

THE REORGANIZATION OF THE DEFENCES OF ROMANO-BRITISH TOWNS IN THE FOURTH CENTURY

By PHILIP CORDER

In 1930 the late R. G. Collingwood in *The Archaeology of Roman Britain* wrote :

'At present no explorations have been made with the express purpose of discovering the date of any town walls in this country, except at Colchester; and consequently almost everything that is said on this subject is tentative'.¹

When this was written the excavations at Verulamium had just begun, and the thorough examination of the southern defences of Caerwent had not yet been published.

During the next decade archaeological evidence accumulated so slowly that historians were free to propound theories based on what little is known from classical writers of events in Britain. The Inventories of the Royal Commission on Historical Monuments which dealt with the walls of Colchester² and London³ had already, with due caution, attributed them to the period following the suppression of the Boudiccan revolt. By 1937 in the second edition of *Roman Britain and the English Settlements* categorical statements were made concerning the date of the walls of Colchester, London and Verulamium, all of which we now know to be untrue.⁴ The excavations at Caerwent, Silchester and Aldborough led to the theory that many British towns did not receive their walls until the reign of Severus, and it has even been asserted that all town walls are of 4th-century date. Thus the pendulum of fashion has swung to and fro, while the archaeological evidence has slowly accumulated and still more slowly been published.

Now, a quarter of a century after Collingwood's cautious statement, it is possible to examine evidence, published, and, alas, unpublished, from London, Verulamium, Colchester, Lincoln, Gloucester, Silchester, Caerwent, Exeter, Leicester, Winchester, Canterbury, Cirencester, Caistor-by-Norwich, Dorchester (Oxfordshire), Dorchester (Dorset), Alchester, Chichester, Towcester, Mancetter, Aldborough, Brough, and Great Casterton. Though this is a formidable list, the evidence is by no means all of equal value: some careful excavations have proved inconclusive, in others the actual evidence is too slight to bear the interpretation put upon it, much of it is too recent to have been fully studied and published, much has remained so long unpublished as to have been almost forgotten, seldom has sufficient digging been done to provide a broad enough basis for a safe conclusion. It would be invidious to pursue this matter further. It is clear, however, that difficulties lie

¹ Collingwood, *The Archaeology of Roman Britain* (1930), 96.

² R.C.H.M. *North-East Essex* (1922), xxvi.

³ R.C.H.M. *Roman London* (1928), 79.

⁴ Collingwood and Myres, *Roman Britain and the English Settlements* (1936), 195.

in the way of anyone who would attempt to answer the question : when were the towns of Britain walled in stone? It is time nevertheless that the attempt should be made.

First I would like to say a word about the difficulties that will be encountered in interpreting the archaeological evidence. The method employed to date a town wall must always be to cut a relatively narrow trench across the defences. Datable finds may be recovered from :

- (a) under the wall footings—an area of seldom more than 28 sq. ft.
- (b) under the associated rampart bank.

In both instances finds will only occur where there has been occupation of the site predating the defences.

(c) from the body of the rampart bank. This last is the most fruitful, but possibly the most misleading, source of evidence, for it must be borne in mind that ramparts may be formed :

- (i) of ditch upcast, which is usually sterile.
- (ii) of material brought from elsewhere, or scraped up from the interior behind the wall. In any of these the chance that a datable object had been dropped during the construction of the wall is small. It is seldom that such good fortune attends the excavator as was ours at Great Casterton, where, in our first section, the rampart sealed abundant evidence of much earlier occupation, but in addition was lucky enough to cross a later hearth with a scatter of potsherds lying around it, all securely sealed by 7 ft. of superimposed rampart. In consequence the tentative conclusions then drawn have hardly required modification as the result of a dozen subsequent sections.

Usually many sections will be required before sufficient evidence can be accumulated to form the basis of a safe conclusion. Too often, owing either to paucity of evidence or to insufficient digging, the interpretation of the evidence has been influenced by prevailing fashion or has relied too much on the preconceived notions of the ancient historian. Moreover, for the defences of many towns we have no reliable evidence at all, while the very sites of others remain unidentified. In a note to his Sanveygate Report in 1953,¹ Mr. R. G. Goodchild stated the position succinctly :

'The dating of Roman city walls in Britain as established by stratigraphic excavation normally varies between the reigns of Hadrian (A.D. 117-138) and Septimius Severus (A.D. 193-211). It has still to be decided whether this is an accident of history or a consequence of divergent archaeological interpretation.'

So little is to be learnt from written history about Roman Britain that it is time to assert the pre-eminence of purely archaeological evidence in a matter of this kind. The 'tools', so to speak, of the excavator have been much sharpened in the last 25 years, for improved technique in excavation has been accompanied by greater precision in the dating

¹ *Trans. Leics. Arch. Soc.*, XXIX (1953), 10, f.n.

of pottery. All this is perhaps obvious and commonplace, but no harm can result from a reminder of the pitfalls in our evidence, and a plea for thoroughness and independence of outlook in its interpretation.

In reviewing the archaeological evidence for the erection of town walls in Britain, I have deliberately rejected the analogy of military sites, and to a large extent that of the semi-military *coloniae*, for their defences were dictated by the requirements of frontier strategy. At the outset it could not be assumed that all town walls would prove to be contemporary, for towns of different types might be supposed to have had different histories. Moreover wall-building was an expensive undertaking, and, although certainly undertaken only at the dictates of government and with official assistance, must have reflected economic conditions. A great municipal city like Verulamium might be supposed to take precedence over a tribal centre like Silchester, half its size: or an important early foundation like Canterbury in the south-east might be expected to have achieved Romanization long in advance of an obscure northern *vicus* like Brough-Petuarium. Moreover special cases must also be allowed for: Corbridge reflects its special relationship with the Wall: Great Chesterford is our one certain Constantinian foundation.¹

It is not intended in this paper to go into the evidence in detail, my purpose being to establish, if possible, the date of the first stone defences which were so drastically reorganized in the 4th century. Bearing in mind all the difficulties that I have indicated, and the unsatisfactory nature of much of the evidence, I have come to the conclusion that there is no evidence for any date earlier than the end of the reign of Hadrian for any town walls in Britain. I refer only to masonry walls and not such earthworks as those that surround Silchester and the earlier Verulamium.

Dorchester (Oxon.)² and Alchester³ have both been assigned to c. A.D. 125, but on evidence that is neither sufficient nor conclusive. The South-East Gate of Verulamium was said to date 'somewhere between A.D. 125 and 150'.⁴ In the definitive report of 1936 the defences as a whole are dated 'not later than the second quarter of the second century A.D.'⁵ This date we now know to be much too early, for a section across the rampart bank, cut by Mr. S. S. Frere in 1955, produced from the body of the rampart a rather worn coin of Pius of A.D. 155 and much pottery, among which were a few sherds of barbotined Castor ware of a type that has never been recorded in site-finds earlier than c. A.D. 170-180. On this evidence therefore the defences, like those of many other British towns, must be dated to the last quarter of the 2nd century

¹ *J.R.S.*, XL (1950), 106-7, fig. 23.

² *V.C.H. Oxfordshire* I (1939), 296; *Oxoniensia* II, 41 ff.

³ *V.C.H. Oxfordshire* I, 287; *Antiq. Journ.* IX (1929), 105 ff.

⁴ *J.R.S.*, XXI (1931), 227.

⁵ *Verulamium: A Belgic and two Roman cities* (Soc. Ant. Research Rep. No. XI, 1936), 75.

at the earliest. At Cirencester, unpublished excavations undertaken by the Ministry of Works in 1952 established the date of the bank and wall as 'not earlier than the late 2nd century'.¹ A date about A.D. 150 has been assigned to the walls of Wroxeter,² but much more excavation is needed there before this can be accepted as established. The city wall of London has now been dated by Mr. Grimes, on the evidence of a coin of Aelius embedded in its mortar, as 'after, if not much after, A.D. 140'.³ If the large towns like these did not complete their walls until the Antonine period, it is extremely improbable that the small towns were walled earlier. A late 2nd-century date may now, I believe, be assigned, with more or less confidence, to the walls of Exeter,⁴ Leicester,⁵ Canterbury,⁶ Chichester,⁷ Winchester,⁸ Towcester,⁹ Mancetter,¹⁰ Aldborough,¹¹ Brough¹² and Great Casterton.¹³ Those of Caerwent¹⁴ and Silchester¹⁵ have been dated as late as A.D. 200, as have those of Caistor-by-Norwich,¹⁶ on evidence not yet published.

