

IV.—CORSTOPITUM:

Provisional Report of the Excavations in 1906.

By C. LEONARD WOOLLEY, M.A.

[Communicated to Mr. F. W. DENDY, V.P., and read on the
28th November, 1906.]

CORSTOPITUM lies west of the town of Corbridge on rising ground that looks down to the river Tyne. The site seems never to have been built upon since Roman times, but has, on the other hand, served as a quarry on which Corbridge, Hexham, and many of the villages round have drawn for building material from Saxon times up to the present day. Tradition, and the ruins that until the seventeenth or eighteenth century seem still to have stood above ground, pointed to its importance in the past, and stray finds, such as the famous Corbridge lanx, have given hopes that some relics of that importance might yet be recoverable, but notwithstanding this, there has been no systematic attempt at archaeological excavation on the site.

It is unnecessary in a provisional report to discuss the references made to Roman Corbridge by ancient authors; the only two that bear explicitness upon the course of this year's work must, however, be summarily considered. Mac Lauchlan, in his Survey of the Roman Wall, gives a plan of the outline of the station. On its south side he marks a line of existing foundations, supposed by him to be those of the city wall: it is not clear that he actually saw anything above ground and he probably relied upon information got from the farmer or farm hands who had come upon foundations in ploughing. On the other three sides, his boundary line is marked as conjectural only, and was

probably dictated by a survey of the ground contours. As a matter of fact, it was found that the position of his southern boundary was moderately correct; of the other sides we cannot speak as yet. In 1861 Mr. Coulson carried out certain investigations upon the site of CORSTOPITUM; he had the assistance of one workman only, and his operations were therefore on a somewhat limited scale, but the results obtained were apparently of great interest. Unfortunately, the plans, reports, and drawings made by Mr. Coulson have entirely disappeared, and the only record of his work is an inadequate *résumé* given at second hand in *Arch. Ael.* vi. 18 and 19.

In 1906 the Northumberland History Committee, being then engaged upon the volume dealing with the parish of Corbridge, decided to conduct excavations at CORSTOPITUM on a small scale with a view to certain definite results, namely, the character of the place, whether military or civil, so far as it could be ascertained—its general outline, and the nature of its defences. The landowner, Captain Cuthbert, gave his ready consent to the proposal and afforded all facilities to the workers; Mr. Haverfield undertook to supervise operations, and the first trench was cut on the 16th of August. I was in charge for four of the five weeks during which digging was continued, employing from six to nine men; during this time valuable assistance was given by Mr. W. H. Knowles, to whom I am indebted for the plans that accompany this report, by Mr. R. H. Forster, who is responsible for the work done on the bridge, by Mr. H. H. E. Craster, and by Mr. R. C. Hedley. Mr. Simpson also gave us useful help in my absence.

As there was at the time of starting operations no idea of continuing them beyond the present season, efforts were naturally made to procure within the short time at our disposal the maximum of evidence bearing upon the different points of interest for the history of the town. Work was therefore some-

what more diffuse than would have been the case had a systematic investigation of the whole site been planned from the outset, and falls under three separate headings according as it dealt with the town defences, with the buildings, and with the bridge.

A.—THE TOWN DITCH.

On the first day two trenches were begun with the object of hitting the town wall and getting a section of the ditch: one of these failed, so we may confine our attention to the other. Trench A (see plan and sections, pp. 165, 168) was started at a point based on Mac Lauchlan's survey, but eventually had to be taken somewhat further south than was at first thought necessary before anything definite was reached. The section then obtained was fairly well marked, though complicated by the fact that a rough stone drain had been brought at an angle across the ditch and at a lower level than it, with the result that the earth was disturbed below the line at which untouched soil was to be expected. The ditch itself was about five feet deep and thirteen feet wide, the northern slope being considerably steeper than that on the south; the drain which was here some four feet south of the ditch bottom, was two feet three inches below that bottom, and eleven feet two inches below present ground level. On the north lip of the ditch was a line of rough stones which at first appeared to be the débris of the city wall. A considerable number of building stones were found loose in the soil in this neighbourhood, but below them, resting on the untouched river gravel, were these unhewn quarry stones, not mortared or jointed in any way, but forming a distinct line that ran at a slight south-west angle across the trench. The line of them appeared to be five feet in width, and was followed up westwards for some six feet along its south face, if face it could be called, for the stones, though piled one on the top of another, presented nothing like a building front. Nowhere round were discovered any signs of lime or mortar.

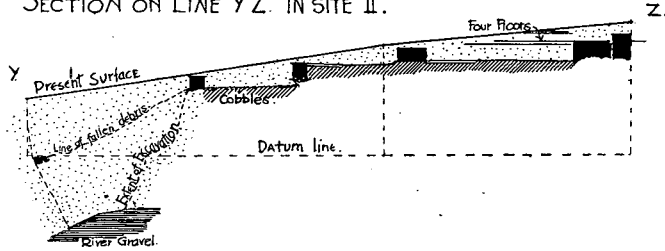
North-east of the point at which the ditch had been thus cut two more trenches were dug, and in each a section of the ditch obtained (T. I. and T. E. on p. 165). The ground-level here was higher, as the ditch had climbed up the sharp slope in the middle of the field and was now well on the brow of the hill.

Trench J was next made, nearer to the bridge, and at the southernmost point of the line of trenches: it gave a section of Site II., north by south; beyond the south wall of the house was an older line of cobbled way with a containing wall, south of which again the river gravel was only reached at a depth of fourteen feet. From the base of the containing wall a layer of débris ending in a heap of loose stones showed the ground-level at the

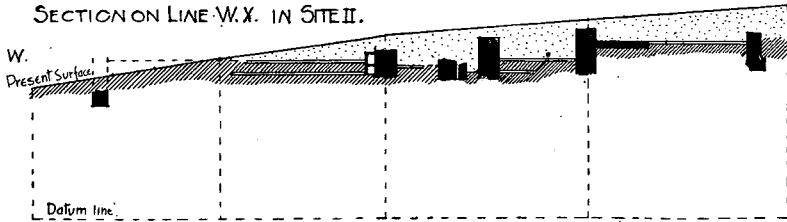
time of the wall's collapse. Close under this fragments of pottery occurred in great quantities, getting rarer as the trench was sunk lower, and ceasing altogether at a depth of eleven feet.

Trench K, about half way between the last trench and trench A, was very complicated. At the north end two cross-walls, apparently fairly late in date, were built upon the gravel. Below, was an empty cist of five flagstones, and beyond this lay a mass of boulders—quarry stones, but not worked—bonded together by a stalagmite formation¹ due to the action of water and lime from a fallen wall. This rested on a bed of sewerage and rubbish, which ran in a tongue under the stones with beneath it a layer

SECTION ON LINE Y Z. IN SITE II.



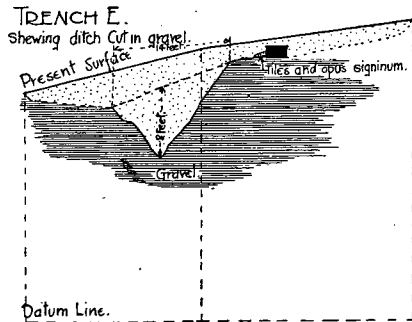
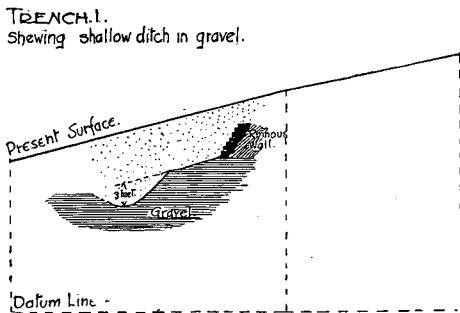
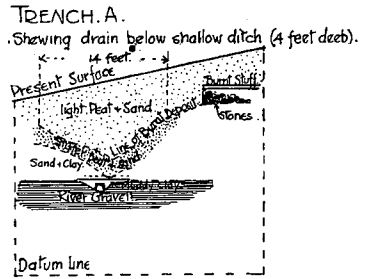
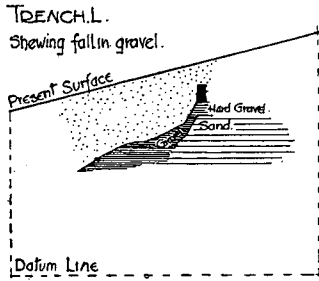
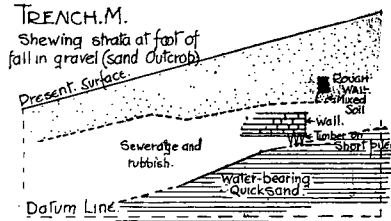
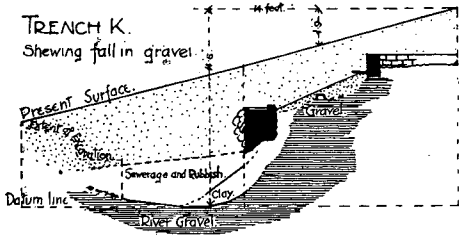
SECTION ON LINE W.X. IN SITE II.



of clean clay increasing in thickness inversely to the sewerage. At the bottom of all, the gravel lay nearly level with the present surface, and from fourteen feet to fourteen feet six inches below it. There was no sign of a ditch.

