

IX.—EXCAVATIONS AT HIGH ROCHESTER AND RISINGHAM, 1935.

BY I. A. RICHMOND.

[Read on 25th March, 1936.]

The excavations here described were made in preparation for the fifteenth volume of the *Northumberland County History*, by the North of England Excavation Committee, who delegated the work to the writer. That volume being imminent, no attempt is made to describe the forts in full; while time and money imposed on the work itself restrictions gladly accepted. The proposition was neither a treasure-hunt nor the recovery of a plan, but the identification and dating of structural sequences in order to reconstruct history. At Risingham we were generously given a free hand by Mr. C. A. P. Reed, of Aydon, and his tenant, Mr. Joseph Walton, of Flotterton, and, for our work on the west gateway, had the welcome assistance of Mr. Peter Hunter Blair. At Rochester, seeking deposits undisturbed by the excavations of 1852 and 1855, our eye fell upon the little lambing-garth in the north-west angle, and on the external circuit of the wall. Permission to work there was readily accorded by Major A. R. G. Thompson, of East Bolton, Northumberland, and his tenant Mr. James Amos of Dykehead, Rochester; while a little work on the south side was facilitated by Mr. Robert Dixon, of Rochester House. The surveying at Rochester was done for the writer (an unusual and welcome luxury) by Mr. F. A. Child and three students, Messrs. K. Burton, K. Easton, and V. Abbott, of Armstrong College



Fig. 2. RISINGHAM FROM THE EAST.



Fig. 1. HIGH ROCHESTER FROM THE NORTH.

School of Architecture, to whom particular thanks are due for arduous work in difficult weather. Finally, Dr. A. Raistrick, of Armstrong College, is responsible for the appendix upon rampart-materials, of which the very great value will be self-evident to all who study it.

I. HIGH ROCHESTER.

(a) *Introductory.*

The Romans knew¹ this place as *Bremenium*, the Latinized form of a Celtic name applicable to the adjacent noisy stream; Ptolemy places *βρεμενίον* among the Otadeni; the Antonine Itinerary puts it twenty miles away from *Corstopitum* (Corbridge); and the name is abbreviated upon altars (C. 1030, 1037) from High Rochester itself. The site (pl. ix, fig. 1) is a bold plateau, protected on the west by the noisy Sills Burn and on the north by a little nameless tributary which springs in Coal Cleugh. It lies at the foot of the long valley by which Dere Street climbs towards Scotland over Foulplay Head; and, like eastern *tell* or Thracian *toumba*, it is rendered bolder by the superimposed Roman occupation-levels which crown it (pl. ix, fig. 1). These comprise a four-acre fort, about 485 feet by 445 feet across its massive stone defences, within which excavations of 1852 and 1855 disclosed the buildings of a typical auxiliary post. Among datable inscriptions then found may be noted a building-slab (C. 1041) of Lollius Urbicus, who reconquered Scotland in A.D. 139-142 for Antoninus Pius: inscriptions of Caracalla and Elagabalus (C. 1042-3; 1047, 1039, 1044-6), the latter recording the construction of *ballistaria* in A.D. 219-20; and an altar of Gordian (C. 1030), which mentions the name of the site. The third-century garrison was *cohors I Fida Vardullorum*,

¹ Similar Romano-British names are *Bremetennacum* and *Bremia*, analogues of the surviving name Breamish, see Ekwall, *English River-names*, s.v. *Breamish*. *Bremenium* occurs in Ptol. *Geogr.* ii, 3, 10; *Antonine Itinerary*, Iter I; *Ravenna List*, v, 31, p. 434 (edn. Pinder & Parthey).

civium Romanorum, equitata milliaria, reinforced by the *numerus exploratorum Bremen(iensium)*. The Antonine garrison was *cohors I Lingonum, equitata quingenaria*: and a tombstone (C. 1055) records another unit, perhaps *cohors I Da(imatarum)*, whose connexion with the site remains undefined. Such changes of garrison and rebuildings imply vicissitudes, of which traces were noted by the excavators,² if with little precision. Bruce writes (*R. Wall*, edn. 2, 451):

“Wherever the ground has been deeply cut into, layers of wood-ash have been found. In several places two, and in some three, of such layers have been met with. . . . Two distinct layers of flagging, both of them much worn, and with a mass of rubbish between them, have been found in some of the dwellings and streets.”

Again (*AA*² i, 71):

“A similar layer of ashes has been found at a low level in other parts of the station. It was found beneath the foundation course of the west wall, near the gateway.”

(b) *The defences.*

The north-west angle had already been noted³ to have

² Previous excavations by the fourth Duke of Northumberland in 1852-3, and by this society in 1855, are reported in Bruce's *The Roman Wall*, edn. 2, 1853, 450-464; in Roach Smith's *Collectanea Antiqua*, iii, 1854, 163-178, and in *Proc. R. Arch. Soc., Newcastle meeting*, 1852, i, 135-149, published 1858, and very largely derived *verbatim* from the first source: also Bruce, *AA*² i, 1857, 69-85, which describes the whole work. Original plans are lost. The earliest is *Collectanea Antiqua*, 174, and Bruce's plan of the central buildings, *The Roman Wall*, edn. 2, 452. The lithograph of 1857, in *AA*² i, 77, influenced that in *The Roman Wall*, edn. 3, 317, both by G. G. Bell, and is related to the traced plan given by the seventh Duke to Dr. Hodgkin for Professor Bosanquet. The traced plan, supplied with a numbered but uninformative list of finds, is now at Armstrong College. Two more plans come later, a copper-plate by J. H. Le Keux for *Lapidarium Septentrionale*, iii, 1872, 280, devoid of letters or numbers, and the same plate revised for *A Descriptive Catalogue of Antiquities at Alnwick Castle*, 1880, numbers and letters being added, on a different system from that used in the tracing. These omit features noted by Bruce in *AA*, loc cit. All the plans are somewhat schematic, too regularly drawn, and hardly to be trusted for detail.

³ *AA*² i, 70.

been reconstructed, in a manner now revealed (fig. 1; pl. x, fig. 1) by an examination of its face. The latest wall, six courses high and linked with an angle-tower of massive masonry, was built on the irregular ruins of a second wall, one to four small courses high, set out in a different curve.

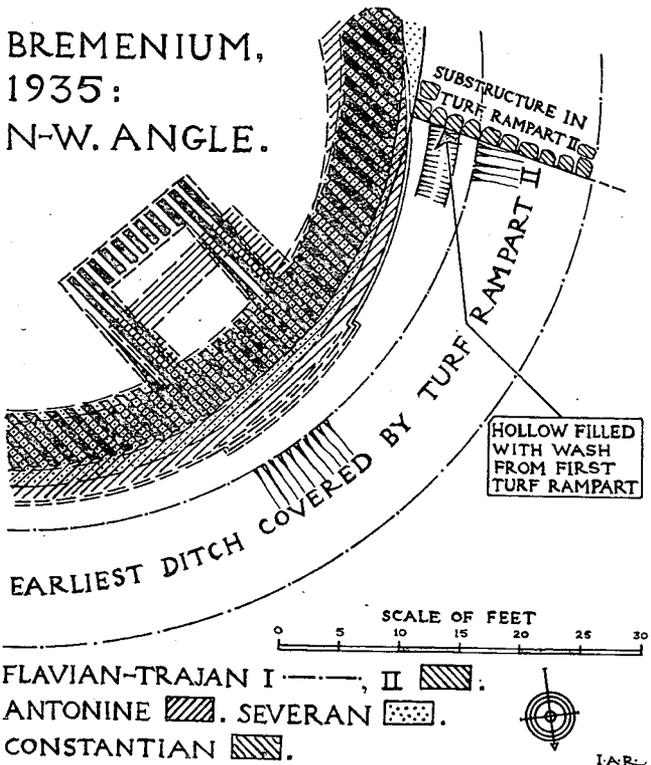


FIG. 1.

The latest wall therefore has lacing-stones, to prevent subsidences. Below the second wall lay a first, one course high above a footing, and at some distance round the curve an extra offset appeared, intended to support the extra weight of an angle-tower, whose size could be roughly estimated from its position on the curve. Thus,

the stone fort-walls of *Bremenium* had been reared at least three times. Exploration in front of them then revealed still earlier phases. The first wall destroys a fragmentary foundation of stone slabs, projecting obliquely for 16 feet, upon which lay unmistakable built turfwork, almost levelled away when the wall was built. The foundation and turfwork, however, had subsided over a still earlier ditch, whose inner lip was found at two points. A little pocket behind this ditch contained wash from the contemporary rampart, and was sealed by the later stone foundation; and this material, when analysed by Dr. Raistrick (see below, p. 196), turned out to come also from turfwork. Thus, both the first and second ramparts had been of turf; and the defences as a whole are seen to have passed through five periods, I and II in turfwork and III, IV and V in masonry.