In short, it may now be taken as an established fact that no town in Britain received stone defences before the middle of the 2nd century, and by the end of that century few, however small, were without such defences.

It has long been recognized that the lay-out of the streets of large towns in regular *insulae*, and the erection of public buildings such as *fora*, baths, temples and theatres had taken place much earlier.¹⁷ The addition of defences and the erection of such monumental gateways as those of Verulamium have, in consequence, been interpreted as the culmination of the process of Romanization, and attributed to civic pride rather than necessity. The immense cost of the undertaking both in labour and material, and the fact that the remotest *vici* like

¹ I am indebted to Mr. G. C. Dunning, F.S.A., for permitting me to read the report of Miss Rennie, who supervised the excavation; and for information from Miss Grace Simpson, who examined the stratified Samian from the rampart bank.

² *Arch.* vol. 88 (1938), 179.

³ *J.R.S.*, XLI (1951), 134. At a meeting of the Society of Antiquaries on March 22nd, 1956, an account was given of a section of the Roman defences dug in 1954 by R. Gilyard-Beer, F.S.A., of the Inspectorate of Ancient Monuments, to the east of the White Tower in the Tower of London. On pottery evidence the bank was dated to the late 2nd century. It is, however, known from other sections of the London defences that the rampart and stone wall are of one period. This important evidence, which has remained unpublished, points to a late 2nd century date for the walls of Roman London.

⁴ Fox, *Roman Exeter* (1952), 21.

⁵ *Trans. Leics. Arch. Soc.*, XXIX (1953), 10.

⁶ *J.R.S.*, XXXIX (1949), 111.

⁷ *J.R.S.*, XLIII (1953), 125.

⁸ *J.R.S.*, XLII (1952), 100.

⁹ I am indebted to Mr. John Alexander, who cut a section across the defences in 1954, for allowing me to examine the stratified pottery.

¹⁰ Information from Mr. Graham Webster. Pottery from a pipe-line trench across the site was recovered by Mr. Gathercole.

¹¹ Full report unpublished. Summaries in *J.R.S.*, XXV (1935), 204; XXVI (1936), 244; XXVIII (1938), 178; XXIX (1940), 204. The statements here made are the outcome of correspondence with the excavators, Mr. J. N. L. Myres, F.S.A., and Dr. K. A. Steer, F.S.A.

¹² Corder and Richmond, 'Petuaria' in *J.B.A.A.*, 3rd series, VII (1942), 15.

¹³ *The Roman Town and Villa at Great Casterton, Rutland. Second Interim Report* (1954), 3, 7.

¹⁴ *Arch.* 80 (1930), 274-6.

¹⁵ *Arch.* 92 (1947), 134, 143.

¹⁶ *Arch. Journ.* CVI (1949), 64; *J.R.S.*, XXV (1935), 213.

¹⁷ The discovery of an Agricolan inscription from the basilica at Verulamium in 1955 provides welcome confirmation of this.

Brough-Petuaria were also walled in stone, makes this explanation of the late date of town defences subject to question.

It has recently been fashionable to ascribe this widespread building of town walls to Severus, but this seems to me an unrealistic interpretation of the evidence, and to underestimate the enormous task of reconstruction that had immediately to be undertaken by Severus in the military zone to repair the damage to the frontier defences. As the most recent writer on the subject has said :

'Almost every excavated fort between York and the North shows traces of destruction at this time, and the walls of York itself had to be rebuilt from their foundations'.

In buying off the northern raiders, 'time was thus gained for the reconstruction of the base at York and of the wasted forts, hardly less than thirty in number, from Hadrian's wall southwards'.¹

Such a programme of rebuilding, involving a drain on the man-power of the whole province, makes it unthinkable that practically all the towns of Britain could have been walled afresh during the same period.

It is remarkable that, so far as the meagre evidence goes, we know of no widespread destruction in the towns contemporary with that which overtook the military frontier at the end of the 2nd century. It is here suggested that the reason is that the towns were already walled and well able to protect themselves from the hordes who smashed up the undefended frontier forts. Can we go a step further and assign a closer date to the walls of British towns? I think we can. From the moment in A.D. 193 when Septimius Severus recognized the governor of Britain, Clodius Albinus, as Caesar, in order to gain time in which to crush other claimants to the imperial throne, Albinus must have begun preparations for the civil war that he saw to be inevitable. Britain was his province, he could count on the legions of Britain to support him, and to Britain he planned to return, whether his gamble proved successful or not. He must have known that to withdraw the garrison of Britain to fight Severus would leave the frontier inadequately held. It became essential for the towns to be put in a state to defend themselves. It seems probable therefore that the majority of town walls belong to the years A.D. 194-197.² Pottery evidence, though pointing in this direction, is hardly yet precise enough to constitute proof: the suggestion is here put forward as a working hypothesis until such time as the fortunate discovery of a defaced building inscription establishes it as a fact.

In general these late 2nd-century walls, as at Silchester for example, were without projecting towers. The great drum towers that flank

¹ Richmond, *Roman Britain* (1955), 57.

² I owe this interpretation of the archaeological evidence to many discussions of the problem with Mr. Graham Webster, F.S.A., and Mr. John Gillam, F.S.A. At Great Casterton, as the result of extensive trenching over a number of years, many sherds have been recovered from beneath the wall footings and the

rampart. Among these there is no 4th-century pottery, and none that need be assigned to the Severan period. A very few sherds only, notably some chips of barbotined Castor ware, point to a date late in the 2nd century. Nowhere else in Britain, except Caerwent, has a larger body of stratified evidence been collected for dating the defences of a British town.

the main London and Chester gates at Verulamium, where angle-towers and interval-bastions also appear to be the rule, seem to be quite exceptional in Britain, as are the alternating rectangular and U-shaped towers closely spaced on the walls of Caistor-by-Norwich, which are said to be contemporary with them.¹

During the 3rd century the defences of some towns were neglected. One of the interval towers at Verulamium had fallen into complete ruin by A.D. 273.² The guard-rooms of the main south gate at Caistor-by-Norwich soon became unusable through the tipping of rubbish across their doorways, and both were abandoned and filled in before A.D. 300.³ Indeed no evidence has yet come to light of any repair or alteration to the walls of British towns throughout the century following their erection. Some, like Verulamium and Silchester, though doubtless repaired, may never have been remodelled.⁴

At other towns, however, there was drastic reorganization. At London, Caerwent, Chichester, Aldborough, Brough and Great Casterton this takes the form of added bastions projecting at intervals from the face of the wall, or situated at the angles where it changes direction (fig. 1). At most of these the addition of bastions carried with it a modification of the ditch system. Recent air photography has indicated that this list is far from complete. It is the nature and date of this reorganization that is the main theme of this paper.

Late in the 3rd century—the date is not yet known with precision—a new system of coastal defence was inaugurated. A series of forts, of a novel kind, clearly designed for co-operation with naval patrols, was sited on harbours along the coast.⁵ Architecturally these 'Saxon Shore' forts, as we have come to call them, were characterized by very high thick walls, provided with projecting bastions of widely different forms, on some of which, e.g. Burgh Castle, are still to be seen the emplacements for swivelling spring-guns, known as *ballistae*.⁶ It was certainly the use of artillery that dictated the new type of fortification. Later in the 4th century, as I hope to show, it was the military engineers versed in this new type of static defence who were called upon to supervise the reorganization of town defences. Let us now examine the evidence for the form and the date of this reorganization.

Caerwent—Venta Silurum (fig. 1)

No detailed description need be given of the series of bastions added to the walls of Caerwent, for its southern defences are better known

¹ *Arch. Journ.* CVI (1951), 64.

² *Verulamium*, 62.

³ *loc. cit.*

⁴ Since this was written Mr. G. C. Boon, F.S.A. has shown me a copy of a plan in Aubrey's *Monumenta Britannica*, showing a circular angle bastion at Silchester, near the N. Gate, which he hopes shortly to identify by excavation. If this proves to be a later addition to the late 2nd-century walls, there will be a strong case for the

re-examination of the bastions at Verulamium and Caistor-by-Norwich.

⁵ The best general account of these forts is still Mothersole, *The Saxon Shore* (1924). For constructional details and dating evidence, see Bushe-Fox, 'Some notes on Roman Coast Defences' in *J.R.S.* XXII (1932), 60 ff.

