occupied by the reredos and vestry of the Lady Chapel.

Truly the dimension of length was enough to excite surprise in the mind of any antiquary, yet there seems nothing unusual in the breadth as compared with that of the nave severly which it would overlie, and we have only to examine the noble porch of Wells to see that there the breadth is almost from window to window of the bays adjoining on east and west.

Wyrcestre also gives us the following note:—

"Longitudo a fenestra quæ est proxima latitudinis brachiorum, quæ incipit in parte occidentali latitudinis brachiorum quasi *Anglice a porche*, usque principium navis ecclesiæ continet 7 virgas."

In March, 1911, a trial excavation was made, the point selected for first investigation being a little over 60ft. from the west wall of the nave. This would be opposite the junction of the third and fourth bays going eastward. A sinking was here made over the line of the missing North Aisle wall, and at a depth of 5ft. or 6ft. the foundation was discovered.

It proved to be 10ft. 6ins. in width, and was joined at this point by a wall-footing running in at right angles from the north. The junction wall was about 8ft. in width, and soon showed itself unmistakably to be the east wall of a porch.

1. *Archæol. Journ.*, LXI (1904), 185-196.

On clearing it out to the north, the stone-work was found to be almost entirely removed, but the clay matrix was firm and clear, so that no difficulty was found in getting accurate dimensions.

At about 10ft. north of the aisle-wall trench a large square buttress footing, nearly 7ft. wide, was encountered on the east of the porch; whilst a second and similar projection appeared a few feet further on.

In order to test William Wyrcestre's statement of the length, a distance of 45ft. was measured out northwards from the first excavation, and a deep hole sunk at that point, revealing a clay face breaking back at an obtuse angle. This was undoubtedly a part of the N.E. extremity of the building, with an unexpected feature, namely, the trace of a large angle-buttress.

The northern face of the wall at its junction with the buttress, measured back to the northern face of the aisle-wall footing, proved to be approximately 46ft. This would make 45ft. a probable interior dimension for the porch itself, if taken—as Wyrcestre may well have taken it—from the face of the great nave door outward to the inner line of the north wall—or from the outer face of the aisle-wall to the outer face of the porch entrance.

*Width of Porch.* An attempt was then made to verify the width of 24ft. given by Wm. Wyrcestre. For this purpose, a shallow trench was cut in a westerly direction across the middle of the site, a little to the north of the centre of the first buttress projection on the east, and almost exactly at the anticipated distance the west footing wall of the porch was encountered, in so perfect a state as to cause no little astonishment, since its upper surface was barely a foot below the grass. This wall was then cleared for its whole length northward, and proved to be an extremely massive piece of work of a character totally different from that met with in the aisle foundations, as will be described later. The square platforms



of two heavy buttresses were found in positions roughly opposite to those on the east side. They come rather near together, there being rather under 4ft. clear between their footings, which are 7ft. and 9ft. wide respectively. At the N.W. corner is an immense angle buttress. The footing here is fortunately very perfect, and until recently its dimensions could be easily seen. The width is 11ft., the total projection (angular measurement) from the interior angle of the porch 17ft. 5ins.

The outward termination of the buttress is not square, but obtuse-angled, and the trend of the buttress itself is about  $59^{\circ}$  from the north and south line. (Plates I and II).

The indications on the other side were similar, but the actual termination of the N.E. angle buttress has only been inferred, since the presence of large roots in the high bank at this point rendered excavation a matter of great difficulty.

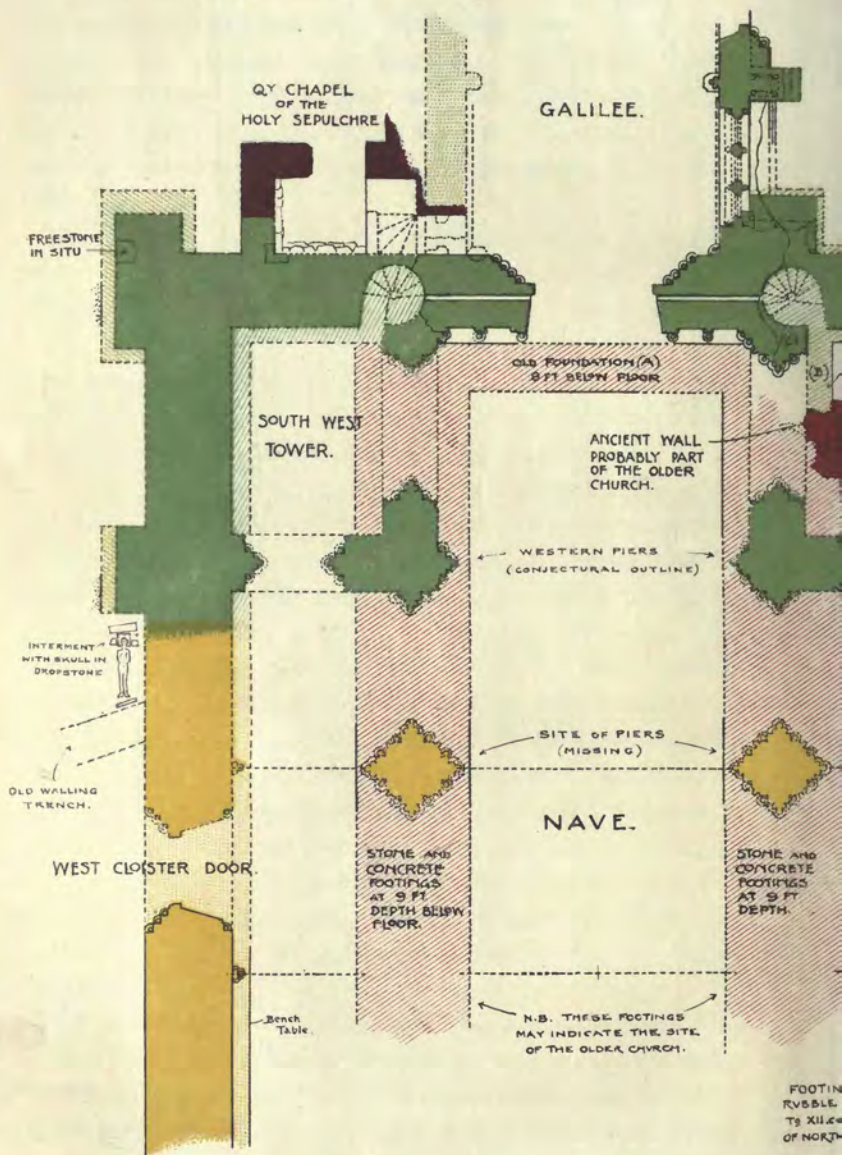
The N.W. half of the north wall, with the footing of the N.W. jamb of the great entrance archway, was next unearthed, and revealed this feature in a good state of preservation, the rough masonry showing clearly the approximate line of the splays inside and out.