The west side now yielded further information about the turfwork periods. Midway between the south interval-tower and the south-west angle, the fort-wall, here built of large blocks set upon masons' chippings and tied with a string-course of sandstone slabs, had collapsed inwards. It rested upon the prominent remains of a turf rampart, analysed by Dr. Raistrick (see below, p. 197), which had slid forward, under pressure from the later wall, on top of a still earlier ditch. The rampart and the ditch, representing successive early periods, are obviously the same as those discovered at the north-west angle and elsewhere; while the fort-wall is the same type as that bonded into the south tower of the west gate, and therefore belongs to the last period (see below, p. 197). Since the two intermediate fort-walls are missing, the periods present are I, II and V.

The north side proved to contain work of all periods. In a continuation of the long internal section from the lambing-garth, two superimposed walls were found (pls. XII, XIII). The earlier, 6 feet 6 inches thick, retains two 5-inch courses on a 6-inch footing, projecting 5 inches:

the later, 4 feet 5 inches thick, has one 8-inch course and is set back 1 foot 9 inches on the first. These revetted a clay bank, about 32 feet thick. They belong to the type of composite fort-wall common in Britain after Hadrian's time,⁴ and evidently represent periods III and IV. Immediately in front of the earlier wall comes the earliest ditch, here also purposely obliterated. The filling, mixed to see and cespitious to touch, was analysed by Dr. Raistrick (see below, p. 197) as tumbled turf, shot on top of silt containing primary wash from a turf rampart. It affords abundant confirmation of the evidence from the north-west angle as to the nature of the first rampart. Rampart II was represented by four or five courses of laid turf, covering the mixed turf filling; and the fact that this second rampart was planted immediately upon the demolished remains of the first, suggests that the second occupation followed without a break, and was a consolidation of the first. Later still, when the fort was walled in stone, this rampart too was levelled away, leaving only its heel sunk in the ditch.

The same trench was then taken northwards (pl. XII) right across the prominent mounds resembling a ditch-system. The spade quickly showed these to be plough-rigs of forced soil, covering, however, the heels of six ditches belonging to a multiple system, as at Ardoch.⁵ It was not determined how far round the fort these ditches had extended, or to what period they had belonged. They do not represent the first system in use on the site. Equally, they do not seem to be the last; for the east half and entire south side of the fort are protected by three much larger ditches, unrelated to those discovered on the north-west. It is thus suggested that ditches as well as ramparts have been remodelled.

Meanwhile, a trench cut 35 feet west of the north gate, exposed three successive fort-walls, as at the north-west

⁴ Cf. Collingwood, *Archæology of Roman Britain*, 26.

⁵ *Proc. Soc. Ant. Scot.*, xxxii, 438, folding plan.

angle. The first had two courses and a footing, and projected 1 foot 6 inches in front of the second, which retained three 7-inch courses. The third was set back $2\frac{1}{2}$ inches on top of the second, and exhibited three similar courses, bedded irregularly on thin stones laid in clay, and very evidently a latest rebuilding. Earlier remains were not sought at this point. Finally, about 140 feet east of the north gate, the fort-wall was found to be built in the massive style of the third period from top to bottom. No course is less than one foot high, in marked contrast with the earlier works.

The east side also produced a fort-wall, in the large masonry of the last period. The earliest ditch, 12 feet wide, lay 19 feet 9 inches beyond this wall. It had been obliterated, as elsewhere, and laid turf from the second turf rampart appeared above it. Since there is no trace of the earlier fort-wall, the periods represented are I, II and V.

The south side still exhibits some visible remains. These are the south gate, whose west passage-wall appears in the east verge of the modern road, the south-east and south-west angle-towers, and two interval-towers. The south-east angle-tower is marked by a hollow in the grass, and by some large facing-stones not in position. A large block in position occurs on the front of the south-west tower, partly covered by a field-wall, confirming Hodgson's statement⁶ that "in 1810 a strong tower in the south-west corner had some of its facing-stones in their original position." Similar large masonry at the north-west angle is already dated to the last period: consonantly, the south-east tower was noted by its excavators to have been a late structure. The interval-tower (pl. x, fig. 2) west of the gate, partly examined in 1852, proved to have an interior about $7\frac{1}{2}$ feet square, with sides not exactly equal. The front wall was 5 feet thick, built in large masonry, as at the angle-towers, and set in undisturbed subsoil. No trace of earlier defences was found, as if these did not here

⁶ *Hist. Northumb.*, part ii, vol. i, p. 146.

coincide so closely with the later line: but the question was left aside, as affecting planning rather than history. It is clear that the whole massive basement of this tower retained an earth-filling, as the level of the doorway suggests, and the filling itself was described⁷ in 1852, by Edward Milburn, the Duke's moorgrave for Wark.

“Commencing at the top,” he notes, “the rubbish was composed of soil, stones and lime, until nearly half-way down, when wood ashes or similar material became mixed with the other matter. At the bottom of these ashes, and on a level with the scarcement, was a layer of grey slates, in several of which the hole for fastening them remained. Below the slates, the rubbish was thickly mixed with ashes; so much so, indeed, that in some parts the matter consisted almost entirely of them, to the thickness of about a foot. Next a bed of lime was met with, about a foot thick, and below this another bed of ashes, three inches thick, blacker than those formerly noticed, and thickly mixed with small pieces of charcoal. The ashes last mentioned had the appearance of having been those of burnt heath or brushwood.”

It follows that the floor-level, marked by fallen roof-tiles and burnt timbers, came about a foot below the threshold, which was well worn.⁸ Since the tower was roofed, the coping-stone (pl. x, fig. 2) from a merlon, found near by, must have belonged to the adjacent curtain-wall.

(c) *The gates.*

The west gate (pl. xi, figs. 1 and 2) is the most notable ruin on the site. A little clearing was done, to relate its towers to the curtain-wall. The south tower rested upon a single offset, formed by a course of re-used blocks, diamond-broached; and the contiguous curtain-wall was founded in the same manner, apparently at the same time, and built in the style of the wall which covers the early rampart and earliest ditch further west. The north tower was differently founded (pl. xi, fig. 2), on roughly-

⁷ *AA*² i, 71-72.

⁸ *Ibid.*, 71.

quarried rubble, set herringbonewise in stiff yellow clay. The contemporary curtain-wall had clearly been built with the tower, for the footings were bonded; but below their level were broken ends. These comprised one course of an early wall, which rested upon a thin slate-like foundation-course and was bedded in turn upon the remains of a still older wall, of one course and a footing. Thus, there is an evident correspondence between these remains and the three fort-walls discovered at the north-west angle. At both points also the massive masonry covers two earlier walls, and belongs to the final period of occupation, carrying with it the whole visible gateway; as would, indeed, account for the late character of its impost-mouldings, matched by the fourth-century impost-moulding from Risingham (pl. xv, 2e). Earlier gates have evidently been entirely removed, as if their planning did not agree with the ideas of the late restorers. In the late scheme, this gate and its sister *porta principalis* were the most important; and the latter gave access to Dere Street, though nothing is now known about it.

The north gate, disclosed⁹ in 1852, still retains its east passage-wall. The west wall has been removed, so that the span is uncertain. The east impost is recessed 7 feet 6 inches from the front of the gate. Search for a guard-chamber or tower showed that the east side of the gate had no such feature. The front wall was 5 feet thick, and was backed with clean clay, extending to the north wall of an internal building, 11 feet 5 inches behind the outer faces of portal and wall. This building was 16 feet wide over-all, and at least 15 feet long. It evidently matches the late internal buildings¹⁰ lining the rampart-walk on the west, found in 1852 and figured correctly in *Lapidarium Septentrionale*. The interior was flagged, and yielded a fine hammer-headed *mortarium*. Gate and building were evidently designed together, and belong to the latest recon-

⁹ *Collectanea Antiqua*, iii, 174, plan.

¹⁰ Marked as m, m, m in *AA*² i, 77.

struction of the fort. Unlike the west gate, this one had no lateral towers, though there may have been a single tower over the portal.

The south gate was not examined, but its east passage-wall appears in the east verge of the modern road. The west passage-wall has been removed, so that the width cannot now be checked. Nineteenth-century observers¹¹ record that it was very narrow, and of corresponding style to the north gate.

(d) *The interior.*

Stratified levels in the interior were recovered undisturbed by trenching in the lambing-garth (pl. XIII). They provided the necessary correlations between internal levels and the defences, enabling the history of the fort to be defined with some precision.