⁶ Morris, 'The Saxon Shore Fort at Burgh Castle', *Proc. Suffolk Inst. of Arch.*, vol. 24 (1947), fig. 3, p. 106.

than those of any Roman town in Britain. They were carefully excavated thirty years ago by the late Dr. V. E. Nash-Williams and were fully published then.¹ Recently a detailed publication of the numismatic evidence has followed.² Until 1954 they remained the only certainly dated series of 4th-century town bastions known in this country.

ROMAN TOWN BASTIONS

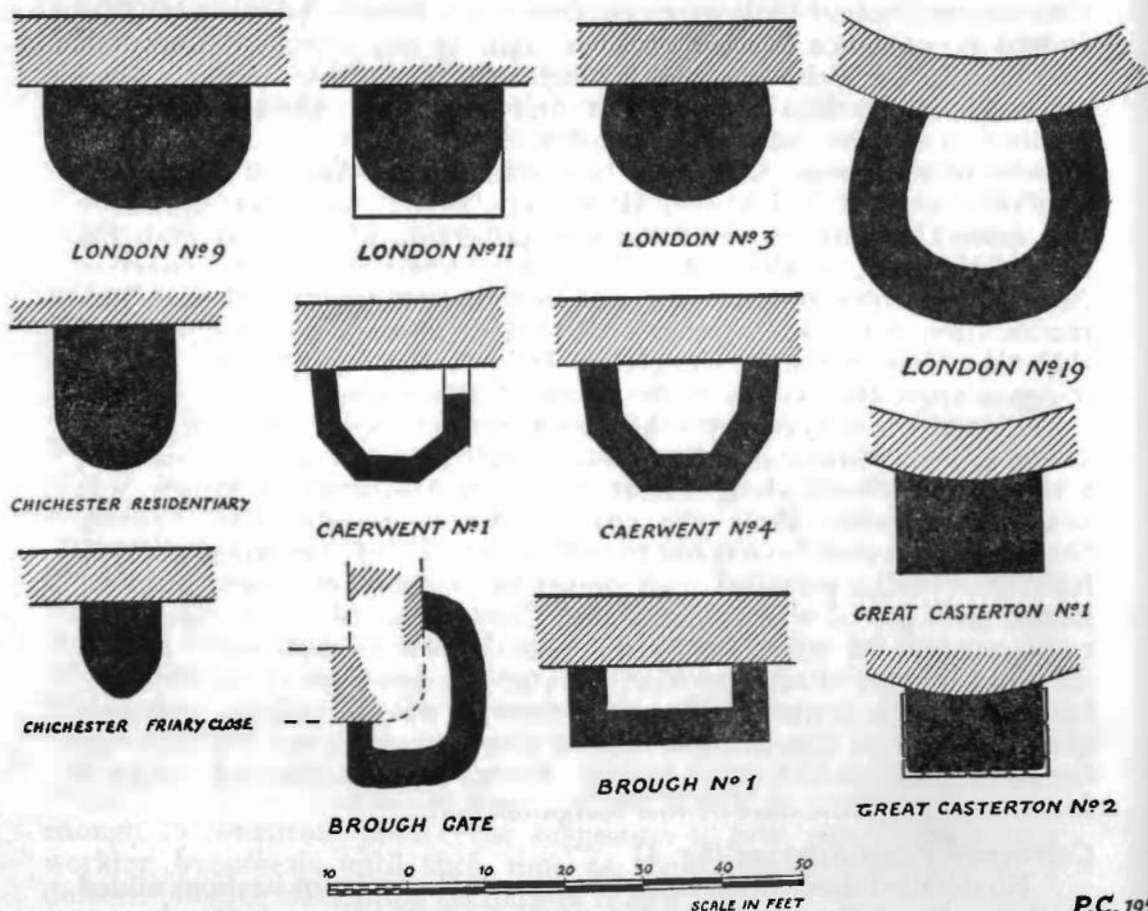


Fig. 1. Roman Town Bastions in Britain

Briefly, then, these bastions are six in number, and another known from the north wall suggests that they formed a regular feature of the late defences. All are semi-octagonal, and spaced at uneven intervals

¹ *Arch.* 80 (1930), 251-88.

² *Bull. Board of Celtic Studies*, vol. 14, pt. 3 (1951), 242-9.

along the town wall from which they project from 10 to 12 ft. All are hollow, their walls varying from 3 ft. to 4 ft. 9 ins. in thickness. No. 1 alone has a postern gate opening eastwards along the wall face on to the berm. They were apparently not roofed, but simply covered by a timber platform at the level of the rampart walk. This suggests that they can only have carried light artillery. They are not bonded into the town wall, the pointed joints of the masonry of which run continuously behind them.

A coin of URBS ROMA (A.D. 333-5), in good condition when dropped, came from below the floor level of No. 1, that is below the construction level of the bastion. Its evidence must be accepted for the erection of the whole series, which, in the words of the excavator, 'can scarcely have taken place more than a decade or so after that date'—that is, not before A.D. 333 and probably not later than c. A.D. 350, a date that is closely corroborated, as we shall see, by the coin evidence from Bastions 2 and 3 at Great Casterton.

Aldborough—Isurium Brigantum

The evidence from Aldborough, the Brigantian town of Isurium in the plain of York, is less well known, for the extensive excavations of 1935-8 remain unpublished. The town walls are of late Antonine date. Four bastions are known to have been added to them in the 4th century. Three of these are very large solid angle bastions. That at the north-west angle, discovered by Mr. J. N. L. Myres in 1935,¹ projected some 30 ft. from the wall and was no less than 63 ft. wide, having clay and cobble footings 15 ft. thick. The south-east angle bastion, trenched by Dr. K. A. Steer in 1938, was similar.² Its walls were 12 ft. thick, and it had a solid core of gravel. Both these bastions were built in millstone grit, limestone and yellow sandstone, with yellow mortar, materials which contrasted sharply with the red sandstone and white mortar of the town walls. An interval bastion, 100 yds. south of the north-west angle, was also located by Mr. Myres.³ It projected 22 ft. from the wall face, and was built over the town ditch, which had been previously filled with rubbish containing much pottery, the latest sherds of which, according to Mr. Myres, are to be assigned to the second quarter of the 4th century. As at Brough, and Great Casterton, a new ditch was dug farther out, so Dr. Steer informs me, the earlier ditch having been rendered useless by the bastions, and at the same time there was a partial blocking of the North Gate. This drastic reorganization of the town defences, so similar in character to that known at London, Brough and Great Casterton, must be assigned on pottery evidence to about the middle of the 4th century, for the pottery of a later date, which is very well known in Yorkshire, is entirely lacking beneath the

¹ *J.R.S.* XXVI (1936), 244.

² *J.R.S.* XXVIII (1938), 178.

³ *J.R.S.* XXVI (1936), 244.

bastions.¹ Indeed the evidence from Aldborough agrees exactly with that from Caerwent and Great Casterton.

London (figs. 1, 2, 3)

It seems worth while to recapitulate briefly what is known about the bastions added to the walls of Roman London, as much has been learnt since *R.C.H.M. Roman London* (1928), and some of the arguments put forward in that admirable discussion are no longer tenable.

Twenty-one bastions are known: the irregularity of their spacing makes it probable that many more formerly existed.² They fall into two series:

(1) Eleven of the eastern group, situated to the E. of Moorgate, are, with the solitary exception of No. 1, Wardrobe Tower, of solid construction, and of semi-circular, rounded or horse-shoe shape, projecting from $14\frac{3}{4}$ to $18\frac{1}{2}$ ft. in front of the Wall, and varying in width from 19 to 26 ft. In their construction much use was made of architectural fragments, tombstones and the like taken from earlier structures.

(2) The western group, ten in number, are, with the solitary exception of No. 17 on the Christ's Hospital site,³ hollow and either semi-circular or horse-shoe shaped, with walls $5\frac{1}{2}$ to 7 ft. thick. They vary in size and seem in the main to be constructed of fresh material. Though their construction is usually shoddy, they have not produced reused architectural fragments of Roman date like the eastern group.

Positive evidence of the relationship between these two groups is entirely lacking: the only confident assertion that can be made about both is that they are additions to the Roman City Wall. It has, however, been surmised that the eastern are the earlier on the grounds that:—

(a) The greatest threat to the City might be supposed to be from the coast.

(b) That the available building material from earlier structures had become exhausted before the western group were begun. No great weight can obviously be attached to either argument. General similarity of construction makes it a reasonable assumption that the eastern group are contemporary structures. An indication of their Roman date—and it falls short of proof—is forthcoming at No. 11 (All Hallows), which is founded on a rectangular plinth of massive reused blocks containing lewis-holes. These are laid over the partially filled Roman ditch, the filling of which produced only Roman material⁴ (fig. 2). The close analogy with Bastion 2 at Great Casterton, which is dated by coin evidence, will, I hope, be apparent later.

