

## THE AVRANCHES TRAVERSE AT DOVER CASTLE

By D. F. RENN, F.S.A.

TEN years ago, Mr. H. M. Colvin put forward a number of sound reasons in support of G. T. Clark's opinion that the earthworks surrounding Dover Castle were originally those of an Iron Age hill-fort.<sup>1</sup> Colvin drew attention to the overlapping entrance-gap in the earthworks, blocked by the Avranches Tower and by a wall running south from it to Penchester's Tower (Fig. 1). The Rev. C. H. Hartshorne described the Avranches Tower to the visiting members of the British Archaeological Association in 1844,<sup>2</sup> but it has since remained practically unknown. It is dealt with only briefly in the Official Guidebook,<sup>3</sup> since it is remote from the usual visitor's route and the interior is not yet open to the public. This masonry traverse (to use a modern fortification term), from the Fitzwilliam Gate to Penchester's Tower, is a remarkable piece of Angevin military engineering, in many ways unique in this country. This paper sets out to describe the traverse and to put forward arguments for its date and function.

### DESCRIPTION

Commencing at the south (or inner) end, Penchester's Tower (Fig. 2, *P*) is now reduced to a solid L-shaped bastion, pierced by a narrow passage with several right-angled turns, having two separate long arrow-slits facing along the inner scarp of the inner ditch. This ditch ends at Penchester's Tower, and is revetted all round with enormous brick escarpments. The wall running north across the end of the ditch is plain, apart from a stone string-course chamfered on its upper edge, and ends at the Avranches Tower which stands on the narrow causeway between the inner and outer ditches.

This tower (Plate I) is built of rubble with ashlar quoins and dressings, some at least of which are of Caen stone. In plan (Fig. 2, *A*) it is five sides of an octagon, the inner three being missing. Externally,

<sup>1</sup> *Antiquity*, xxxiii (1959), 125-7; also H. M. Colvin, R. Allen Brown and A. J. Taylor, *The History of the King's Works* (hereafter cited as Colvin *et al.*), ii (1963), 629-41.

<sup>2</sup> A. J. Dunkin, *A Report of the Proceedings of the British Archaeological Association, first general Meeting at Canterbury in September 1844*, 253, 304.

<sup>3</sup> R. Allen Brown, *Dover Castle* (1966), 6, 16. The passages were reopened in the 1920s, according to cuttings from *The Illustrated London News* in the National Monuments Record.

