NOTES ON THE DEVELOPMENT OF THE TOWER OF LONDON.[1]

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The Tower of London is set at the south-east angle of the Roman city. There is no evidence that any fortress stood on this site before the Conquest, and the position is a normal one for a castle of conquest date. Here, as at Chester, Exeter, Winchester and York, the Conqueror made a strong place within one angle of the walls of the city. Orderic Vitalis tells us that he built two castles in London, one at the east and one at the west; the latter was that afterwards known as Baynard's castle, and need not detain us now.

As to the extent of the Conqueror's fortress, the line of the Roman wall gives us its eastern boundary, and with practical certainty its southern boundary. The evidence for a Roman wall on the river front of the city, though it has been disputed, is strong, and an argument may be drawn from the Tower itself, as pointed out to me by Mr. Clapham. The distances between the towers on the south front, the Lanthorn, Wakefield, and Bell Towers, are practically the same as those between the bastions on the Roman wall where it still exists, the suggestion being that the position of these towers was determined by that of the Roman bastions. It remains to suggest a line for the north and west boundaries of William's castle. One may presume that it consisted, besides the Great Tower which remains to-day, of two courts, an outer and an inner. The inner was most probably the area between the Great Tower and the city wall to the south of it; the outer is perhaps represented by the space inclosed by the walls and towers from the Bowyer to the Bell, and thence to the Wakefield Tower. The line from the Bowyer to the Bell Tower was doubtless defended by a palisaded bank and a ditch. The inner

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court at any rate must have contained some permanent buildings, that were to develop later into the king's houses. a hall, kitchen, and living rooms, like the contemporary or even earlier buildings at Richmond in Yorkshire. But the great tower was the principal building, as it has always been, so dominating the whole fortress that we have never had a Castle in London, but always only a Tower. It will be noticed from the plan facing page 220 that it is not set parallel to either of its enclosing walls on the east and south; its distance from the east wall may be connected with the former existence of an earthen bank against this wall, like that at Silchester, but that is conjecture only, and we must be content merely to note the fact.

Another question which suggests itself is, whether there was ever a mound here, after the ordinary fashion of Conquest castles. Probably not; but if there was, the Tower must soon have taken its place. The point is of interest in connexion with the date at which the work of building was here begun. We know that Gundulf was in charge of the work, from an entry in Registrum Roffense, which is as follows: "While the said Gundulf by command of king William the Great was overseeing the work of the Great Tower of London, staying in the house of Eadmer Anhaende, citizen of London."

This does not help us to the date of beginning, except that it must be 1087 or earlier. In 1091 the Anglo-Saxon Chronicle mentions the building of a stone wall round the Tower, and according to Fitzstephen the Tower was shaken by a tempest of wind in the same year. It would be hard to imagine any building less likely to be shaken by wind, and some have seen in this record an inference that it was then unfinished, and therefore more vulnerable to attacks by the elements. However this may be, it was clearly finished by 1100, when Ralph Flambard was imprisoned in it. It is difficult to draw an argument from its details, but comparing those of St. John's chapel with the chapel in the castle of Durham, built about 1072, or the work at Richmond, which should be of much the same date, the London work seems to me of more advanced style.

With regard to the stone wall round the Tower, built

in 1091, it is interesting to compare its suggested extent with that of Rochester, which we know to be a work of Gundulf's: I owe this comparison to Mr. Sands. Rochester wall is 265 yards long; the Tower wall is 216 yards from the Bowyer to the Bell Tower. Indeed the resemblance in position between Rochester castle, in an angle of the Roman town wall, and the Tower, is very considerable.

I must now take up the story of the growth of the buildings. In the only surviving pipe roll of Henry I's time is an item of £17 for the work of the Tower of London. Probably this refers to the king's houses in the inner court, but no work of this date is now to be seen, and no further records are available. Of Stephen's reign there is an interesting record, dated 1141, but rather topographical than architectural, in the appointment of Geoffrey de Mandeville, as constable of the Tower, to the charge of the Tower together with the little castle (castellum) which belonged to Ravenger. What was Ravenger's castle? I fear I can give no confident answer.

On the pipe rolls of Henry II there is shown in all a sum of £248 spent on the Tower, but the only piece of work which I can think of as possibly of his time is the ruin of the Wardrobe Tower, east of the White Tower. That this is in any case probably not later than his time is suggested by the development to which I shall refer.

Buildings mentioned in Henry II's time are the kitchen, the gateway of the gaol, and the chapel, which was to have sheet lead put on its roof, as a repair. In 1174, the king's houses within the bailey of the Tower are mentioned, and the Great Tower came in for some repair.

Whether this chapel was St. John's or St. Peter's may be argued: but it is always well to remember that *reparacio* or repair in mediaeval Latin often means fitting up, for a new building, instead of refitting of an old one. I must, however, leave St. Peter's chapel and its possible date for the moment.

