

## DEFENDING FRAMLINGHAM CASTLE

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Yet another paper on Framlingham Castle needs an explanation, which is concealed in its title. Dr. Allen Brown<sup>1</sup> has studied the castle's history, Group Captain Knocker<sup>2</sup> and Mr. Coad<sup>3</sup> the results of extensive excavations within and without, but no-one has yet appraised its remarkable defensive features. Framlingham is not alone in this neglect. In his brilliant essay, 'Framlingham Castle and Bigod, 1154-1216,' Dr. Allen Brown<sup>1</sup> wrote: 'English medieval castles have been largely neglected by historians from every point of view save the architectural.' Indeed the published description of any castle usually concentrates on the stylistic features and everyday purposes of the separate buildings, overlooking the fact that the buildings were primarily grouped for defence. Any discussion of defensive properties is confined to generalizations (from the plan) in terms of flanking towers, drawbridges, portcullises, etc. But what field of view - or fire - did the man in the tower - or on its parapet - really have? Where could the firepower be concentrated and why? Where were the weak spots - the dead zones - and was any attempt made to overcome them?

At most castles it is impossible to do more than to speculate upon the answers to these questions, but a very few castles do still contain evidence of their defensive arrangements. At Framlingham the defences erected soon after 1175 survive to this day. One wall-tower collapsed in the 19th century and two others have lost much of their parapets, but the other eleven of the main circuit are complete. The intervening stretches of curtain wall survive entire, except for the parapets on the northern part of the circuit. This remarkable state of preservation enables a detailed study to be made of the defensive arrangements of a baronial castle of the late 12th century.

The main circuit is an irregular oval (Fig. 22) with a right-angled projection to the south-east. Thirteen square towers punctuate the circuit at intervals varying from 10 to 20 yards, some of the irregularity being due to the presence of earlier buildings. Except in the projection, the towers are not at the angles of the lengths of

<sup>1</sup> *Proc. Suff. Inst. Arch.*, xxv (1952), pp. 127-148.

<sup>2</sup> *Ibid.*, xxvii (1956), pp. 65-88.

<sup>3</sup> *Ibid.*, xxxii (1971), pp. 152-163.

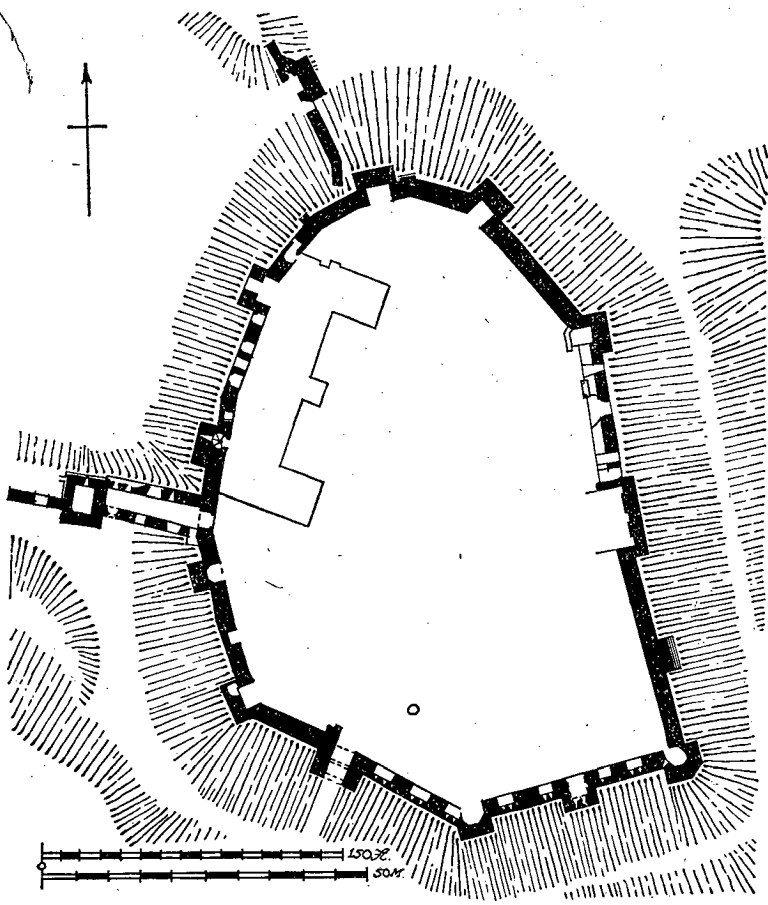


FIG. 22.—Plan of inner enclosure at Framlingham Castle to show openings in lower part of walls.