In trench M, much the same features appeared, though the quantity of water here made operations difficult. Here in the sewerage deposit was a wall of rather rough masonry running south-south-west, which was built on a foundation of planks lying on short piles; the water broke up from the sand in which these piles were sunk. Here, too, the sewerage tailed down to

¹ This formation, made a layer over the top of the stones, and penetrated between them; below it was a quantity of limonite on the stones. All the objects in the sewerage deposit were thickly coated with crystals of vivianite.



the south (to the north it was not followed very far) from a bottom depth of thirteen feet four inches to eight feet as the flatter level of the sandy gravel beneath it drew close to the present ground surface. In trench L, water again hindered operations; the sewerage was practically absent, but the level of the gravel, after a rapid fall from a wall face, ran very nearly parallel with the present surface (sinking one foot one inch in ten feet six inches) for as far as it could be followed. In neither this trench nor the last then was there a sign of that ditch which first appears in trench A to the north-east.

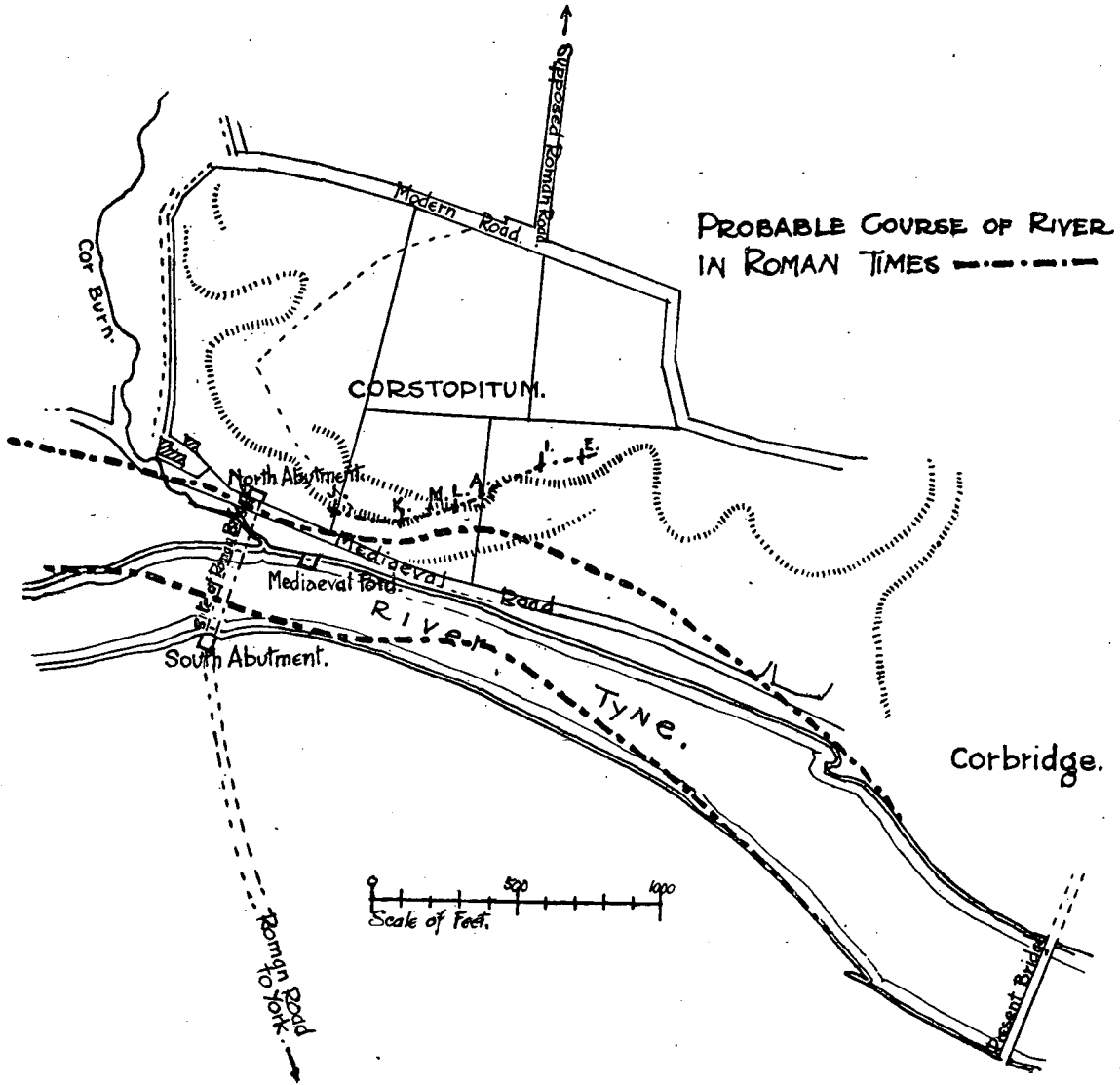
From the evidence, at first sight perhaps rather confusing, given by these cuttings, and in particular from the relation of the datum line to the various sections on pp. 164 and 165, the following conclusions can be obtained. To the east, the ditch was cut fairly high up upon the hill, in firm ground, and at some little distance from the river; here then it is clearly marked. As it runs westwards, with a distinct trend to the south, it comes down the hill-side and nearer to the river; its actual level is here considerably lower than at its eastern end. The natural slope of the ground here is quite sharp, and before the plough had brought down a heavy deposit of soil from the hill top, this fall was succeeded by a comparatively level stretch of land reaching to the river bank; judging from the quantity of water that broke out from quicksand in the trenches at this point, the level ground must have been of the nature of a marsh.² Now the line of the town ditch here comes down to the foot of the slope, and when it reaches it the ditch itself disappears, the reason being that it was unnecessary; the steep slope on the north, with the marsh and the river at its foot, afforded a protection quite as sure as that of the ditch proper on the eastern hill top. It must be remarked that further west, where

² In Prof. Lebour's opinion, the river in Roman times probably made a slight bend to the north here, following the contour of the hill between trench K and the modern Corbridge; on this hypothesis, if the river itself did not reach quite up to the line, KML, there would certainly have been no great distance between it and that line. *N.B.*—In trench M, the wall shewing in the section is built on piles.

the Corburn joins the Tyne, the northern abutment of the Roman bridge is to be found at a spot now some considerable distance inland, separated from the river by a plantation and by the medieval Carlisle road; even allowing for one or two dry piers (though floods would affect the flat ground on the south side rather than the steep banks here) we may well suppose that the river then ran some way north of its present bed.³ It seems that when CORSTOPITUM was built the river followed far more nearly than it does to-day the footline of the northern hill, both on its south-east and its south-west flanks; the bridge in that case would have taken the stream practically at right angles, and the town would have been directly protected by water along the greater part of its southern side. This theory that the ditch ran downhill and disappeared on the low flat ground to the south will account for the peculiar feature of trenches K and M, namely, the presence in them of the very heavy deposit of black, evil-smelling sewage and rubbish. Clearly this represents the accumulated filth of the ditch on the whole of the south, or, at any rate, on the south-east side of the town, which had run down to this, its lowest point, and then formed a sort of tongue against the sharply-rising gravel.