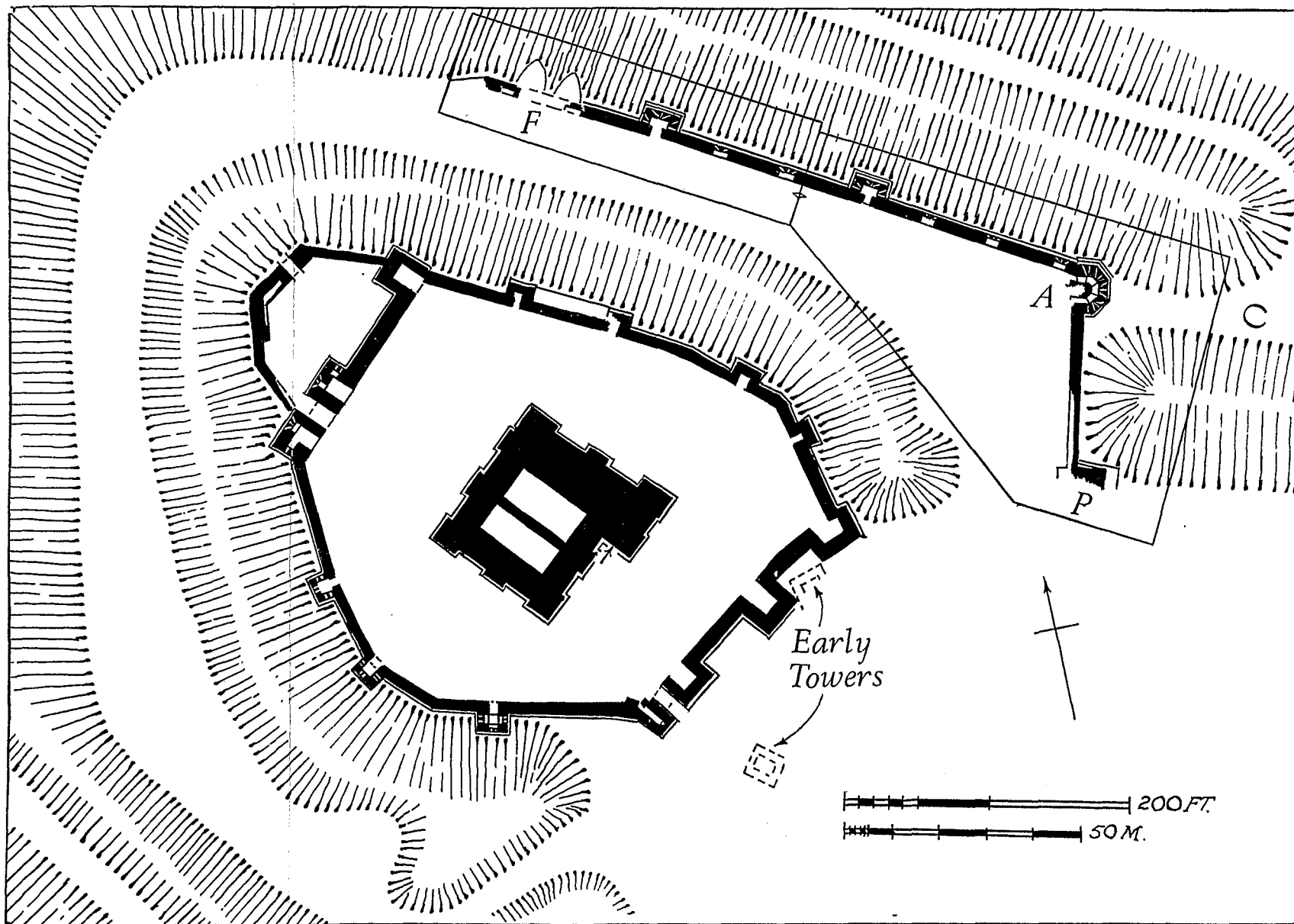


FIG. 1. The north-east Part of Dover Castle c. 1190, with the original Entrance Causeway (C) leading to the Avranches Traverse, shown in detail in Figures 2 and 3.

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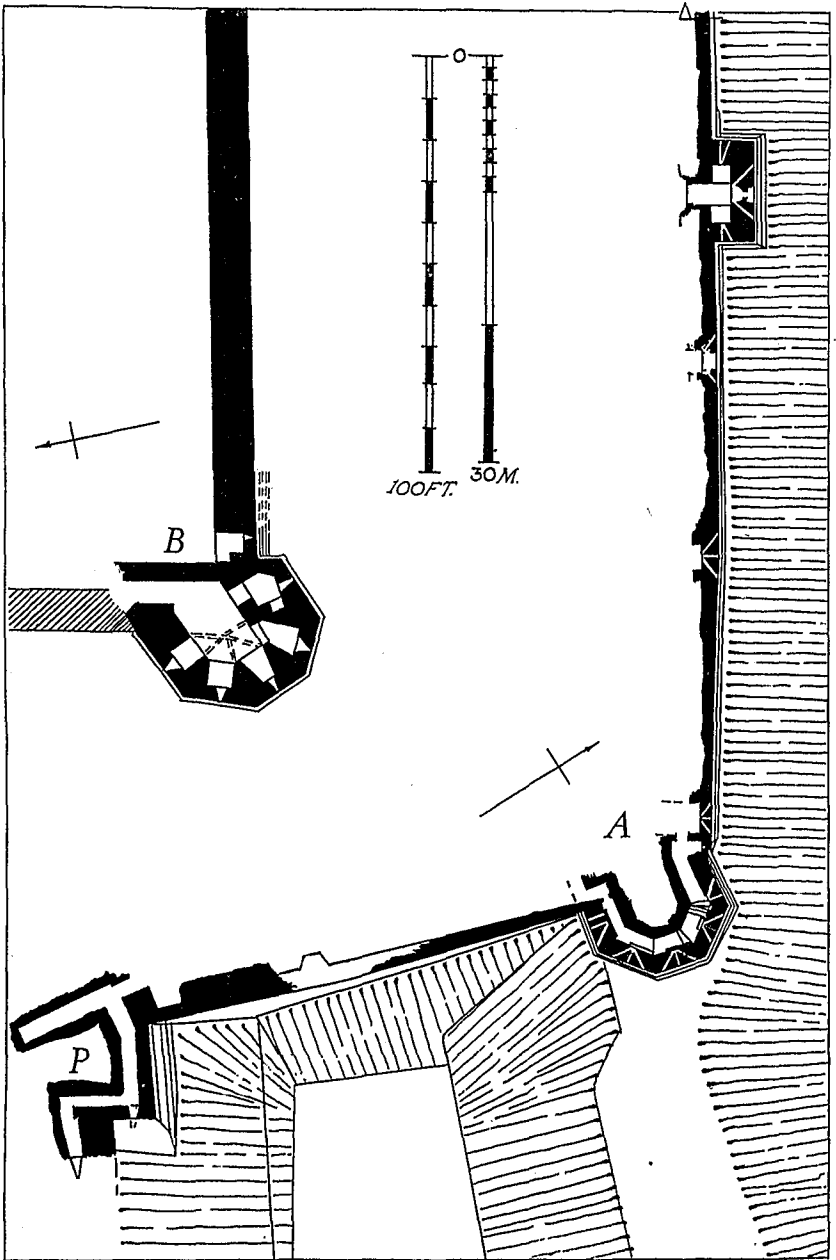


FIG. 2. The southern Part of the Traverse from Penchester's Tower (*P*) by way of the Avranches Tower (*A*). Top left is the Bell Tower, London (*B*).



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The Avranches Tower of Dover Castle from the East.