curtain wall: for example, changes in the plane of the walls flanking the northmost tower are covered by a slender turret on one side and by a low buttress on the other. Usually the towers had wooden floors continuing the wallwalk of the curtain, removable at need. However, the tower immediately north of the old hall on the east side was tunnel-vaulted on two levels, and so had a permanent floor. Timber stairs, or a ladder, must have led up to a narrow walk at a higher level (now inaccessible) round the three faces of each open-backed tower. Each face had two crenels cut in the parapet, with an arrowslit below the central merlon. Those slits on the flanks of the tower are usually sited immediately above the outer face of the curtain wall, so that they command the wallwalk itself as well as the foot of the curtain wall.

Tower designs (but not dimensions) seem to be uniform all round the circuit, apart from the polygonal tower at the south-east angle; the fallen tower next to it seems to have been of the standard type.<sup>4</sup> Walls and towers rise sheer to the parapet, unpierced (save for hall windows or latrine shafts) *except in two sectors*: the projecting south-east angle and the forework at the southern end of the west side, which are considered separately below. Much of the northern parapets of the curtain wall have gone, although an occasional arrowslit survives in a merlon (for example, in the middle of the curtain north of the eastern hall, just north of the next tower and just north of the forework immediately opposite). The only access to the wallhead is the spiral stair in the tower north of the western forework, perhaps supplemented by an outside staircase against the north-west face of the entrance tower. An enemy who gained the wallhead could be pinned down to that one panel of the curtain, by removing the tower floors, or barring their doorways, unless and until the attacker could either get his ladders over and inside the wall or capture one of the stairs.

The north part of the circuit, therefore, was defended from the wallhead, probably by small mobile groups of men. The named Bigod garrison of 1216 totalled 56 men,<sup>1</sup> which averages out at four men per tower and length of curtain wall combined. There were fairly strong outer defences on this side; to the north-west, the banks of the Outer Court and beyond them the mere formed by damming the river valley, and to the north-east the main castle ditches and Town Ditch beyond on falling ground.

There is a contrast in the southern part of the circuit (Fig. 23) between the south-western faces (one or two arrowslits at parapet level being the only defence of the curtain wall) and the south-eastern faces beyond the entrance tower (a row of arrowslits at

<sup>4</sup> H. Davy, *Suffolk Antiquities* (1819).

parapet level, several pairs of slits below and also at two or three intermediate levels in the intervening towers). The latter need to be described in detail, proceeding eastward from the entrance: first as to disposition, second as to design, and last as to defensive effect.

The entrance tower has a horizontal slot below each of the outer merlons on the front face, perhaps part of the lifting mechanism for the turning bridge. The panel of curtain wall to the east has three pairs of slits about six feet above present ground level, and five, (formerly six?) slits at the level of the wallwalk. Another slit opens off an intermediate floor in the next tower at the angle of tower and curtain wall. The tower beyond this has fallen, but Davy's engraving<sup>4</sup> shows it with a pair of slits at each of two levels facing forward. The curtain walls on either side each have two

## FRAMLINGHAM

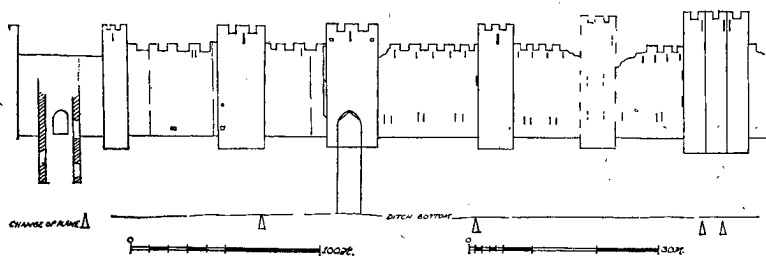


FIG. 23.—Elevation of the south and west sides of Framlingham Castle. The western forework is on the left (in cross-section) and the polygonal angle tower on the right.