The other question to which the trenches were expected to give an answer was that of the existence of a town wall, and here it must be admitted that the results were far from satisfactory. Briefly, nothing that can be called a town wall has been brought to light. It is true that in every trench walls have been found close to the north lip of the ditch or on the slope of the steep descent to the marsh level; but none of these answers to the description required.

³ Within the last fifty years, at a point two or three hundred yards higher up stream, the river has changed its course considerably, in so far that the piles which then strengthened the south banks now shew at low water rather north of the middle of the river bed.



In trench E, at its north end, there are two walls running east by west, not in the same line, and with broken ends and no apparent connexion between them; they are twenty-seven inches and thirty inches thick respectively, with foundations far too shallow for a defensive wall, even if their thickness were adequate to such a purpose; broken hypocaust tiles and fragments of *opus signinum* of fine quality lying in great quantities on the north side of the eastern wall (which is also three feet six inches to the south of the other) shew that here we have part of a dwelling house only. In trench I, the wall shewn in the section gives only a south face and is of poor and late construction. In trench A, there is certainly the line of stones of which a description has already been given; but this, whatever it is, cannot by itself and in the entire absence of similar foundations in other trenches be taken as proof of a five-foot wall. These rough boulders were more like the core of an earth counterscarp than the foundations of regular masonry: moreover, the face stones that did occur here in considerable numbers were all of quite small size, suited to domestic building rather than to any massive work. In trench L, the wall (see section) had on the south face two very fine courses of masonry, the foundation course being thirteen inches thick, with a slight plinth projecting one inch on a three-inch chamfer; the second course was thirteen inches thick. The whole formed the finest piece of walling yet discovered on the site; behind these facing stones was rubble set with mortar, but after about a foot this appeared to tail off into rubble without mortar, and no trace of a north face could be found. In trench M, the wall east and west was of the poorest description—Mr. R. H. Forster (who dug trenches L and M) doubted whether it were wall or curb. The wall on piles cannot, from its direction, be part of the town wall.

In trench K, the wall east and west measured but eighteen inches across. The mass of stones to the south (which were like the stones in trench A) could not be itself described as any part of a wall, and the fact that the sewage and the clay run right up beneath it disposes of its claim to consideration. In trench I, there was only a very poor containing wall to the cobbled way.

We are driven then to the conclusion that on the south side of the town, at least, no wall existed. In most cases buildings were brought right up to the edge of the trench or of the slope leading to the marshy ground and river: when there were no such buildings (and no walls were shown in trench A) a mound or palisade may perhaps have served to strengthen the defences. But no trace of any continuous defensive works on a large scale has yet been discovered.

B.—THE BUILDINGS.

Excavations were carried on on two sites: one of these was a large private house, the other apparently an official and possibly a military building. These sites were not, properly speaking, cleared, but only trenched, the walls being followed on one or both sides, the interiors left undisturbed.

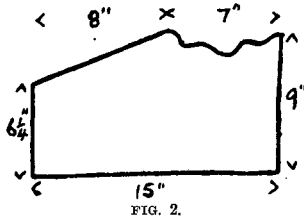
SITE I (see plan).

This was at first regarded as a collection of small separate buildings, lining a street or streets, but as it afterwards appeared more probable that the whole was enclosed by one wall, it is here treated as a single site, while the blocks in it retain their original numbering in the order of discovery. The excavation of the site is not nearly complete. As will be seen in the plan, a broad road, twenty feet wide, runs east and west across the site excavated: it is of cobbles set in concrete over a thick gravel bed, has curbs to north and south, and is bordered on each side by buildings, whose narrower ends abut upon it. The walls seldom have more than two courses remaining and are for the most part of not very good quality, though the corner stones are sometimes of massive proportions: doorways could scarcely ever be made out, while to the south the centre of the area had suffered grievously from the plough and at the brow of the hill all traces of building disappeared. In block A there were the remains of a hypocaust, belonging apparently to an earlier building, as it was more solid than and not in line with the upper walls; the north-west room had been flagged, and concrete laid on the top of the flagging. Between this and block B was a cobbled way nine feet wide, the cobbles at the south-west corner of block A being replaced by flagging. In block B in the south room there were possibly signs of a doorway in the east wall: in the south-west corner of the north room large paving stones formed a platform slightly higher than the concrete floor. Two



GROOVED FLINT, NORTH END OF SITE I, BLOCK A.

curious holes in the earth outside the west wall of the south room, unlined (though one contained three fragments of a large amphora), three feet six inches deep and shaped like inverted funnels, must have served as surface drains. In block J most of the north wall had disappeared; a narrow stone gutter, seven inches wide, ran alongside one of the walls, ending abruptly at either end, while to the east of it a gamma-shaped block of very solid masonry was equally difficult of explanation. To the south of this the fragments of walls that remained were disconnected and ruinous, nor could anything be made of them. The next block to the west, block H, presented at its north end most

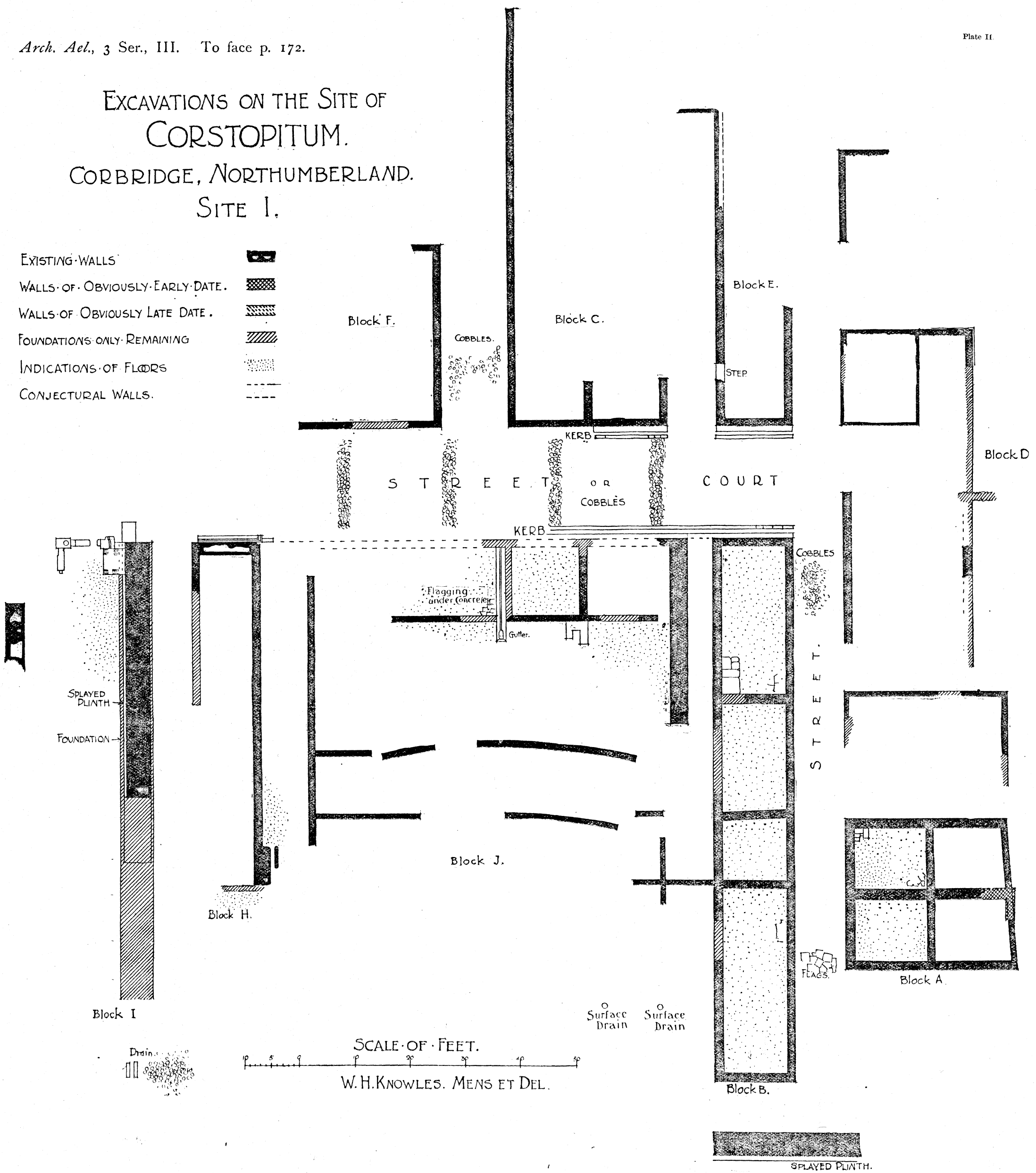


interesting features. Against the outer face of the north wall ran a grooved stone plinth (see page 171) composed of three blocks with a total length of eleven feet eight inches and a section as here shewn. At the east end the grooves formed a return to the north; at