[*face p. 80*

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the projecting string-course of the wall from Penchester's Tower is continued round the Avranches Tower as far as the slight projection housing the latrine shaft, beyond which its level is continued as a chamfered offset along the wall and towers as far as the Fitzwilliam Gate. Another offset runs round the Avranches Tower at a higher level, approximately that of the cut-down wall-top on either side. At the base of the Tower is a chamfered stepped ashlar plinth which is continued along the wall beyond. There are two tiers of rectangular loops, three loops to each face: the upper ones, above the offset, are short and show signs of having been widened. The lower ones are both narrower and longer: they are stepped down from south to north, and those on the last face cut through the string-course. There are only two lower loops here and none at the upper level; beyond is a single small loop at each level, lighting the latrine and the stair above.

A brick-lined passage at ground level inside the castle leads to a barrel-vaulted stone gallery within the wall, with steps down at each bend. Each outer wall-face has three vertical slits close together, the central one at right angles to the wall face and the others usually diverging at about  $60^\circ$  on either side (Fig. 4). The first slit of all, however, is parallel to the next and both look straight at Penchester's Tower, with the blank wall between the towers less than a yard away to the right. The slits are about 18 in. high and 6 in. wide, with chamfered edges. Each slit has a horizontal lintel and parallel jambs, but the sill slopes downward and outward. A 4-in. projecting ledge, chamfered on the underside, runs under each group of slits and is continued to the left-hand end of the wall-face. The last group consists of two slits, with an angled niche to the right; beyond is a wide recess for the (blocked) latrine and another recess beyond has three slits of the normal pattern. This is the first of seven (possibly nine) similar recesses in the wall beyond the Avranches Tower itself. The passage is bricked off at this point, so that it is uncertain whether or not it continued within the wall (see pp. 85-6).

Above this passage is another vaulted gallery (Fig. 3, *A'*), with certain differences: the loops do not splay downward and they show traces of having been altered and widened externally. The vault is pointed, and there are pointed unmoulded arches opening into the interior space in which there are the remains of a stone fireplace. The floor of this passage is level, and a round-headed doorway at the northern end gives access to a spiral stair rising to a turret and probably to a wall-walk (now vanished) over the upper gallery. All the wall-tops have been cut down, and an enormous earth bank thrown up against the inner face of the wall.

The wall beyond the Avranches Tower has two projecting rectangular towers of similar masonry, with a sloping plinth in front but not at the

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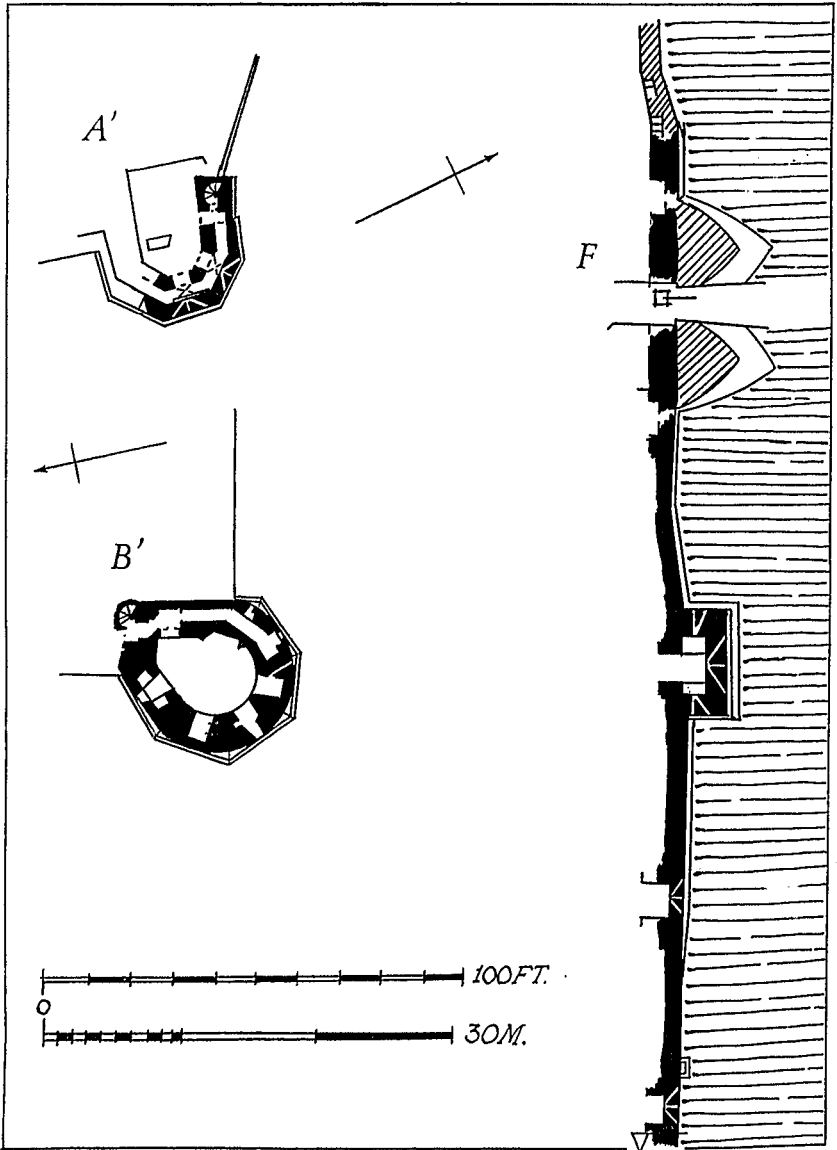


FIG. 3. The northern Part of the Traverse to the Fitzwilliam Gate (*F*). Inset are upper Floor Plans of the Avranches (*A'*) and Bell (*B'*) Towers.