pairs of lower slits and four (five?) slits at parapet level. The angle tower has slits at two intermediate levels at the angle of tower and south curtain, as well as in the parapet of each of the outer three faces, but not in those adjacent to the curtain walls. The tower immediately north of the angle is solid, with 12 offsets on the outer face near ground level. An arrowslit passes through the thickened face at wallwalk level, and there is a blocked slit in the parapet above. The towers beyond are really casings of the earlier hall and chapel, and the right-angled salient projecting 100 feet from either side of the angle tower sticks out oddly from the generally elliptical trace. Was it built to protect some major rectangular building — a keep or *donjon* perhaps?

We can now pass from the distribution of the arrowslits to a consideration of their form. The paired slits in the lower part of the curtain wall (Fig. 24, lower) are about 42 inches long and two inches wide, with triangular heads and a plunged sole: each pair open off a large round-headed embrasure or casemate half the thickness of the curtain. (Davy shows no common embrasure for the slits of the fallen tower.) These embrasures have lost their rear-arch dressings, and several of the slits are roughly lintelled over, with traces of wooden beams in the rubble. Counting eastward from the entrance, the second, third and fourth embrasures still contain twin round-headed arches turned in ashlar, with a semi-conical vault tapering with the converging jambs to each slit. Such narrow slits could only have been intended for arrow-firing weapons, and the shape of the embrasure would have been very inconvenient for artillery or hand crossbows needing lateral space. Practical experiment shows that a crossbow could only be fired accurately on the *inside half* of each arc of view from a pair of slits, covering an arc of about  $45^\circ$  in two parts with a strip of uncovered ground 4 feet wide immediately between each pair of openings. A field of view uncovered by fire seems pointless, unless the attackers obligingly defiled parallel to the wallface! Turning the crossbow through  $90^\circ$  merely makes it unmanageable, whatever the theoretical improvement in the field of fire. This practical test puts paid to the otherwise attractive idea that each of the seven named crossbowmen of 1216<sup>1</sup> was allotted one of these embrasures.

In any event, only one crossbow could have been used in one embrasure at a time, whereas two longbowmen could stand side by side to shoot through the two slits in one embrasure. By standing well forward, each had a full  $45^\circ$  of traverse arc, with a depression arc of  $35^\circ$  to  $60^\circ$  standing or  $0^\circ$  to  $45^\circ$  kneeling (if the latter were permissible with contemporary bows). This field covered the slopes of the ditch and the bailey beyond entirely, except for a tiny strip at the very foot of the wall too narrow for more than one man (Fig. 25, X). The eastern of the first and third pair of slits (reckoning eastward) each have a stone removed as if to improve the south-eastward view. The latter slit has been rendered inaccessible to an archer of normal size by the building of the adjacent tower, whose quoins stand immediately behind the embrasure. This grouping of slits in a common embrasure can also be seen in work, perhaps of the 1180's, at Carrickfergus (Antrim), Dover (Kent) and Gisors (Eure) castles. At Carrickfergus, and also at the undated cruciform tower excavated at St. Iltyd's (Monmouth),<sup>5</sup> the outer jambs of the slits are parallel, perhaps recognizing the limitations of traverse in crossbow use.

<sup>5</sup> *Archaeologia Cambrensis*, LXXX (1925), p. 374.