¹ I have to thank Mrs. Derwas Chitty, F.S.A., for allowing me to see illustrations of the stratified pottery, and Mr. J. N. L. Myres, F.S.A., and Dr. K. A. Steer, F.S.A., for confirmation of its date. The presence of what Mr. J. P. Gillam, F.S.A., has called Dales Ware (*Antiq. Journ.* XXXI (1951), 154 ff.) in the

ditch filling beneath the western interval bastion and in the gravel packing of the S.E. angle bastion points to a mid 4th-century date.

² For details see Inventory in *R.C.H.M. Roman London* (1928).

³ *Arch.* LXIII (1912), 276.

⁴ *Arch.* LXIII (1912), 273.

The western group is much more enigmatical. In 1948 Mr. Grimes found a coin of Constans, in good condition, on the primary floor of the Windsor Court Bastion (No. 14).¹ No great stress would be laid on this, as an Anglo-Saxon pendant was found 'on or just above the gravel,' did it not point to exactly the same period for its construction as that of Caerwent Bastion No. 1 and Great Casterton Bastions Nos. 2 and 3, the only three added bastions so far dated in Britain.

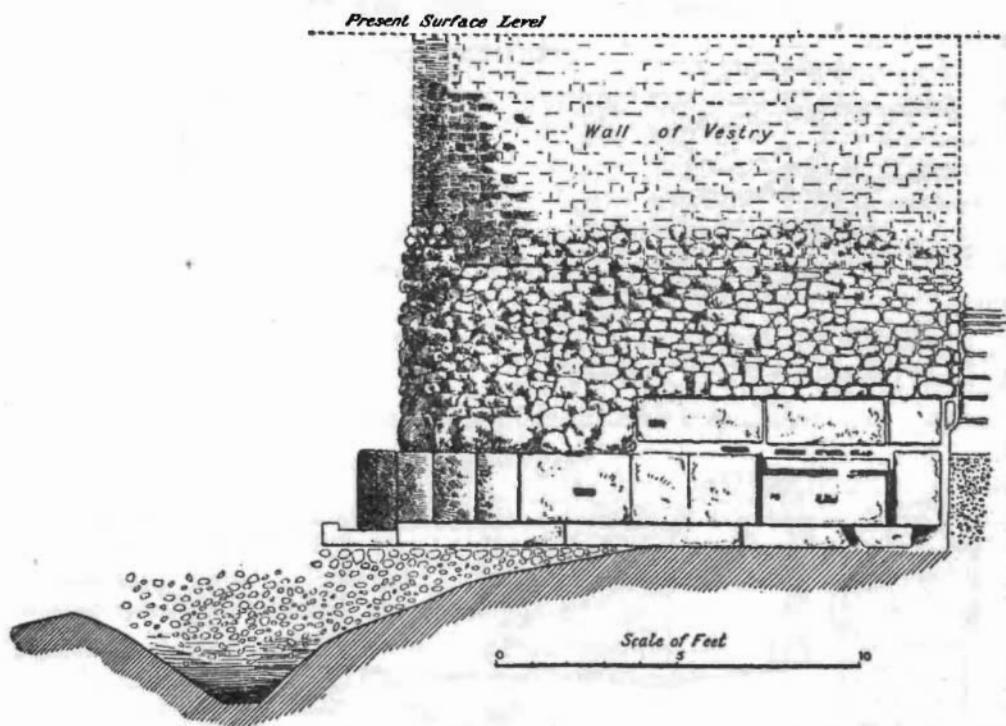


Fig. 2. London. Section of Bastion No. 11 (All Hallows), *Archaeologia* LXIII (1912), pl. XLIII

(Reproduced by permission of The Society of Antiquaries of London)

It should perhaps be noted that when the great angle bastion (No. 19)—now preserved at the G.P.O.—was built up against it, the City Wall was in an advanced state of disrepair, leaning outwards about a foot in its surviving 5 ft. of height, and that no attempt whatever had been made either to bond the two structures together or even to make a decent job of the addition (fig. 3).²

¹ *J.R.S.* XXXIX (1949), 107.

² *Arch.* LXIII (1912), pl. LV.

THE ROMAN WALL AND ANGLE BASTION CHRISTS HOSPITAL NOW THE G.P. O.

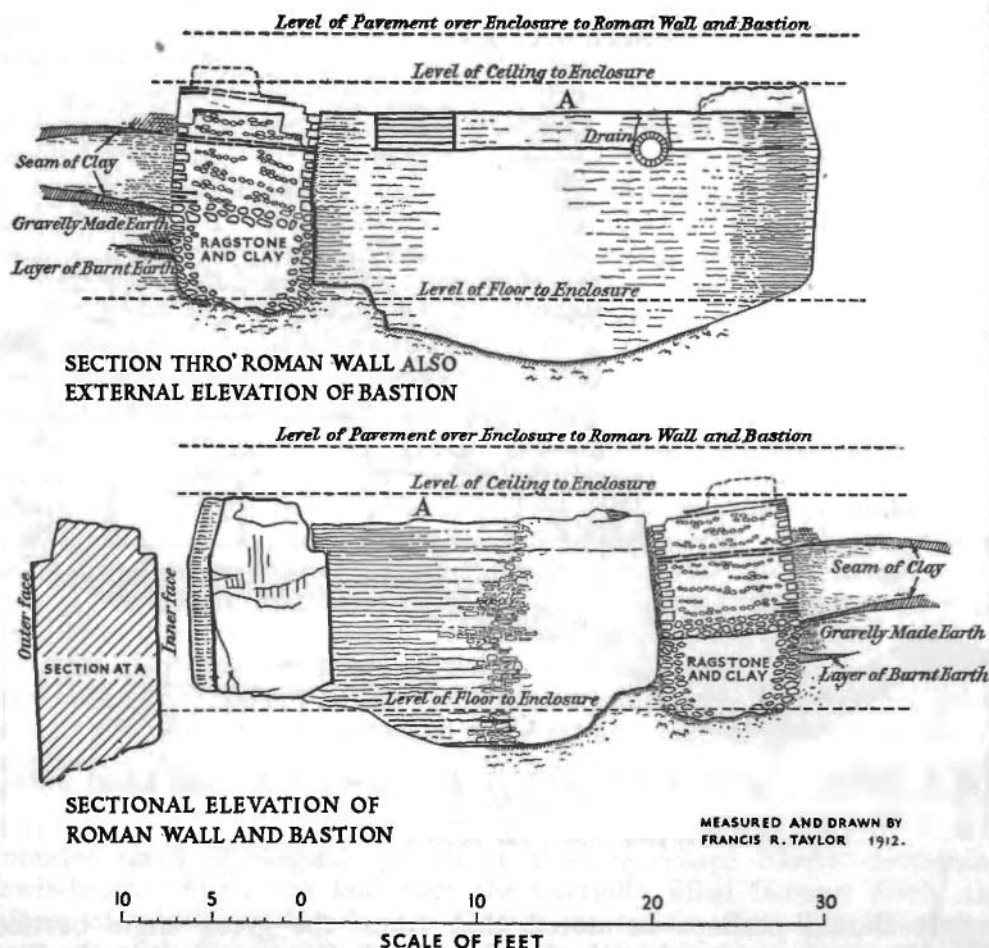


Fig. 3. London. Bastion No. 19 (G.P.O.), *Archaeologia* LXIII (1912), pl. LV
(Reproduced by permission of The Society of Antiquaries of London)

In brief, though some of the western group appear to represent Roman bastions, it cannot be asserted that all are Roman in origin.