All these footings came up within a few feet of the surface, but in the case of the angle buttress they were exposed to a great depth—upwards of 10ft. in fact. The enormous solidity of the masonry seemed clearly to point to a former heavy superstructure. The walling was of well-shaped and bonded lias stones, set in a hard mortar of prime quality. This was in contradistinction to the footing of the XII Century aisle wall, which was of rough stone, largely of boulder nature—the yellow “Tor burr” being often seen—and the whole practically unmortared.

Now this rough dry footing-work seems to be characteristic of the XII Century nave foundations, and in the case of the porch it appears to have extended on the east side as far as the second buttress, to a point 28ft. north of the aisle wall footing,



# PLATE II.



10 5 0 10 20 30  
SCALE OF FEET

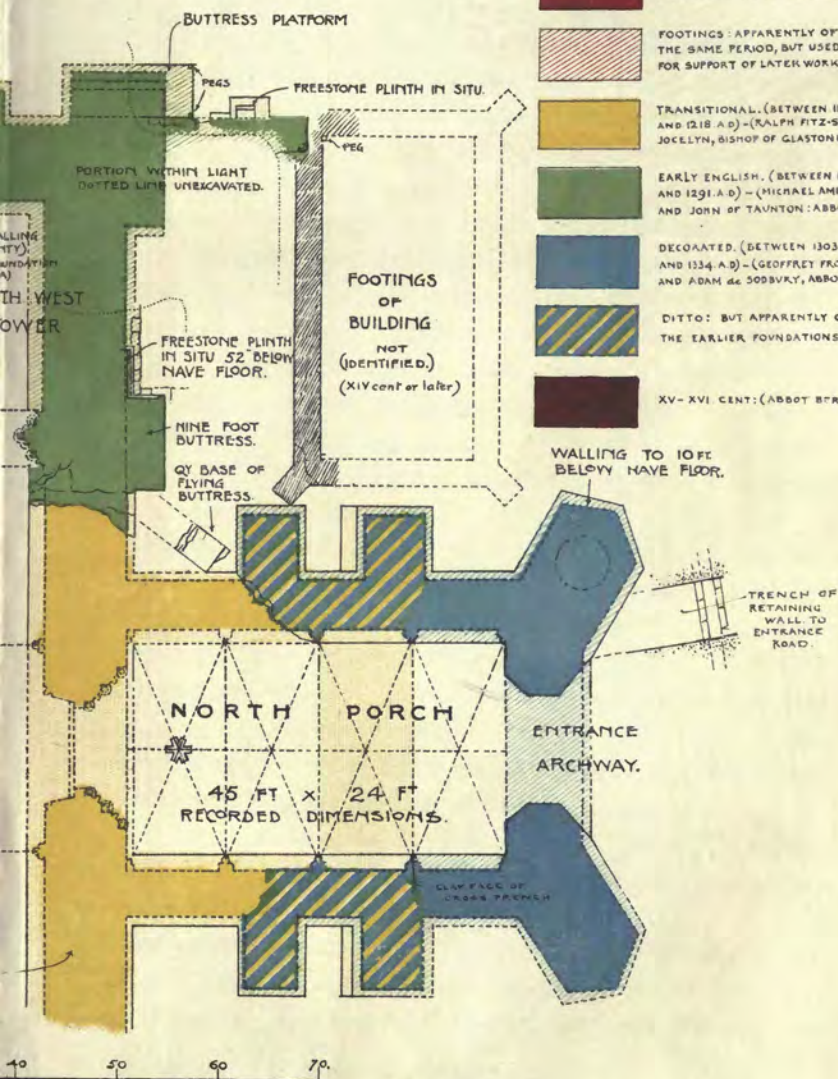


# GLASTONBURY ABBEY

PLAN OF EXCAVATIONS AT THE WESTERN END OF  
NAVE INCLUDING THE NORTH PORCH AND WEST  
TOWERS ETC.

## INDEX OF COLOURS.

	NORMAN or PRE-NORMAN. PROBABLY HERLEWIN'S WORK.
	FOOTINGS: APPARENTLY OF THE SAME PERIOD, BUT USED FOR SUPPORT OF LATER WORK.
	TRANSITIONAL. (BETWEEN 1181 A.D. AND 1218 A.D.) - (RALPH FITZ-STEPHEN & JOCELYN, BISHOP OF GLASTONBURY).
	EARLY ENGLISH. (BETWEEN 1235 A.D. AND 1291 A.D.) - (MICHAEL AMBRESBURY AND JOHN OF TAUNTON: ABBOTS).
	DECOATED. (BETWEEN 1303 A.D. AND 1334 A.D.) - (GEOFFREY FROMOND AND ADAM de SODBURY, ABBOTS).
	DITTO: BUT APPARENTLY ON THE EARLIER FOUNDATIONS.
	XV - XVI CENT. (ABBOT BORE).