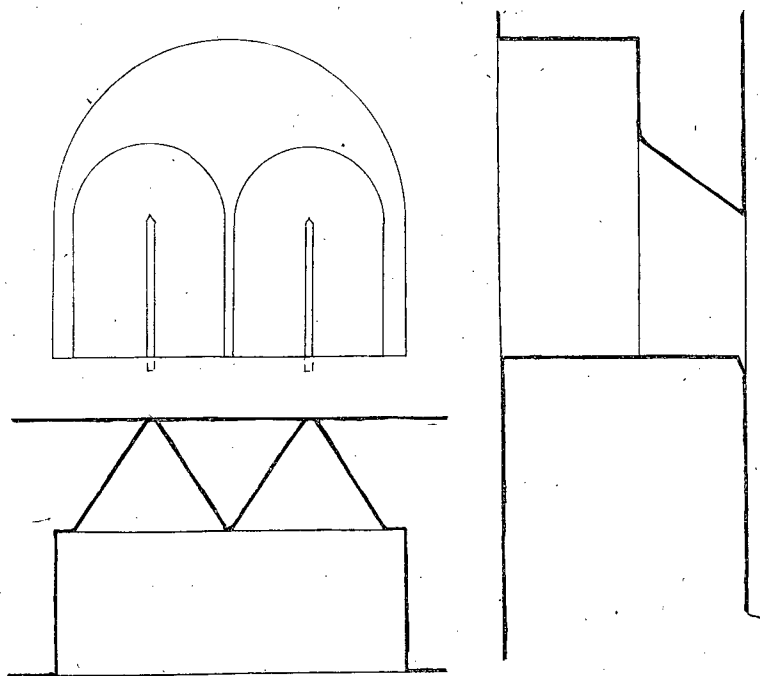
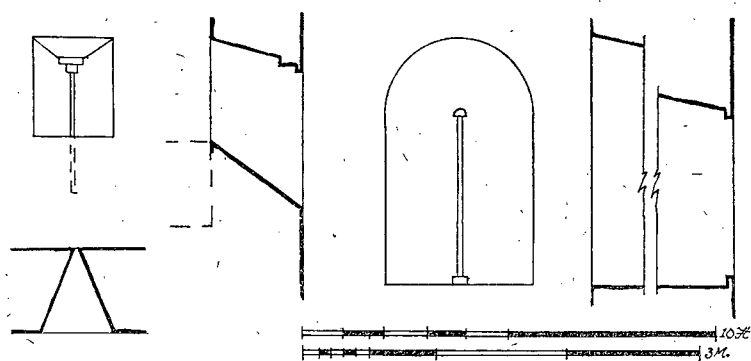


FIG. 24.—Details of Framlingham arrowslits: top left, curtain parapet; top right, solid tower; bottom, lower curtain wall.

The external openings in the parapet above (Fig. 24, upper left) are similar in size to those just described, although they occur singly (except for a blocked pair in the parapet between the first two towers west of the entrance) and their embrasures are very different. They are usually (but not always) sited below the merlon, with the internal opening about 24 inches square. Those east of the entrance are level with the wallwalk, while those further west are about two feet higher. Both the flat lintel and the sole of the loop slope downwards and outwards, and the cross-section is very similar to that of those in Lunn's Tower and the Keep parapet at Kenilworth Castle (Warwickshire), dated to soon after 1200, although these have elaborate external detail and (later) cross-slots. A standing archer would have to be dangerously near the edge of the wallwalk to use the depression arc fully, and even a kneeling longbowman would have difficulty in using these arrowslits. However, a crossbow is ideal in these small openings, with a  $0^{\circ}$  to  $60^{\circ}$  (or  $20^{\circ}$  to  $60^{\circ}$ ) depression arc; the traverse is again about  $45^{\circ}$ .

The arrowslits in the tower parapets are now inaccessible, but appear to be generally similar to those just described. One curious wallwalk level loop has been mentioned already, passing through over eight feet of solid masonry in the tower north of that at the south-east angle, having a  $25^{\circ}$  traverse and similar depression, without much supporting fire (Fig. 24, upper right).

Although the tops of the merlons have been altered, two of them have pivot-holes in their sides for swinging shutters to block the crenel, except when needed for shooting or observation. The crenel would provide a very wide traverse and depression arc, at the cost of some hazard to the archer when he was exposed while actually shooting with the shutter raised.