Brough-Petuaria (Pls. IB, IIIA and fig. 1)

At Petuaria, the little capital of the Parisi in East Yorkshire, the defences were strengthened, in the 4th century, by the addition of shallow rectangular bastions to the Antonine town wall. Four of these are known, No. 1 placed half-way between the East Gate and the north-east angle, and Nos. 2-4 at intervals varying from 172 to 147 ft. south of the gate. Each was about 25 ft. wide and 10 ft. deep.¹ Their footings, where preserved, are of four courses of stones pitched herring-bone wise 2 ft. 6 ins. deep and carrying upon them walls 3 ft. 9 ins. thick, very inaccurately laid out. The Antonine berm had proved insufficiently wide to carry such towers with safety, and the inner ditch had, in consequence, been filled with compact red clay. There was evidence indeed that the bastion footings had been first built free and the red clay subsequently packed against them.² The bastions were not bonded into the town wall, but in one case (No. 4) the lowest course was laid upon the external offset of the wall.³ No conclusive evidence of their date was obtained. No. 1 overlay the ditch of a Flavian camp, but this had been filled long before it was built. Two sherds with 3rd-century affinities were recovered from beneath the clay filling within it, and outside No. 4 was a complete cooking-pot which lay in a patch of black ash that ran up against its footings. This pot had clearly been left by the builders who had knocked a hole in its side during their meal. Unfortunately it is not to be dated closely, being of a local type that has no close parallels.⁴

Contemporary with these rectangular bastions was a large projecting bastion at the awkward angle in the wall south of the East Gate.⁵ Only seven stones of its outer face remained and these also showed faulty setting out on their footings. It formed a sort of flattened semi-circle 24 ft. in diameter facing the road through the gate, but was flat to the east with a rectangular south-east corner, matching the other bastions already described, though shallower (Pl. IIIA).

A Constantian date was tentatively put forward for this series, but, in the light of the evidence from Caerwent, Great Casterton and Aldborough, a date forty years later seems now more probable.

Chichester—Noviomagus (fig. 1)

Excavations carried out in recent years under Dr. A. E. Wilson, F.S.A., have pointed to a similar history for the town defences there. The town wall, some 7 to 8 ft. thick, is constructed of flints. Beneath its footings is an occupation layer containing pottery none of which is

¹ *J.B.A.A.*, 3rd series, vol. VII (1942), fig. 3, p. 7.

² Corder and Romans, *Excavations at the Roman Town at Brough-Petuaria*, 1937 (= *Brough V*), 32 & fig. 6, pl. II.

³ Corder, *Excavations at the Roman Fort at Brough, E. Yorkshire*, 1934 (= *Brough II*),

fig. 2, p. 12.

⁴ *ibid.*, fig. 6, D1, p. 28.

⁵ Corder and Romans, *Excavations at the Roman Town at Brough, E. Yorkshire*, 1935 (= *Brough III*), 13-20; *J.B.A.A.*, 3rd series, vol. VII (1942), fig. 8.

later than the 2nd century. In the large amount of pottery recovered from the rampart bank there is nothing that can be assigned to the 3rd century. A date of c. A.D. 200 has therefore been suggested for the wall and rampart.

Bastions were added 'not earlier than the 4th century'.¹ In Excavation 5 (Friary Close) a solid bastion of unusual shape 10 ft. 6 ins. wide projected 12 ft. from the wall face, which was standing 9 ft. high behind it, and into which it had not been bonded. A sherd of 4th-century date came from the mortar against the face of the earlier town wall.

Great Casterton (Pls. IA, II and figs. 1, 4)

Striking corroboration of the dating of the Caerwent bastions was obtained at Great Casterton in 1954. In the previous year the sequence of the town defences was firmly established, and has since been fully published, so that only a recapitulation is required for our present purpose. The town wall and earthen rampart were erected at one time in the late 2nd century.² They were accompanied by at least two steep-sided rock-cut ditches. In the middle of the 4th century these defences were modified and completely reorganized. A new rock-cut ditch, 60 ft. wide, was dug much farther from the wall, and the stone obtained from it was used to fill up the earlier inner ditch, and to construct upon it projecting bastions at the angles in the wall. This was carried out at one time and as one operation, any rock that was left over being piled on the outer scarp of the great ditch.

Two of these bastions were completely excavated in 1954. Bastion 1 at the north angle of the town proved to be only a ghost, as it had been robbed of most of its stone. It was 18 ft. 6 ins. wide and projected 11 ft. 6 ins. from the wall-face. Its footings of freshly-quarried flattish stones from the new ditch were laid directly upon the filling of the earlier ditch. It was a solid structure, its body being formed of successive layers of stone and thick beds of mortar.

Bastion 2, some 55 yds. to the east, was well preserved and stood four courses high upon massive footings formed by twelve huge blocks of local freestone brought from some earlier building within the town. These had been simply laid upon the filling of the early ditch and were neither bedded in mortar nor mortared together, though occasionally levelled up with stone wedges. That they had come from an earlier structure was manifest both from their dressing, and from the lewis-holes and cramp-holes in their faces. The bastion itself was built of small roughly-dressed slabs of local limestone, bedded in thick mortar, which had weathered and split much as have the lower parts of many walls in the modern village where exposed to rain and frost. Its face was set back only a few inches from the edges of the foundation blocks,

¹ *J.R.S.* XLIII (1953), 126 & pl. XXVII.

² *The Roman Town and Villa at Great Casterton, Rutland* (1951), 6-14, figs. 5, 6; *The Roman*

Town and Villa at Great Casterton, Rutland. Second Interim Report for the years 1951-3 (1954), 7-10, fig. 2.



A. Great Casterton. Bastion 2 from the north (1954), p. 32
(*Photograph by E. A. Johnson*)



B. Brough-Petuararia. Bastion 1 from the south-east (1937), p. 31
(*Photograph by Rev. T. Romans*)



Air photograph of the Roman town at Great Casterton from the north, p. 32

*(Crown Copyright reserved. Photograph by Dr. J. K. S. St. Joseph)
(Reproduced by courtesy of Nottingham University)*

and its corners were rounded. The body of the bastion was formed, like that of Bastion 1, of alternate layers of undressed stones and mortar.

The stratification around the bastion was uniform and instructive. The Roman turf-line oversailed the edges of the big foundation blocks and sealed the construction layer of chips and mortar beneath it. Over this was a thick layer of tumbled stones that marked the robbing of the town wall and the final collapse of the upper part of the bastion. It was evident therefore that no part of the great blocks was visible above ground in Roman times.

The great ditch had produced a few sherds of 4th-century pottery from its primary silt, but here we were fortunate in obtaining a much closer date for the construction of the bastion, for sealed in the construction layer beneath the turf-line was a coin of CONSTANS (Coh. 179) of A.D. 337-350. Coins of MAXIMINUS II (A.D. 305-313) and of CONSTANTIUS II (post A.D. 348) came less certainly from the junction of these two layers, but do not affect the issue.

It is certain therefore that the bastion was erected after A.D. 337, and quite possibly after A.D. 350. The evidence at the bastion itself takes us no further than this. The history of the villa, about a mile to the north-east of the town, has a bearing on the problem. Here extensive rebuilding was going on just at this time. A large barn was dismantled, and on its site was erected a small house with a mosaic floor, dated by numerous sealed coins to the period A.D. 350-365. This house was twice enlarged in the next 40 years, as the owner prospered, adding new mosaics and a hypocaust system. There was no evidence whatever at the villa for any disaster in A.D. 367. In fact just at that time there is positive evidence of prosperity and fresh building. It is unlikely in the highest degree, therefore, that urgent reorganization of the defences of the neighbouring town, that would demand all the labour available, could have taken place at this time. Moreover the reorganization involved much more than the addition of bastions to the existing defences: it included the quarrying of thousands of tons of rock from the new 60-ft. ditch, and the filling of the existing ditch. Such an undertaking must have been deliberately planned at the dictates of an imperial decree, carried out by a tribal levy. It is unthinkable that it could have been urgent work dictated under threat of attack or during a scare. In fact the prosperity of the neighbouring countryside during the Pictish War reflects the security of pre-existing town defences. I conclude therefore that the bastions were erected within the period A.D. 337-367,¹ and in all probability about A.D. 350, a striking corroboration of the date already arrived at for the work at Aldborough and Caerwent.

¹ Since this paper was written two more bastions were identified in August, 1955, of which one (No. 3) was completely excavated. Confirmation of the date suggested here was provided by a coin Constans or Constantius II,

with Fel. Temp. Rep. reverse, found in the construction layer close to its footings, and struck, in the opinion of the Department of Coins and Medals at the British Museum, in the decade A.D. 350-360.