The earliest occupation left a thick deposit of ashes and rubbish lying along the whole length of the trench and continuing below the clay rampart-backing of the stone fort-walls. There occurred a large fragment of morticed oak timber, and a flagged floor, but no structural remains of coherent plan. The flagging yielded a scrap of a small south-Gaulish cup, Dragendorff's shape 27, two metallic grey jars, and a carinated bowl with strongly reeded rim in hard orange fabric. These sherds could easily be dated to Agricola, whose troops were passing over this route between Corbridge and Newstead; and there need be little hesitation in accepting the fine position of Bremenium as one of that general's skilled choices. But the occupation evidently continued into Trajan's reign, for a remarkably fine bowl of that age occurs in the Alnwick collection; and this would explain the consolidation of the defences. It may be observed that the nineteenth-century excavators¹² reached this layer, but were at a loss to explain it.

¹¹ Roach Smith's plan and Bruce's lithograph in *Arch. Ael.* are discrepant. The copper-plate in *Lap. Sept.* is in closer agreement with Roach Smith.

¹² *AA*² i, 71.

The second layer is contemporary with the earliest stone-wall and its rampart-backing. It contains an *intravallum* road, coeval with the backing, and an excellent mortared stone building, 23 feet 3 inches wide, having an extension 5 feet wider towards the west. Then comes a 3-foot alley, and the back wall of another building. The presence of the extension and its relation to the angle of the fort define the building as a typical L-shaped barrack-block, probably paired with another. It yielded a fragment of Antonine decorated Samian ware, of Dragendorff's shape 37, and contemporary coarse pottery. Hadrianic sherds being absent, the lack of them may be taken to confirm the impression conveyed by the inscription of Lollius Urbicus (C. 1041), that the second period of activity at High Rochester, as at Corbridge,¹³ coincided with the Antonine occupation of Scotland.

In the next period the mortared stone building was taken down, to within two or three courses of its foundation, and rebuilt in much coarser work, set in clay. Above the fourth new course the wall was reduced in thickness and very heavily burnt, while its foot was buried in burnt and collapsed wattle-and-daub, suggesting that a half-timbered superstructure began about the fourth course and had been largely of wattle-and-daub. The new work also extended eastwards, across the *intravallum* to the rampart; to the south of it the rampart-backing was cut away. Doubtless this provision is somehow connected with fitting a milliary cohort into a fort of little more than quingenary size. The plentiful pottery from this building was all of third-century type, matching that from turret 52a on Hadrian's Wall. There had, however, been an alteration during this period. Against the south side of the wall running to the rampart was built a great platform, faced with masonry at the back, and very solidly built with large rough stones set in very sticky resilient clay. It measured at least 25 feet from back to front, and its size,

¹³ NCH x, 478; see below, article xiv.

and solidity combined with resilience, show it to be a *ballistarium*. Gun-platforms, as inscriptions tell, were added under Elagabalus, when the place had become Rome's furthest outpost: but their construction has hitherto remained unknown. They may now be pictured as large and relatively low platforms, from which spring-guns fired their missiles with a parabolic trajectory over the heads of defenders on the rampart-walk: and the hundredweight projectiles, preserved on the school-house porch at Rochester,¹⁴ attest the magnitude of the machines. The trench thus affords a picture of both the third-century buildings and the additional defences: and this third-century reconstruction coincides with the fourth period detected in the defences, when the wall was first rebuilt, and its original clay backing partly removed inside.

The last period is marked by a complete rebuilding upon new lines. A flagged floor, contained within the angle of a building, yielded a little pottery and some deer-antlers. But most of the pottery had been touched by the plough, and was lying in the surface soil. This consisted of well-developed hammer-headed *mortaria*, matching not only that from the north gate but also three in Alnwick castle,¹⁵ and cooking-pots with finely burnished surface and strongly everted rim. On Hadrian's Wall¹⁶ these are typical of the Constantian age, and absent from third-century deposits: at High Rochester they therefore attest a Constantian occupation not hitherto suspected. If it is asked, on the other hand, whether the subsequent history of the fort corresponds to that of Hadrian's Wall, it must be answered that the date of evacuation is uncertain. The Constantian occupation was not transitory, as is proved by heavy wear on the threshold of the interval-tower; and this might suggest that the fort, like the Wall, held firm until A.D. 367. That conclusion, however, is not supported

¹⁴ Mentioned *AA*² i, 73, and figured by Paul Brown, *Friday Book*, 52.

¹⁵ *Catalogue*, p. 152, no. 829, case G.

¹⁶ Cf. *CW*² xi, 452 and pl. v, nos. 1-4; also *CW*² xxx, 189, nos. 11-13.

by any pottery so far recovered, and derives still less support from a coin-list¹⁷ which does not outlast Carausius. Thus, while an intensive Constantian occupation is proved, there is no reason to give it a life of sixty years, in a period known to be chequered with troubles. Literature and coins attest¹⁸ a Pict War conducted by Constans himself early in A.D. 343; *loca limitibus vicina* were wasted¹⁹ in A.D. 360, a disaster met by Julian's *magister militum*; either event may have compelled a withdrawal from Bremenium. Finally, evidence from Risingham shows that fort to have been held for one period longer than High Rochester, and the final period was not short (see below, p. 186): yet even the Risingham pottery does not certainly carry beyond the Pict War of A.D. 367.

It may be remarked, however, that to have carried the occupation into the fourth century at all sheds new lustre upon the vigorous Constantian restoration of A.D. 297-305. Evidence²⁰ has steadily accumulated, from York, Birdoswald, Chesterholm, Malton, South Shields and now Piercebridge, to show that Constantius was not satisfied with patchwork. His was a new creation, planned and executed in the light of new ideas; and where foundations were not firm, his work was as drastic as Hadrian's in days long past. North of York, where the Multangular Tower still impresses every visitor, upstanding remains have rarely survived to characterize the bold and sweeping achievement. At Bremenium there is a whole circuit, comprising an impressive gate, stout walls and stately towers: and

¹⁷ AA² i, 80-83, ranging from Otho to Carausius.

¹⁸ Amm. Marc., xx, 1, 1; *Cod. Theod.*, xi, 16, 5, mentions Constans at Boulogne, on 25th January, 343, cf. Firmicus, *de error. profan. relig.*, *hieme . . . tumentes ac saevientes undas calcastis oceani sub remis vestris*; Cohen, *Méd. Imp.*, vii, Constans 9, where the Emperor is accompanied by Victory in a galley, and viii, p. 313, the famous unique contorniate 331, with reverse legend *Bonomia Oceanen(sis)* and the same theme elaborated, now in the Cabinet de France.

¹⁹ Amm. Marc., *loc. cit.*

²⁰ York, JRS xviii, 94-99; Birdoswald, CW² xxx, 201; Chesterholm, AA⁴ viii, 210; Malton, *The defences of the Roman fort at Malton*, 67; S. Shields, AA⁴ xi, 100; Piercebridge, *Durham and Northumb. A. and A. Soc.*, forthcoming volume.



Fig. 1. HIGH ROCHESTER: **NORTH-WEST** ANGLE.



Fig. 2. HIGH ROCHESTER: WEST INTERVAL-TOWER,
SOUTH RAMPART.





Fig. 2. HIGH ROCHESTER: **NORTH** TOWER OF WEST GATE.