ALBERT W. BROWN

AT THE COURT OF THE  
COUNTY OF ALBERTA

IN THE MATTER OF THE

WILL OF

ALBERT W. BROWN

DECEASED

BY

ALBERT W. BROWN

ADMINISTRATOR

OF THE ESTATE OF

ALBERT W. BROWN

DECEASED

IN

THE MATTER OF

THE WILL OF

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where a clay face was met with running west across the line of the wall, some distance into the interior of the porch.

On the west side of the porch, as on the east, this loose material has been largely removed, but the more solid masonry of the outer part of the porch begins at the first buttress, where it overhangs the softer material, and shows every sign of being a later work superadded to the original.

We have thus apparently two sections of walling of a different date and consistency, the earlier being that nearest the nave, and representing an original porch of more moderate dimensions. The second (*i.e.* northern) buttress on the east of the porch showed also signs of an alteration in width on its south side. This might well bespeak two different dates of work. The greater of the two widths brings this side in line with the south side of the buttress opposite, which measures 9ft. across the footings. As it was not possible to investigate this one without removal of the solid masonry, a similar change in its width, though probable, can only be conjectured. Between these buttresses a tract of concrete-like footings crosses the porch and these are again suggestive of an original outer wall at this point.

The clearance of the looser work, which is merely unmortared rubble, is easy to understand—it would be readily withdrawn during the various stages of the destruction of the Abbey buildings,—whilst the more refractory parts would be left in part untouched. More yet of the latter would doubtless have been in evidence some fifty or sixty years ago, as the removal of a quantity of foundation work from this part is still remembered by an old servant of former owners.

The comparative lateness of date of the outer part of the porch is evidenced also by the nature of the fragments encountered.

Those in the part nearest the nave were all clearly of the XII or XIII Century, and were similar to what is now seen in the Church. But beyond the site of the first buttresses they



were practically all of the XIV Century—a well-developed type of Decorated work. A number of these are given on the Section sheet (Fig. 1). Some of the most perfect and most characteristic of date are the sections of the vaulting-ribs. The carved fragments found lying around the jamb of the outer entrance are of a rich nature, and indicate a very refined vine-leaf enrichment of convex profile. There are two different sections of vaulting-rib, both later than the XII Century work of the nave, but one earlier than the other. These are marked A and B in Fig. 1. The rib A retains the intersection of six ribs, four being large cross-ribs, and two, smaller ridge-ribs. The setting out of the diagonals according to the angle indicated by this fragment exactly satisfies the plan which would divide the interior of the porch into four equal severies.

A large buttress-weathering of polygonal form, with a hollowed interior, possibly for a small newel-stair, was found lying in the trench on the east side, and is now placed in the middle of the grassed internal area. This would presumably have come from a turret in connection with the porch, and most likely from over one of the great buttresses at the angles of the entrance.

*Situation of the Porch.* The discovery proves Willis right in his conjecture as to the true position of the porch, which masks the third bay from the west of the nave, and brings the entrance into true line with Hollar's gate, and also with the door to the west alley of the Cloister, on the south side of the nave, thus making a clear run across the width of the Church at this point.

The flooring of the porch was missing, but an indication of its old level was found at the northern entry, where the hard-beaten underlayer of concrete-like consistency presented a smooth surface inclining upwards at a sharp slope—about one in ten—for several feet inwards towards the point where the level would have practically coincided with that of the nave floor.

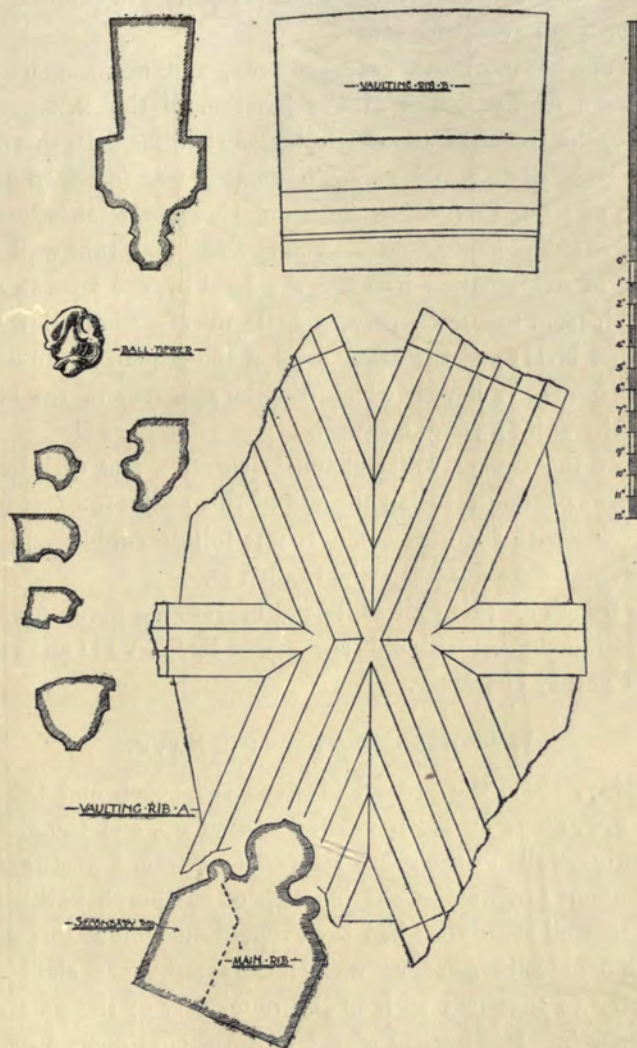


Fig. 1.—Details of Stonework (fragments), found on Site of North Porch, Glastonbury Abbey.