The fire diagrams (Fig. 25) show, from top to bottom, the fields of fire from the arrowslits (X) near the base of the walls; (Y) in or near the parapet of the curtain walls, and (Z) in the parapet of the towers. Dotted lines indicate the probable fields of fire from the arrowslits shown on Davy's engraving<sup>4</sup> of the tower which subsequently collapsed. The arrowhead on diagram X indicates the entrance tower.

Fields of fire from the tower parapets (Z) are typical of those all round the circuit. The wallwalks between the towers are enfiladed, sometimes from one tower but not that at the other end of the curtain wall, whose fire would instead cover the face of the first tower. Dead zones not covered by tower parapet fire do exist, but an attacker would be pinned down in them and be unable to advance without entering a tower parapet fire zone, and these zones anyway were covered by fire from the lower slits on the south side (X, Y). These upper diagrams show the firepower that might be concentrated on protecting the southern curtain walls, given

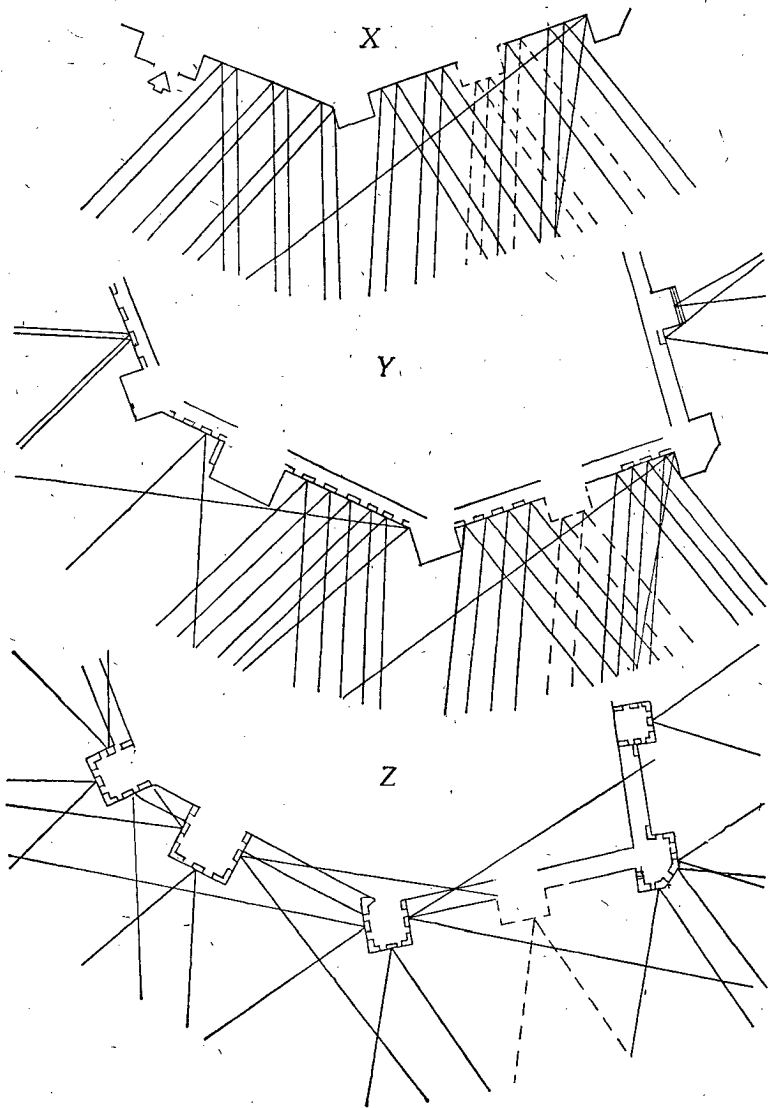


FIG. 25.—Fire diagrams: X, lower curtain wall; Y, curtain wall parapet; Z, tower parapet.



sufficient manpower and weapons. Paradoxically the safest line of attack was head-on towards a tower, where an attacker would meet the least arrows but the greatest passive defence in terms of masonry.