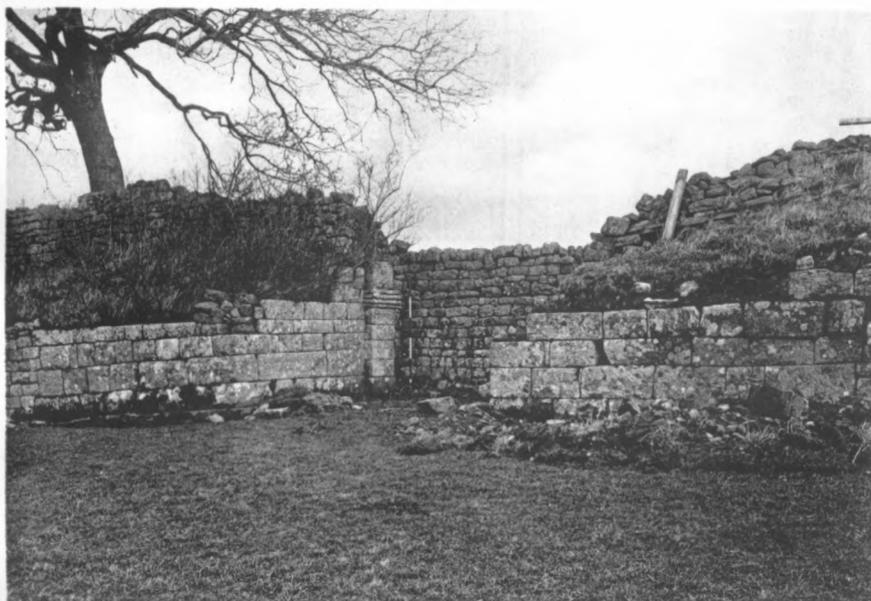
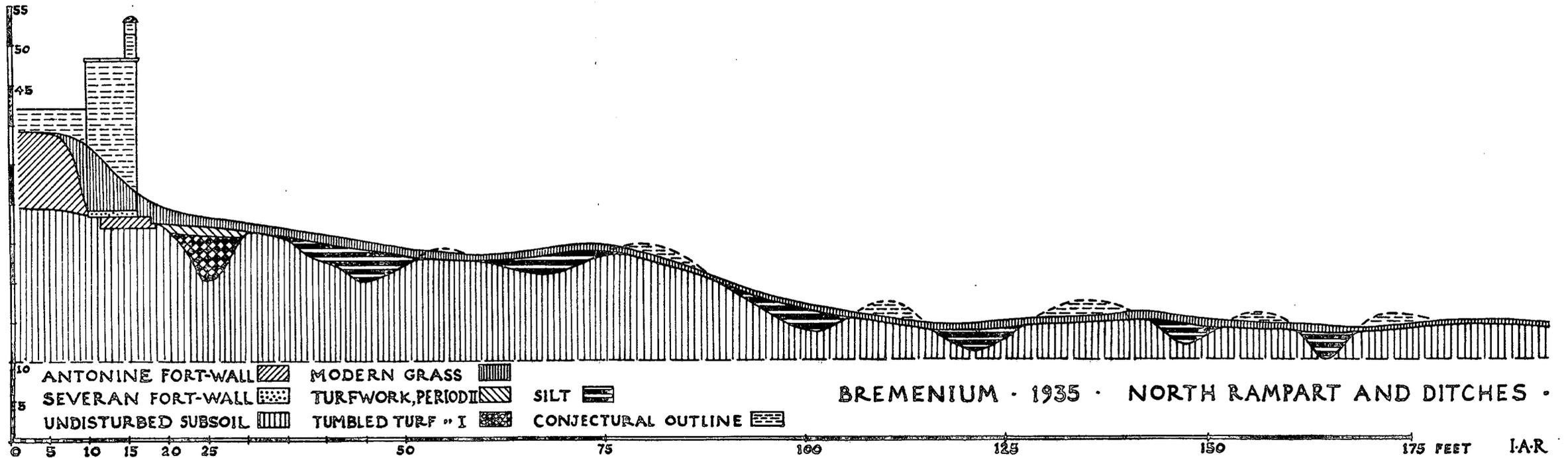


Fig. 1. HIGH ROCHESTER: WEST GATE.



Arch. Ael. 4th ser., vol. XIII.

Plate XII.

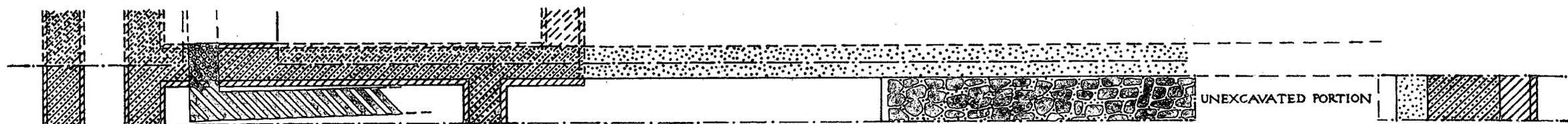






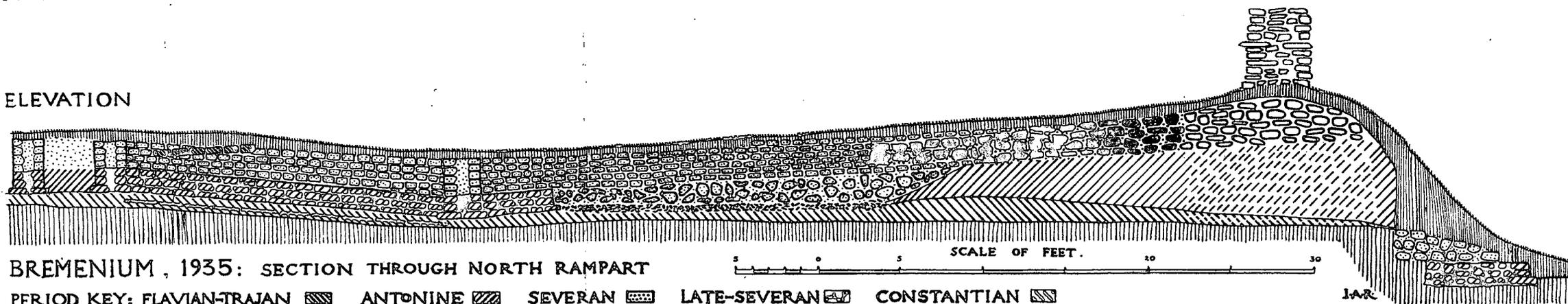
Arch. Act 4th ser., vol. XIII.

Plate XIII.



PLAN

ELEVATION



BREMENIUM, 1935: SECTION THROUGH NORTH RAMPART

PERIOD KEY: FLAVIAN-TRAJAN [diagonal lines] ANTONINE [cross-hatch] SEVERAN [stippled] LATE-SEVERAN [horizontal lines] CONSTANTIAN [vertical lines]

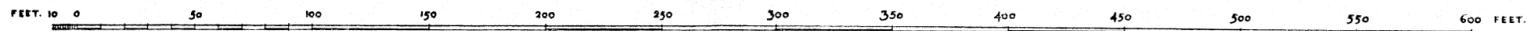
JAR







HORIZONTAL SCALE



VERTICAL SCALE

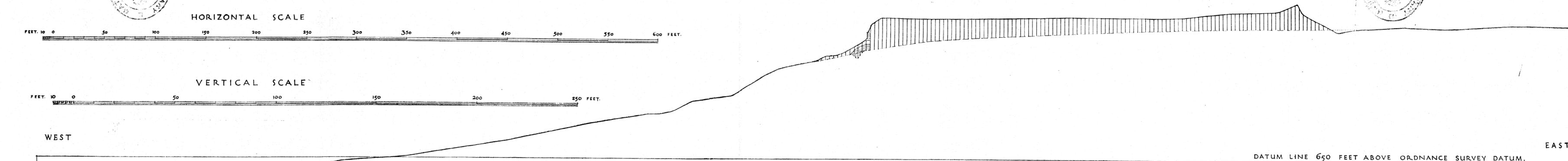


WEST

EAST

DATUM LINE 650 FEET ABOVE ORDNANCE SURVEY DATUM.

BREMENIUM 1935 SECTION THROUGH FORT FROM WEST TO EAST

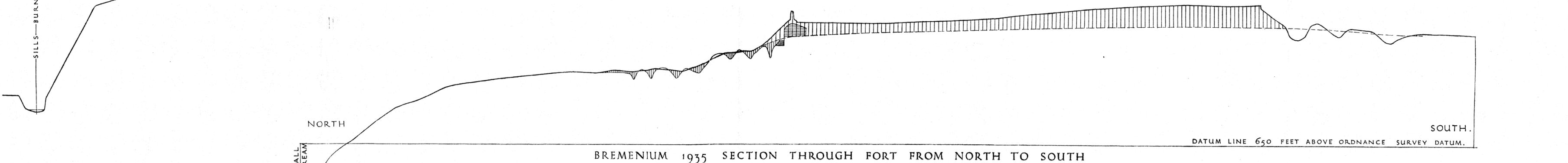


NORTH

SOUTH.

DATUM LINE 650 FEET ABOVE ORDNANCE SURVEY DATUM.

BREMENIUM 1935 SECTION THROUGH FORT FROM NORTH TO SOUTH



SMALL STREAM

RAMPART OR WALL.

DITCHES ASCERTAINED 1935.

ROMAN STRATIFICATION IN FIVE PERIODS.

F.A.C.



these bear witness that, before Constantius died at York in A.D. 305, he had restored Roman prestige in its furthest outpost, imposing the authority of a New Age with fortifications more massive than any built on the site before.

(e) *Inscribed stones re-used.*

Some inscribed stones from High Rochester, now at Alnwick, have also a story of change to tell, apart from the record engraved upon them; for some were put to new use when their texts were no longer respected.