Very little encaustic tile work was met with in this excavation, and from this fact it seems but reasonable to suppose that the floor was paved with stone.

Just outside the north entrance arch, and abutting on the north face of the porch at the junction of the N.W. angle buttress, the trench of another wall came to light. In this only a little loose stone remained. The footing was found to go to a depth of 10 or 11ft. below the ground level here (as indicated by the existing bank), and it seemed clear that this wall was the line of demarcation between the level of the roadway of approach from the town (say, a little over a foot below the nave floor level) and the lower level of the ground to the north of the Galilee, in or near which was the cemetery of the laity. It was therefore a retaining-wall.

One of the square water-channels so often met with in the Abbey, was found crossing the site of this wall a few feet from its junction with the buttress. It was full of rubble, and the cover-stones were missing or had fallen in.

The trench of this wall at its end nearest the porch foundation was found filled with old crockery of late XVIII and early XIX Century character.

#### WESTERN END OF THE NAVE.

In May, 1911, the ground between the porch and the extreme N.W. angle of the nave was opened up, and the site of the footing-walls of the north aisle of nave traced westward.

For about 8ft. west of the junction of the porch wall it was found that all stonework had been rooted out, but at this point a section of solid masonry was encountered, very similar in character to that met with in the outer part of the west wall of the porch. But instead of the uniform continuance of the 10ft. 6ins. which had been elsewhere proved to be the normal thickness of the aisle footing, the masonry here returned and ran out to 13ft. thick (north to south), the increase being on the outer face in the form of a rectangular buttress projection.

This ultimately proved to be 9ft. in measurement east and west, and beyond that point the wall ran on at the reduced thickness of 10ft. The 9ft. buttress, at its western end, was found faced with freestone, showing a chamfered plinth, terminated at the N.W. angle with an upward ramp, as though for continuance in a northward direction, from which it is clear that the intention had at one time been to unite a wall here with the main wall at right angles.

The continuance of the main wall west of the buttress showed the plinth following round at the same level, with an unworked mitre at the angle. Above this appeared a freestone weathering which, on comparison with the plinth of the Galilee, proved to be a facsimile of its lower member. This fact, coupled with the altered character of the walling, shows the western bay of the nave to be of later date than the XII Century foundation, and demonstrates it to be coeval with the existing west wall.

Excavation in a corresponding position in 1908 on the south side of the nave had shown an external break or projection at a point as nearly as possible opposite that at which the 9ft. buttress emerges on the north, and this may be assumed to give ground for the statement that the whole of the last or westernmost bay of the nave, in its lower stage, was the work of a XIII Century abbot, either Michael de Ambresbury (1235-1255) or John de Tantonía (1274-1291).

Owing to the presence of a large elm tree over the line of the wall, a limit of excavation was reached a few feet west of the 9ft. buttress, but a trench was sunk on the further (west) side of the tree, and here the square footing of a great western buttress was found.

From its position on the plan (Plate II), it will be readily seen that the general grouping is symmetrical—allowance being made for the fact that only the inferior footing or mere foundation is here in evidence, and to obtain the true line of the plinth, a set-off must be assumed, bringing the face back a foot or more to the south. The projection of this buttress



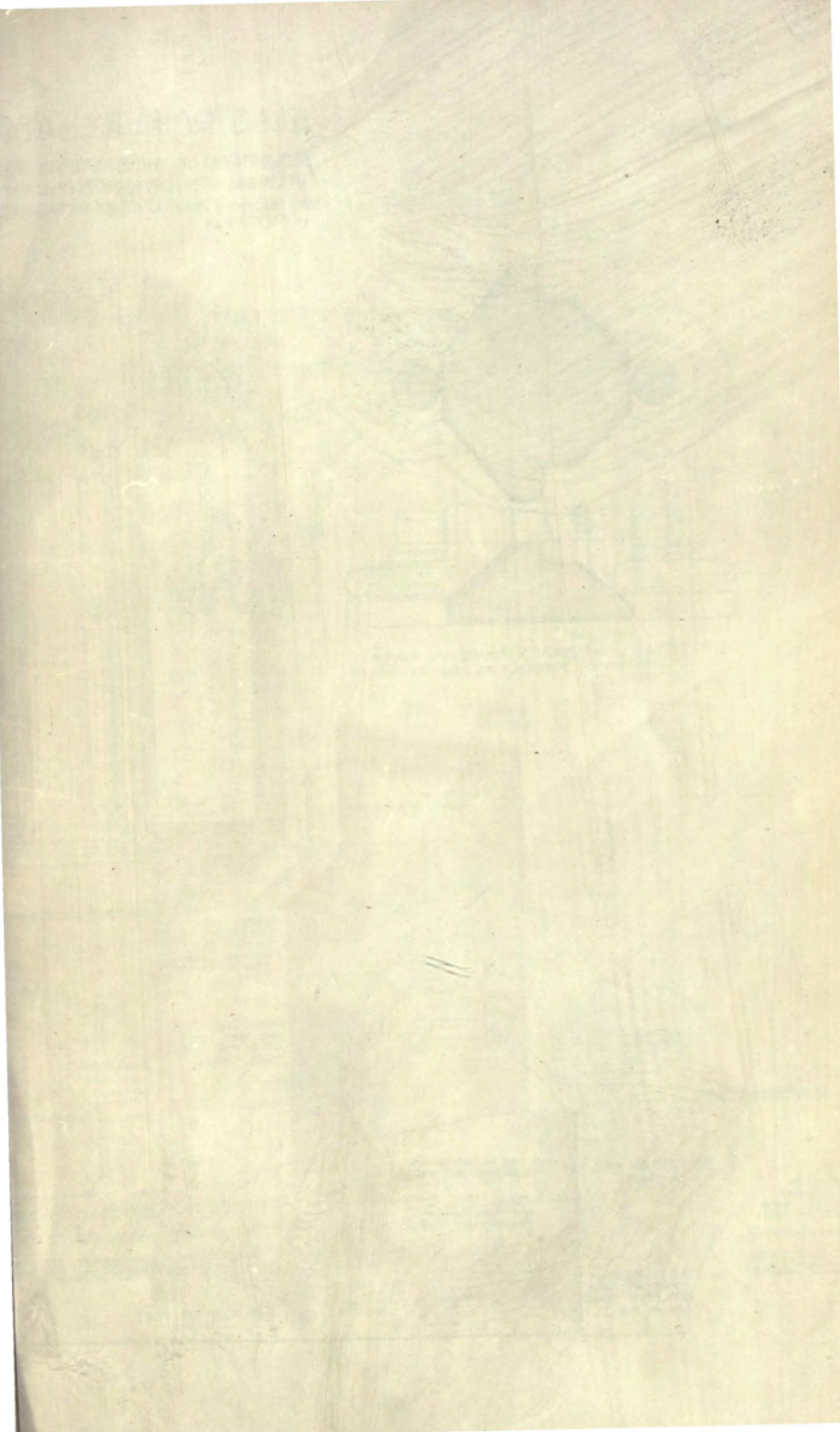
platform westward was found to be 5ft. lin. clear of the face of the foundation of the west wall of the aisle, of which a section remained.