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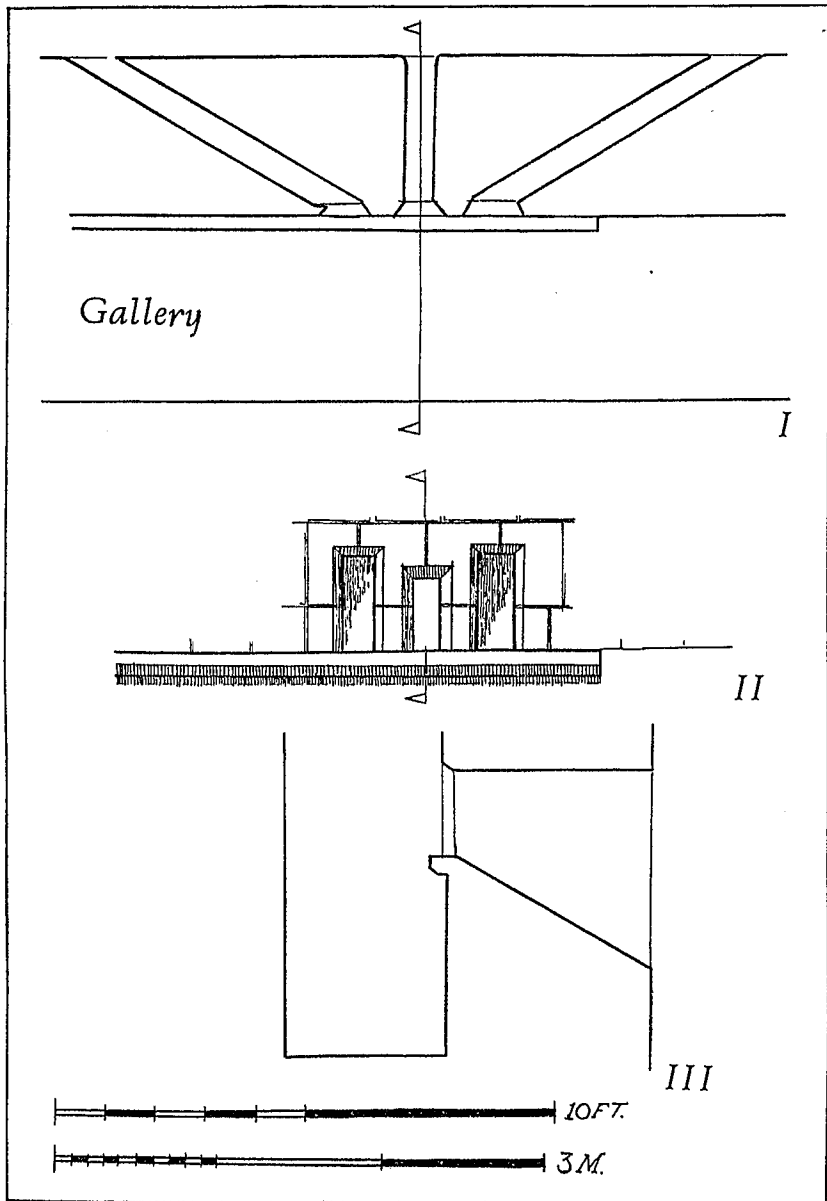


FIG. 4. Plan (I), internal Elevation (II) and Cross-section (III) of triple Slits in lower Gallery of the Avranches Tower.

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sides, and a string-course a little higher up. Triple slits of the lower gallery recess pattern face forward, while double slits look along the face of the curtain wall (a third divergent slit would merely look point-blank at the wall; such a mistake had been avoided in the lower gallery as well). The same pattern of slits can be seen in the King's Gate to the inner ward, with triple slits facing forward and double ones outward. The three towers adjoining that Gate have double slits, but these are parallel under a common lintel, and the other nine towers of the inner ward are blind. The towers on the outer curtain wall and the triple slit recesses are equally spaced: traces of two more recesses at the same spacing have been found blocked up by the towers of the Fitzwilliam Gate (Fig. 3, *F*), but the form of their slits is unknown. Beyond the Gate a break in construction is marked by a change in direction of the wall-face, accompanied by the use of a different size of rubble and by the disappearance of the chamfered offset course.