the west end the plinth did not continue the full length of the wall but left a gap of fifteen inches, into which the end of a similar plinth running north and south, with a return east in the grooving, could have fitted. The grooves, and the juggle-holes between the stones of the plinth, were partially filled with a very fine quality of *opus signinum*. A well-worn doorstep abutted on the east end of the plinth, and the corner of the wall behind it was cut away, leaving a socket into which might have been fitted the wooden framework of a door. The object of this plinth is not easily seen, and can only be fully explained by further excavation to the north; it certainly bears some resemblance to the grooved base of a balustrade found in the Praetorium of Borcovicium, but the fact that the plinth here is flush against a wall makes the theory of such a balustrade improbable; nor indeed is the elaborate (though rather rough) grooving so suitable

EXCAVATIONS ON THE SITE OF CORSTOPITUM. CORBRIDGE, NORTHUMBERLAND. SITE I.







- EXISTING WALLS
- WALLS OF OBVIOUSLY EARLY DATE.
- WALLS OF OBVIOUSLY LATE DATE.
- FOUNDATIONS ONLY REMAINING
- INDICATIONS OF FLOORS
- CONJECTURAL WALLS.

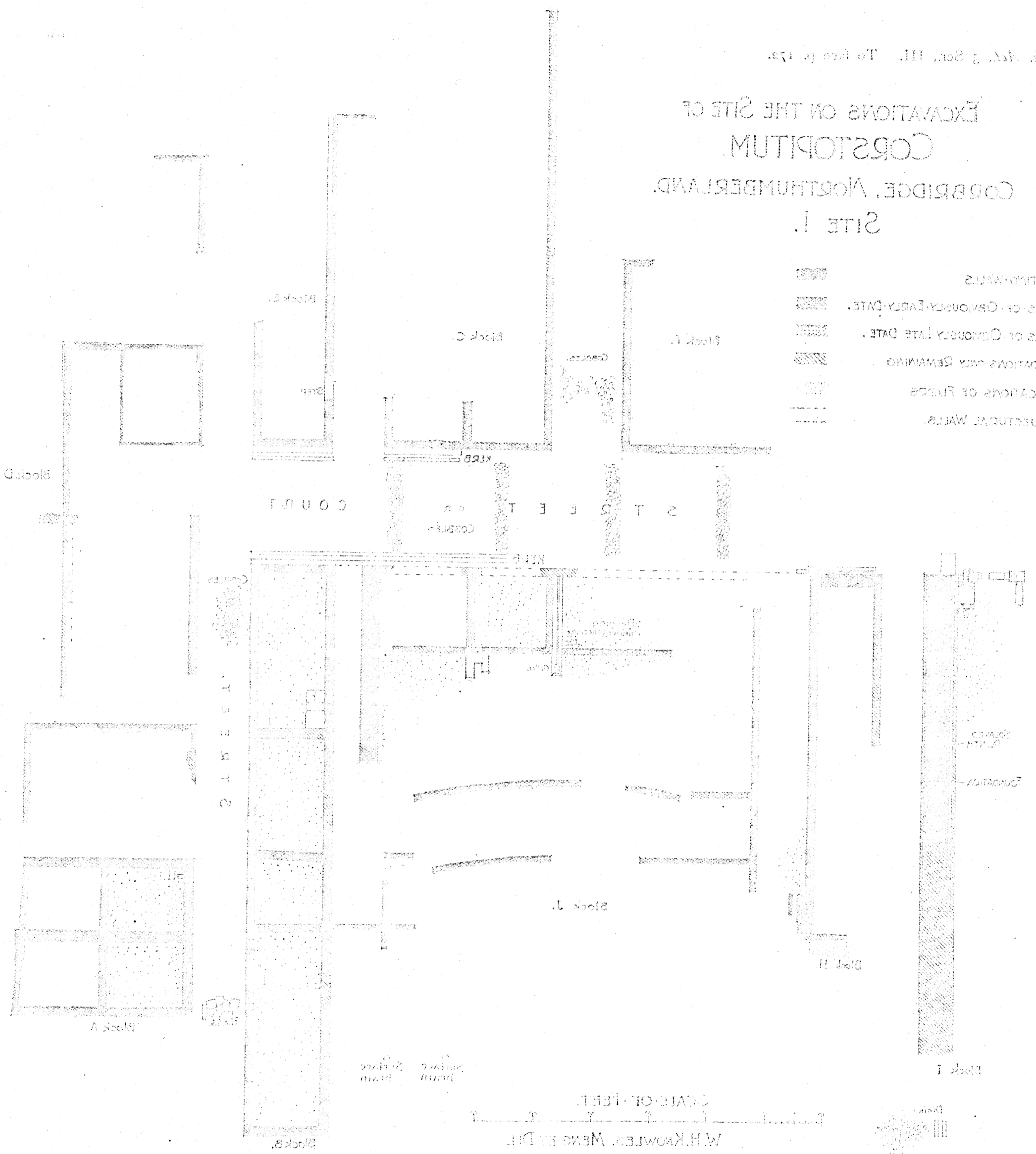


SCALE OF FEET.
W.H.KNOWLES. MENS ET DEL.

SPLAYED PLINTH.

CORSTOPTIUM CORBRIDGE, NORTHUMBERLAND. SITE I.

-  EXISTING WALLS
-  WALLS OF OBVIOUSLY EARLY DATE
-  WALLS OF OBVIOUSLY LATE DATE
-  FOUNDATIONS ONLY REMAINING
-  INDICATORS OF FLOORS
-  CONJECTURAL WALLS



SCALE OF FEET
 W.H. KNOWLES, MENSURER
 0 1 2 3 4 5 6 7 8 9 10

for such a purpose as a plain rectangular socket would have been.⁴ It can only be said that the plinth, whatever its purpose, seems to have been on the south side of a small court or vestibule, leading into the main court or street on the east.

Just to the west of this block ran, north and south, a fine wall [block I] with a chamfered plinth on its west side and projecting foundations of flagstones three inches thick: the breadth of the foundation course was six feet, of the plinth-course five feet, and of the wall proper four feet eight inches. It ran from the south line of the 'street' for eighty-two feet five inches, where the foundations had been ploughed away. Clearly this is the west wall of the building which included within it all the blocks hitherto described, as well as those to the north of the street. South of block B was found a fragment of a similar wall running east and west (the plough had destroyed all but some fifteen feet) which must be taken as the return wall on the south of this important site. The main entrance must have been immediately on the north of block I, in a line with the 'street' into which one passed through the small vestibule abovementioned. On the west of this plinthed wall, and at its north end, was part of a rough enclosure formed of stones clearly taken from some older building and here re-used; one shewed a round shallow socket, probably for a small pillar, another a curved groove that suggested a large gateway. Right against the wall was a square mass of burnt earth, with corners of masonry; this must have been the booth and hearth of some tradesman or mechanic, built in late times against the older wall. Of the buildings lying to the north of the 'street,' little more than the south fronts was excavated, and enough done to shew that here, too, were long narrow blocks running up north and south

⁴This holds equally good against the theory of a wall-casing with slabs of fine stone; moreover, as the grooving is seven inches wide, slabs to fit it would more naturally have been set into the wall, as building stones.