A similar projection had, in 1908, been proved to exist in a corresponding position at the s.w. angle of the Church (western face). This could only be partly examined owing to the presence of a large tree at this point, but there seems no doubt that its dimensions corresponded. The plan therefore shows buttress platforms 5ft. by 10ft. or thereabouts at the n.w. and s.w. angles of the Church, indicative of the existence of large buttresses at the extreme limits of the western side of the Church. These would be probably 7ft. 6ins. wide under the plinth and approaching 4ft. in projection—a calculation based upon the projection of other footing-walls in the Abbey.

The whole of the western face of the northern section to its junction with the Galilee wall has not yet been examined, but there are two features on the Galilee wall which call for remark in this connection.

(*A*). The plinth on the north side of the Galilee terminates at a point rather to the westward of the line of the n.w. nave buttress; and a prominent mass of rough masonry is in evidence on the wall, just within that line, indicative of a projecting member attached to the face of the wall at this point, and exhibiting still, in its rough and mutilated condition (it has been totally stripped of its ashlar coat), the form of an engaged buttress with sloping top, the rake of the slope being to the westward. An inspection of the rubble masonry below the window opening in the east bay of the Galilee, just under its eastern jamb, will reveal this feature to the trained observer.

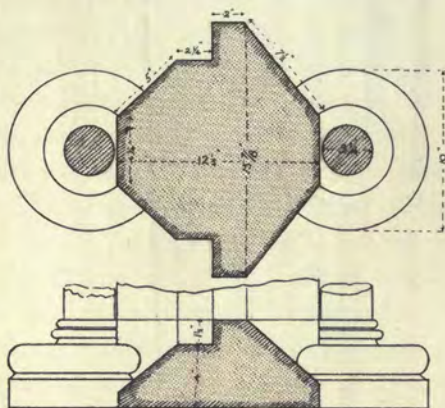
(*B*). Above this rough projection, the east jamb of the Early English window carries still some traces of a plain ashlar facing running out north, significant of the return face of the n.w. section of the west wall of the nave or of the face of the great stair-turret which occupied this angle. For the better apprehension of these points, readers are referred to the



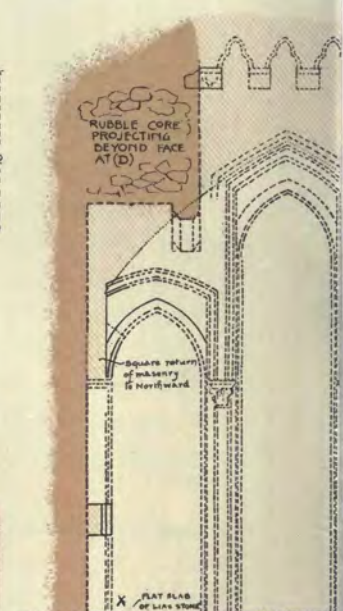


# GLASTONBURY ABBEY

ELEVATION OF THE EASTERN PART  
SHOWING ITS JUNCTION WITH THE  
(IN SECTION) AND CONJECTURAL RE-  
WINDOW



DETAILS OF BASES FOUND IN TOWER  
FOUNDATIONS: PROBABLY AS USED IN GALILEE  
AT A.A.



TRACES OF  
NEWEL STAIRCASE

"Hole Here"  
West wall of Nave  
is West door.

RUBBLE CORE  
PROJECTING  
SEVERAL FEET  
BEYOND ASHLAR  
FACE OF GALILEE  
WALL

CONJECTURAL  
WEST FACE  
OF TOWER  
(UPPER PORTION)

CONJECTURAL  
WEST FACE  
OF TOWER BUTTRESS  
(OR TURRET)  
ADJOINING GALILEE WALL

GROUND LEVEL IN NAVE

XIII CENTURY WALL  
B on PLAN

EAST FACE OF FOOTING WALL  
CLOSE TO NAVE RESPOND (C.)