The most interesting is the Antonine dedication (C. 1041), of about A.D. 140, found serving to line the water-tank in front of the latest *principia*, and therefore proofed with cement, which adheres thickly to parts of the surface. Earlier still, however, before the cement protected the surface, the letters had been much defaced by treading. Thus, after the destruction of the Antonine building, the stone had later served as a flooring-slab, and last of all as the lining of a tank. It gives its own proof of two periods following the Antonine, exactly as revealed by the spade.

Further evidence of the same type is supplied by an inscription²¹ of Elagabalus (C. 1045), recording the erection of a *ballistarium* in A.D. 219-20, which is heavily worn by treading. This stone already belongs to a period later than the Antonine slab; since it was used up in a still later occupation, its second use must correspond to the third use of the Antonine stone.

Finally, an altar (C. 1030) once put in the *sacellum* of the *principia* tells a similar story. It was set up in A.D. 238-43 by the governor,²² Egnatius Lucilianus, to the genius of our Lord emperor and of the standards of *cohors I Vardulorum*. The first line, on the capital of the altar, has been much defaced by treading; the top has been clumsily

²¹ C. 1045=EE ix, 612, found "outside the west wall, with its face downward," see Bruce, AA² i, 78, note 5. It may be assumed that it had been used to floor some building on or near the wall.

²² JRS xii, 71.

trimmed down, losing its *focus*, and the back is roughly cut straight, evidently to bed the stone in a new position as a stair-tread. This third-century altar had been re-used in a later period, as had the stone of Elagabalus.

The same kind of reasoning affects the interpretation of three third-century altars (C. 1033-35), from a building west of the south gate. These had been set up in a shrine to Minerva, the seat of a *collegium*, not in place among the barracks where the stones were found. When it is realized that each stone has been deprived of its *focus* in cutting it up for building, it is no longer necessary to relate the dedications to the buildings in which they were found. They had already been robbed from another position, probably outside the fort. But the shrine was of the third-century, and this implies a later period, exactly as do the previous examples.

II. RISINGHAM.

(a) *Introductory.*

Habitancum, the Roman name²³ of this fort, occurs upon the earliest stone (C. 996) recorded from the site, but is otherwise unknown to Roman literature and of obscure etymology. The site (pl. ix, fig. 2) is a flat tongue of land, jutting from the south into the marshy valley of the Redè, where Dere Street crossed it by a bridge: so flat as to be rendered prominent only by the bold mound of its Roman ruins. If Rochester is a typical outpost-site, Risingham is an equally typical bridge-head position, close to the river-crossing thus guarded. The remains comprise a four-acre fort, 402 feet by 482 feet across exceptionally massive stone-faced ramparts. Little is known of its buildings, except the site of the later *principia* and a bath-house at the south-east angle (see below, p. 193).

²³ *Habitancium* was the version preferred by Hübner, *CIL* vii, p. 169; but the form preserved is locative and the analogies of *Eboracum*—*Eboraci*, and of Gallic names in *-ncum* favour the former.



Dated inscriptions are a dedication to Marcus and Verus (C. 1001), a slab (C. 1003) recording restoration of gate and walls in A.D. 205-8, dedications to Caracalla (C. 1002,

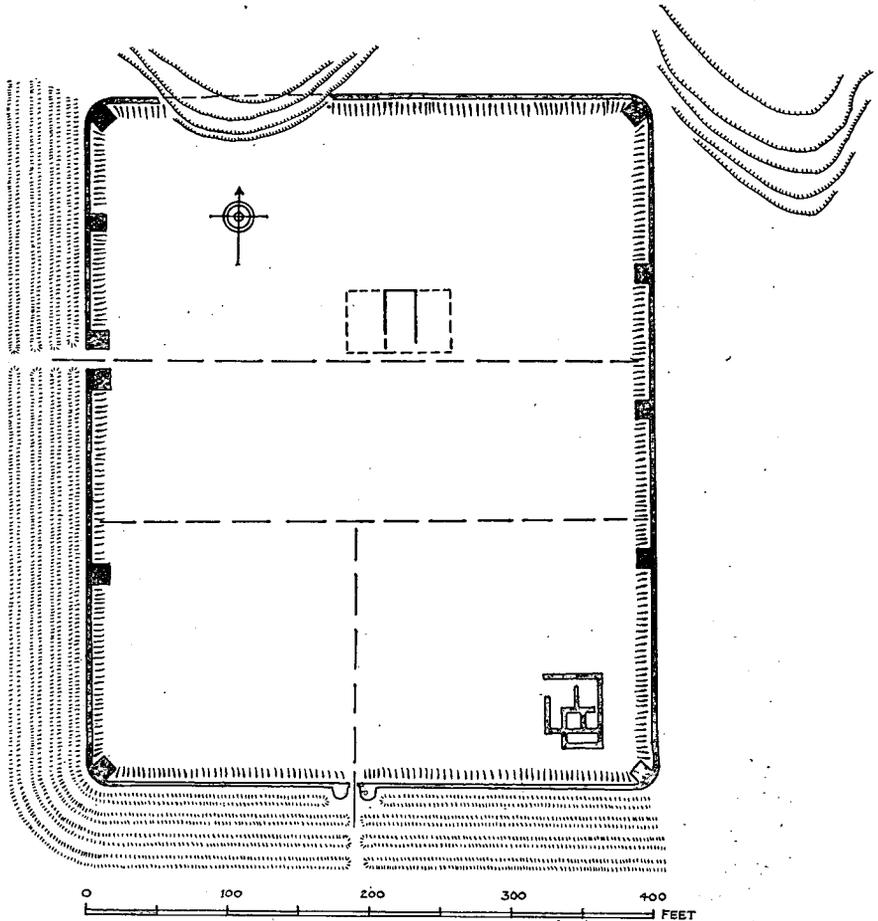


FIG. 2. SKETCH-PLAN OF RISINGHAM FORT.

1004), and a tombstone (C. 1021) with Christian formula.²⁴ The second-century garrison was *cohors IV Gallorum*.

²⁴ Haverfield, *AA*³ xv, 28-29; *EE* ix, 612.

Severus placed there *cohors I Vangionum*, reinforced under Caracalla by *Raeti Gaesati* and *exploratores*. Later garrisons are unknown.

(b) *The gates.*

The west gate (fig. 3; pl. xv, 1) is clearly indicated by the causeway leading to it across four ditches. Only the south guardchamber was examined, the north being outlined by trial trenches; sufficient to show that the gate had possessed a single portal of the Rochester type (pl. xi, fig. 1), largely robbed of its big masonry. The guardchamber had two levels, corresponding to an original building in large masonry and a reconstruction in smaller stones. The flagged floor of the rebuilt chamber was much worn, but yielded no relics: the original floor was of gravel, laid upon undisturbed subsoil, and produced a well-developed hammer-headed *mortarium*. Thus, even the first period of this gateway falls within the fourth century. The portal also exhibits two levels, the later marked by a very large worn threshold, on which had raged a fire hot enough to calcine the passage-walls—a vivid reminder of the day when assailants burnt down the doors of the gate. The same paving embodied a discarded arcuate lintel, well worn with treading. These stones hid from sight a pair of ornamental angle-plinths, re-used but well abraded in that position, which marked the first road-level of the portal. An impost-mould, of typical fourth-century profile, and an exceptionally fine *cavetto* string-mould, show (pl. xv, fig. 2e) that the superstructure had been elaborate. A large *ballista-ball* (pl. xv, fig. 2c) was also found, on the berm.

There was no trace of the earlier gate, but the position had been occupied by earlier defences (pl. xvi, fig. 1). The masonry bonded with the south angle-plinth rests upon an earlier plinth-course, at a lower level, which belonged to a fort-wall of still larger and very beautiful masonry, in courses 1 foot 4 inches high, into which the