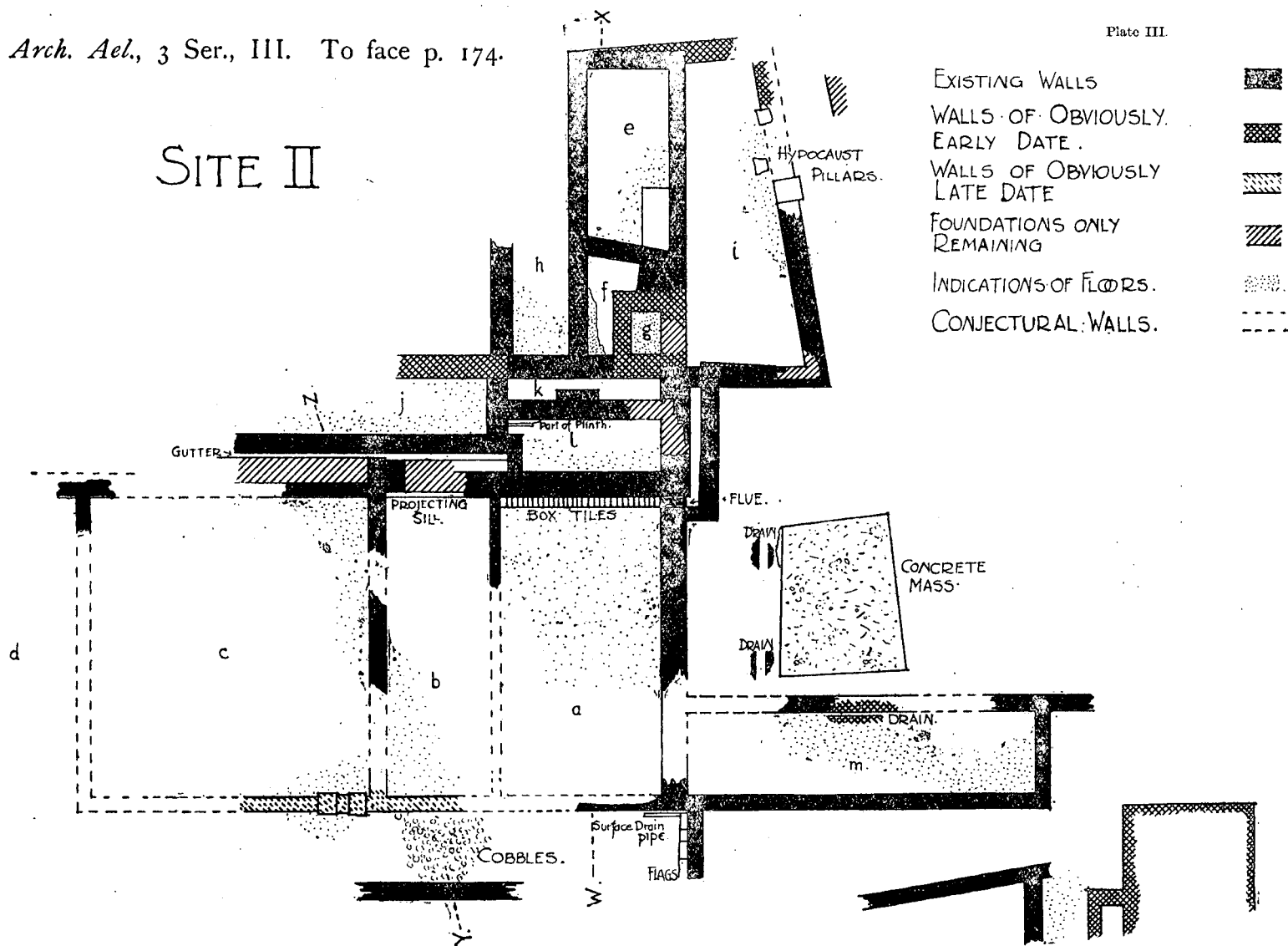
and corresponding more or less to those upon the south side. Owing to the little time at our disposal the west part had to be left untouched, only a trial pit being sunk on the line of the five-foot wall some thirty feet north of its northern end: but only loose stones were found. Close by here was found a large stone drain-top with four holes set cruciform fashion. To the east, foundations of walls were traced running right across the line of 'street,'—further proof that this is not a public road but a long courtyard within a building, whose main east wall probably lies not far from the limit of our excavations in this direction.

This site yielded great quantities of pottery, some twenty-two coins, and seven or eight spearheads; a fair quantity, considering that it was trenched only. The floors shewn are always of concrete, sometimes laid over rough flags. In most blocks signs of burning were commonly visible; in block E, at the south end, a layer of burnt wood lay under the concrete of the floor, as also under the west wall of block J, and under the concrete along the east side of the east wall in block H. Between blocks C and F the concrete in which the cobbles were laid contained fragments of *opus signinum*, and below it appeared another line of concrete and plaster *débris*. It can be said with comparative certainty that the interior buildings of this site are not of early date.

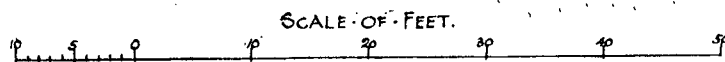
SITE II (see plan).

This site is complicated by the fact that a hedge runs obliquely across it, and, perhaps owing to the action of the plough, the ground-level on the west side is considerably lower, especially at the north end, so that here only foundations and floorings still exist; also, whereas the walls are of very different dates, many of the older have been incorporated in the later building or used as foundations for later walls, so that their

SITE II



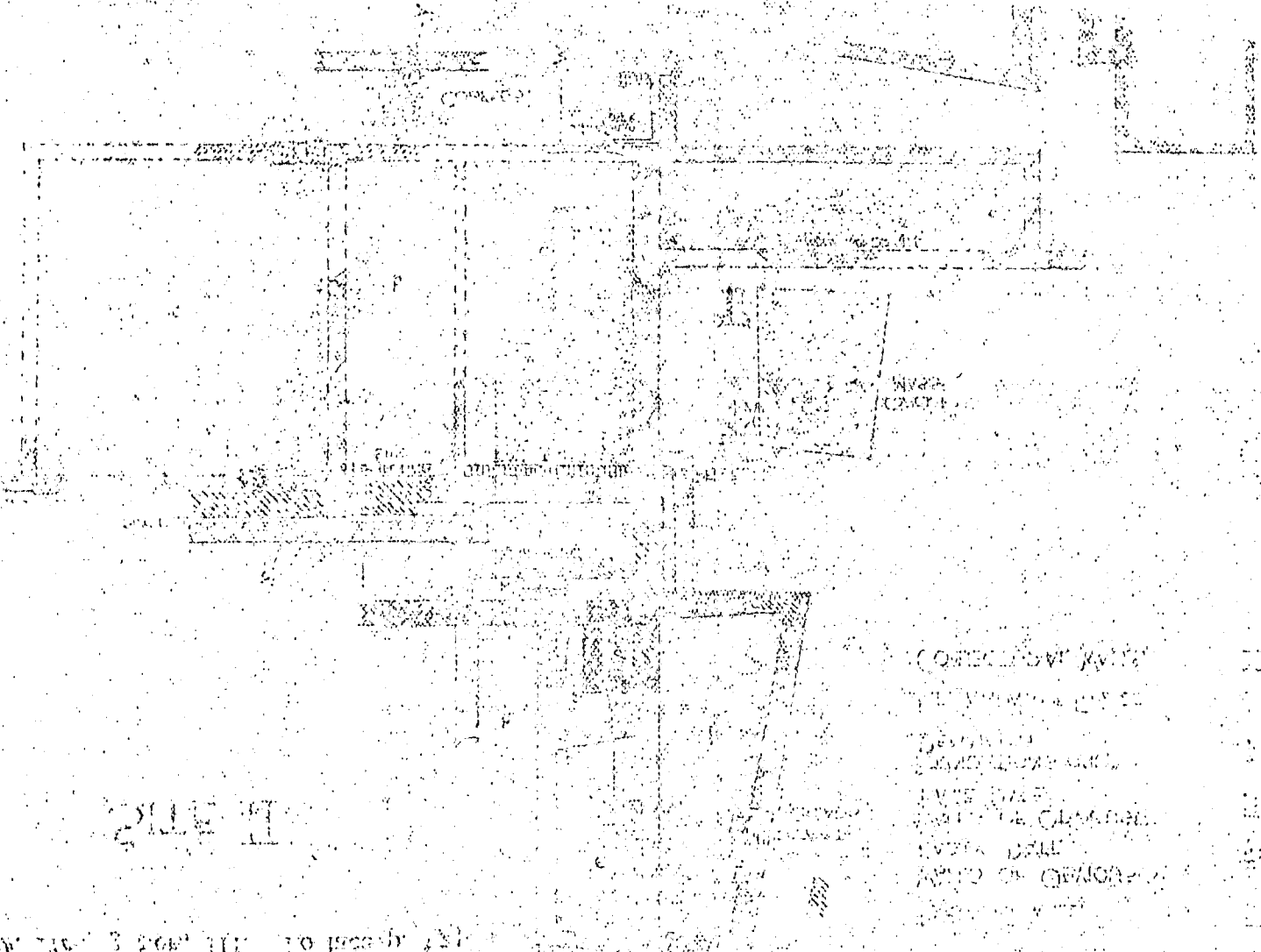
EXCAVATIONS ON THE SITE OF
CORSTOPITUM.
CORBRIDGE: NORTHUMBERLAND.