### PURPOSE

From the arrangement of at least fifty slits could have poured a withering fire on any attacker of the old entrance to the castle. The only archers' batteries below wall-walk level of comparable concentration are due to Edward I: the rank of single slits with splayed jambs in deep embrasures on either side of 'Mint Street' in the Tower of London, running north from the Bell and Byward Towers, and the complex double tier of linked embrasures and slits on each side of the Granary Tower at Caernarvon Castle. At Wolvesey Castle in Winchester there is a vaulted gallery round two sides of the top of Wymondestour, with three or four rectangular loops on each side, with splayed jambs and a semi-circular head, all in fine ashlar. The extension of this tower is dated to c. 1138, but the gallery might be later.<sup>4</sup>

Two castles have multiple slits, but these are all parallel with splayed jambs. At Framlingham (Suffolk) the curtain wall, an irregular oval in plan, has a right-angled salient to the south-east as if to protect some major building (a keep?) which either was never built or has completely vanished. The angle is capped by an open-backed tower (three sides of an octagon in plan) with a blind wall and projecting tower running north. The nearer of two hollow-backed towers to the west contained two round-headed embrasures, each with splayed jambs to a single slit, and was flanked by two round-headed embrasures on either side, each containing a pair of slits under a common lintel. Beyond the further tower the wall changes direction to the gateway and contains three round-headed embrasures with pairs of round-headed slits within. There are single slits offset below each merlon at the wall-top (and on the towers) here as well as elsewhere, but the

<sup>4</sup> *Antiq. Journ.*, xlvii (1967), 274, plate lx.



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lower parts of the other walls and towers are blind, except for the salient between the Prison Tower and the Postern Gate, guarding the earthwork Lower Court, which has  $2\frac{1}{2}$  pairs of similar slits. The walls were probably erected soon after Roger Bigod bought back his family castle in 1189.<sup>5</sup> At Carrickfergus (Co. Antrim), the square tower projecting into the sea east of the keep has three triple slits, the outer ones splayed on the inner jamb only. Those to the south are lintelled, the others have a semi-circular rear-arch and central embrasure, the outer ones being lintelled (to the north) or half-round (to the east). A date before 1214 is suggested in the *Official Guide*.<sup>6</sup>

This raises the question, why were such small and inconvenient slits used in the Avranches traverse? There is a very minimal advantage in that an attacker's arrow entering the usual slit (with tall splayed jambs) at almost any angle would fly on and perhaps strike a defender, whereas at Dover it would in all probability strike either the sill, lintel or jambs rather than penetrating further except on ricochet. But it would be the rare arrow-shot that entered the slit anyway. The restricted vertical field at Dover might be thought reasonable, since the ground beyond the counterscarp rises within a hundred yards with dead ground beyond (so limiting the upper end of the slit), while the slope of the inner scarp of the ditch limits the needs of the lower view from the slit. The usual embrasure with jambs sloping towards each other provides a good traversing field of fire (and view), particularly for a longbow held vertically. Given a tall embrasure, the bow itself could be held quite close to the outer face of the wall with corresponding manoeuvrability. In the Avranches traverse the archer would perforce have to stand back from the opening, in a narrow passage, with little room to aim and draw. With such a restricted view (albeit three views per archer's stance), snap-shooting must have been required. Now, it is physically tiring to hold a longbow at full draw for any length of time, waiting for a target to appear, and it is impossible to traverse the aim rapidly from one slit to the next, since the whole body stance has to be changed. By contrast, a crossbow would be ideally suited to the conditions in the Avranches slits. Drawn mechanically (or at least by using both hands on the bowstring), the crossbow is held tense by a trigger until required. The ledge below the slits would have formed a convenient support for the forward end of the crossbow stock, and this would have assisted rapid aiming and changing slit. There are twenty-one groups of slits (if we include those blocked by the Fitzwilliam Gate), and the *honor* of Avranches had to supply twenty-one men for castle-guard at Dover.<sup>7</sup> Thus the traditional name of the

<sup>5</sup> *P. Suffolk Inst. of Arch.*, xxv (1950), 126-48, also engraving by H. Davy in the National Monuments Record.

<sup>6</sup> Professor E. M. Jope, *Carrickfergus Castle* (1962), 10, 11.

<sup>7</sup> *Arch. Cant.*, xlix (1937), 96-107.

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Avranches Tower may preserve the actual part of the castle that the *honor* of Avranches had to guard.

### THE DATE

The crossbow has a long history, but its greater range and heavier missile weight never offset its greater complexity and slower rate of fire when compared with the simple (long)bow. It seems to have been particularly popular during the reigns of Richard I and John,<sup>8</sup> but we cannot rule out an earlier or later date for the traverse merely from this general impression. Architecturally, the stepped plinth to the exterior and the upper doorway to the stair, both of fine ashlar, argue for a twelfth- or early thirteenth-century date. The pointed arches opening off the upper gallery might be alterations of the early thirteenth century, although the passage vault is correctly groined to take them and otherwise a lower limit of *c.* 1140 could be proposed. Since the building of the Fitzwilliam Gate in 1227<sup>9</sup> blocked two embrasures, the curtain wall they pierce must have been built before then. Again, the French attack of 1216 on the new gatehouse further north, an attack made across a deep and wide ditch, shows that the original entrance causeway must have been impregnable by then, whether or not it was sealed off as well. (In parenthesis, did the loss of Normandy in 1205 interrupt the export of Caen stone?)