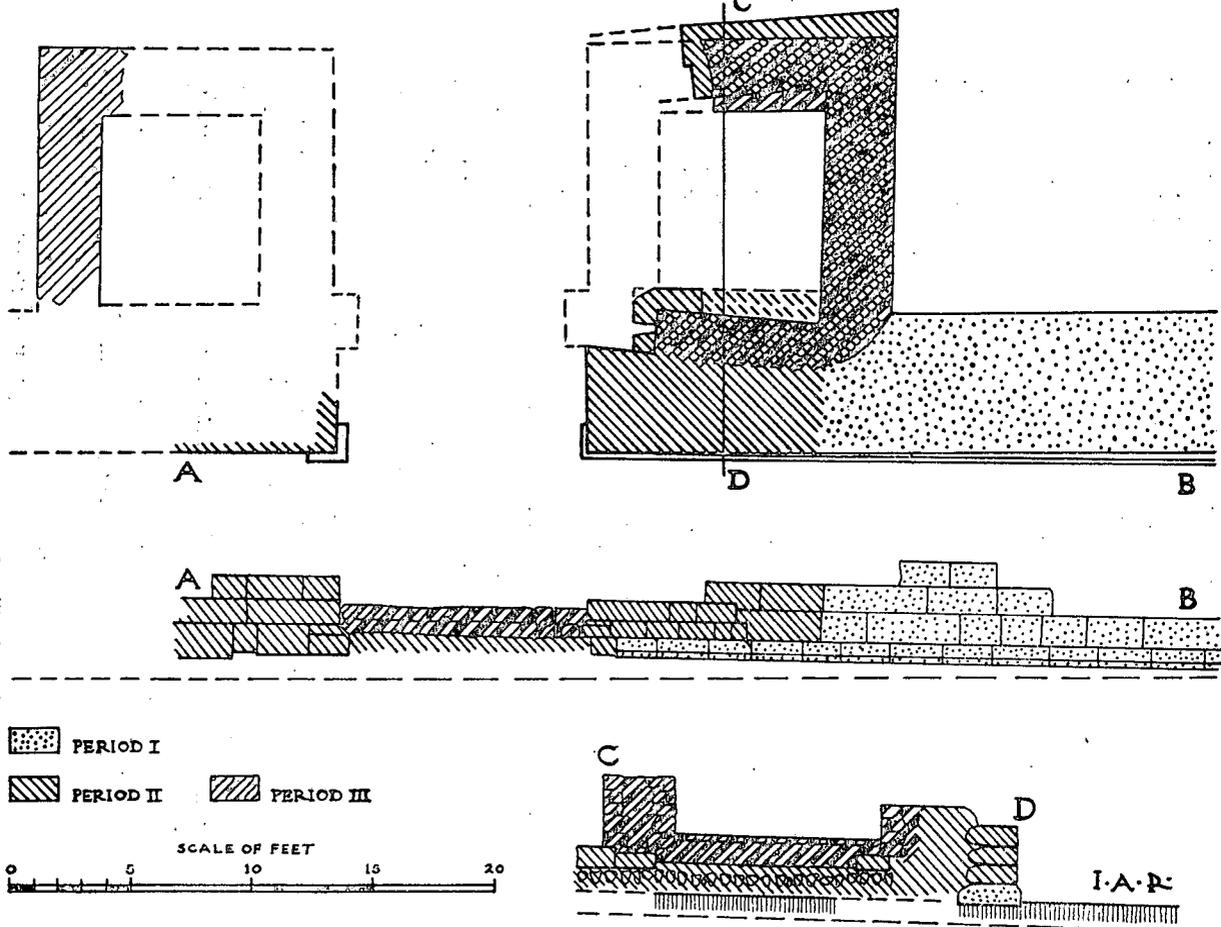


FIG. 3. WEST GATE AT RISINGHAM, PLAN AND SECTIONS.

stone-work of the gate was inserted by joggled joints, after the wall had been partly taken down in order to build it into position. On the north side, the early plinth had not been retained, though it recurs 27 feet further north, showing that the earlier work ran north of the gate. But this half of the gateway (pl. xvi, fig. 1) had been built from the very bottom with re-used stones, irregularly bedded. In short, the fourth-century gateway, itself once reconstructed, had been inserted into an earlier fort-wall, whose west gate probably occupied another position, as at Chesterholm.²⁵

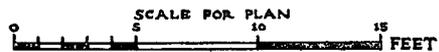
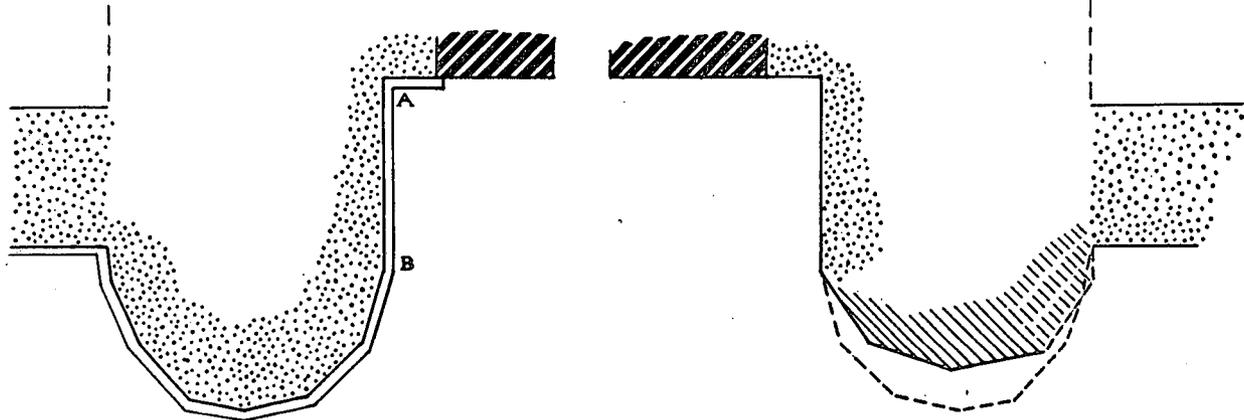
The south gate was partly cleared by Richard Shanks²⁶ in 1844. John Bell's plan, here reproduced (fig. 4) with modifications, shows it to have had a deep double portal, later reduced or blocked, contained between two projecting polygonal towers of differing shapes. He cleared most of the west tower, with seven-sided front, and his measured elevation shows its original masonry, bonded with the west impost of the portal, in elaborately tooled courses 1 foot 4 inches deep. The exact correspondence in exceptional depth between this coursing and that of the fort-wall suggested that the two structures were coeval; a point worth verification, since the original work upon this gate and an associated fort-wall is dated by the inscription (C. 1003) of A.D. 205-8, in the phrase "*portam cum muris vetustate dilapsis . . . a solo restituit.*"

The first trench, seeking the foundations of the masonry A-B, exposed by Richard and removed²⁷ by William Shanks, disclosed a foundation of two deep courses, set upon masons' chippings in undisturbed subsoil (fig. 4). The uppermost course was chamfered, to serve as a plinth at ground-level. At the junction with the fort-wall (pl. xvi, 2), the wall-plinth overlapped this chamfered foundation; and a slight discrepancy in level was corrected on the

²⁵ See below, article XII.

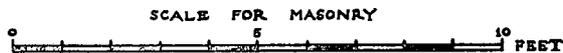
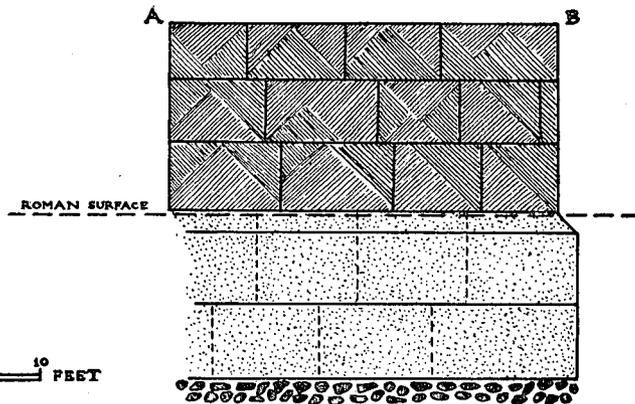
²⁶ AA¹ iv, pl. II, 20, plan by J. Bell, of Gateshead.

²⁷ PSAN³ viii, 96.



PERIOD KEY

-  SEVERAN
-  CONSTANTIAN
-  POST-CONSTANTIAN



I.A.R. 1935.

FIG. 4. SOUTH GATE AT RISINGHAM, AFTER JOHN BELL.

foundation by inserting a thin course of masonry, cut to match the wall-plinth, so that above this point the large ashlar of wall and tower, now removed, should bond perfectly together. This arrangement leaves no doubt that the structures are contemporary. Had the tower been earlier, the correction would not have been made: had the tower been later, the wall-plinth could not have overlapped it. Thus, the wall and gate were built together *a solo*, as stated by the Severan inscription (C. 1003), which must be taken as applying to them. Presently, it will be seen that there is further independent evidence supporting a third-century date for the wall.

On securing the desired link between Roman record and the structural remains, the trial-trenching was not extended to examine the later history of the gate. But some curious points emerge from Bell's plan. That the towers did not originally match is an altogether unlikely contingency in such fine building; and the inference, that the east tower is a rebuilding, wins support from what Bell²⁸ calls "the mouth of a drain" on its front. Drains have no place there, and the stone was probably a re-used arcuate lintel, like that at the west gate (see above, p. 186). If, however, the tower was rebuilt, it is not easy to think that the gate was then reduced to a postern; and still more difficult if the very narrow gap had contained the central pier of the original double portal, robbed from between blocking-walls, for this would imply that when the tower was built the gate was completely blocked. Whatever the true explanation, the final phase can hardly be taken in connexion with the rebuilding of the east tower. In other words, the nineteenth-century record would suggest two periods of reconstruction, the last perhaps less clear than Bell thought; and this is a chronological scheme similar to that of the west gate.

