

Excavations in Commonhall Street, Chester 1954-56: The Granaries of the Legionary Fortress of *Deva*

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*This paper has been published with the aid of a grant from the
Council for British Archaeology*

INTRODUCTION AND ACKNOWLEDGMENTS.

UNTIL the excavations, which are now to be described, took place, very little was known of the granaries (*horrea*) of the legionary fortress at Chester. This was a surprising omission, not only because of the importance attached to such buildings in Roman military planning,¹ but also in view of their standardised and characteristic structural features—the long, rectangular plan, the thick outer walls with buttresses, and the floor supported on transverse or longitudinal sleeper-walls. In the basement so provided air circulated freely, having been drawn in through ventilators between the buttresses; the aim was to keep the contents of the building cool and dry and so avoid any danger of sprouting or mildew in the stored grain. In the Princess Street clearance area, excavated by the late Professor Newstead in 1939, traces of a granary were found in the shape of a buttressed outer wall with attached sleeper walls, apparently running transversely,² but the remains were too slight to permit the reconstruction of the full plan.

The present excavations were begun in 1954 (by the first writer) and completed in 1956 (by the second writer³). Briefly, they disclosed in the rectangular area bounded by Watergate Street, Old Hall Place, Commonhall Street and Weaver Street (fig. 1) a block of three granaries running side by side from west to east. This was a notable addition to the fortress plan, the more so because these buildings lie within the *praetentura* which, with the exception of the colonnaded building discovered on the east side of Bridge Street,⁴ is largely unexplored territory. The 1954 excavation began as the result of demolition of old property on the west side of Crypt Court⁵ in preparation for the building of a new printing works for the Cheshire and North Wales Newspaper Co. Ltd. Permission to excavate in two cellars revealed by the

¹They were designed to hold a year's supply of corn for the garrison.

²*C.A.J.* xxiv, 6 and pl. I.

³The thanks of both writers are due to the Ministry of Works for the substantial grants made in both years; the second writer is also grateful to the Chester Archaeological Society for additional financial help.

⁴*C.A.J.* xxvii, 114 and pl. XVIII.

⁵At the time a lane, narrowing to a passage at its northern end, which led from Commonhall Street to Watergate Street: it has since been merged in a general scheme of road widening in the area.

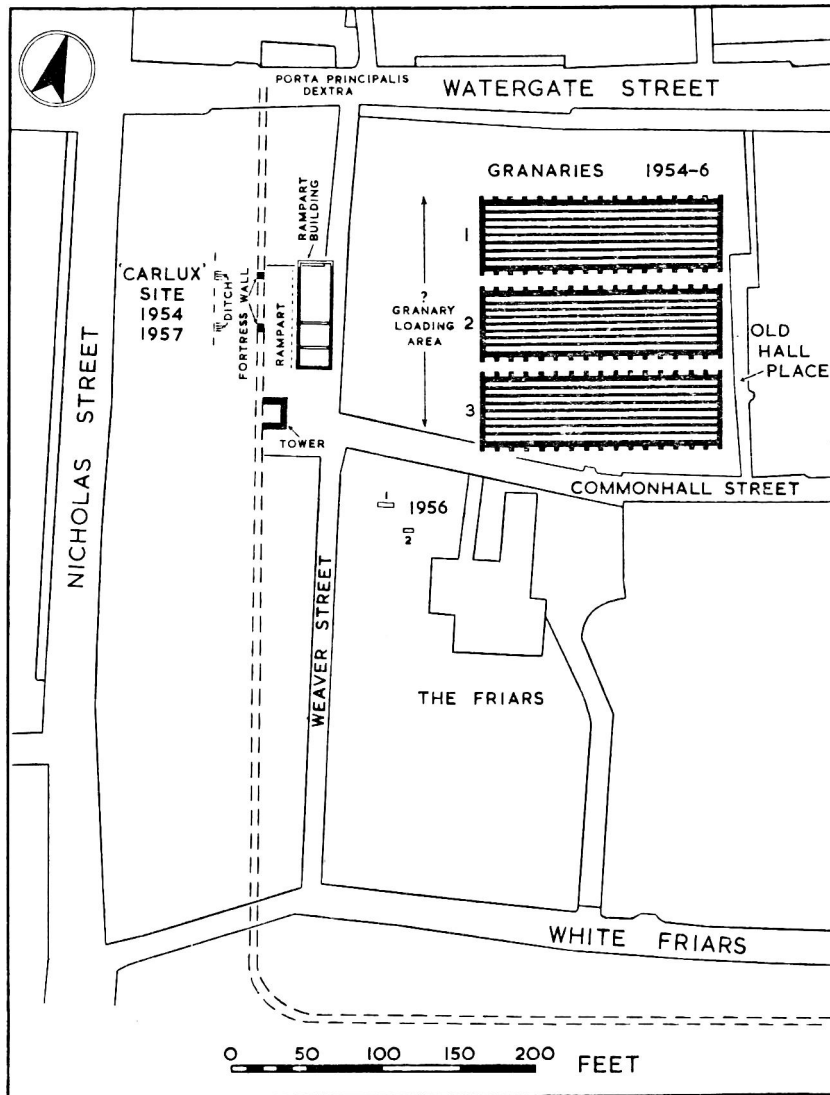


FIG. 1

COMMONHALL STREET CHESTER 1954-6

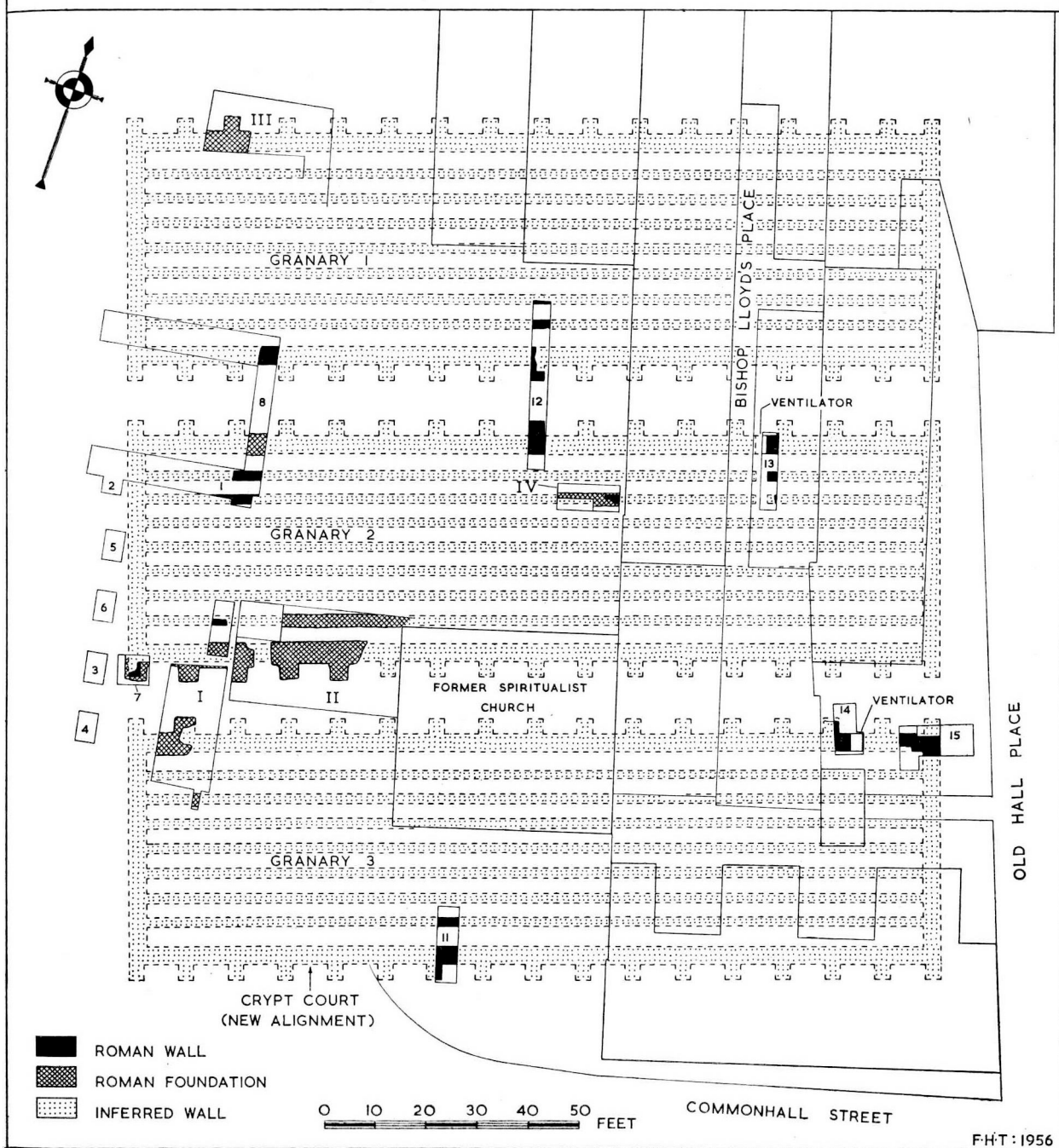


FIG. 2

demolition (nos. I and II, figs. 2 and 3) was readily granted by the company⁶ and the work was subsequently extended to the excavation of Trenches 1—10 and the examination of cellar III. As a result, the western ends of granaries 1 (north), 2 (centre) and 3 (south) were located and traced eastwards for a distance of 56 feet. Before describing the site in detail, the first writer would like to express his indebtedness to Mr. Graham Webster for his advice and encouragement, to the Venerable R. V. H. Burne for his valuable support, and finally to Messrs. K. J. Barton, F. J. Foley, F. W. Tobias and G. Simpson for their assistance on the site⁷.