We now come to a very important time in the Tower's history, the reign of Richard I. In the pipe roll for his second year is the enormous sum of £2,881 for the works of the Tower of London: something like £60,000 of our money. What is there to show for it? As far as I know

there is not a single detail of his time now in the Tower; but we may get some sidelights on the matter. Richard was a great castle-builder, and the art of fortification took great steps in his day. The mount and bailey fortresses of the Conquest began to enter on the development which resulted in the concentric plan, which reached its perfection under Edward I. Richard entrusted the work at the Tower to his chancellor, William Longchamp, and we are told that he made a wide and deep ditch round his new works, which was to be filled with water from the Thames; but perhaps because the levels were wrong, or because he provided no sluices for keeping up the water at low tide, the work was a failure. This record points to the fact that before Richard's time there was at most only a dry ditch round the Tower.

Again, during the course of the work, the chancellor seized some land belonging to the priory of the Holy Trinity in East Smithfield, and removed a wall belonging to St. Katherine's hospital. As both these places were to the east of the Tower, outside the Roman wall and ditch, it is clear that Longchamp was doing something east of the wall, and it seems probable that what he did was to add the eastern part of the present inner ring of fortification from the Bowyer to the Lanthorn Tower, breaking through the city wall, and carrying his ditch right round from the Bell Tower to the Salt Tower.

It is one of the great problems in the history of the Tower that there really seems nothing to show for the vast expenses of this time, for the masonry work cannot but have been considerable. Entries show that palisades, piles, wattle hurdles, etc. were freely used, and in 1194 a palisade furnished with mangonels was made "circa turrim Londoniensem": this rather suggests an outwork beyond the ditch, unless we may suppose it to be wooden fighting tops to the line of fortifications.

John spent in all about £420 on the Tower, but very little light is thrown on the matter by the entries. He repaired the king's houses, as usual, deepened the ditch on the north towards the city (which rather suggests that inaccurate levels were the cause of Longchamp's failure with the ditch) and built a mud wall round the Tower liberties. The most interesting item of his time is, however, a mention

in 1210 of the church of St. Peter at the Tower, the earliest actual reference to it.

For the long reign of Henry III there is abundant documentary evidence, and fortunately also a great deal of work of his time remains. Doubtless the best of his work was given to the king's houses, of which nothing is left, but he also paid great attention to the fortifications. He rebuilt the great hall, finishing it about 1236, when tables were being made for the great dais there, and did much work on the queen's rooms and his own, but as these buildings do not affect the general history of the Tower, and do not now exist, a mere mention must here suffice. In 1221 he built a new tower adjoining the hall, having a roof of lead and a chapel or oratory. This must certainly be the Wakefield Tower, where the crown jewels are now kept. Its lower story is remarkably perfect to-day, with narrow window-slits in round-headed recesses, the tooling of the stone being characteristic of its date. The brick vault of this chamber is quite modern, and succeeds a wooden post which carried the main beam of the upper floor. In this upper room the chapel plan is clear, though much of the stonework has been renewed.

In 1240 Master John le Fossur of Flanders is engaged to work at the Tower, doubtless on the foundation of the new gate the king was then building on the south front of the Tower. The Tower wharf (kaia regis) had been in existence some time before this, as it is mentioned in 1228, and may have formed part of Longchamp's work. It seems that Henry was now planning a fine entrance from the river front to the bailey, which should at the same time command the approach along the river front from the city. Like all additions to the Tower, the work was unpopular with the citizens, who saw in it only a further strengthening of the royal power of oppressing the city, and when, owing doubtless to bad foundations, the gate fell in 1240 and again in 1241, the Londoners felt that their cause was approved, and it was shortly reported that St. Thomas of Canterbury had been seen to thrust down the new building with his staff. The tale goes that Henry, in the third building of his gate, had a small oratory of St. Thomas made in the south-west corner, and the gate then stood without further difficulty.

The present St. Thomas's Tower, otherwise known as Traitors' Gate, was much repaired in 1532, but preserves early fourteenth-century work in its main walls; including the corner turrets, and the upper story of the south-east turret, now alas a scullery, has clearly been an oratory, though it must be at least a century after Henry's time. Whatever may be the real truth of the tale, the fact emerges that Henry was then adding to the fortifications of the Tower, and an examination of the towers all round the walls shows much work of his time. The Bell, Devereux, and Bowyer Towers have vaulted lower stories of this date, and the oldest details which remain in the Martin, Broad Arrow and Salt Towers seem to be of the same period.

In 1241 Henry opened a stone quarry for the Tower works on land lately belonging to William, earl of Warrenne, and in 1241 also occurs that well-known entry of the whitewashing of the whole of the Great Tower and of St. John's chapel, and the addition of lead rainwater pipes from the top to the ground, to prevent the water spoiling the whiteness. It is also recorded that all the old wall round the Tower was whitewashed at the same time, a statement which suggests either that the Roman city wall was still standing, at least in part, after Richard's additions, or else that Henry had built his towers, leaving Richard's curtain walls between them. If the latter solution is true, all traces of Richard's work have long since perished in later repairs. The second line of fortification, that along the river front, is also at least of Henry's time, as the work in the Well Tower proves, though both the Cradle and Byward Towers are of later date.