The important result, however, is the connexion now established between the original gate, with polygonal

²⁸ As noted on the plan, see note 26.

towers, and the Severan reconstruction. As already noted, the gate is without British parallels in this period, though projecting towers had already been built in Wales,²⁹ while simpler polygonal towers³⁰ occur at Lambaesis and served as models for not a few African forts. The large semi-circular gate-towers of Regensburg (*Castra Regina*), dated to A.D. 179 (*CIL* iii, 11965), are in the same line of descent, the polygonal form adopted at Risingham being easier to create in stone. The military engineers, as Dr. R. E. M. Wheeler has observed,³¹ were at first borrowing "from urban architecture rather for its monumental possibilities than for its tactical value." This point is the more interesting when it is recalled that the Risingham gateway was built by a civil authority, the *procurator Augusti*, acting under the governor's orders. It so happens also that this is a highly exceptional procedure, and a standing puzzle to students of the Roman civil service;³² for what special interest the Imperial finance-officer had at Risingham, or why he should be concerned to build a fort garrisoned by troops under the governor's control, does not emerge; and analogies are wanting.

The north gate does not now appear, and Bell's indications of its site can command little confidence. In 1810, however, Hodgson³³ saw a rectangular east tower, which projected from the fort-wall in the manner of the north gate at Chesterholm.

An east gate is not revealed by surface indications. Indeed, the disposition of the interval towers on this side of the fort, as now visible, suggests that no gate was there; an inference strengthened, though not verified, by the discovery (see below, p. 198, 2) that beyond this side of the fort there was anciently marsh-land.

²⁹ R. E. M. Wheeler, *The Roman fort near Brecon*, 17.

³⁰ Lambaesis, *Mém. Acad. Inscr. et belles-lettres*, xxvii, figs. 3-5; cf. Wheeler, *JRS* xvi, 181, fig. 59.

³¹ *The Roman fort near Brecon*, 25.

³² Mattingly, *The Imperial Civil Service of Rome*, 114.

³³ *Hist. Northumb.*, part ii, vol. i, 179-180.

(c) *The defences.*

The west side offered the best opportunities to examine the exceptionally fine masonry of the fort-wall. Trenches were cut at 33 feet to north of the west gate (centre-line), and at 165 and 200 feet to south, and showed that similar masonry continued uniformly along the west side. Its occurrence at the south gate and the north-east angle (see below) carries on the tale.

The southernmost trench disclosed only the wall-plinth, set on two layers of masons' chippings, in undisturbed subsoil. The shear-holes by which a crane had placed the stone in position were clear. The wall above was 5 feet 9 inches thick, built with mortared rubble core against a contemporary bank of clean river-clay, probably derived from ditches, as Dr. Raistrick's analysis suggests (see below, p. 198). The bank had been at least 25 feet wide, but was later much reduced.

The north-east angle still exhibits (pl. ix, 2) the curving masonry fronting the angle-tower, weathered, but once elaborately broached as at the south gate. The masonry of towers was evidently treated more richly than that of the curtain-wall, though similarly coursed. Below the standard plinth were two layers of large masons' chippings and cobbles, set in hard black clay. Although the existing masonry is all original work, it is known that this angle-tower was repaired. One tombstone was found built into its face in 1842, and two more a little further south.³⁴

Our trench was then extended across the two innermost of seven prominent mounds, looking like the remains of a ditch-system. As at High Rochester, these proved to be modern plough-rigs, lying on top of clean layered river-sand unsullied by ditches. An explanation is easy to offer. Before Catcleugh reservoir robbed the river Rede

³⁴ The account of these stones in *Lap. Sept.* must be revised with Hodgson, *Gent. Mag.* 1842, 535-536. No. 617, C. 1019, was found at the north-east angle, and nos. 616 and 620, C. 1014 and 1015, were found 20 feet further south. No. 622, C. 1011, comes from another part of the wall, unspecified. All were face downward and end inward.

of its head waters, it was a higher stream, more turbulent than now; and old folk at Woodburn recall how the whole valley hereabouts became a lake in winter. That Roman engineers had also visualized these conditions is shown by the great embankment which carries Dere Street to the bridge-head, well above those floods which have long since washed away the bridge and the corresponding causeway on the north. In these circumstances it would have been impossible to maintain ditches on the low-lying east side. On the higher south and west sides there are four ditches, on a very much bigger scale than the rigging.

(d) *The interior.*

The principia were not examined, but the later building³⁵ was trenched by J. Bell in 1843, who seems to have found the north end and back wall of the cross-hall, with signs of reconstruction. He also records a complete stone screen,³⁶ of the Chesterholm type, taken with fragments of another by Richard Shanks to Parkhead farm. The building seems to have faced west, as if the west gate were then the *porta praetoria*. This would be an unusual arrangement at an earlier date, but fourth-century builders were taught not to sacrifice uniformity to convenience; in Vegetius's phrase, *nec utilitati praeiudicat forma* (iii, 8). Lionel Charlton³⁷ saw two altars lying near this building in 1753, of which both (C. 987, 988) mentioned a vexillation of *Raeti gaesati*.

The bath-house was excavated³⁸ by Richard Shanks in

³⁵ AA¹ iv, 158. On Bell's original plan, in this society's possession, a "walled-up doorway" is marked north of the screen stone, discovered 17 October, 1843. This would suggest that the later *principia*, like the west gate, had been reconstructed once, being in fact designed to go with this gate during the same rebuilding of the fort.

³⁶ Illustrated *loc. cit.* The fragments of the second, belonging to a different pair, have neither been recognized nor illustrated. For the type, see below, article XII.

³⁷ *Gent. Mag.* 1753, 224.

³⁸ AA¹ iii, 150-152, shows that the work was done piecemeal, between 1839 and 1842. Hodgson, *Gent. Mag.* 1841, 135, notes that C. 1004, part of a slab to Caracalla, was used in the walls of the building, together with C. 990, of uncertain date but not identical, as

1840, and an original plan³⁹ of the work, by John Bell of Gateshead, has recently been presented to this society by Mr. John Gibson of Hexham.

Stratification behind the west rampart was examined in the southernmost section (pl. xvii). The earliest level was a well defined layer of gravel and some flags, resting throughout upon a strong-smelling black viscid mass, which Dr. Raistrick's analysis (see below, p. 198) shows to be tangled marsh plants, growing in position. Until this time, the site at *Habitancum* had been a little island in the fen, overgrown with sedges. There were no first-century relics, but plentiful cooking-pots, platters and Samian ware of Antonine date. As at High Rochester, Hadrianic sherds were absent, forbidding the assumption that the place was occupied before A.D. 140. No structural remains were forthcoming, but the very handsome dedication (C. 1001), probably to Marcus and Verus, by *cohors IIII Gallorum*, suggests that these remains belonged to a quingenary-cohort fort, with some buildings of architectural pretensions. A *ballista*-ball (pl. xv, fig. 2*b*) found in the gravel attests the use of large spring-guns in this period.

Above the second-century layer was placed the rampart-backing of the massive fort-wall, already shown to be associated with the Severan gate. This complete change in plan demonstrates that the Severan fort was indeed built from the very foundations. Behind the rampart there was a spread of clean broken stone, on which lay a *ballista*-ball (pl. xv, fig. 2*a*); and two compartments of a building, one floored with clay, the other with flagstones, and both producing scraps of third-century pottery.

sometimes thought, with C. 989. This demonstrates rebuilding after the third-century occupation. He also mentions a heated apse, unrecorded by Bell, in which C. 982 and 984 were found. The reason why Bell did not record the apse was that, when he and Clayton arrived (see *AA*, *loc. cit.*), the excavation had been filled in, so that his plan, dated 18 October, 1843, is really of upper walls only.

³⁹ This is a large edition of the sketch upon the plan facing *AA*¹ iii, 158.

The next level is marked by a heavily burnt flagged floor towards the east end of the trench. The earlier rampart-backing was cut away to within 10 feet of the fort-wall, and revetted with stones. The extra space thus created yielded a millstone, indicative of habitation.