The 1956 excavation arose from the decision of the authorities of the Chester First Spiritualist Church to build a new church on a small site immediately south of their existing building, which lay east of the junction formed by Crypt Court and Commonhall Street (fig. 2). The new site offered a good opportunity of locating the south wall of granary 3, if it was in fact still running eastward, and the first trench, 11⁸, was set out with this in view. It proved successful and was followed by the excavation of four more trenches (12—15) and the clearance of a cellar (IV). These located one or other of the granaries at different points and finally, in trench 15, the east end wall of granary 3, so enabling the complete plan of this granary and, by inference, of all three to be obtained. The second writer's thanks are due to all those who gave permission to dig on their property and also to the numerous volunteers who assisted in the early stages of the excavation. A special debt of gratitude is owed to the writer's assistant at that time, Miss Elizabeth Pirie, who shared the work of supervision and recording, and also to the Grosvenor Museum joiner, Mr. G. M. Stark, who timbered trenches at short notice and also devised a technique for removing and replacing the roofs of sheds inside which some trenches were dug, in order to admit the necessary light for excavation and photography.

SUMMARY OF EXCAVATIONS (figs. 1 and 2)

The detailed results of the 1954 and 1956 excavations, which are described below, can be combined to give the following general picture of the three granaries, though a strong conjectural element must be present in view of the selective nature of the trenching:—

Length:	159ft.
Width:	44ft. (granary 2) and 45ft. (1 and 3).
Interval between granaries:	14ft.
Outer walls:	3ft. 4in. thick, with buttresses 3ft. square and an average space between each pair of 6ft. 9in.

⁶The first writer's thanks are due to the Company's Directors and especially to the Chairman, the late Mr. C. Cullimore, and Secretary, Mr. H. Wickham. This is also a suitable place to record the helpfulness of the architect, Mr. R. Boot, and the contractor, Mr. E. Pritchard.

⁷His particular thanks are due to Mr. Barton, who first drew attention to the site, and to Mr. Foley, through whose assistance the finds made by builders on the site were recorded.

⁸The numbering of trenches and cellars excavated during 1956 follows on from that adopted by the first writer for the earlier excavations.

Ventilators:	2ft. 3in. and 2ft. 5in. wide with no splay in the two examined: frequency uncertain but possibly alternating.
Floor:	no trace of this was found in any of the trenches but presumably it was originally formed by stone slabs, as at Corbridge, which would quickly be removed by later stone-robbers.
Sleeper walls:	seven per granary, running lengthwise: each 1ft. 9in. thick with a space of approximately 3ft. between, except between the outer and first sleeper walls where it varied from 3ft. 6in. to 3ft. 9in.
Foundations:	these were grouted pebbles and sandstone rubble, set in partially rock-cut foundation trenches.
Masonry:	regularly coursed blocks of sandstone, 4—5in. thick and 8—18in. in length, set in mortar.

Little dating evidence was recovered, a not unexpected result in view of the function of the buildings excavated, but such as there was pointed to an early second century date for the construction of the granaries. No traces of earlier timber buildings were found, with the exception of single small post-holes in Trenches 11 and 12. A consistent feature of the stratification was a thick layer of broken roof-tiles, lying between the granaries and between the sleeper walls; these can only have reached their position inside the granaries after removal of the floor and their presence suggests deliberate demolition or destruction of the granaries. The recovery of six tile-stamps reading LEG XX VV DE from the space between granaries 2 and 3 suggests that repairs to the roof may have taken place *c.* A.D. 250, that is if R. P. Wright's expansion of DE to read DECIANA rather than DEVENSIS is accepted⁹. A total of five coins was recovered from the upper levels: two Tetrican copies, to be dated A.D. 270 +, from the tile layer itself, and coins of Crispus, Theodora and Constantius II, from the disturbed levels above it. If it is permissible to regard the granaries as a closed site during their period of use, the coin evidence suggests a late third century date for their dismantling, a conclusion of some importance in any consideration of the later history of Roman Chester.

There can be no certainty about the storage capacity of the three granaries but a conjectural estimate is of some interest. If allowance is made for a central gangway 8ft. in width and the grain is assumed to have been stacked to a depth of 6ft. on either side of it, perhaps in bins, then each granary would have held 1,000 cubic yards. The calculation that a legionary's corn ration for a year would occupy half a cubic yard¹⁰ suggests that the three granaries together would have served to store a year's supply for 6,000 men, in other words, for the entire garrison of the fortress—a neat but not necessarily accurate conclusion.

⁹i.e. as a title conferred by the emperor Decius, A.D. 249—251 (cf. R. P. Wright and I. A. Richmond, *Catalogue of the Roman Inscribed and Sculptured Stones in the Grosvenor Museum, Chester*, no. 1, pp. 11—12); a short life for such a stamp is likely in view of the *damnatio* of the emperor after his death, and the erasure of his name from inscriptions.

¹⁰Cf. *P.S.A.S.* LXIII, 131.

The position of the granaries within the fortress layout is also of interest. They lie close to the *porta principalis dextra* which gave access to the harbour area and there can be little doubt that this reflects the importance of water-transport for the movement of supplies into and out of the fortress. The granaries at Neuss and Vindonissa have a comparable relationship to the rivers Rhine¹¹ and Aare¹² respectively, suggesting that this was a deciding factor in the siting of granaries in the permanent legionary fortresses, whereas in the timber-built fortresses a policy of dispersal seems to have been favoured, e.g. at Inchtuthill¹³, where no doubt timber buildings constituted a greater fire risk.

DETAILED DESCRIPTIONS OF EXCAVATIONS.

Cellar I (figs. 3 and 4)

This cellar lay immediately to the west of Crypt Court, and had been unroofed by the removal of the house above it. At first offering an area of only 12ft. by 9ft. for excavation, the excavated area was later extended until it measured 12ft. by 25ft. The walls of the cellar were built of large sandstone blocks, and were based on the south and west sides on the sandstone rock, which here lay between 9 and 10ft. below ground level. During the course of the excavation it was proved that the cellar had once extended further to the east, possibly as far as Cellar II, and the wall on this side was a blocking wall of comparatively recent date.

At the southern end of the cellar was a brick floor 8ft. below ground level. Removal of this floor and the dark rubbish fill under it revealed a stone and mortar foundation which had been considerably damaged by pits (pl. Va). This foundation presented such an irregular shape that it was not until further work had been done in this cellar and in Cellar II that it was possible to identify it as part of the foundation of the exterior wall of a granary with a projecting buttress foundation on its north side. The foundation had been laid in a U-shaped trench with a flat bottom, and was 4ft. 2in. wide at its highest point, its depth being 1ft. 9in. of which the lower 1ft. 3in. had been laid in the rock. The method of laying the foundation could be seen clearly in a section cut across it (pl. Vb). Alternating layers of mortar and rubble had been thrown into the trench, the mortar only partially penetrating each underlying layer of rubble; the upper part of the foundation contained quite large stones. On the eastern side of the cellar the foundation had been removed by the insertion of a curious structure consisting of large blocks arranged in pairs standing three courses high (pl. Vc). This feature, the purpose of which is quite unknown, was apparently of medieval or later date, since a sherd of medieval pottery was found in the fill of its construction trench. The pit on the south side of the foundation, which contained 19th century pottery, had removed all traces of Roman levels. However, work by the builders after the end of the excavation revealed, 1ft. beyond the south wall of the cellar, the lower part of the foundation

¹¹*Bonner Jahrbücher* 111/112, Taf. III.

¹²*Römisch-Germanische Forschungen* 10, Taf. 2.

¹³*J.R.S.* XLVI, 122 and fig. 22.

of a sleeper wall 2ft. 2in. wide. It is clear from the plan of granary 3 that an intermediate wall should be restored here, and when the west face of the cellar was examined carefully a shallow depression in the rock was noted in approximately the position where the foundation would have been. The depression, which was filled with yellow sand, under-ran the cellar wall. The rock under the wall was otherwise unbroken on the west and south sides of the cellar.