It is remarkable that so powerful a defence seems to have been provided only on the south side: the east side is just as vulnerable to a massed assault from the level bailey; the outworks and the natural fall to north and west provide some protection there. However, the lost parapets may have been defended more powerfully than now appears, and the window embrasures of the two halls may have been adaptable for arrowslits instead of lighting. This is the more likely in the case of the eastern hall, whose embrasures were extended through the thickness of the new curtain wall although the hall must have gone out of use when the new western hall was built. Even so, there is no excuse for the blank wall and solid turret at the south end of the east wall. Was the south side intended to be a great show-front, a parade of defence, with a great tower looming above and behind?

The western forework consists of a square tower linked to an opening in the main circuit of walls by a passage flanked by loop-holed walls – an arrangement similar to that termed a *caponier* in later fortification. The square tower has lost any trace of arrow-slits, and the passage walls have been much altered. However, the north wall has a pair of slits 36 inches long and two inches wide, with shelving feet and triangular heads; their blocked embrasure is said to have been round-headed. Another pair may have been destroyed when the Tudor window was built further east, beyond which again is a single slit of similar size and shape. The south wall has another Tudor window flanked by round-headed doorways opening onto the slope at the foot of the main circuit of walls.

The blocking and alteration of the slits, and the loss of the upper parts of the tower, prevent any detailed discussion of fire zones here. But the arrowslits must have commanded the eastern half of the Lower Court at ranges of less than 80 yards, enfilading any attackers of the western side of the main circuit. The screen wall on the north side of the Lower Court looks like a makeshift barrier to discourage infiltration along the berm into the Court, which itself backs on to the river marshes. If an embrasure existed in the south wall of the passage, which was a two-level gallery at one time, it would have commanded the entrances to the forework, and the shallow berm and ditch, but not the entrance to the main circuit of walls.

Framlingham as it stands today is clearly Bigod's reply to Henry II's Orford. Although architecturally interesting, Orford Castle does not appear to have been designed for really active defence. The surviving *donjon* has not a single arrowslit worthy of the name, and the portcullis arrangements appear makeshift. The curtain wall

has gone completely above ground, but Norden's view (c. 1600) shows it pierced by a simple gate and with several square towers, with a window or two but no arrowslits. Framlingham has a triangular arch over the entrance like Orford, but its keystone alone has joggled joints while that at Orford is in two superimposed parts and the joggling continues along the voussoirs.

The one firm date for Framlingham Castle is the payment in 1174-1175 to masons and carpenters for throwing it down and filling up its ditches,<sup>6</sup> a demolition ordered by Henry II to punish Hugh Bigod for his part in the Leicester War. Unless there was a fraudulent conspiracy, and the castle was not badly damaged, the extant remains must be due to a subsequent rebuilding. The eastern hall and chapel were still roofed (and presumably habitable) when the new walls were applied against their eastern faces, or else they would surely have been demolished to provide both space and materials for the rebuilding. The details of the towers and the arrowslits resemble Henry II's work of the 1180's, but there is no Exchequer record of Crown expenditure on building work at Framlingham, even during the known periods of royal custody. This militates against Professor A. W. Lawrence's suggestion<sup>7</sup> that the castle was rebuilt after the siege of 1216, since it remained in Crown custody for a decade. Indeed the most likely *terminus ante quem* is 1213, when King John was entertained here.<sup>8</sup> As Dr. Allen Brown pointed out,<sup>1</sup> Hugh Bigod's son remained loyal to the Crown and received much of his late father's property by 1181/2, although the earldom of Norfolk was not restored until 1189 and some lands not until 1194. There the date bracket of these remarkable defences may be left at present.

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<sup>6</sup> *Proc. Suff. Inst. Arch.*, xxxii (1971), pp. 159-161.

<sup>7</sup> *Papers of the British School at Rome*, xxxii (1964), p. 102.

<sup>8</sup> F. J. E. Raby and P. K. Baillie Reynolds, *Framlingham Castle* (H.M.S.O. 1959), p. 9.