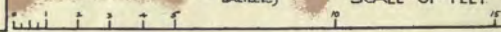
WEST WALL FOOTING  
OF N.Y. TOWER  
(ABOUT 10 FT WIDE)

OLD FOUNDATION  
ABOUT 2-6" THICK  
8 FT BELOW GRASS  
(A on PLAN)

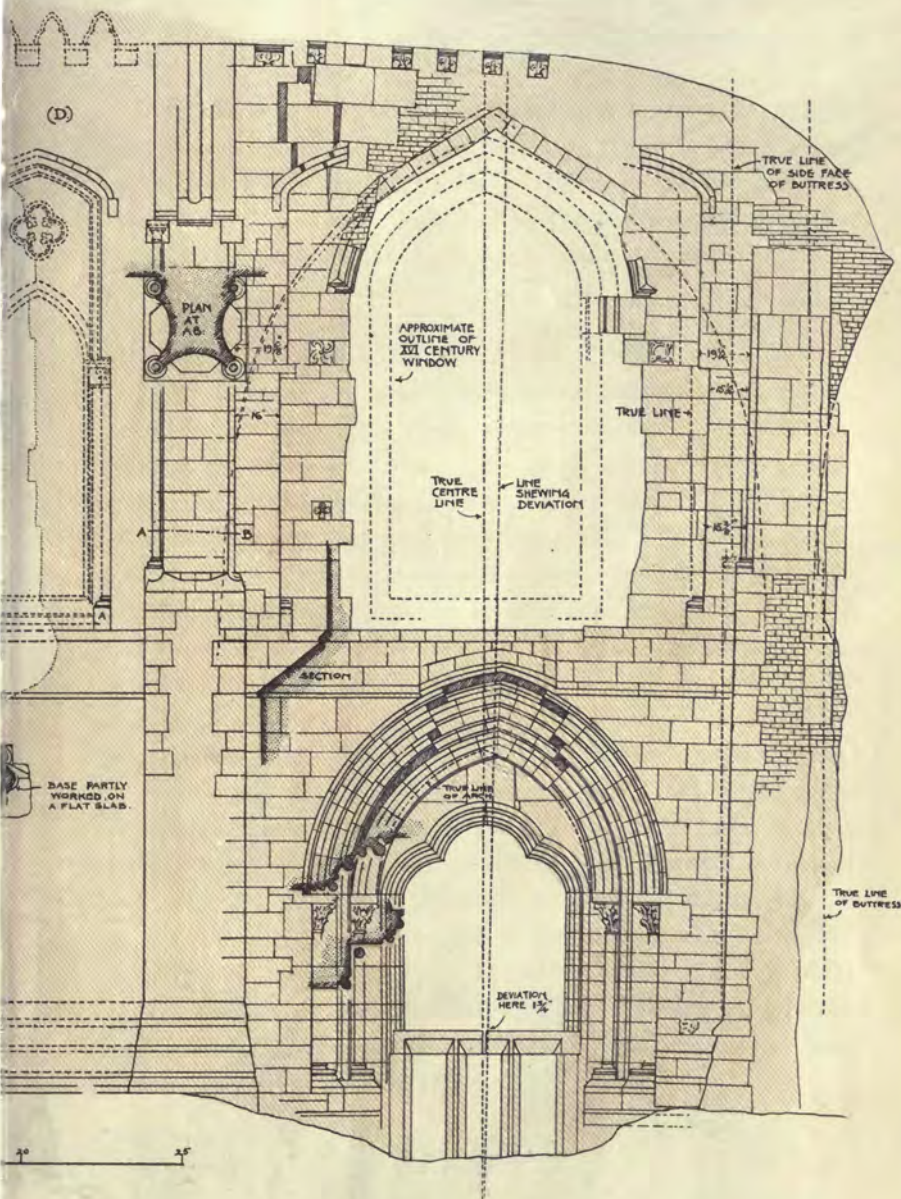
WEST FACE OF  
FOOTING WALL  
(30 FT NORTH OF  
GALILEE)