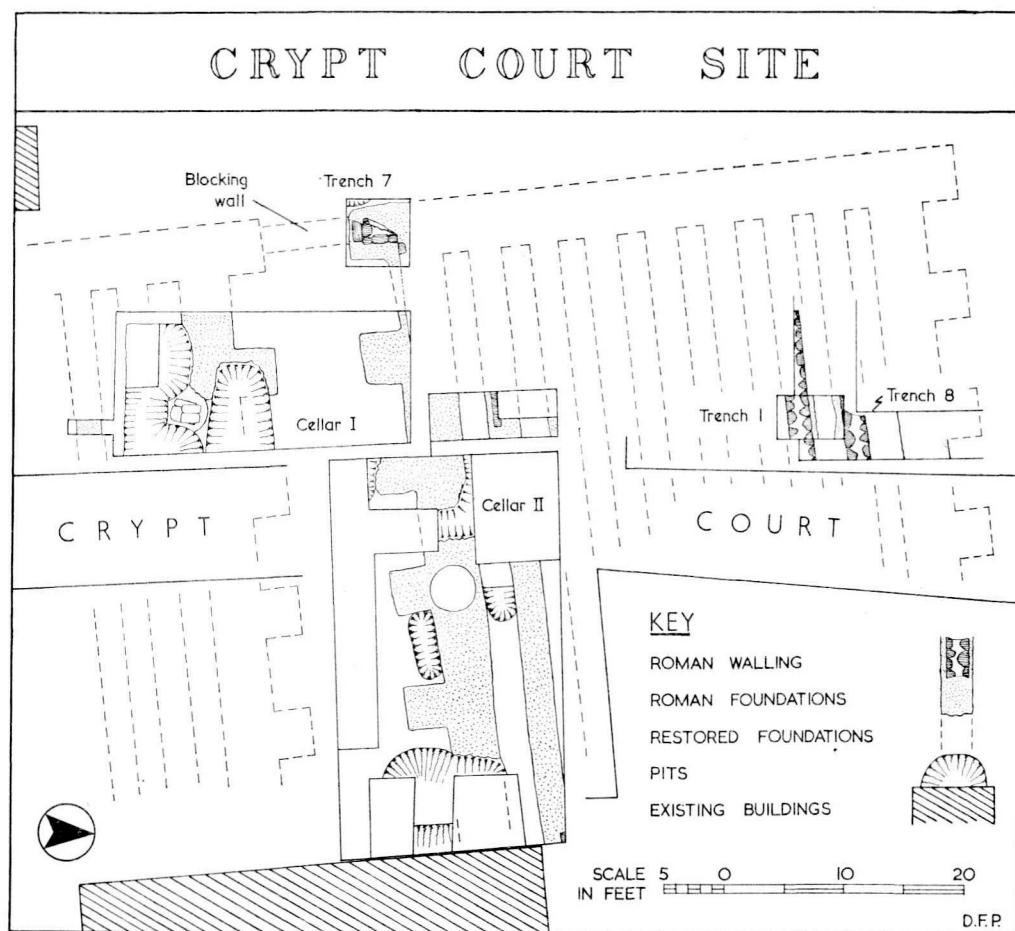


FIG. 3

In extending the excavation to the north end of the cellar, the southern edge of the outer wall foundation of granary 2 was found (pl. Vd), and the distance between the foundations of the two granaries proved to be 14ft. As will be seen from the section (fig. 4), the northern part of the cellar was much less disturbed than the southern, and stratified levels were found in association with the central granary. Its foundation had been inserted into a clean yellow sand layer which passed without

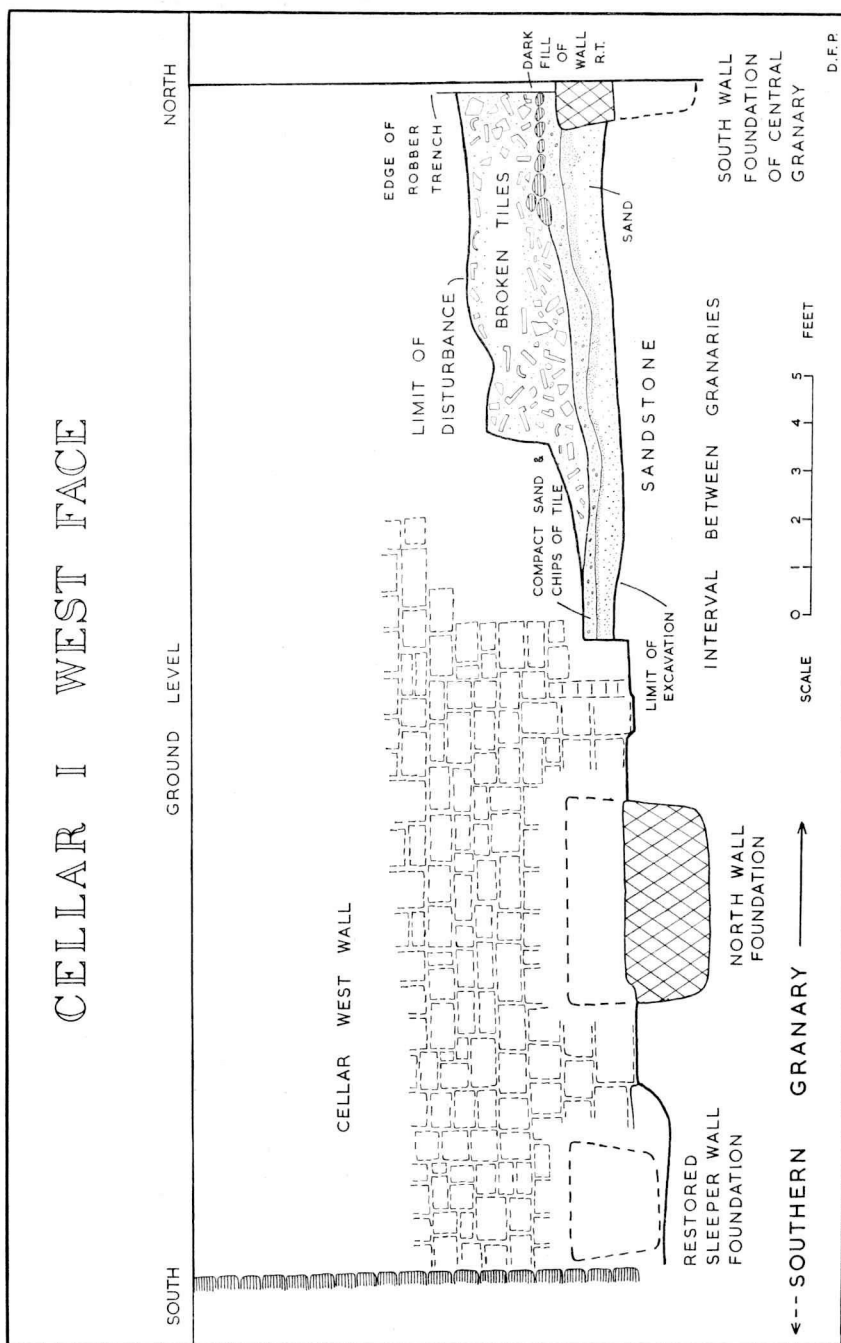


Fig. 4

any clear division into the red sand overlying the rock. As was the case in the southern granary, the lower part of the foundation trench was rock-cut. The upper part of the yellow sand was stained to a depth of from 3 to 6in. to a somewhat darker colour. Above the yellow sand was a layer varying in thickness from 1 to 6in., consisting of compacted sand containing many chips of tile and flecks of mortar. This layer ran over the foundation, and is presumably to be associated with the construction of the granary, and it is therefore unfortunate that it contained no pottery. Immediately over this was a layer which consisted entirely of broken roofing tiles and scraps of mortar. Where it lay against the granary wall this layer was 2ft. thick, and it declined gradually in height southwards for a distance of 7ft. 6in. Eight stamped tiles were recovered from the layer, three of which bore stamps of Holt type 12, two of Holt type 13,¹⁴ two of Holt type 1 and one of Chester type 49. Four further stamped fragments were found in disturbed material immediately over this layer, of which two were of Holt type 1, one was of Holt type 12 or 13, and one was probably of Holt type 13a¹⁵.

No masonry remained of the granary wall, or of the buttress which had projected from it, but the position of the robbed walling was clearly revealed by the dark fill of its robbing trench, which contrasted markedly with the undisturbed layer of tiles. The foundation, which was clearly standing to its full size, was 3ft. deep.

Cellar II (fig. 3).

The second cellar to be explored lay to the north and east of Cellar I. It was 33ft. long and extended under Crypt Court to the east side of the street. Its width was 19ft. and it was covered by a low single span brick roof which considerably hampered the excavators, since it excluded the light and made the disposal of spoil difficult. Access to the cellar was obtained by a flight of steps at the west end. The cellar floor was 9ft. below road level, and consisted of a layer of dirty soil and rubbish of recent accumulation varying in thickness from 15 to 18in. When this layer had been stripped away a granary wall foundation was found to be running from east to west through the cellar (pl. VIa). This was a continuation of the foundation found in Cellar I, and had three buttress foundations on its south side. At the east end of the cellar some 7ft. of the foundation had been removed by a large pit 5ft. deep, and a drain trench near the entrance had also removed much of the foundation between two buttresses. About 9in. had been removed from the top of the foundation by disturbance, tested depths being constant at about 2ft. 3in. In width the foundation varied from 4ft. to 4ft. 6in. Situated between 2ft. 3in. and 2ft. 9in. inside the main foundation was a sleeper wall foundation 2ft. 6in. wide. This was traced throughout the cellar, except in the unexcavated north-west corner, its depth varying from 8 to 13in. according to the degree of disturbance. Where the foundation passed under

¹⁴The front half of the tile of Holt type 13 was encountered at this site for the first time.