This level goes with the building of the fourth-century west gate. The last level contained buildings set still closer behind the fort-walls, covering even the meagre remains of the original rampart-backing. The floors, partly of dirt and partly flagged, produced a little pottery, and a much worn coin of Gallienus (A.D. 260-68). The pottery was of fourth-century type, including part of a grey jar with wide lattice scoring of signal-station type, and a flanged bowl of about the same period. But the dearth of material makes it difficult to estimate whether the occupation continued after A.D. 367. The level is certainly to be equated with the final reconstruction of the west gate, which was even more unproductive of relics. Whenever the occupation ceased, it may probably be taken to have continued until A.D. 367.

Risingham is thus seen to have had a somewhat different history from High Rochester. There was no first-century occupation; and the twenty-mile stage between Corbridge and High Rochester, which results, is matched by many such intervals of early date. Low Borrow Bridge to Brougham, Ambleside to Ravenglass, Binchester to Ebchester are similar examples not far afield. In the second century, the fort was founded to guard the Rede crossing. Quick to develop the fine local stone, its garrison produced at least one remarkable slab, now at Cambridge, in Trinity College Library: but their work was eclipsed in size and magnificence by the Severan fort, which plainly ranks as one of the finest in Britain. There followed two fourth-century restorations, one more than at High Rochester; but the date of evacuation is not yet precisely fixed. The pottery from the final level will not allow a date before A.D. 367, while not definitely for-

bidding an occupation even after that date. Coins, which would best give precision to these inferences, were not forthcoming. A very small area was uncovered, and the requisite evidence would no doubt reward more extensive work.

III. APPENDIX.

Reports on geological samples by A. Raistrick, M.Sc., Ph.D.

I. MATERIAL FROM HIGH ROCHESTER.

1. *Turfwork from on top of the stone foundation, N.W. angle.*

Material is about 40 per cent. sand grade (90 to 60 mesh), with very little true silt, not more than 5 per cent.

Material greater than 60 mesh is mainly organic, small pieces of bark and heather stems, roots, probably grass and sedges, and small pellets of peaty material.

Material greater than 30 mesh is mainly coarse sand, with many small pebbles up to $\frac{1}{2}$ inch diameter. Fragments of wood and bark and some peaty "muck."

A separation of the organic part and analysis for pollen content gives the following qualitative results:

BIRCH: pollen is common.

HAZEL and ALDER: pollen is present but not very common, estimated at about one fourth the amount of birch pollen.

Grass spores are very abundant and very varied, swamping all other spores and pollen.

Fern spores (mainly polypody) present but not common.

Ericoid pollen, present but rare.

2. *Pocket of silted material, sealed by stone foundation, N.W. angle.*

In all respects like turf wall (1), except that there is no silt grade present, and rather less sand grade material. A prolonged washing (10 hours) produced identical material from a sample of 1 (turf wall).

Pollen-analysis of organic part:

BIRCH: commonest tree pollen with

HAZEL: less in quantity.

ALDER: present but not common.

Grass spores in abundance.

Ericoids are present but rare.

Fern spores present but rare.

1 and 2 suggest a grass area with light birch-hazel-alder scrub, possibly restricted to the cleughs and hollows. Heather either not abundant or present at some distance.

Everything suggests that 2 is derived directly from material of type 1 by heavy rain or drainage wash, sufficient to remove the silt and fine sand and to concentrate the coarser material.

3. *Turf rampart, below west wall.*

This is identical in all respects with 1, except that the peaty content is less, though the pollen present is the same. It would not be easy to distinguish this from the turf-wall material. The heavy mineral separations of both are equally meagre, but alike in species of minerals, etc.

4. *From ditch below turf rampart west wall.*

The silt from the earliest ditch, sealed by this rampart, is a true silt, with very dominant clay grade material and very small organic content. Would accumulate fairly rapidly in a ditch receiving "wash" waters during rain from a moderately wide area. The absence of organic stuff suggests that this did not accumulate in a long continued stagnant pool, where water weeds, etc., could have grown.

5. *Material from the earliest ditch, north rampart.*

This is similar to the turf-wall material (1), but includes several distinct patches of a true pond silt (green clays and peaty mud). The two materials are absolutely distinct and give entirely different results on analysis.

The bulk of the material is identical with the turf wall, both in mechanical and pollen analysis, and undoubtedly is turf-wall debris. The silty patches prove to be identical with the silt of (4), but contain more organic matter. This organic stuff contains little pollen, but what is present includes mainly grass spores and fern spores, and is mostly far-decayed plant material.

The assemblage would be adequately explained if turf-wall rubbish had been thrown into a previously open ditch in which a layer of peaty silt had accumulated. Such accumulation would not require a great length of time, as the source of abundant silt is at hand in the rain wash from ramparts, etc.

6. *Turfwork covering the earliest ditch, north rampart.*

Turf-wall material, indistinguishable from 1.

II. MATERIALS FROM RISINGHAM.

1. *Material covering undisturbed subsoil from the section through west rampart.*

The basic material is mainly river-warp, with a fine silt grade. There is very abundant peat, with some grasses or sedges still present, all suggestive of a river-marsh.

Pollen-analysis of the organic part:

WILLOW: rare.

HAZEL: rare.

Grass spores in great abundance.

Sedges, very common.

Ericoids, rare.

2. *Undisturbed subsoil at the foot of the north-east angle.*

About 10 per cent. of very fine clay grade material, obtainable by flocculation. The remainder is a very clean uniform grade sand or silt, with no trace of soil or humus present. It is possible to detect extremely fine bedding on a sharply cut block, which can be very slightly etched with dilute hydrochloric acid. These characteristics agree in all respects with a normal rather coarse river "warp," or with the coarser clays of a glacial lake-bed. The former is almost certainly the more correct description.

3. *Material composing the rampart-backing, west rampart.*

This is a mixture, of blocks of material identical with 2, in a mass of heavily oxidized boulder-clay. No humus is present. I would suggest with some confidence that this material could be supplied by a deeper cut in river-warp than would provide 2; that is, a cut touching the base of the warp and taking up the washed and oxidized surface of underlying clay. This would be also attained if 2 were cut from a thick warp area, and 3 cut where boulder-clay had only a very thin covering of warp.

The last remark corresponds to the conditions on the site; the west side is higher ground, and this material could all come from the ditch-digging. (I. A. R.)



Fig. 2. RISINGHAM. a, b, c, BALLISTA-BALLS; d, e, STRING MOULDS; f, JOGGLED MASONRY.



Fig. 1. RISINGHAM: SOUTH GUARD-CHAMBER OF WEST GATE.

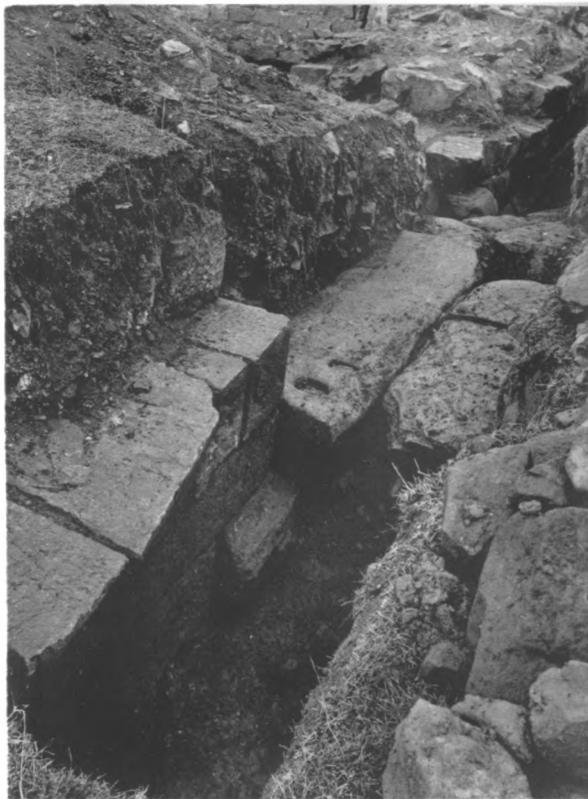


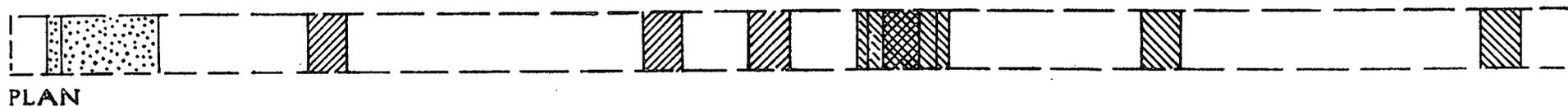
Fig. 1. RISINGHAM: PORTAL OF WEST GATE.



Fig. 2. RISINGHAM: JUNCTION OF SOUTH GATE-TOWER
AND FORT WALL.



RISINGHAM 1935 SECTION THROUGH WEST RAMPART



PLAN

ELEVATION