The history of Dover Castle in the first half of the twelfth century is something of a blank. When Robert, Earl of Gloucester, renounced his allegiance to King Stephen in the summer of 1138, his vassal, Walchelin Maminot, who was in charge of Dover, was blockaded by land and sea and forced to submit to Stephen's queen.<sup>10</sup> There is no reference to building work at Dover in the one surviving Pipe Roll of Henry I, but the continuous series of rolls from 1155 onwards does provide a picture in some detail of the works on Dover Castle and the people involved. The accounts are summarized in the appendix to this paper (pp. 90-2).

Until 1167 expenditure is petty, obviously no more than maintenance. Between then and 1174 some £500 was spent, partly on lime (and therefore presumably upon masonry) as well as on brattices and stockades of wood. The 'viewers'—or quantity surveyors—were Robert Kentish and Hugh de la Mare, supplemented by the Prior of Dover and William de Popeshall in 1171 and by Hamo de St. Remigny in 1173

<sup>8</sup> *Herts. Arch.*, forthcoming. There were 7 *balistarii* in the 1216 garrison of Framlingham (*loc. cit.* in note 5). For *balistarii* working in pairs (marksman and loader) between the heads of kneeling spearmen at Jaffa in 1192, see R. C. Smail, *Crusading Warfare* (1956), 189.

<sup>9</sup> Colvin *et al.* (*op. cit.* in note 1), ii (1963), 636.

<sup>10</sup> Ordericus Vitalis (ed. le Prévost), *Historia Ecclesiastica*, v, 112.

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and 1174; Kentish acted alone in 1170. Master Ralph,<sup>11</sup> the mason, received 20s. 'by the King's gift' in 1169 for his work at Dover and two years later was given 40s. for his services, and called 'the royal mason of Dover'. He received the same amount in 1172 for two years' work, possibly at Dover, although, since no other expenditure there is recorded, it may be for work at Chilham which immediately precedes the item. £500 was spent at Chilham between 1170 and 1175, probably upon the octagonal Keep and curtain wall.<sup>12</sup> It may have been the same Ralph *cemetarius* who was given 13s. 4d. at Winchester in 1175, when work was in progress on the castle chapel, and who received the same amount back at Dover in 1182.<sup>13</sup> Whether it was the same Ralph who was viewing royal castle-works on the Welsh Marches in 1177-79 and 1182-88, or at Warwick in 1190<sup>14</sup> is more doubtful.

After 1175 there is a hiatus of four years, and then £260 is spent on a wall around the castle and nearly as much on 'works' in the following year (1181). The keep (*turris*) is first mentioned in 1182, when Ralph appears for the last time at Dover and Maurice the Engineer (*ingeniator*), makes his *début* here.

Could Ralph have been responsible for the Avranches traverse? Its octagonal shape is similar to the keep at Chilham, and the Wolvesey gallery at Winchester bears some resemblance to those at Dover. But Chilham Keep used to have mid-wall buttresses, and neither plinth nor multiple slits; its relation to the curtain wall is tactically unsound, and not to be expected of the designer of Avranches. Again, it seems illogical to spend a considerable sum of money on masonry blocking the entrance and enclosing a fraction of the perimeter of a large castle otherwise entirely defended by earth and timber (as far as we know); indeed the accounts mention timber brattices in 1167 and 1175. The pattern of expenditure, followed by a gap of several years and a change of 'viewers' (and shortly after a change of architect) suggest that the campaign ended in 1174, and it seems likely that the 'works' were the isolated stone tower (or towers) inside the castle, excavated by Mr. S. E. Rigold, partly under the inner curtain wall.<sup>15</sup> The wall of 1180 may be that on the east side of the inner ward (Fig. 1) which has no arrow slits below parapet level (at least) unlike the traverse and the rest of the inner curtain wall. It forms the outer face of a block of domestic buildings, so it could be argued that the blank wall was deliberate, making use of the protection of an already-existing stone traverse.

<sup>11</sup> The name is printed *Rob'* in *Pipe Roll 15 Henry II*, 161, but later volumes print *Rad'*, and presumably the same man is meant.

<sup>12</sup> *Antiq. Journ.*, viii (1928), 350-3; for a pilastered polygonal turret of Angevin date at Exeter, see *Trans. Devon Assn.*, xcvi (1966), 343.

<sup>13</sup> *Pipe Roll 21 Henry II*, 199; *23 Henry II*, 150.

<sup>14</sup> Colvin *et al.* (*op. cit.* in note 1), i, 59, and *Pipe Roll 3 Richard I*, 123.

<sup>15</sup> *J.B.A.A.*, Third Series, xxx (1967), 87-121.

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In 1175 one Maurice was described as the mason of the Keep of Newcastle upon Tyne<sup>16</sup> upon which money was spent between 1171-78, the final entry referring to gates as well. From 1182-87, Maurice, the Engineer, drew a regular wage at Dover castle:

	£	s.	d.
28th March-27th September, 1182	6	4	8
1183	6	13	4
23rd April-12th December, 1184	12	8	0
21st April-29th September, 1185	7	19	0
47 days thereafter	2	7	0
226 days, 1186	11	6	0
14th April-15th November, 1187	10	16	0

In 1182 Maurice also drew £3 0s. 2d. for robes, and the payments for clothes and caps may refer to his own staff. His regular wage (it appears that he was paid for Sundays and other holidays) of £6 4s. 8d. for the building 'season' of 1182 contrasts sharply with Ralph's final 'gift' of 13s. 4d. of the same year, but either may have had other sources of income. Maurice's ten marks in 1183 again looks like 8d. a day for the 'season', but in 1184 his daily rate rose to 12d. and he worked from Easter to well beyond Michaelmas in this and the following three years, and then abruptly vanishes from the accounts.