¹⁵The tile numbers quoted here refer, in the case of the Holt types, to the tile stamps published by W. F. Grimes in *The Works Depot of the Twentieth Legion (Y Cymyrodor vol. xli)*, fig. 59. Further types of tile stamps have been found in various excavations at Chester since the publication of this report, and a list of these has been compiled by G. Webster, and is preserved in manuscript at the Grosvenor Museum.

the cellar wall in the north-east corner one block of masonry was found *in situ*, while in the entrance one course of this wall had been preserved by the steps. At the latter point the full depth of the foundation was 18in. 2ft. 6in. to the north of it was the edge of the foundation for a second sleeper wall. In the yellow sand, between the main foundation and the first sleeper wall, was a small pit containing the base of a second century grey ware jar. Within the cellar another Roman pit was situated between the second and third buttresses which contained brown sand, some animal bones and three sherds of pottery of a third or even a fourth century character. From the large post-Roman pit at the east end came several medieval floor tiles, and a triangular medieval tile had been built into a circular structure of stone packed with clay placed on the main foundation 11ft. from the west wall. Another post-Roman pit was situated in the south-west corner of the cellar.

The fragments of Roman structures which were found in Cellars I and II could fortunately be identified with confidence as belonging to legionary granaries from the typical plan form revealed. Although it was clear that the granaries were orientated from east to west, and that the sleeper walls were disposed longitudinally, the length and width of the buildings were still uncertain, and no satisfactory dating material had been recovered. If these problems were to be solved further excavation would be required, and for this reason permission was obtained to extend the excavation to other parts of the site. Since the trenches could only be sited where there were to be stanchions, and were limited in size to 6ft. by 4ft., only a limited amount of information could be obtained from them.

Trenches 1 and 8 (figs. 3 and 5)

The first trench was dug 2ft. to the west of Crypt Court, and 18ft. north of Cellar II. It revealed a sleeper wall 2ft. wide, and the edge of another wall 2ft. 8in. to the north of it (pl. VIc). Both walls were of well dressed sandstone blocks, and stood five courses (18in.) high, and rested on foundations 2ft. deep. Above the clean yellow sand layer into which they were dug was a layer 2in. thick consisting of dirty sand containing chips of tile, flecks of mortar and small pieces of stone. On each side the layer ran over the foundation and up to the wall, and it may be supposed that this layer, like that between the granaries in Cellar I (which it resembled) should be associated with the construction of the granaries. As in Cellar I, it yielded no dating evidence at all. Overlying it was a layer of brown sand in which were found several pieces of broken roofing tile, one of which bore a stamp of Holt type 8. The top of this layer was 6in. below the sleeper walls on each side, and dipped towards the centre of the interval. In the north-west corner of the trench a pit had removed all but the lowest course of masonry on the northern wall.

After the excavation had ended the work of digging foundations for the printing works was closely watched, and although the builders' trenches did not go deep enough to show foundations, they revealed walling where this was standing to a height of three or four courses. Trench 8 was an extension to north and west of Trench 1, and for that reason the discoveries made in it will be mentioned here.

It revealed, in the first instance, more of the sleeper walls found in Trench 1, the southern of the pair being traced for a distance of 12ft., the western end being robbed. The northern edge of the second wall was also found, and its width confirmed as 2ft. At a distance of 2ft. 10in. to the north of this the position of the next wall could be

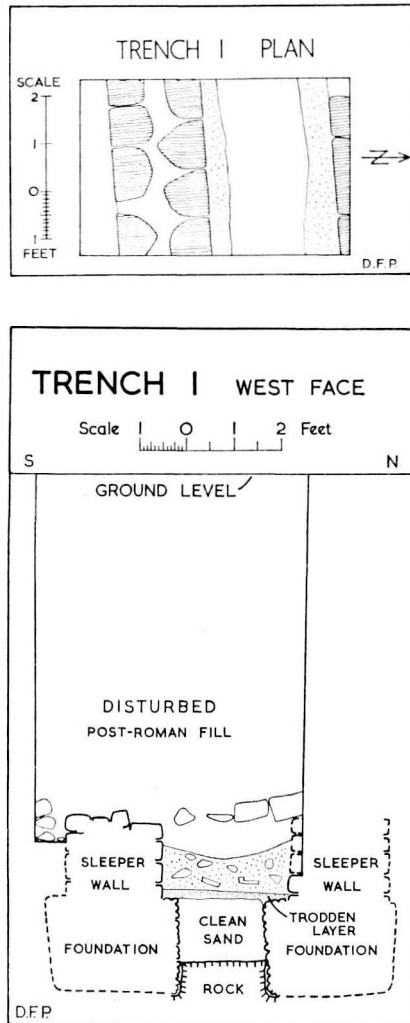


FIG. 5

traced in the floor of the trench by the abrupt change from the sandy fill of the cavity between the walls to the dark fill of the robbing trench. It was suspected that this might be the north wall of the central granary, and this suspicion was confirmed by a small sounding which encountered the outside edge of the foundation at 6ft. 8in. from the sleeper wall.

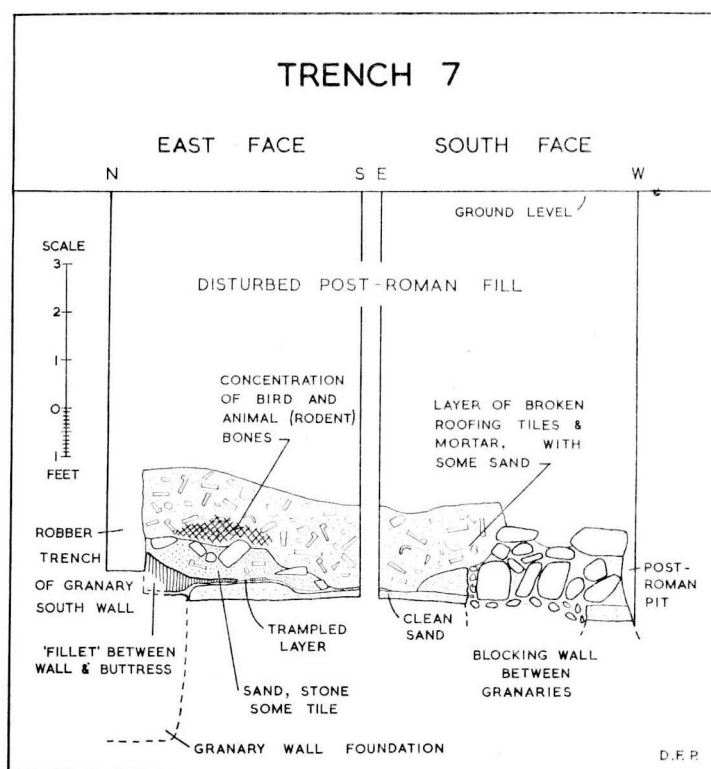
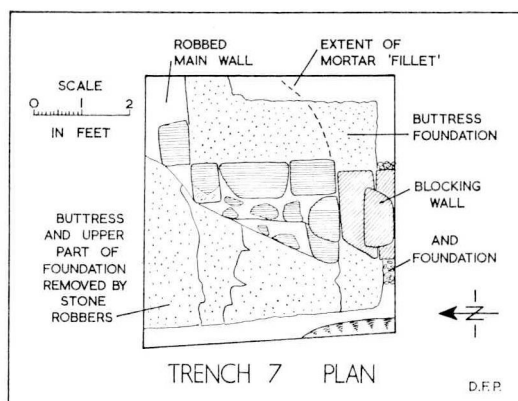


FIG. 6

At the north end of the trench a wall 3ft. 6in. wide was encountered. This projected 3ft. 6in. from the east side of the trench, the west end being robbed away (pl. VIb). Its identification as the south wall of another granary (1) was made certain by the observation of a small fragment of sleeper wall in the north face of the trench. Since the thickness of the outside walls of the granaries was now known, it was possible to estimate the width of granary 2 at 44ft. On the south side of granary 1 lay a mass of broken tiles similar to that found between granaries 2 and 3. From it came stamps of Holt type 1, type 2, type 29 (two examples) and one of uncertain type.

Trenches 2—6 (fig. 2).

A line of five trenches roughly 25ft. to the west of Crypt Court, and parallel to it produced no structural work belonging to the granaries. All showed a considerable degree of disturbance, those at the northern being more disturbed than those at the southern end, and in Trenches 3 and 4 alone could Roman levels be identified with confidence. The sequence found in these two trenches was similar, but was more clearly demonstrated in Trench 4. The top of the clean yellow sand overlying the rock had been trampled to a thin grey layer which was capped by a thin spread of chips of mortar about one inch thick. From the trample layer, sealed by the mortar layer, came a sherd from the shoulder of a black burnished cooking pot which is not likely to be earlier than the Hadrianic period. Above the mortar spread was a layer of red-brown sand which yielded a sherd from a bowl of Dr. form 29 of Flavian date, as well as scraps of pink Holt ware and fragments of mortar and tile. In the north-west corner of trench 3 a small Roman pit dug into the yellow sand contained brown sand, a few bones, and much of the rim and shoulder of a Holt jar of later first or early second century date. In the north end of Trench 4 was a pit at least 4ft. deep which contained some interesting late Saxon pottery (see below, p. 58) as well as Roman and medieval pottery.