COBBSIDE MOUND WEST END

COBBSIDE MOUND

EXCAVATIONS ON THE SIDE OF



COBBSIDE MOUND WEST END

COBBSIDE MOUND

EXCAVATIONS ON THE SIDE OF

LATE STAGE

EARLY STAGE

AREA OF QUARRY

COBBSIDE MOUND WEST END

ARCHAEOLOGICAL REPORT

elimination, where possible, would upset instead of simplifying the plan of the house. The excavation of the site was not finished, and a complete plan is therefore not as yet obtainable; what we have, however, are rooms adapted for heating and baths. Such rooms occur regularly in the bathhouse outside Roman forts, but our discovery resembles rather the remains of a private dwellinghouse of some size and importance. In room *a* were three levels of *opus signinum* flooring, the top one resting directly on the second, the third, which is the best in quality, being fourteen inches lower; beneath the foundations of this were burnt matter, lime, and fragments of *opus signinum* from a former building. The whole north wall of the room was jacketed with box-tiles,⁵ contiguous throughout, fastened to the wall by T-shaped clamps, the lowest row being bedded in between the wall and the floor above a flue that runs the whole width of the room. This flue passes through the east wall (the wall is of rubble; the hole only roughly knocked through and coated with plaster), and goes north to room *i*, which was entirely filled with soot, while at its north end a perfect hypocaust pillar built upon the wall (which here gave out), and the remains of two other pillars, shewed that the furnace was in this part, with a stoke-hole, perhaps, just to the east, where our excavations only went far enough to shew another wall seven feet away.

The box-tiles were coated in front with plaster which, like that of the walls, had been coloured, no less than five coats of paint having been applied at different times, always with a fresh ground of fine plaster over the old face. The design could not be properly restored from the innumerable fragments of all periods; but in the last stage there had been a granite-like marbling in dull red and blue for the dado, above this apparently

⁵ The same arrangement occurs in the bath-house of a fort at Binchester, county Durham.

a narrow frieze of straight lines and a Vandyke pattern in dark blue on white, and above this again imitations of various finer marbles (perhaps arranged in panels) in many colours, amongst which reds and pinks predominate, blue is fairly common, and green rarer, the veining being, as a rule, upon a whitish ground; a good many fragments, however, are evenly coloured in deep red without pattern of any sort. In the second layer the dado had an orange ground with designs in creamy white, while above yellow and pale pink prevailed. Coloured plaster was also found in rooms *b*, *c*, and *d*. In the south wall of room *c* were imbedded two voussoir stones (see p. 182) which are discussed in the appendix on the architecture. This room had four floor levels of *opus signinum*. In room *b* the south wall was built over a cobbled way, which lay a foot lower than the foundations. Outside the south-east corner of room *a* was found in position a double drain-pipe with the legionary stamp LEG VI V, emptying upon an open gutter or line of flagging that ran south along the wall there.

Room *g* had a floor three feet seven inches below the surface, but had been filled up with rough stones and lime, bonded together, for a height of some three feet: the walls of this small room were of very good quality, and not originally connected with the walls that now abut against them. In room *k* and probably part of room *l*, with the long narrow gutter that runs along north of rooms *b* and *c*, we may perhaps see the latrines of the house: owing to the presence of the hedge, however, this corner was left to the last moment and then not very satisfactorily cleared up. Room *m* has a thin floor of fine white plaster with a highly polished surface; this plaster also ran up the north wall, which was of rubble. Two feet below the wall was a drain, and the floor rested upon burnt-soot and sand in which the remains of another plaster floor could be seen.

Just to the north of this was the most peculiar feature of the

site, an irregular quadrilateral mass of concrete, whose sides measured, north, ten feet eight inches, east, sixteen feet, south, thirteen feet nine inches, west, fifteen feet six inches, while its thickness was no less than five feet six inches : it was made with quicklime and small pebbles and was of remarkably good quality ; the sides and bottom were quite smoothly finished. At present it awaits an explanation. Upon the buildings to the south-east of the site very little was done in the way of excavation, and it is not certain whether they form part of the same building or not. A section of the site between the points *w* and *x* is given on p. 164, fig. 2, and a section between *y* and *z* forms the upper part of fig. 1, the trench J having been cut through the site.

FIG. 3 (SCALE $\frac{1}{2}$).

The difference between the characters of this and of the first site is very obvious ; it is worth noticing that very little pottery and no such things as spearheads or tools turned up here, the chief small ' find ' being an engraved carnelian (fig. 3).

THE BRIDGE.

(Contributed by Mr. R. H. FORSTER.)

Remains of the bridge, which once carried the great road of the Second Iter across the Tyne to CORSTOPITUM, are still to be seen in the bed of the river, and of these a preliminary survey was made in September. The foundation of the southern abutment is easily discernible : it consists of a parallelogram of large stones of unknown thickness, firmly bedded in the hard gravel which forms the bottom of the river, its dimensions being thirty-six feet nine inches on the river face by twenty-two feet. The south-east corner just cuts the present south bank of the river, and at this point, for a few square feet, three courses of masonry

seem to be still in place: the south-west corner is about thirty feet from the bank into the river, and the line given by this abutment, and confirmed by such of the water piers as are still traceable, does not traverse the present river at right angles, but (as viewed from the south side) points considerably down stream. It is, however, probable that in Roman times the course of the Tyne at this point was different: Professor Lebour is of opinion that anciently the river curved more to the north just west of the site of CORSTOPITUM and that a similar bend occurred on the south-east of the city, the old bed being now covered by the flat land immediately to the west of modern Corbridge. If this was the state of things in Roman times, the stream must then have run at right angles to the line of the Roman bridge, and that line in itself is enough to corroborate this conclusion: with a river so liable to heavy floods as the Tyne was before the dredging of the bar, and, to a large extent, is still, it would be dangerous to place a bridge with the axes of the piers askew with the direction of the current, and the length of the bridge—about seven chains—seems to show that the Roman engineers were alive to the danger of a heavy spate. It is probable that the site they chose was at that time very similar to the site of the present bridge, a broad space from bank to bank, a large proportion of the space being occupied by gravel beds, such as exist now on the south side of the river beside the structure of 1674. It was this great breadth which, by allowing the water to spread, saved the modern bridge in the famous Tyne flood of 1771; the Romans may have noticed the danger and guarded against it in the same way.

The first step was to survey from a point which could be identified on the parish Ordnance map to this southern abutment, and it was at once determined that the line laid down on that map as the course of the bridge was out of place. Next the foundations of the water-piers were explored, and it was

found that the upstream tip of the first from the south side was in the line given by the western edge of the south abutment: the second, third, and fourth piers were also found, but their foundations were not so complete and it was not possible to fix their extremities exactly; but the tip of the fifth was clearly discernible, and confirmed the line given by the abutment and the first pier. The line thus ascertained has been laid down on the Ordnance map, and crosses the river not only from a different point but at a different angle from that previously shewn.