In 1263 two posterns were made for the use of the palace in the south-east part of the Tower, one probably in the wall which formerly joined the Salt and Well Towers, perhaps the south postern through which, in 1267, the besieged papal legate, cardinal Ottobon, was rescued by the king from his besiegers, and the other somewhere on the river front east of St. Thomas's Tower.

The last great period of building falls within the reign of Edward I, and during that time, as I read it, the general plan of the Tower, as it has come down to us, was developed.

The entries of money for the works of the Tower occur

regularly, and it is evident that repairs were continuous, but the principal work seems to have been the making of the existing great ditch, which spread over twelve years, the clay being regularly sold to the tile makers of East Smithfield. In 1299 is an entry recording the clearing away from the land of the abbot of Lilleshall of the earth piled upon it when the king caused the ditch of the Tower to be made, and in 1291 an annual payment of five marks is settled on St. Katherine's hospital for damage sustained by the ditch made by the king round the Tower.

It seems, therefore, that until Edward's time the ditch came up to the line of Richard's defences, but now, in order to enlarge the fortified space, a second line of walls was made surrounding these, and occupying part of the area of the ditch. The ditch was therefore widened outwards, and this entailed the rearrangement of the eastern and western approaches to the Tower along the Thames. The Byward and Middle Tower are clearly works of this date, as their vaulted ground stories testify, and the Lion Tower and gate, with the ditch carried round the former, completed the new defences on the west. At the east the Iron Gate, with the Devilin and Galleyman Towers, protected the newly lengthened approach from the country. In the last year of Edward's reign the accounts of the constable, Ralph de Sandwich, were audited. He had spent during his term of office much money on repairs, the amendment of the walls, houses, engines, barges and bridges, and on the construction of a new chapel within the Tower; this was the rebuilding of St. Peter's chapel.

The two bulwarks or mounts, the Legge and Brass mounts, at the north-west and north-east angles of the outer line of fortification, show now no details which can be older than Henry VIII's repairs, but in some form or other they probably existed from Edward I's time.

This closes what may be called the constructional period; for the future new works are small, and repair and upkeep of the buildings become the order of the day. In 1326 Edward II ordered a survey to be made, showing what repairs were needed, but there is no evidence that this was actually done till 1336. Of this year a survey of dilapidations exists, divided into categories of stone-

work, timber, lead, tiles, glass and iron. Each section begins with the *alta turris*, which must be the Great Tower, and goes on to the king's houses, mentioning the king's and queen's chapels, the great hall and chambers adjoining, the constable's hall, chambers and stables, etc. The inner and outer gates are mentioned, and of towers le Blaunche tour, which had two turrets adjoining it, and is clearly distinct from the *alta turris* or Great Tower; the Round Tower, which might be either the Wakefield, Lanthorn or Salt Towers; Corandes tour, named perhaps from Nicholas Corand who lived in the Tower and helped to draw up this survey; a turret called the Moneye Tower, and four turrets towards St. Katherine's hospital, i.e. at the south-east. A turret called le Wayte is mentioned, also the Watergate, or St. Thomas's Tower, and the gate towards St. Katherine's hospital next the king's chamber in the outer ward. This was probably the chamber in the Lanthorn Tower, elsewhere referred to. The ward of the mint is also mentioned, and the houses in it.

The Tower wharf was also in need of repair from Petty Wales as far as the small postern, a distance of 28 perches.

In order not to spin out this story more than necessary it may be well to mention here the three buildings now standing which belong to the latter part of the fourteenth century, after the date of this survey. They are the Cradle Tower, or palace postern, opening to a bridge on to the quay: its details show such a correspondence with the work of the cloister of St. George's chapel at Windsor, built in 1353, that its date must be about the same. The Bloody Tower Gate is perhaps of Richard II's time, taking the place of an older gate, and the postern of the Byward Gate is about contemporary.

I must pass over any mention of fifteenth-century work, which is in any case slight, and come to the sixteenth century, when the detailed survey of 1532, and the series of drawings beginning with Wyneguarde's about 1550, make it possible to be precise about the topography of the Tower. The repairs of 1532 were most thorough, and must have practically remodelled the appearance of the fortress, reducing it to something like uniformity. New battlements were everywhere put on, the towers and walls were covered with roughcast, and thorough repairs

in Caen stone and brick were made, to be seen to-day in many places, as for example in the Beauchamp Tower. St. Thomas's Tower, as far as regards its timber work, was rebuilt, and the great watergate arch, 61 feet in span, the long arch as the accounts call it, was strengthened at both ends by stone pillars 17 feet in compass and over 13 feet high.