Trench 7 (figs. 2 and 6).

This trench was sited to reveal the south-west corner of granary 2. By this late phase in the excavation it was clear that this must be sought in the limited area between Trench 3 and Cellar I. Much of the corner buttress was fortunately found to be intact (pl. VIId), projecting 3ft. from the wall, and standing three courses high on the east and much of the south side. On the west side the buttress and part of the foundation had been removed by a post-Roman pit. The main granary wall had also been robbed, but its outer edge was marked by a layer of broken tile 18in. thick which had once rested against it. Two incomplete tile stamps were recovered from this layer, of which one was probably of Holt type 12 or 13, and the other was possibly of Holt type 5. Among the tiles in the lower part was a quantity of small bones which on examination¹⁶ proved to be in the main rodent bones (mostly mice, but also shrews and water vole). Some of the bones, however, were of small birds, probably sparrows, and there were also a few large bird bones, possibly of pigeons.

¹⁶By Mrs. R. Pope, at that time the Natural History Assistant at the Grosvenor Museum.

This intriguing deposit, which was quite clearly associated with the tiles, seems to indicate a possibility, to put it no higher, that the granaries sheltered exactly the sort of fauna to be expected in the circumstances.

Below this layer of broken tile, which may be equated with that found only a few feet away in Cellar I, was a light brown sandy layer containing stone and a little tile, and part of the rim of a rough-cast beaker. Between the main wall and the buttress was a spread of hard mortar. This was 9in. thick where it met the wall, but it thinned out rapidly, and was only one inch thick at a foot from the wall. It is possible that this was a mortar fillet placed here to carry surface water away from the granary wall, but this feature was not observed anywhere else in the granaries. Under the mortar was a thin spread of dirty sand which ran over the edge of the foundation and up to the granary wall. Beneath this was the clean yellow sand which marked the top of natural. A most interesting feature revealed by this trench was a rough wall 20in. wide, standing on a foundation 2ft. 6in. wide, which extended southwards from the south face of the buttress (pl. VIe). This indicated that the space between the granaries had been blocked off at some date after their erection by the insertion of this wall between the corner buttresses. It is interesting to note that this was apparently done before the deposition of the tile layer.

Cellar III (fig. 2).

The completion of Trench 7 brought the excavation to a close, but finds of considerable importance still remained to be made on the site. The discovery in a foundation trench of the north wall of granary 2 and the south wall of granary 1 has been described above (p. 43). When the width of granary 2 could be determined it was seen that if granary 1 was of the same dimensions its north wall should pass through a medieval cellar at the rear of nos. 63-5 Watergate Row. This cellar was accordingly examined closely, and it was found that the lowest part of the granary foundations, only an inch or two thick, were to be seen in the floor on the western side. It was also noticed that the cellar wall, which was based on the rock, took a marked step down in about the middle of the south side, the base of the eastern half of the wall being about a foot higher than it was on the west. This sudden change in level probably marked the point at which the rock-cut granary foundation trench entered the cellar. In the east wall of the cellar the north side of the foundation trench could still be seen, with some of the foundation remaining *in situ*, but the floor of the cellar was here lower than the bottom of the foundation. From these structural traces it was possible to estimate the width of granary 1 at about 45ft.

Although there would seem to have been exactly the right amount of space remaining between granary 1 and the *via principalis* for another granary, an exploratory trench (Trench 9) in the cellar of nos. 63-5 Watergate Row did not produce any evidence to confirm this supposition.

Trench 10.

5ft. to the west of Trenches 2—6 a large trench 40ft. long and 6ft. wide was excavated by the builders down to the rock. Two large pieces of Roman foundation

work were found, one being at the south end of the trench, and the other about 13ft. to the north of it. The latter foundation was 3ft. 6in. deep, and was roughly rectangular in shape, although its eastern side was not seen. The southern foundation was at least 2ft. 8in. deep, and projected 5ft. into the trench from the south side and 4ft. from the east side (pl. VIIa). What appeared to be a return to the west where the foundation entered the south wall of the trench proved to be only 20in. deep. These massive foundations do not shed much light on the type of building situated

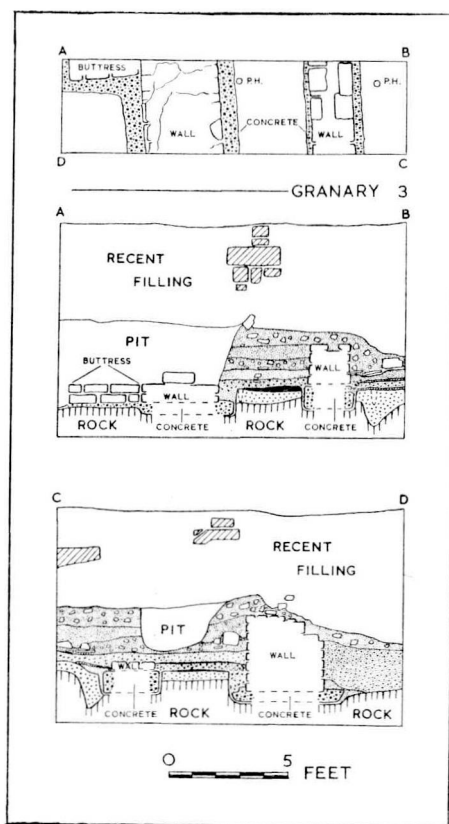


Fig. 7. Trench 11: plan and sections.

between the granaries and the *intervallum* road; one possibility is that they represent the bases of a colonnaded portico, as at Corbridge.

Trench 11 (figs. 2 and 7).

This trench was set out with a dual purpose in mind, first, to establish that the granaries, or one of them at least, were still continuing eastwards from the furthest point recorded in the earlier excavations, and secondly, to determine the overall width of granary 3 which was still unknown. The trench fulfilled every expectation.

The outer wall of the granary, 3ft. 4in. wide, and one face of an attached buttress were located in the south end of the trench (pl. VIIc), giving an overall width, excluding buttresses, of 45ft. for granary 3 (as for 1); 3ft. 9in. to the north appeared the first of the longitudinal sleeper walls, 1ft. 9in. wide, while the south face of the next sleeper wall was located by undercutting the north end of the trench, the interval between the two sleeper walls being 2ft. 9in. Although reduced here and there by later robbing and the cutting of pits, the actual masonry of the walls still survived to a respectable height; it consisted of the customary ashlar faces of regularly coursed sandstone blocks enclosing a rubble core, the whole being grouted with a tough mortar. Both walls rested on a broad grouted rubble foundation, 4ft. 9in. wide for the outer wall and 2ft. 4in. for the sleeper wall; the outer wall foundation was 5in. thick and rested in a partially rock-cut trench, while that for the sleeper wall was 1ft. thick, though the wall itself stood at a higher level than the outer wall.

As well as structural details, this trench yielded some useful historical information. Natural lay at a depth of from 7 to 8ft. below the present surface and varied from roach (broken sandstone) within the granary to solid rock outside. On the roach appeared a layer of clean yellow sand, 6in. thick, which had evidently been laid down to level the the irregular surface of the rock preparatory to building, since it completely filled a small gully north of the first sleeper wall. But this sand layer belonged to an earlier phase in the history of the fortress than the building of the granaries in stone, since two small post-holes, one between the outer and sleeper walls and the other north of the sleeper wall, appeared in it; these presumably are slight traces of previous buildings on the site, belonging to the construction of the fortress in earth and timber in the late seventies of the first century A.D.¹⁷

The foundation trenches for the stone walls had been cut through this layer into the natural below. The date of their construction is fixed by material from a thin occupation layer of black soil charged with pottery and animal bones which rested on the yellow sand between the outer and sleeper walls; this layer was sealed by a layer of reddish-brown soil containing builders' debris which merged into the filling of the wall construction-trenches. The pottery (fig. 13, 1—3) was Flavian in complexion and it seems clear that the stone granaries belong to the re-building of the fortress in stone in or shortly after A.D. 102¹⁸.

Apart from a second thin occupation layer, containing animal bones only, which appeared on the east side of the trench between the outer and sleeper walls, no evidence appeared in this trench which would throw any light on the subsequent history of granary 3, *while it remained in use*. This was not unexpected since, in the unlikely event of any occupation material having been present in a building of this nature, it is doubtful whether it would have penetrated into the spaces between the granary walls so long as the floor which they supported was in position. The next layer of importance, in fact, must apparently be related to the period when the

¹⁷C.A.J. xxxviii, 18.

¹⁸*ibid.*, 19.

granary had fallen out of use: this was a scatter of broken roof tiles (a consistent feature of the previous excavations) lying between the walls and so concentrated that it seems probable that they reached this position only after the removal of the granary floor. The sequence would appear to have been: first, removal of the flooring slabs; secondly, stripping of the tiled roof and discarding of any tiles beyond salvage by throwing them down into the granary, so forming the layer; and thirdly, removal of suitable building stone from the outer and sleeper walls which accounts for the occasional appearance of sandstone rubble on the surface of the tile layer.