The next step was to examine some remains of masonry, in the bank just below the hedge of the turnip-field, which were pointed out as the scene of excavations carried cut some years ago by Mr. Coulson, who then discovered what he took to be the core of the north abutment. Unfortunately no record of his investigation has survived, but there is practically no doubt that his conclusion is correct. The position of these remains was determined by chaining along the line of the hedge to a point which could be accurately identified on the Ordnance map, and this process proved them to be situated on the line already given by the south abutment and the water-piers: this enabled us to fix the length of the bridge as approximately seven chains or one hundred and fifty-four yards—about twenty yards less than the length of the modern bridge.

Measurements were then made of the first waterway and pier from the south side, and these, though carried out with some difficulty, agree in the main with measurements previously taken. They give a waterway of twenty-two feet four inches and a pier fifteen feet four inches broad and about twenty-nine feet long, the latter measurement including the pointed nose of the western or upstream end. On the basis of these measurements we may conjecture that the bridge consisted of north and south abutments, with ten water-piers and eleven waterways, the breadth of the latter being a little greater, and of the former

a little less, than the figures given; for wherever the edge of a pier or abutment is visible, there are indications that the second course was set back from six to eight inches, and possibly the two or three succeeding courses were set back in the same way. If this estimate be approximately correct, the sixth pier from the south must be in the river bed, covered with stones and gravel: the remaining four should be buried in the plantation on the north bank of the river, near the mouth of the burn. It is to be hoped that an attempt will be made to discover their positions, and it is possible that some, at least, will be found standing some height above the foundation course.

A good deal of *débris* from the ruins of the bridge lies in the river, but no indication of arch stones has been found, and probably here (as has been conjectured elsewhere) the superstructure and roadway were of timber; the piers are large enough to carry a road twenty feet wide.

About eighty yards below the line of the Roman bridge are the remains of what appears to be a medieval quay or ferry-landing: they consist of a platform with a river face of thirty-seven feet, composed of large stones, evidently of Roman origin, with four massive timbers, about a foot square in section, one at either end of the platform, and two running at approximately equal intervals through the centre; between the first and second timbers at the west end there is a cross tie of the same thickness at the back of the stones. These timbers, which project from fifteen to twenty-four inches beyond the river front of the stones, and extend some feet behind them, have evidently been taken from some previously existing structure, being pierced with large slots, measuring twelve inches by three inches. The platform is nearly in a line with the present north bank: the southwestern corner is forty-one feet from the water's edge, and the average breadth of the stonework is ten feet.

APPENDIX I.

THE ARCHITECTURE.

As was to be expected, all the buildings hitherto unearthed have been of stone obtained from quarries in the neighbourhood of Corbridge. The actual stones used are, for the most part, small, with the exception of the quoins of some blocks in site I; one of these (one smaller than most) shewed careful broaching within a plain border; all the rest were merely smooth faced. The difference in quality of buildings of different periods has been remarked already. Very few architectural fragments of importance were found; two or three small moulded stones of rough workmanship occurred, one from site II with a rope moulding, possibly from a window, and one that seemed to form part of the base of a small pilaster, but could not be connected with any particular part of the buildings; they will be figured in a subsequent report. The really interesting and important architectural find was that of the two voussoir stones⁶ imbedded in the late wall that forms the south boundary of the western chambers of site II.

The arch from which these voussoirs are taken had a span of twelve feet six inches, and was the largest arch as well as the

⁶ The western of these two stones (that seen in the front in the illustration) was the larger of the two: its measurements are (on the front face): width at the top, one foot five inches; width at the bottom, one foot one and a half inches; height at right hand corner, one foot eleven inches; height at left hand corner, two feet; and depth, one foot ten inches. The measurements of the smaller stone are (on the front face), width at the top, one foot one inch; width at the bottom, ten inches; height at right hand corner, one foot ten and a half inches; height at left hand corner, one foot nine and a half inches; and depth, one foot ten inches. The lower moulding occupies two and a half inches; one foot three and a quarter inches above this (measuring across the centre of the stone) begins the top moulding, which is two and three-quarter inches in width and has a projection of three-quarters of an inch from the main surface and of one and a half inches from the upper band. The measurements from the base of the stone to the top of the upper moulding, taken from right to left are, on each stone, one foot eight and a quarter inches, one foot eight and a half inches (in the middle), one foot eight inches.

finest in quality known on any Roman site in northern England. It is, of course, impossible to say as yet of what building it once formed a part; the occurrence of the stones in the south-west part of the site, not far from the line of the road leading

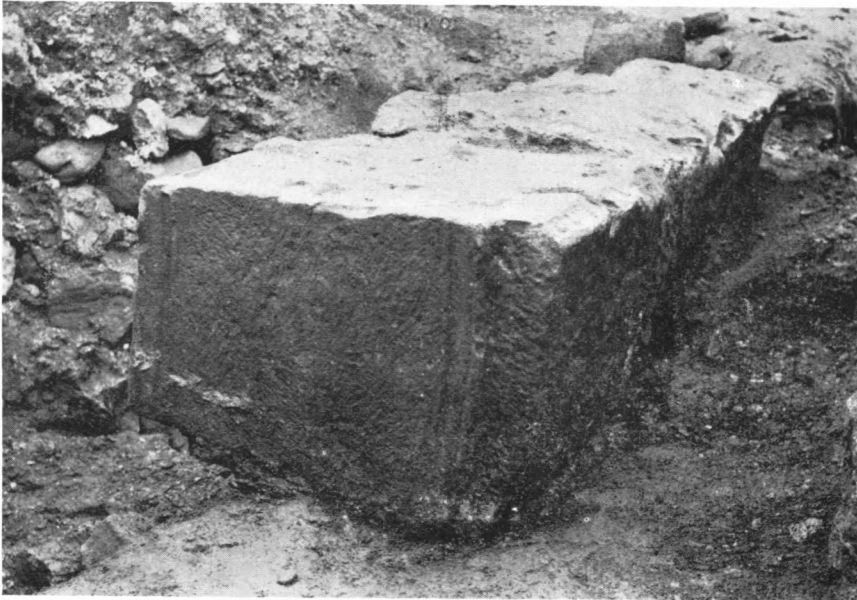


FIG. 4.

from the bridge, might incline one to think of the gateway that must have stood somewhere in the neighbourhood,⁷ and

⁷ The west arch of Corbridge church, which was taken bodily from Corstopitum and used for its present purpose by the Saxon builders, has a span of eight feet six inches. At Boreovicium the entrance to the inner court of the praetorium was 'about twelve feet wide . . . and seems to have been spanned by an arch at either end,' but no actual traces of such an arch were discovered. The sacellum of the same praetorium had an entrance twelve feet six inches wide and a voussoir measuring one foot eleven inches was found in the area before it.

built into the wall between them were two stones whose shape points to their having been the centre jambs of a double gateway; but they may equally well have been brought from some little distance, and only further excavation can throw light upon the point. It is worth noticing, however, in the absence of other early dateable objects, that not only the quality of the stones, but also their present position, shews that the building for which they were first intended goes back to a very early time. The room of which they go to form the south wall has four distinct floor-levels, the lowest of which, some seventeen inches below the uppermost, runs up to the top of these voussoirs and is supported by them. That must give a fairly long period during which the stones served their present purpose; and as a work so important and massive as this arch is not pulled down until it has stood for some considerable time, the foundation of the original building must be pushed back to a date very early in the history of the occupation.

APPENDIX II.

THE POTTERY.

The pottery finds were numerous enough, but in some ways rather disappointing; while they give very many varieties of ware, there is really nothing that can definitely be called early. Nearly everything, too, was very fragmentary.

A.—*Samian*.—Of the types of *terra sigillata* given by Dragendorff⁸ the most common were 18, 27, 31, 32, 33, and 46; of 7, 36, 42 and 45, two or three fragments only; one or two types not mentioned by him also occurred amongst the plain ware.

Of the decorated ware, only one piece of a vase of the cylin-

⁸ Hans Dragendorff: 'Terra Sigillata' in *Bonner Jahrbücher*, lxxxxvi.

drical form 30 was found, all the rest being of the late hemispherical bowl type (37), and on these the decorative scheme was as a rule that of the later periods. Of the actual ornament nine out of some twenty recognisable types seem to go back to moulds in use at Lezoux,⁹ the centre for the later stages of this fabric.