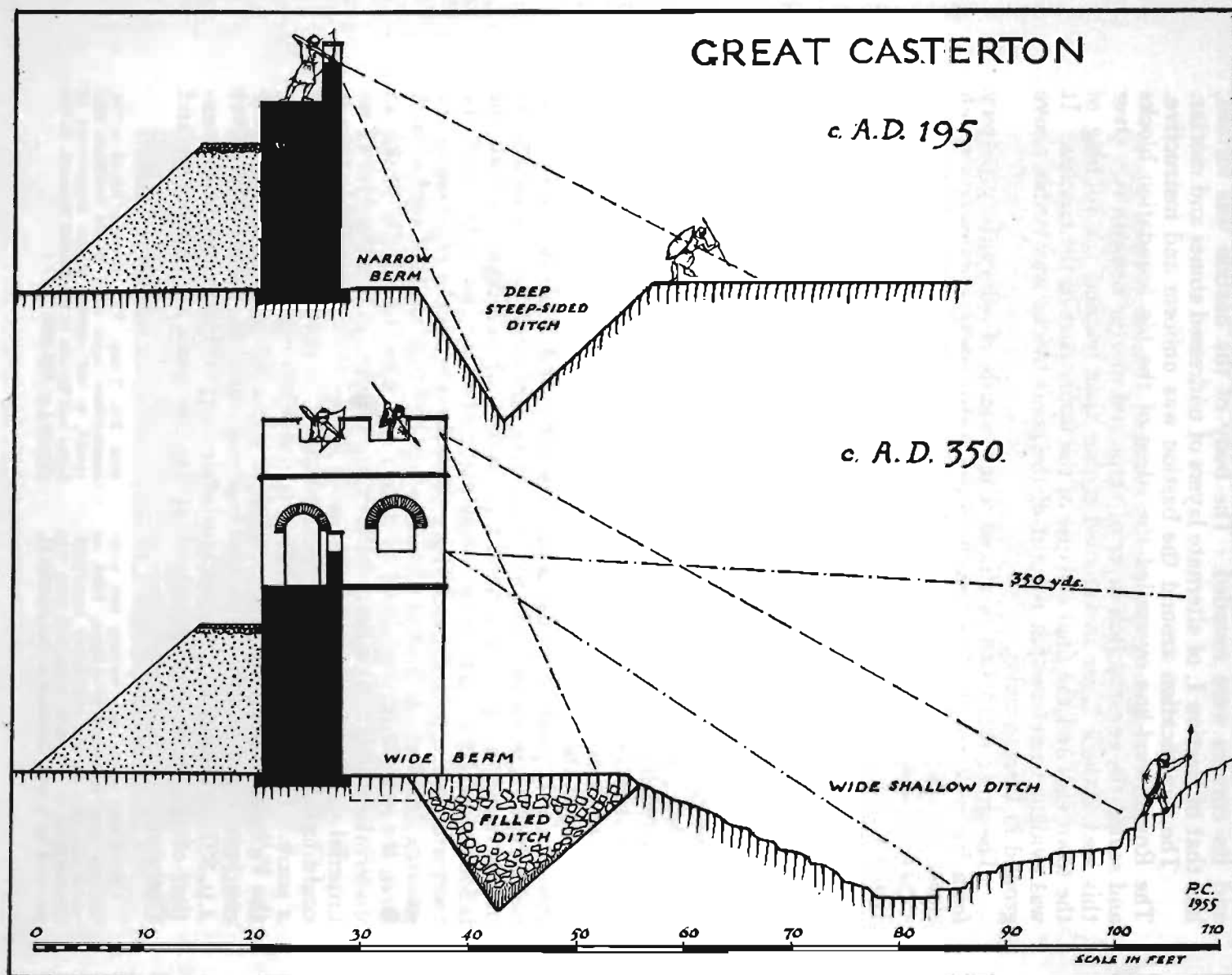


Fig. 4. Reconstruction drawing comparing the late 2nd century and the mid 4th century defences of Great Casterton

What features characterize these 4th-century town defences? The most striking, as we have seen, are projecting bastions or towers. These are as various in form as those of the somewhat earlier Saxon Shore forts, and, like them, were dictated by the new defence by artillery (fig. 1). But the military engineers who constructed the coastal forts erected them normally on virgin sites. The towns presented a more difficult problem, for their late 2nd-century walls were already surrounded by deep ditches. At London, Aldborough, Brough, and Great Casterton, and no doubt others, these ditches had to be filled up to provide firm footing for the bastions, which could not safely be accommodated on the existing narrow berms. At Great Casterton the new ditch, 60 ft. wide, was dug further away from the wall, providing a level berm of 27 ft. in place of the earlier 7 ft. berm. Bastions and wide ditches are part of the same novel scheme of defence, best illustrated by a tentative reconstruction (fig. 4).

The 2nd-century wall has been represented as 18 ft. high. A narrow berm separates it from a deep ditch, whose steep sides form a serious obstacle to surprise attack. It would have had to be filled before scaling ladders could be placed against the wall, the whole area at the foot of which lies open to the fire of the defenders on the rampart walk. The defences, however, were not designed to withstand a siege, like those of a medieval castle, but served rather to protect the town from raiders and to control entry and exit.

The 4th-century defences betray a different purpose. Each projecting bastion provided a platform, 17 ft. deep by 20 ft. wide, at the level of the rampart walk, on which could be mounted two *ballistae*. This is not the place to describe in detail this form of Roman artillery—a species of large mounted bow, the torsion for which was provided by vertical twisted cords, mounted on a stout square frame. The barrel had a trough-like section, which directed with precision either a steel-headed bolt or a stone ball, usually 6 to 8 lbs. in weight. A diagram (fig. 5), prepared by Professor Richmond 25 years ago to illustrate the tactical use of *ballistae* on the first period towers on the walls of Imperial Rome (which he has kindly allowed me to use), illustrates well their use of the closely-spaced towers.¹ I venture to quote his words for they bear on the reconstruction I have here proposed for the superstructure of the Great Casterton bastions:

‘The reason for the lateral windows in the towers thus becomes apparent. A study of the *ballista* reveals that, without some very complicated adjustment, and particularly carefully designed arrangements for dealing with a recoil, this spring-gun could not hit at close range an objective below the level of the barrel. For the normal trajectory of its missile was either straight or parabolic. Ground immediately below the tower was therefore dead, and so an isolated tower would be sur-

¹ Richmond, *The City Walls of Imperial Rome* (1930), fig. 14.

TOWERS AND BALLISTA TRAJECTORY

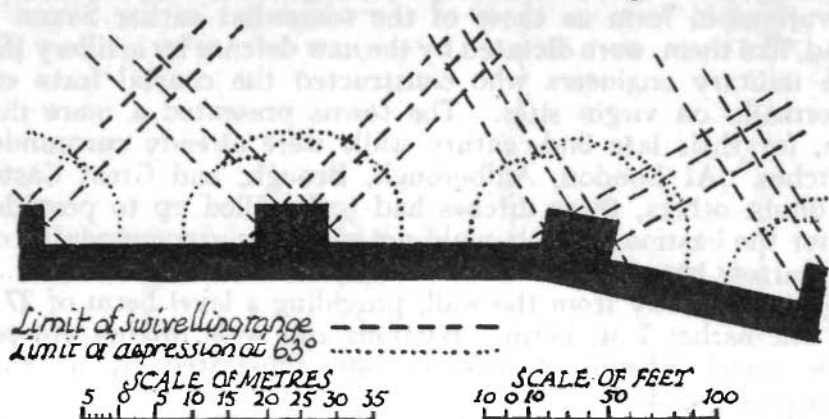


Fig. 5. Towers and ballista trajectory (after Richmond, *The City Walls of Imperial Rome* (1930), fig. 14)

rounded by a space which the *ballista* could not cover. But when towers were grouped close to one another, the difficulty of defence thus raised could be simply solved. The *ballistae*, which used the side windows, would be designed to concentrate, not upon the short piece of ground which separated the two towers (which also would have to be covered by 'co-operation') but upon the dead ground in front of the neighbouring towers as well.¹

As the bastions are not so closely spaced in British towns as were those of Rome, the necessity for side windows is obvious, since the face of the wall must be enfiladed. At Great Casterton two *ballistae* mounted on each tower would be capable of swivelling so as to accomplish this and at the same time in the frontal position their field of fire would cover the whole of the wide shallow ditch, proving deadly to infantry concentration to a distance of 400 yds. or more from the wall. The towers must have been carried up at least 10 ft. above the rampart walk, and must have been roofed, for it was of the first importance that the fibres that provided the torsion should be protected from damp. I have represented their roofs as flat to provide a raised fighting platform from which the defenders could cover the 30 ft. arcs at the foot of each tower that would be the only areas immune from *ballista*-fire. Each *ballista* required a team of four men to work it. The new arrangement provided, therefore, a greatly improved static defence with much reduced man-power. *Ancaster, Horncastle, Caistor, Water Newton* (figs. 6, 7, 8)

Where else may we look for parallels to our great ditch and projecting bastions? I have four other towns in mind, all of them either on the

¹ *ibid.*, pp. 79-80.