SCALE OF FEET

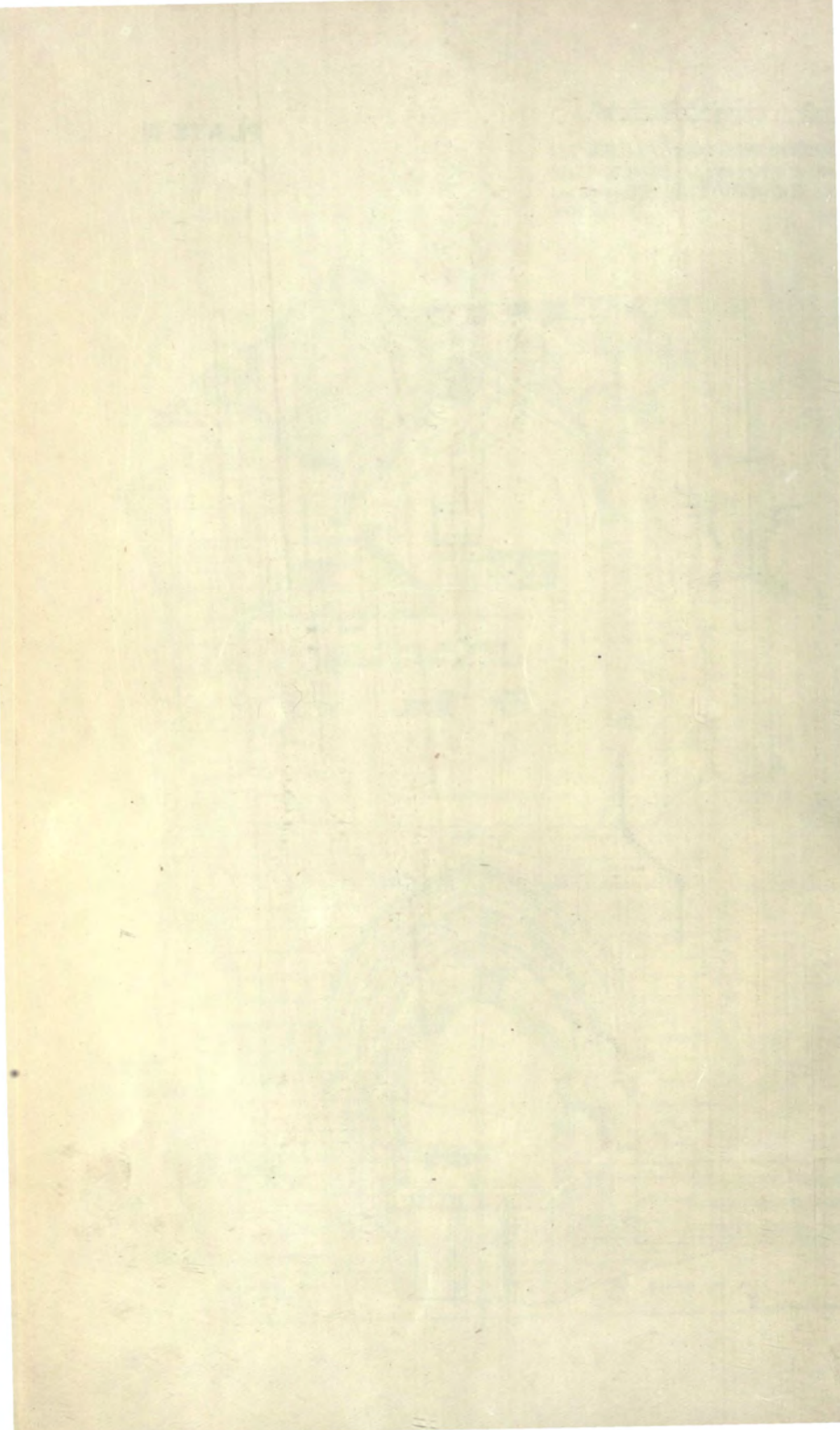
LEVEL OF  
FREESTONE  
PLINTH NORTH  
SIDE OF NAVE



OF THE NORTH WALL OF GALILEE  
LINE OF THE NORTH-WEST TOWER  
RATION OF THE ORIGINAL XIII CENTY







Plan (Plate II) and diagram elevation (Plate III), where all the principal dimensions are given.

It may reasonably be conjectured that the prominent weathered base of the stair-turret stood out some 5ft. northward of the Galilee, and that the space between it and the great N.W. buttress on the west wall of the north aisle was divided by a smaller buttress.

Indications of such a minor intermediate buttress, as well as a stair-turret at the Galilee corner, were found in 1908 on the south side where the projection of the turret-footing is 6ft. beyond the line of the south wall of the Galilee, and the little buttress footing, which is 3ft. 3ins. wide, comes 9ft. further south.

#### (?) CHAPEL OF THE HOLY SEPULCHRE.

The footing of the small intermediate buttress on the south continues out about 8ft. west, where it is joined by a return wall to the north, and the whole group forms a rectangular enclosure, with an external orifice on the west side, indicative of an archway or door at a very low level. There remains *in situ* one chamfered jamb stone, the upper surface of which is 5ft. 3ins., or nearly, below the level of the nave floor.

At the opposite or north-east angle of this enclosure there remains a trace of ashlar facing at a level only slightly higher, and in advance of this, to the west, are rough indications of steps rising northward, towards the S.E. angle of the Galilee. In connection with these features it will be noted that there are clear indications in the Galilee itself of a passage or exit at this corner, since the freestone face of the east wall runs out clear past the line of the south wall, which was carried by an arch overhead, the skewback or springer of which remains.

All these indications point to the existence of a low level annexe or chamber here, entered from the Galilee by a stairway, and from the lower ground without, and attached to the west wall of the south aisle of the nave.



In the list of the works performed by Abbot Bere (1493-1524), given by Leland, occurs the following: "He (Bere) made the Chapelle of the Sepulcher in the south end navis eccl: whereby he is buried *sub plano marmore* yn the South Isle of the Bodies of the Church."

In this little crypt or chamber whose position so well corresponds to that described by Leland, would it not appear that we have the remains of Abbot Bere's chapel?

#### WESTERN TOWERS.

The chief motive of interest underlying the foregoing analysis has been to demonstrate the existence of two Western Towers to the Abbey. With the assistance of documents, it may, I think, fairly be claimed that this fact is now established.

Both Willis and St. John Hope favoured the theory that such towers formerly existed, partly, no doubt, because it is difficult to find Romanesque churches of the first magnitude in which these members are omitted.

The following points have been noted in the existing remains, as tending to favour the supposition:—

(1). The signs of a 6ft. newel staircase on either side of the west gable wall, as shown by the hollow section of rough masonry still visible on the north and south extremities, and the marks of steps on the north; also the marks of a heavily-projecting plinth, as described above, beneath the first Galilee window. Such plinths are an attribute of Early English towers.

(2). The spacing of the nave piers. This gives an unexplained surplus of 3ft. 6ins. for the width of the western bay of the nave, and can only be explained by a thickening of the first pair of piers with a view to supporting the superincumbent mass of heavy towers.

(3). The presence of a series of massive buttresses, with prominent footings, unique as regards the north and south walls,

which, for the rest of their length have flat pilaster strips only, and no special projections for same, in the footings.

(4). Smaller indications found in the excavations on the north side. (a) A footing of masonry forming apparently part of the base of a respond on the north aisle wall opposite the first pier. (b) A rectangular footing of masonry set diagonally opposite the inner angle (east) of the 9ft. buttress on the north aisle wall. This looks like the base of a pier for the abutment of a flying-arch or buttress to the tower angle.

The evidence of the stones is strengthened by a critical examination of Hollar's perspective view of the Abbey buildings. In this, the site of the s.w. angle of the nave is occupied by a mass of building in which the presence of several buttresses is strongly indicated, having what appear to be triangular gabled heads, and a wide spreading plinth or base (see Fig. 2).