If the validity of this interpretation is accepted, the whole operation must be viewed as an act of deliberate demolition carried out by the fortress garrison. Fortunately, there is some evidence for the date when it took place. From the layer of brown soil immediately below the tile layer came a small group of pottery (figs. 12, 4 and 13, 5—8), the latest piece of which was a sherd of Samian form 37 in Lezoux ware, of the period A.D. 170—190. From the tile layer itself were recovered two coins, one a copy of a coin of Tetricus II, A.D. 270-3, and the other a Tetrican model of *c.* A.D. 270+. There are then some grounds for concluding that the granary (and its fellows) was dismantled in the later years of the third century and the historical implications of this view are considered below (p. 55).

Above the tile layer, layers of sandstone rubble suggested further robbing of the granary walls, perhaps at a much later date. Above them came a filling 4ft. thick of undifferentiated black soil, extending to the present surface; the mixed nature of this deposit was brought out by its varied yield of objects, of which the most important were a dragonesque brooch (fig. 12, 2), a coin of Theodora under Constantine the Great (a commemorative issue struck after her death in A.D. 328), a coin of Constantius II with FEL TEMP REP reverse of *c.* A.D. 348, and a Nuremberg jetton of Hans Krauwinkel. The two Roman coins are of slight value as evidence for continued occupation in this area after the demolition of the granary.

Trench 12 (pl. VIId and fig. 8).

The purpose of this trench, set out to the north of the Spiritualist Church, was to confirm that granaries 1 and 2 were, like granary 3, still continuing eastwards and to establish, by comparison of structural features, that all three formed part of the same building scheme. All the desired results were achieved: at its south end, the trench was crossed by the outer wall of granary 2, 3ft. 4in. wide, with an attached buttress, 3ft. square, filling the width of the trench (pl. VIIb); 8ft. to the north appeared a similar buttress attached to the outer south wall of granary 1 (pl. VIIe), though most of the wall itself had been destroyed by the insertion of a medieval cess-pit; 3ft. 5in. further north appeared the first of the sleeper walls, with the standard width of 1ft. 9in., followed, after an interval of 3ft. 1in., by the south face of the next sleeper wall. In their general character, all these walls were quite comparable with those already encountered in trench 11, suggesting contemporaneity of construction.

Historically, this trench was less informative than 11. On the natural red sand

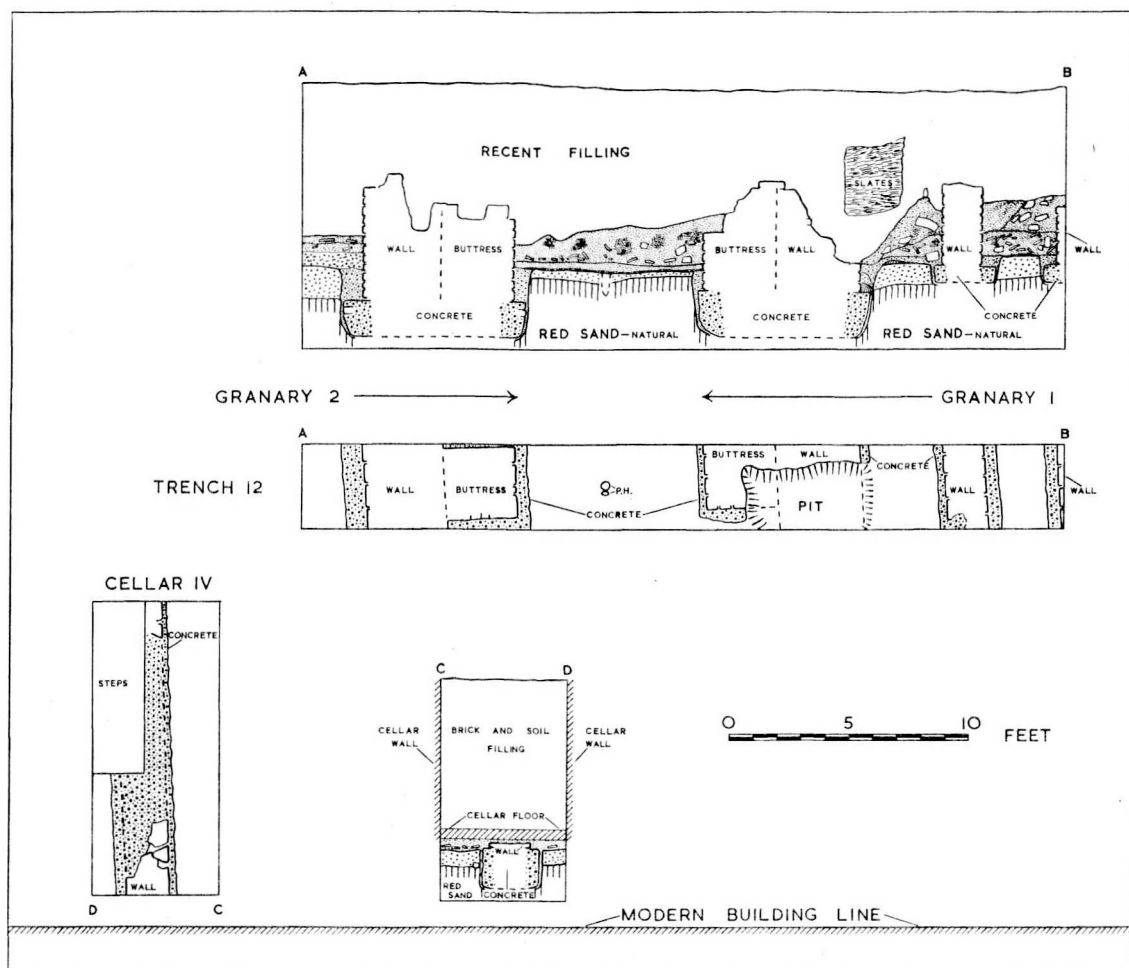


Fig. 8. Trench 12 and Cellar IV: plans and sections.

appeared the thick layer of yellow sand encountered previously and there interpreted as levelling material laid down before any of the fortress buildings were erected. In the surface of this layer, midway between the two granaries, were noted two small post-holes which, by their close proximity, suggested that one had succeeded the other; these were the only traces of earlier timber buildings on the site. No evidence for the date of the building of the stone granaries was obtained, and the the next feature of note was a layer of broken roof tiles extending the full length of the trench and similar to that encountered in 11. It had been immediately preceded, against the south face of the first sleeper wall of granary 1, by a small hearth with a sandstone kerb (not shown in the plan and section) which unfortunately produced no datable finds but only a few pieces of unidentifiable ironwork from the sooty

filling. Collapsed rubble again rested on the tile layer, indicating the same sequence of events as in 11. From the tile layer south of the outer wall of granary 2 came the rim of a cavetto-rim cooking-pot, and a fragment of Castor ware with white slip decoration (figs. 12, 5 and 13, 9), both of third-century date, confirming the coin evidence obtained in the previous trench; from the topsoil in the same area was recovered a coin of Crispus under Constantine the Great, dated *c.* A.D. 325 +. An interesting discovery in the tile layer between the sleeper walls of granary 1 was a small cache of opercular bones of the herring (*Clupea harengus*)¹⁹ which is to be related to the appearance of small rodent and bird bones in a similar position in trench 7 of the earlier excavations; the most likely interpretation is that these remains represent the residue from meals by predators nesting in the granary rafters. The cess-pit cutting into the outer wall and buttress of granary 1 extended below the foundation level and was not investigated to the bottom; it seems to have had a long life as the pottery ranged from medieval at low levels to 16th and 17th century sherds in the upper filling. The function of the pit was well attested by the bleaching effect of its contents on the surrounding sandstone masonry. Again, the bulk of the filling to the present surface was an undifferentiated black soil with no features of note except for a trench closely packed with broken slates.

Cellar IV (fig. 8).

The clearance of this disused cellar offered an economical method of pursuing granary 2 (and, by inference, 1 and 3) to the limits of the open ground north of the Spiritualist Church. After removal of a brick and soil filling, the brick floor of the cellar was encountered at a depth of 6ft. It was lifted and found to rest directly on a thin layer of black soil, beneath which appeared the concrete foundation of a sleeper wall, extending the full length of the cellar (pl. VIIIa), with traces of the first course of masonry at either end. By its relation to the walls found in trench 12, it proved to be the second sleeper wall south from the outer north wall of granary 2.

The layers associated with the upper course of the wall, which might have yielded useful historical information, had disappeared along with the wall, probably at the time when the cellar was dug. However, there still remained the usual layer of yellow sand, resting on the natural red sand, and above it a thin layer of broken roof tiles in black soil.

Trench 13 (fig. 9).