A. Brough-Petuarria. Bastion at the East Gate from the west (1935), p. 31
(*Photograph by Rev. T. Romans*)



B. Horncastle. Remains of the north angle-bastion
(1955), p. 39

(*Photograph by C. F. Bauer*)



A. Ancaster. The great ditch at the south-east angle (1955), p. 38
(*Photograph by M. W. Barley*)



B. Ancaster. North-west angle bastion (1955), p. 38
(*Photograph by E. A. Johnson*)

great highway of Ermine Street that leads through Lincoln to the Humber, or not far from it. The first is Ancaster, some 25 Roman miles north of

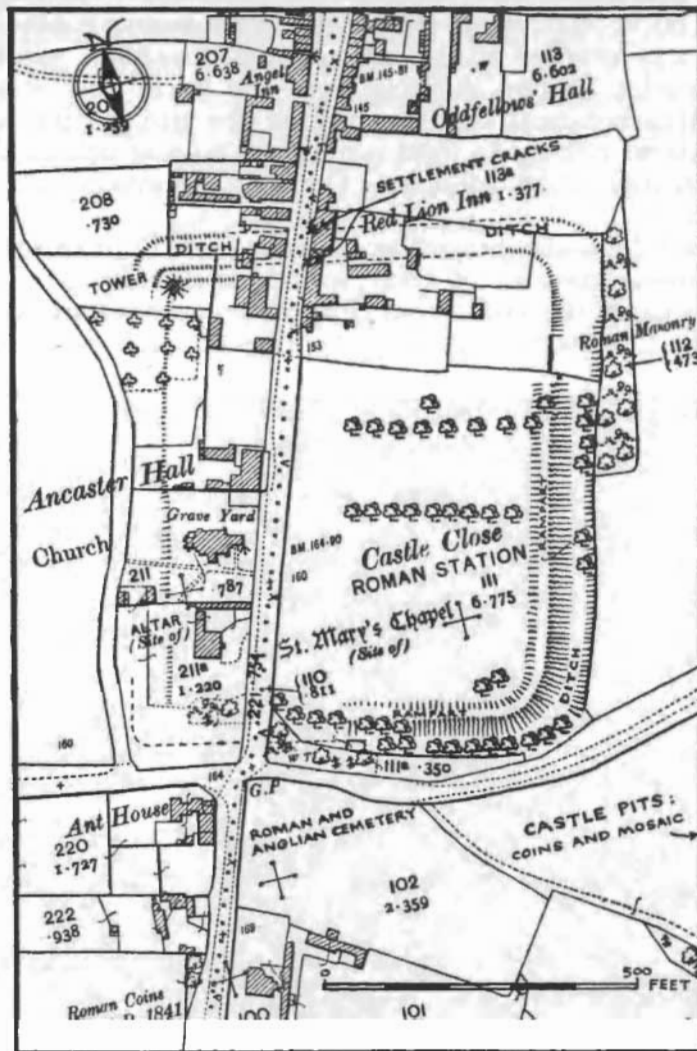


Fig. 6. Plan of Ancaster

(From *Arch. Journ.* CIII, p. 18)

Great Casterton, long identified with Causennae of Iter V. Here is a small walled town or posting station of some 9 acres. No systematic excavation has yet been undertaken of its defences,¹ and it is idle to speculate whether it began as a military camp, as indeed coin finds

¹ Excavations directed by Mrs. Helen O'Neil, F.S.A., for the Ministry of Works in 1955 did

not include an examination of the defences.

suggest. Its visible defences form a rectangle 700 ft. from N. to S. and about 580 ft. from E. to W., enclosed by a very wide ditch, still open on the east and south and traceable on the west.¹ This as at Great Casterton, is 60 to 70 ft. wide. (Pl. IVA). No masonry is now to be seen, but the wall was recorded on the east as recently as 1885, while a massive and solid circular bastion projects from the north-west angle. When the Royal Archaeological Institute visited the site in 1946 some of us were fortunate in talking to local residents who dug into it about 1934, and were defeated by its solidity. The mound covering its site is still notable (Pl. IVB).

Similar solid circular projecting bastions are still to be seen, together with considerable remains of their surrounding walls, at the two tiny towns of Caistor-on-the-Wolds and Horncastle, each about 20 miles from Lincoln, and a like distance apart on an ancient track along the Lincoln-

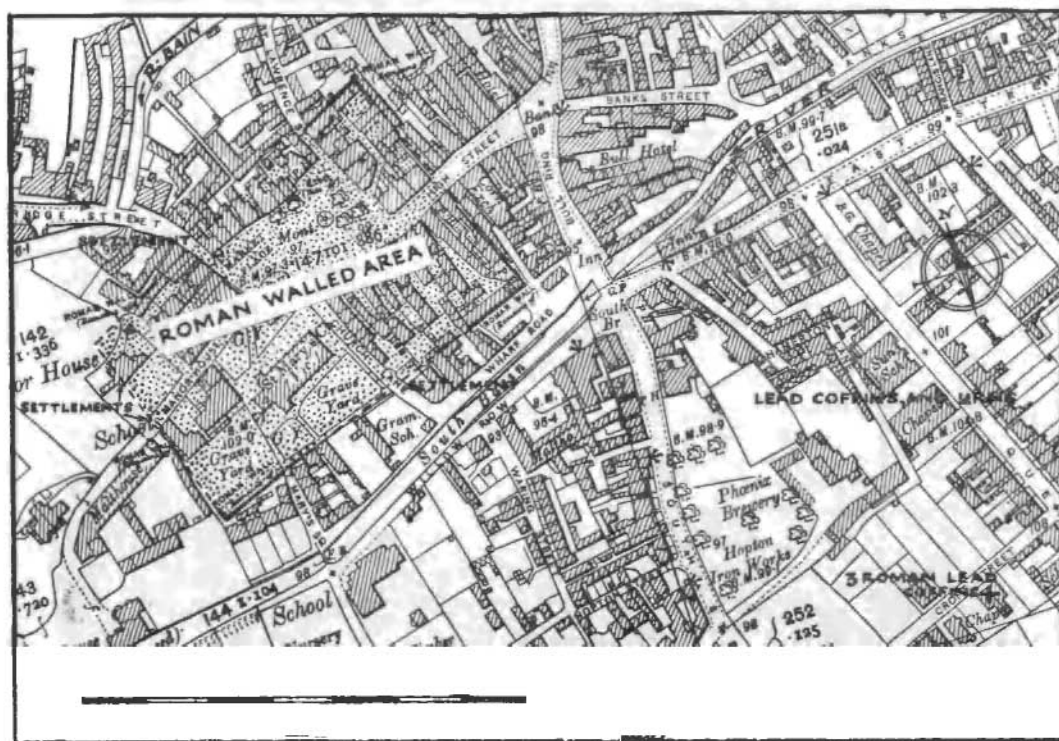


Fig. 7. Plan of Horncastle

(From *Arch. Journ.* CIII, p. 21)

shire Wolds. Both have been described as a part of the 4th-century coastal defence system, as they may well have been, though this is pure supposition. The visible remains are those of very small market towns

¹ *Arch. Journ.* CIII (1947), 17-21, fig. 1.

or villages. Horncastle, the larger, is a bare 5½ acres in extent, and the irregular quadrilateral of its walls is engulfed in the modern market town.¹ Stretches of 40 and 50 ft. of its walls are, however, still visible to anyone willing to peer into back yards or invade private workshops. Their outline is certain. At the north angle is the upstanding core of a solid circular bastion of large local pebbles and concrete at least 15 ft. across, the condition of which is a disgrace to a civilized community that takes pride in its ancient monuments (Pl. IHB). There is no sign of a surrounding ditch, but the site of the town between the rivers Bain and Waring may have rendered this unnecessary.