The high rate of pay makes it clear that Maurice was the architect of the Keep at Dover, and certain similarities of detail make it very probable that he also designed the Keep of Newcastle upon Tyne. One feature of the latter is remarkable in the present connection—the plan of one angle is six sides of a dodecagon instead of the usual two sides of a square, and it is carried up above the wall-head as a turret. There are some essays at galleries within the projection.<sup>17</sup>

Lead was purchased for the Keep at Dover in 1184; this may have been for the plumbing system<sup>18</sup> rather than the roofs, although building expenditure reached its peak at Dover in the following year, when payments to the men of Dover and for the provisioning and garrisoning of the Keep suggest its virtual completion. What was left for Maurice to design in the next three years, and why did his pay rise by 50 per cent.? The roll-call of the 'viewers' gives us a clue:

1180-83	Philip de Pisingis, Walter de Esteria, Godwin fitz Anfrid.
1184	Philip de Pisingis, Walter de Esteria, William de Enemada, William fitz Helt.
1185	Philip de Pisingis, William de Enemada, Godwin Infantis, Joseph of Dover.

<sup>16</sup> *Pipe Roll 21 Henry II*, 184.

<sup>17</sup> *Arch. Ael.*, Fourth Series, ii (1926), 1-51.

<sup>18</sup> *Arch. Cant.*, xliii (1931), 167.

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- 1186-89 William de Enemada, William fitz Helt (given two marks 'for their services as keepers of the works on the *turris*' in 1188).  
1190 William de Enemada, Godwin Child, Joseph.

It appears therefore that the 'Pisingis' group handed over to Enemada and fitz Helt in 1184-85, with the Keep substantially complete but with little (if anything) of the inner curtain and traverse accomplished. In 1186, the wall (the Chancellor's Roll says *walls*) round the Keep was being paid for, and expenditure falls off rapidly but rises to a secondary peak in 1190. The casual viewers Godwin Child and Joseph of Dover only appear in 1185 and 1190—can they have been looking after the physically distant traverse works? It may be more than a coincidence that the same folio of the 1190 Pipe Roll appears the tremendous expenditure on the Tower of London—£2,881 1s. 10d., for 49 weeks' work, which probably included the Bell Tower and the wall and ditch beyond.<sup>19</sup> Now the plinth of the Bell Tower and the wall running east from it bears comparison with that at and beside the Avranches Tower, and indeed their plans are similar, although the Bell Tower has no multiple slits and only a hint of a gallery (Fig. 2, *B*; Fig. 3, *B'*). Both towers had the same function: to control a narrow causeway forming a salient entrance, with enormous ditches on either side (dry at Dover, but wet at London). They may well have been completed in the same year of crisis, 1189-90. Later expenditure at Dover was confined to repairs until 1207, but considerable sums were spent thereafter, particularly in 1212-15, presumably including the continuation of the curtain wall at least as far as the stylistically later Norfolk Towers, which must have been built by 1216 (page 86).

### CONCLUSION

The Avranches traverse was, I suggest, designed to defend as well as to block the original entrance to Dover Castle. The arrow slits were aligned and built for the use of crossbowmen, and their survival is a tribute to the skill of their designer in that they needed minimal alteration to the needs of musket and pistol in the eighteenth and nineteenth centuries. The most probable dates for the building of the traverse are between 1185 and 1190, although a beginning in 1180 cannot be ruled out.

### ACKNOWLEDGEMENTS

I am most grateful to Mr. S. E. Rigold, F.S.A., for visiting the Avranches traverse with me and for discussing this paper in draft; also to the Ministry of Public Building and Works for allowing the

<sup>19</sup> Colvin *et al.* (*op. cit.* in note 1), ii (1963), 708-10, plate 46B.

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illustrations to be based upon Crown Copyright plans and photographs, published in *The History of the King's Works* (H.M. Stationery Office, 1963).

APPENDIX

*Expenditure on Dover Castle, 1155-1216*

The first column gives the Exchequer year (to Michaelmas), the reference being to the regnal year/page(s) of the printed edition of the Pipe Roll. The usual form of the entry is 'on the works of Dover Castle' (*in operatione castelli de Doura*), and more detailed entries are abstracted in the last column, except for payments to masons and references to viewers, which have been mentioned already in the text.