One granary had now been traced over a distance of nearly 100ft. but a block of houses and outbuildings now intervened to prevent any excavation in the area immediately east of cellar IV. Beyond them, however, a small garden to the east of Bishop Lloyd's Place, which runs south from Watergate Street Row behind Bishop Lloyd's Palace, offered an opportunity for establishing whether granary 2 was still running eastwards or had now ceased. Trench 13 was sited to cut across the line of its outer north wall, which was eventually found to lie just within the north end of the

¹⁹Kindly identified by Mr. N. B. Marshall of the British Museum (Natural History).

trench. The beginning of a buttress was noted and, more interesting, one face of a ventilator passing through the thickness of the wall between this buttress and its next companion to the west (pl. IXb). Undercutting of the trench wall located the other face of the ventilator and established its width as 2ft. 3in., with no suggestion of a

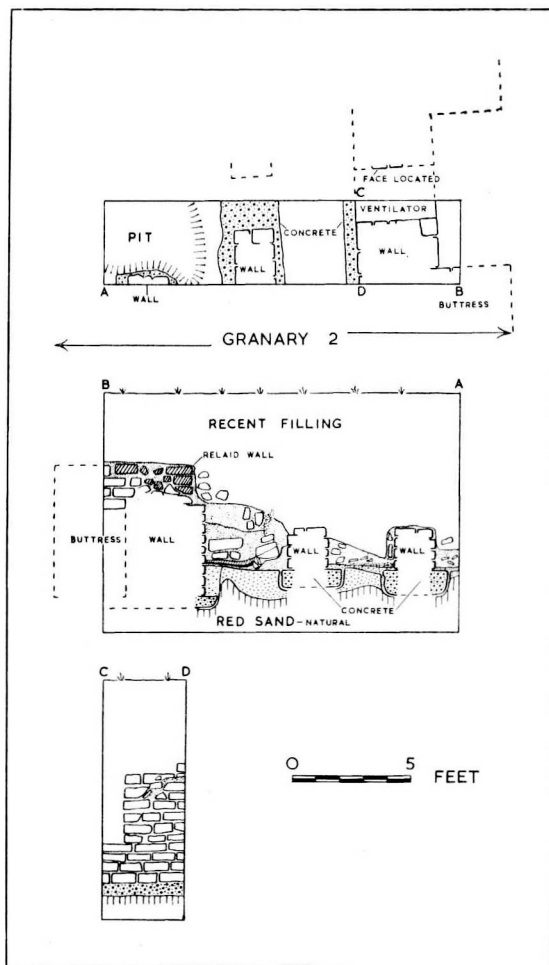


Fig. 9. Trench 13: plan and sections.

splay. The ventilator sill stood at a height of 1ft. 9in. above the concrete foundation. The first sleeper wall stood 3ft. 6in. south of the outer wall and was deliberately broken by a gap coinciding with the width of the ventilator, though its concrete foundation carried through (pl. IXa). The next sleeper wall appeared after an interval of 2ft. 9in. but had been largely destroyed by a medieval pit which occupied the south end of the trench.

No stratified material was obtained in this trench. The ubiquitous yellow sand layer was present on the surface of the natural red sand and above it, separated by a thin layer of brown soil, the usual layer of broken tile, with rubble above. Two pieces of second-century pottery (fig. 13, 10) were recovered above the tile layer, but of more interest was a roughly constructed wall of sandstone blocks set in soil running

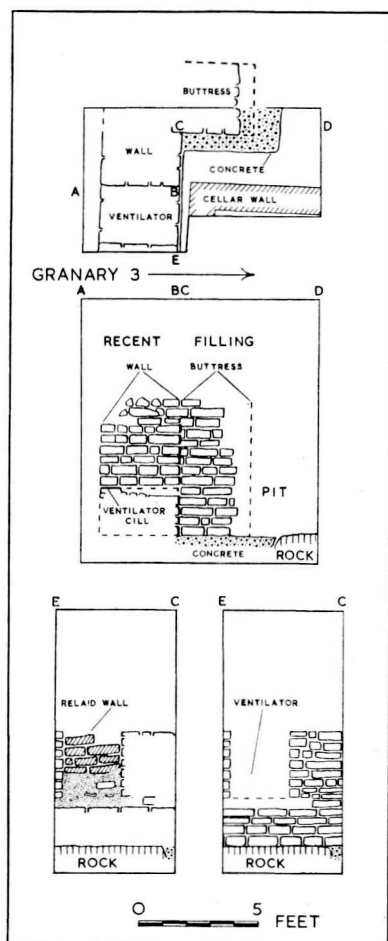


Fig. 10. Trench 14: plan and sections.

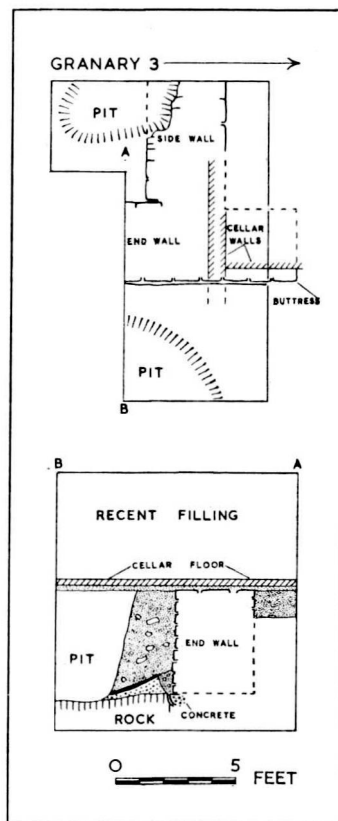


Fig. 11. Trench 15: plan and section.

along the surface of the granary outer wall and across the soil-filled ventilator (pl. IXa and fig. 9, section). Unfortunately, no indication of its date was obtained and it could have belonged just as easily to the medieval as to the Roman period.

Trench 14 (fig. 10).

The possibility of pursuing the granaries further eastwards had now become

even more limited and the only available open space was a small yard lying off Old Hall Place, which runs through from Commonhall Street to Watergate Street Row. Trench 14 was actually sited inside a shed on the west side of the yard after permission had been obtained to break through the concrete floor, and the intention was to drop on the outer north wall of granary 3, if it was there; in this way it was hoped to avoid making too large a bound from trench 13.

The new trench proved highly successful and the outer wall was found standing to a height of nearly 6ft., still continuing eastwards (pl. VIIIb); an attached buttress was also noted, though its outer face had been removed by a medieval or later pit, and both faces of a ventilator passing through the thickness of the wall. The ventilator was 2ft. 5in. in width and the sill stood 1ft. 11in. above the concrete foundation (pls. VIIIc and IXd). The original stratification had been destroyed by the medieval pit and by cellar walls on the east side of the trench and no historical information could be gleaned as a result. Natural proved to be solid rock at this point, into which the foundation trench had been cut (pl. VIIIId). One final point of interest was that the ventilator had been blocked at some later date by a filling of soil on which had been placed four unmortared courses of sandstone blocks (pl. VIIIb). Unfortunately, no material was found which would have had a bearing on when this took place.

Trench 15 (fig. 11).

Although described as one trench, this began originally as two small cuts inside a second shed, one to the west and one to the east, which were eventually joined by a connecting trench. The first cut quickly located the outer north wall of granary 3, reasonably intact except where it had been removed by a later pit; it was not exposed to any greater depth than was necessary to confirm its character. The eastern cut was made as close as was practicable to the wall between the yard and Old Hall Place; beyond this no further excavation was possible because of the road and existing buildings. No trace of any wall was found and the virgin rock was reached at a depth of 9ft. 6in. This process of "bracketing" made it clear that granary 3 terminated somewhere between these two cuts, which were now connected by a third trench. The outer face of the end wall of the granary was quickly exposed, together with an attached buttress (pl. IXe), though it was not possible to expose the latter from above, because of superimposed cellar walls. As the trench advanced, the internal angle formed by the end wall and outer north wall of the granary was also exposed, and the full length of one granary, and by inference all three, determined as 159ft. (pl. IXc).

Outside the end wall of the granary, a layer of sand and pebbles resting on the natural rock and sealed by a black trampled layer produced a sherd of S. Gaulish F. 37, dated A.D. 80—90 (fig. 12, 3) and a large fragment of a carinated bowl with reeded rim, also of Flavian date (fig. 13, 4); taken in conjunction with the Flavian/Trajanic group obtained in trench 11, both pieces confirm an early Trajanic date for the construction of the granaries.

HISTORICAL CONCLUSIONS.

There seems little doubt that the construction of all three granaries was undertaken as a single building scheme which itself formed part of the general reconstruction of the fortress in stone in the first decade of the second century (and after A.D. 102²⁰). They were evidently preceded by timber buildings in the earlier phase of the history of the fortress but whether these too were granaries is as yet unknown. No evidence for reconstruction of the granaries during their period of use was noted, and it is unlikely that anything beyond normal maintenance would have been necessary in view of their substantial nature.

It is tempting to associate the demolition of the granaries late in the third century either with the Allectus episode of A.D. 296 or with subsequent reorganization of the fortress by Constantius Chlorus. It is conceivable that the demolition apparent in the excavations could be interpreted as deliberate destruction by invading barbarians; on the other hand, as a result of the military measures initiated by Diocletian and Constantine, the fourth-century fortress must have altered greatly in appearance. The XXth Legion, presumably still stationed at Chester, may have been reduced to regimental strength and shared the fortress area with a civilian population. In such circumstances, these vast granaries would have lost much of their value except as a source of building materials for such new buildings as might have been required.

DESCRIPTION OF FINDS.

COINS²¹.

Trench 1 (layer 2—disturbed material over sleeper walls and bottom of medieval horizon).

1. House of Constantine.

Rev. GLORIA EXERCITVS

Two standards held by a pair of soldiers.