Of Caistor rather more must be said, for the account of it published in the *Archaeological Journal*,² though illustrated by a plan based on field work by Prof. Richmond and myself, is both inaccurate and misleading. Probably the Bannoalum of the Ravenna Cosmography

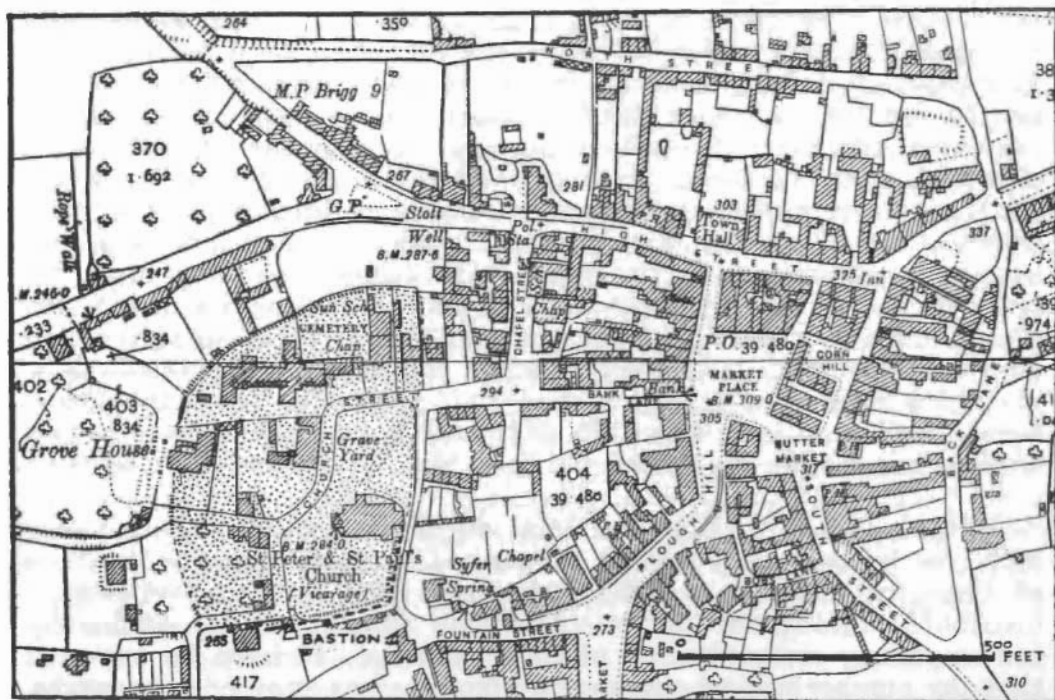


Fig. 8. Plan of Caistor

(From *Arch. Journ.* CIII, p. 22)

(430, 3: see *Arch.* XCIII, 21), the place bears no resemblance to a fort, but is a small village, whose massive defences enclosed an irregular polygon of less than 4 acres. A solid semi-circular bastion, very similar in construction to that at Horncastle, projects from the south wall traces of which are visible to the west of it, while a mass of concrete

¹ *ibid.*, 22-3, fig. 2.

² *ibid.*, 23-5, fig. 3.

core *in situ* in the grounds of the Grammar School disposed once and for all of the hypothetical plan in Vol. XCI of the Journal.¹ Within this tiny enclosure lie the ancient church and graveyard, the Grammar School, Grove House, and one or two other houses, and there is no doubt that excavation would recover both the plan and the history of what must be the smallest walled town of Roman Britain.

Much more important than any of these, and more than twice the size of Great Casterton, is Durobrivae, variously known as Water Newton, or 'The Castles'. Chesterton, south of the River Nene some 10 miles south of Great Casterton. The polygon of its walls encloses an area of 44 acres, and it is traversed from end to end by the causeway of Ermine Street, 40 ft. wide.² No excavation has taken place there since Artis dug thereabouts 130 years ago. That it was the centre of the flourishing pottery industry that goes by the name of 'Castor' there can be no doubt, for Castor itself, on the opposite bank of the Nene, is certainly not a town. Air photographs have shown that its streets are not laid out at right-angles to Ermine Street, nor do they form a regular chess-board pattern such as is normal in larger towns. In fact the air photographs suggest that they existed before the defences, which, as at Silchester, may have enclosed a reduced area. The site has been much ploughed, and it is possible to drive along the Great North Road, which skirts its western defences, without noting their proximity. The great width of the town ditch has, however, caught my attention again and again. It would be going far beyond the evidence to assert that this is contemporary with the great ditch at Great Casterton, but it is worth noting that the surface indications are very similar. The air photograph does no more than indicate two other possibilities: that there is a projecting bastion at the north-west angle, and that the west gate is to be found at a point where the town wall is set back and takes up a fresh alignment, as it does at the East Gate at Petuaria (Pl. V).

The facts that we have examined suggest that we have been dealing with no isolated phenomenon. Twenty-five years ago the bastions at Caerwent stood alone. Now we know that other towns, widely distributed throughout the province show similar, and approximately contemporary, reorganization of their defences. It is to be expected that the number will be considerably increased as knowledge advances. In recent years we have come to rely on air photography as a preliminary to spade-work. Dr. St. Joseph has now revealed that the town of Mildenhall-Cunetio in Wiltshire shows two systems of defence, the later consisting of a very thick wall, furnished with rectangular bastions at 120 foot intervals, and a gate flanked by towers projecting to back and front of it.³ That these were artillery platforms there can be no doubt.

¹ *Arch. Journ.* XCI (1935), 130, fig. 7.

² *V.C.H. Hunts.* (1926), 228 ff.

³ *J.R.S.* XLIII (1953), pl. XIII, 2.

At Kenchester-Magnis in Herefordshire is a town, very similar in size and appearance to Durobrivae, whose walls are still visible in places. Very little excavation would serve to recover the history of its defences. Air photographs suggest that here too is a substantial bastion at one of the angles. Whether this is so or not, the point I wish to make is that enough is already known to make it reasonable to be on the alert for more evidence of what appears to be a widespread rebuilding of British town defences about the middle of the 4th century.

Can we point to any event in the meagre written history of the province to account for this widespread activity? The Emperor Constans found it necessary to visit Britain in person in A.D. 343, as we learn from a cross-reference in Ammianus Marcellinus.¹ But the books in which he described the event are lost, and we are thrown back on archaeological evidence. That trouble on the frontier and beyond was serious is clear from the fact, pointed out to me by Professor Richmond, that the Emperor crossed to Britain in January, a time of year when crossing the Channel would normally be considered hazardous. It appears to have involved the violent destruction of forts beyond the Wall such as Bremenium (High Rochester), Habitancum (Risingham) and Bewcastle, the first of which was never again rebuilt.² The aggressors were the Picts from north of the Tay, not the British, and the trouble may have been confined to the frontier zone. There is certainly no evidence of destruction at this time as far south as Great Casterton. It would now seem certain, in view of the evidence from towns as widely separated as Aldborough, Great Casterton and Caerwent, that as a consequence of these disturbances an imperial decree was promulgated ordering the towns of the province drastically to overhaul their existing defences against future threats. As has been pointed out, the work at Great Casterton is on such a scale, and must have necessitated so large a labour force, that it could not have been contemplated during an emergency or undertaken in response to an immediate threat. Nor could it have been carried out solely by the inhabitants of the town itself, who cannot have numbered more than a few hundred. It can, in fact, only have been achieved by a tribal levy, presumably under the general direction of military engineers.

The process of reorganization seems to have taken place over the whole province at approximately the same time. It was completed before the combined inroads of Picts, Scots and Saxons in A.D. 367, for no Romano-British town has up to the present produced evidence of destruction at that time, nor indeed, so far as I know, have the villas in the proximity of walled towns. At Great Casterton, as we have seen, it was a time of prosperity, when the villa proprietor was enlarging his house, adding central heating and building a new bath-house. The

¹ *Amm. Marc.* XX, 1, 1.

² Richmond, 'The Romans in Redesdale' (*Hist. of Northumberland*, vol. XV, pp. 112-114).

East Yorkshire villas were also flourishing in the second half of the 4th century. This is not the place to enter into discussion of the matter, but it must be concluded that the lurid tales of the break-down of the rural economy of Britain in the so-called 'Pictish War' have been gravely exaggerated.

A new picture of 4th-century Britain is indeed emerging. The new Ordnance Survey map of Roman Britain, like its famous predecessor of thirty years ago, will surely provide the basis for much reassessment. In the 1928 edition only twenty-one towns were shown apart from Verulamium and the four *coloniae*. Towns like Chelmsford, Ilchester, Godmanchester, Braughing and Mildenhall—to name only a few of the more obvious—were classed with Woodyates as 'villages', while Towcester, Brough, Ancaster, Horncastle, Great Casterton, Caistor-by-Yarmouth and Dorchester (Oxon.), all now known to be walled towns, do not even attain that status. It may prove that these centres of economic life, well able, behind their massive walls, to protect their citizens against wandering bands of raiders or deserters, formed self-supporting units on which the continued prosperity of the province depended at a time when the larger towns, like Wroxeter and Verulamium, are said to have shrunk and fallen into decay.



Air photograph of the Roman town of Water Newton-Durobrivae from the north, p. 40
(*Photograph by Dr. J. K. S. St. Joseph*)