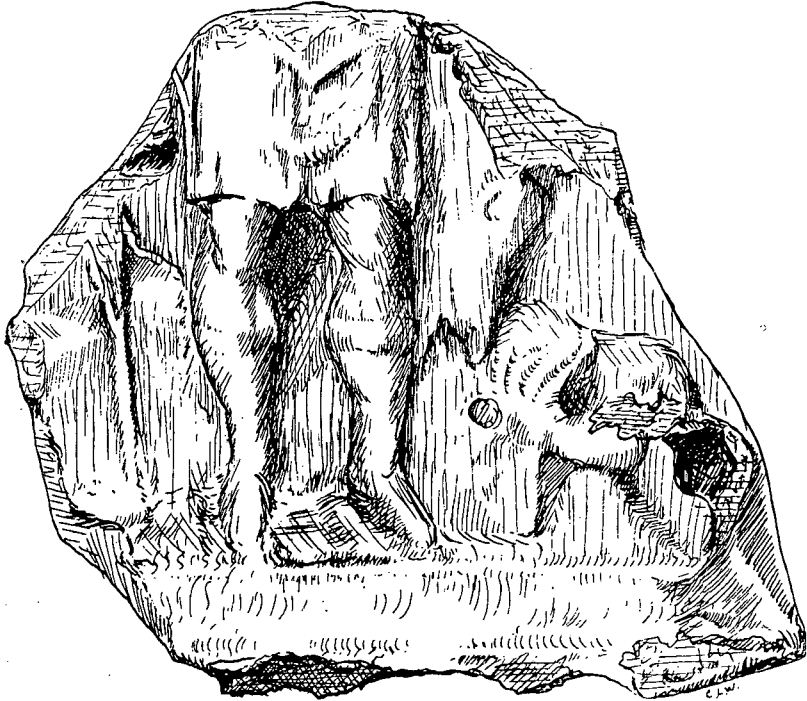


FIG. 5.

B.—The common pottery, drab, and black shading off into grey, turned up in great quantities and in many shapes. There was a small proportion of the finer wares, Durobrivian, New Forest, and a few minute fragments of glazed pottery. The

⁹ Déchelette, *Les vases céramiques ornés de la Gaule romaine*.

pieces of one fine, painted vase, with cream coloured decoration on a brown ground, were numerous enough to admit of its restoration; painted ware was, however, very infrequent. The base of one large amphora was interesting as having *vinum* inscribed on it in the wet clay.

Here, too, might be mentioned the lower part of a terracotta relief which was turned up by the plough a few years ago within the limits of the Roman town, not very far, apparently, from our trenches E and I. It was lying in the farmyard of Mr. Reed, the tenant of the land, who kindly gave it to me. The relief (fig. 5), a weak impression from a good mould, stands now seven and a quarter inches high by seven and three-quarter inches wide, was of curiously irregular shape—a sort of truncated triangle—and represents a soldier standing against a rocky background. He wears high boots, tunic, and heavy cloak, and carries a staff or spear; by his side upon the rocks is perched a cock, a bird used as a symbol in the cults both of Mithras and of Aesculapius, and as a sporting bird popular with the soldiers. The work is of an unusual type, and its date open to question.

POTTERS' NAMES.

A.— <i>Terra Sigillata</i>						Where found.
SAT TOF	...	...	...	...	...	Trench M
CELSI/	...	Dragendorff 31 (?)	...	...	...	Trench I
/RTINI	...	...	...	...	...	Trench L
MICCIOF	...	Drag. 31	...	...	...	Trench J
MASVETI	...	...	...	...	...	Site II
RIOGENI	...	...	...	...	...	Trench A
VID . . ONISO	...	...	...	...	...	...
OFIC VIRIL	...	Drag. 27. <i>C. I. L.</i> , XII. 5686. 938g	...	...	...	Site I
VITALIS F	...	<i>cf. C. I. L.</i> , XII. 5686. 940d.	...	...	...	...

Six others fragmentary or illegible.

B.—*Mortaria*

	Where found
IQAM ... ..	...
ATIANI	Trench K
DRF	Site I, block F
LECIVL	Trench A

Two others uncertain, and one graffito TCAV.

C.—*Amphora handle*

F SCIN	cf. <i>C. I. L.</i> , XV. 2. I. 3169a.	Site II
NIANO		

D.—*Tiles*

1. LEG VI V ...	drain tile at south end of room <i>a</i> ...	Site II
2. EG VI V ...	square tile	Site I, block F
3. LEG/ ...	square tile	Site I, block B
4. /VI/ ...	square tile	Site I, block B
5. EG ...	square tile	Site I, block A
6. IEC ...	square tile	Site I, block B



EARTHENWARE JAR FROM CORSTOPITUM (see p. 185).

NAME OF EMPEROR.	Years of Reign.		OBVERSE.	REVERSE.	Reference to Cohen, Med. Imp.	WHERE FOUND.
VESPASIAN	69-79	II AE	head r. ... ..	... ..	... ..	Site I ... block C
DOMITIAN	81-96	II AE	head r. ... ..	... ..	... ..	Site I ... block A
TRAJAN	98-117	AR	head r. IMP. TRAIANO AVG. GER. DAC. P. M. TR. P. COS. VI. P. P.	... ..	Cohen 18 ...	Site I ... block B
FAUSTINA JUNIOR (?) ...	146-175	II AE	head r. ... ..	... ..	... ..	Site I ... block A
COMMODUS	180-192	AR	head with lion's skin r. L. AEL. AVREL. COM. AVG.	club. across field HERCUL. ROMAN. AVGV.	Cohen 70 ...	Site I ... block A
"		I AE	head r. ... ..	... ..	... ..	Site I ... "Twenty-foot way"
GALLIENUS	254-268	III AE	radiated head r.	deer r. ... ..	... ..	Site I ... block C
"		III AE	radiated head r.	half-nude figure l. rt. hand raised, l. with globe	Cohen 38 (?) ...	Site I ... block I
POSTUMUS	258-267	III AE silvered	radiated head r. IMP. C. POSTVMV ...	Fortune with cornucopiae FELICITAS AVGV.	Cohen 27 ...	Site I ... block A
TETRICUS SENIOR	267-273	III AE	radiated head r.	victory l.	Cohen 117 (?) ...	Site I ... block H
"		III AE	radiated head ... ICVS ...	Peace r. with wreath and transverse sceptre	Cohen 84 (?) ...	Site I ... block I
DIOCLETIAN	284-293	II AE	filleted head r.	Emperor receiving palm from victory PROVIDENTIA DEOR. QUIES AVGV.	Cohen 302 ...	Site I ... block J
NUMERIANUS	284	III AE	radiated head r. IMP. NUMERIANVS AVGV.	Emperor upright l. between two seated captives VNDIQVE VICTORES	Cohen 84 ...	Site I ... block I
CONSTANTINUS I.	306-337	III AE	head r.	Two soldiers with trophy	Cohen 308 ...	Site I ... block J
		III AE	head l. CONSTANTINOPOLIS	Victory l. with crown and palm, on ship's prow	Cohen 13 ...	Trench M ... in surface soil
CONSTANTINUS II.	337-340	III AE	head l. CONSTANTINVS IVN. NOB. C. ...	gate of camp. PROVIDENTIAE CAESS ...	Cohen 152 ...	Site II ...
MAGNENTIUS	350-353	II AE	head r. In field behind N	Two victories with trophy VICTORIA ...	Cohen 55 (?) ...	Site I ... block H
" (?)		III AE	head r. ... ..	... ..	... ..	... ..
VALENS	364-378	III AE	filleted head r.	Victory upright l. in field EI	Cohen 63 (?) ...	Site I ... block F

Besides these, there are three second brasses that are illegible, of which one (from Site I, block A) may be of Hadrian, and two illegible third brasses, one of about Gratian's time.

The majority of the coins are indifferently preserved and the reference to Cohen is in some cases marked as doubtful, usually owing to the obliteration of the legend; it may serve, however, to give the figure-type of the reverse.

I am much indebted to Mr. Blair for his assistance in drawing up this list.