Year	Reference (Henry II)	£ s. d.	Details
1155	—		
1156	—		
1157	—		
1158	—		
1159	—		
1160	6/54	4. 12. 0	Repairing the King's houses.
1161	7/62	1. 14. 3	Work on the Canterbury gate ( <i>porte Cantuar'</i> ). <sup>20</sup>
1162	8/53	6. 11. 5	Work on a turret ( <i>turrelle</i> ). <sup>21</sup>
1163	—		
1164	—		
1165	11/102	8. 4	
1166	—		
1167	13/197	1. 19. 8	For an enclosing stockade, a brattice and a kiln ( <i>pro hericio claudendo . . . et bretescha facienda . . . j. furni</i> ).
1168	14/209	60. 6. 8	
1169	15/161	37. 5. 10	Finding boats to carry lime from Gravesend to Dover.
1170	16/156	34. 7. 0	
1171	17/137	126. 2. 5	
1172	—		
1173	19/81, 89	162. 4. 1	
1174	20/6	74. 0. 1	
1175	21/213	3. 6. 8	William Buisson and Rohe- sia of Dover for their houses which were seized to make a brattice (. . . <i>ad faciendum bretesch</i> ).
1176	—		
1177	—		
1178	—		
1179	—		

<sup>20</sup> Between references to the castle and bridge of Dover.

<sup>21</sup> May be Rochester.

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Year	Reference	£ s. d.	Details
1180	26/143, 144	260. 0. 5	All on the construction of a wall around the castle ( <i>muri circa castellum</i> ).
1181	27/147, 151, 152	231. 14. 3	
1182	28/103, 150-5	823. 15. 4	One reference to the keep and castle ( <i>turris et castelli</i> ). Small amounts on timber, clothes and caps ( <i>maisremi . . . pannis et pillis</i> ).
1183	29/155, 156, 160	490. 3. 4	
1184	30/2, 129, 135, 144-51	736. 3. 2	Thirty cartloads of lead for the castle purchased and carried from (King's) Lynn to Dover. Nearly all expenditure on Keep. Timber cut and wrought in various forests for the Keep: that from Essex brought by sea.
1185	31/168, 169, 224-34	1348. 3. 4	Timber prepared for the Keep, now garrisoned ( <i>in warnisione turris de Doura ad opus militum qui custodient eam</i> ). £18 paid to the men of Dover.
1186	32/180, 181, 186-93, 205	1164. 0. 2	Timber brought by land and sea from Sussex. All expenditure on Keep or the wall(s) around it ( <i>cinguli(s) circa turrim</i> ).
1187	33/129, 205-11	681. 2. 0	All spent on Keep and castle ( <i>turris et castelli</i> ). Alan of Valoignes paid £40 for 1½ years' wages for those guarding the Keep ( <i>in custodia turris</i> ).
1188	34/202, 209	185. 9. 4	At least partly on Keep.
1189	(Richard I) 1/232	90. 0. 0	Including £40 wages to Alan of Valoignes' knights.
1190	2/4	568. 3. 0	
1191	3/145	29. 0. 0	
1192	—		
1193	—		
1194	6/242	2. 0. 0	300 oak planks ( <i>planches de quercu</i> ).
1195	—		
1196	8/281	76. 3. 0	Repairing the castle walls ( <i>reparatione muri castelli</i> ).
1197	—		
1198	—		

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Year	Reference (John)	£ s. d.	Details
1199	—		
1200	2/208-9	8. 19. 0	Includes repairs to Rochester, and timber and covering the well ( <i>cooperculo putei</i> ).
1201	3/284	30. 5. 6	Repairs to Rochester and Southampton also, repairs to gates ( <i>emendatione portarum</i> ).
1202	—		
1203	5/123-4	11. 18. 0	Pay and expenses of carpentry, the products brought from Colchester ( <i>ad eligendum mairemum . . . pro mairemo illo prosterndo et escapelando et carriando</i> ).
1204	6/175	33. 6. 8	But 100 marks according to <i>Rotuli Litterae Clausarum</i> , I, 5.
1205	—	?	Work on the castle is mentioned, <i>ibid.</i> , 42, 51.
1206	—		
1207	—	166. 13. 4	Receipt Roll E.401/3 A, m. 2d, cited by Colvin <i>et al.</i> , <i>op. cit.</i> , in note 1, ii (1963), 632 n. 6.
1208	10/97, 171	89. 8. 4	Timber, for Rochester also; wattles, hurdles ( <i>virgis et clevis</i> ) and lead for castle houses. 25s. for a robe for Walter the carpenter of Dover. <i>Rotuli Litterae Clausarum</i> , i, 106 records 100 marks sent 'to begin ( <i>incipiend</i> ) our works at Dover'.
1209	11/10	60. 0. 0	
1210	12/61	35. 8. 5	Carpentry and carriage from the forest to Bramber.
1211	—		
1212	14/12, 44	?	Carriage of timber, daily candles (?) ( <i>cere et iuniori</i> ). £200 recorded in Mise Roll ( <i>Documents Illustrative of English History . . .</i> , Record Commission (1844), 264) and work mentioned in <i>Rotuli Litterae Clausarum</i> , i, 133, 152.
1213	—		
1214	16/2, 27-8	302. 0. 0	Carriage of timber. Extensive payments in <i>ibid.</i> , 141-3 (including mention of a hall), 153, 163, 167, 204, 207-8.
1215	—	?	Work on house mentioned in <i>ibid.</i> , 191, 229.
1216	—		