But the crowning corroboration comes from John Cannon, schoolmaster of Mere, *temp.* Geo. II, who, speaking of the Abbey in his MS. Diary, p. 209, says, "The great arch between ye body and ye choir was said to be 100ft. in height, and ye great tower in ye middle, lofty, now nothing of it left. *It had also two smaller towers on ye north and south sides.*"

A few small matters remain to be mentioned before taking leave of the subject of these excavations.

The dressed freestone plinth on the wall of the n.w. tower, when first exposed, was found quite fresh and unstained, and had evidently never been exposed to weather.

The mitre in the inner angle was unworked, as I have remarked, and this points to the same fact. A certain amount of white mortar was seen to be adhering to the otherwise clean surface of the stone, showing that this plinth had, at one time, been incorporated in a further thickness of masonry. These facts seem to show that shortly after this freestone plinth was laid, some change, either in the thickness of the wall, or in the level of the ground at this point, was decided on. Both



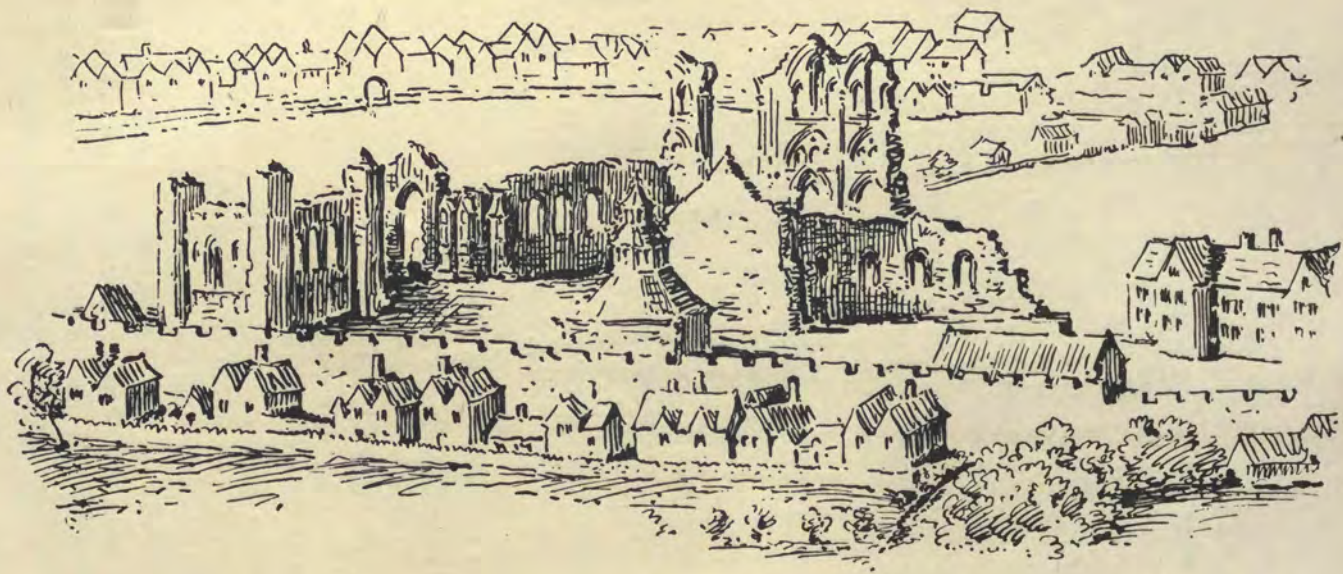


Fig. 2.—Glastonbury Abbey as it appeared in 1655, showing remains of south-west Tower of Nave, etc. Sketch enlargement from Hollar's Bird's-eye view.

N.B.—The detail of the South Transept wall is supplied from a later drawing.

are probable. The plinth is a little above the level of the sister plinth in the Galilee, but far below that of the nave or porch as it would have been. Indeed, so great would be the discrepancy in levels here, that had not some alteration taken place we should have to suppose a high wall or embankment close alongside the west face of the porch or an increased depth on the outer face of the west wall of the porch itself. But there are other reasons for the belief that the ground here was embanked out to the line of the west face of the great Church, and that at that point a retaining-wall ran north for some distance (see Plan), enclosing a further area at the higher level.

Indications of a rectangular building of later date, and of unknown use, were found in this area. The whole dimensions are not yet known, but its southern wall and the returns at both ends have been located, and a small angle buttress found impinging on the first buttress platform on the west side of the porch. Part of an Early English window (*c.* 1280) was found used in the foundations, and the evidence of the walls generally, and fragments found in the trenches, was confirmatory of a later date—probably XIV Century. A conjectural outline is given of the plan.

At the s.w. extremity of this building, at its junction with the wall running north from the tower, a number of XIII Century stones of great interest were found loosely piled together in the foundations. These were taken out, and proved to be the footings of the mullions worked for the Galilee windows, according to the original scheme, with sections of the cills attached (Plate II). They are beautifully worked, and the rounded members have almost a polish on them. The tooling of the beds is fresh and perfect. These stones were probably rejected for their original purpose on account of flaws or chips. It is scarcely likely that they were ever used in the position for which they were designed. More probable it is that the masonry in which they were incorporated



was contemporary with the Galilee work, and they formed handy material for walling.

Very few relics of architectural interest were recovered from the site of the tower walls, but one massive block, at first thought to be of freestone, proved to be of conglomerate, worked into a roughly rectangular shape. The flat surface is sunk with a shallow square, across which runs a diagonal groove, terminating in a round cup-like depression at the inner angle of the square.

It should be added that practically all the freestone fragments recovered from the neighbourhood of the nave and porch had been coated with a fine smooth whitewash.