Mint-mark illegible. *c.* A.D. 330+.

2. Constantius II, A.D. 337—61.

Obv. DN CONSTANTIVS PF AVG.

Bust r., diad. and dr.

Rev. FEL TEMP REPARATIO.

Emperor in ship steered by Victory; RQ—mint of Rome. *c.* A.D. 348.

Cf. Cohen 33.

3. Valens, A.D. 364—78.

Obv. DN VALENS PF AVG.

Bust r., diad. and dr.

Rev. GLORIA ROMANORVM.

Emp. dragging captive to r.; PCON—mint of Arles.

R.I.C. (Arelate) 17 (b).

²⁰*C.A.J.* xxxviii, 19.

²¹We are indebted to Dr. C. H. V. Sutherland for a report on these.

Trench 5 (layer 2—disturbed material).

4. Tetricus I, A.D. 268—73.
Obv. IMP C TETRICVS PF AVG.
Rad. bust r.
Rev. (Probably) HILARITAS AVGG.
Hilaritas stg. 1., holding palm and cornucopiae.
R.I.C. 79 or 80.

Trench 11 (tile layer):

5. Copy of Tetricus II, A.D. 270—3.
Rev. SPES AVGG.
Spes to r. (instead of l.) holding flower and raising skirt (Cf. *R.I.C.* 270).
6. Radiate, probably imitative: ?Tetrican model (bearded?). ?c. A.D. 270+
Rev. probably ORIENS AVG.

Trench 11 (topsoil—unstratified):

7. Theodora, under Constantine the Great (commemorative issue after death, c. A.D. 328).
Rev. PIETAS ROMANA.
Cohen 3.
8. Constantius II. AE 2.
Rev. FEL TEMP REPARATIO.
Emperor in boat to left steered by Victory.
Mint-mark off flan. c. A.D. 348.
Cf. Cohen 33.
9. Nuremberg jetton of Hans Krauwinckel.

Trench 12 (unstratified).

10. Crispus under Constantine the Great, c. A.D. 325+.
Rev. BEATA TRANQVILLITAS.
Altar with VOTIS XX
Cohen 7 (decorated shield: ?PRINCEPS IVVENTVTIS type).

METAL.

Fig. 12, 1 and pl. Xa. Small bronze figure of an owl found during the demolition of a wall in the north-east corner of Cellar I, after the completion of the excavation. It apparently came from a small pit in the undisturbed yellow sand beneath the base of the wall. No other finds were made, and it is impossible to say whether the pit was Roman or post-Roman in date.

The figure is 3.8 cm. high, and the plumage is represented by a series of short incised lines. The eyes were of enamel, but only one has survived, in a badly decayed condition. Originally, the owl would probably have been attached to a pedestal, like that from Willingham Fen.

This find was examined by Mlle. F-R. Bonnet, who has very kindly contributed this comment: "In Britain the only parallel to the Chester bronze owl I know is that from Willingham Fen which was found in a religious context²². Small bronze owls have also been found in Gaul, and I know of five of these, found at Naix, Saint Jean-aux-Bois, Alésia, Bavai and Les Tussotes. The owl from Naix, which was mounted on a pedestal, was found in a *lararium* (or household shrine), together with a tiny bronze altar, a bust of a woman and a winged statue²³. The second find, made at St. Jean in the Forêt de Compiègne, was again of a bronze owl on a pedestal, the owl being 4.6 cm. high and the

²²*J.R.S.* xiii, 94, and pl. IV, no. 4; see also *J.R.S.* xxxix, 19 and pl. II; and *Ant. J.* vi, 178, and pl. XXX, fig. 3.

²³X. Bretagne, *Description d'un lairé trouvé à Naix* (Nancy, 1883); also mentioned by J. Toutain in *Gallia* II, p. 125.

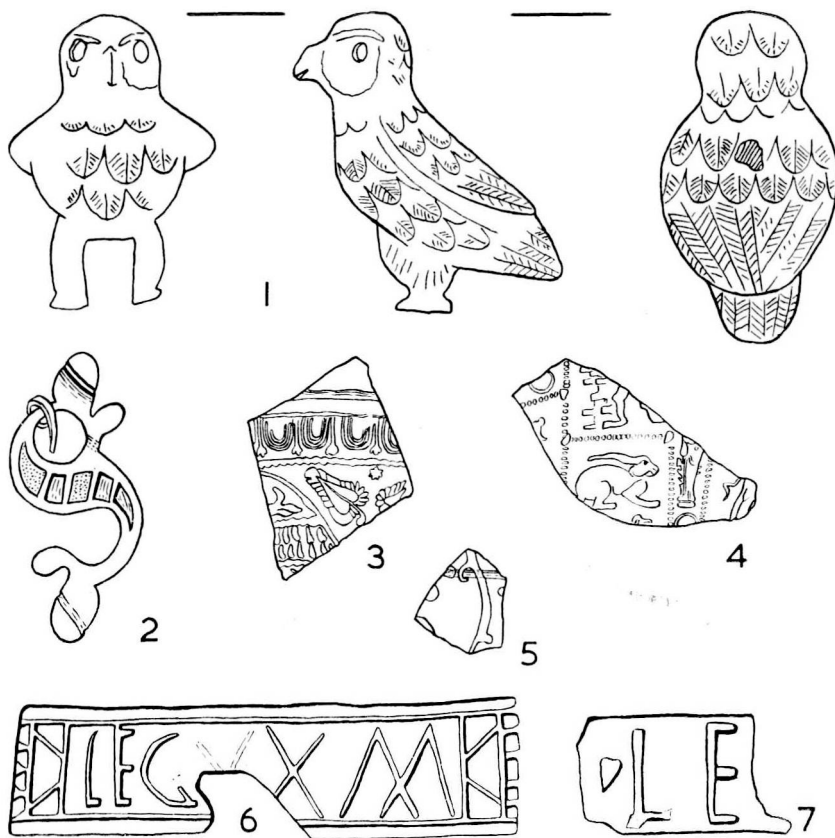


Fig. 12. Commonhall Street: small finds, samian ware and tile stamps
($\frac{1}{2}$ except 1 and 2, $\frac{1}{4}$).

pedestal 1.3 cm. It is now in the Musée de Saint-Germain²⁴. The Alésia owl, which is also on a pedestal, has hollow eyes which must have been filled with enamel or glass. The feathers are shown by incised lines. The owl is 5.5 cm. high, and the pedestal 2 cm²⁵. An owl 4.4 cm. high has been found at Bavai, but its whereabouts are not now known²⁶. Finally, at Les Tussotes another little owl of bronze was found at a site which also yielded a bronze statuette of Minerva. No other details are known about this find²⁷. It is interesting to note that all of these owls come from Northern or Eastern Gaul. On stone sculptures the owl appears very often in Gaul with Minerva (the olive has disappeared, of course, and the snake is rarely represented). In Britain the owl appears on the Bath

²⁴S. Reinach, *Bronzes figurés de la Gaule romaine* (Catalogue of the Musée des Antiquités Nationales, 1894), no. 324 (p. 293); also *Gallia* II, p. 125.

²⁵J. Toutain in *Gallia* II (1944) pp. 124-5, and figs. 2 and 3. Toutain mentions a few other owls found outside Gaul, and says that these little owls seem to be rather rare.

²⁶G. F. Feytmans, *Recueil des bronzes de Bavai* (supplement VIII to *Gallia* (1957)), no. 167 (p. 86), and plate XXXII.

²⁷M. Toussaint, *Répertoire archéologique du Département de la Meuse (période Gallo-romaine)* (1946), p. 17.

pediment²⁸, and on another stone relief from Bath also with Minerva²⁹; on the hand of the Sibson Minerva in the Duke of Bedford's collection at Woburn Abbey³⁰; and under the left foot of the Lavington Minerva (on a bronze plaque)³¹. The owl is also represented on the rock sculpture of Minerva at Chester, and this, together with the inscription to Minerva found in Bridge Street in 1861³² and the owl on the garland from the North Wall³³, makes one suppose that the small bronze owl from this site may have been connected with the cult of Minerva existing in Chester during the Roman period."

Fig. 12, 2. "Dragonesque" brooch of late 1st/early 2nd century date, from upper levels of trench 11: unstratified.

POTTERY³⁴.

A. Granary construction levels (trenches 11 and 15).

- Fig. 13, 1. Jar in dark grey ware with everted rim and shoulder groove.
 2. Rim of screw-neck flagon in pink ware.
 3. Rim of screw-neck flagon in cream ware.

These Flavian/Trajanic pieces came from trench 11 and were associated with the rim and another fragment of Samian form Dr. 18, of S. Gaulish manufacture and Flavian date.

Fig. 12, 3. Sherd from Samian Dr. 37, S. Gaulish ware, A.D. 80—90.

Fig. 13, 4. Upper part of carinated bowl with reeded rim in grey ware.

These two pieces came from trench 15.

B. Brown soil below tile layer, trench 11.

Fig. 12, 4. Sherd from Samian Dr. 37, by CRICIRO or DIVIXTVS of Lezoux, A.D. 170—190.

- Fig. 13, 5. Black burnished dish with lattice pattern.
 6. Rim of wide-mouthed jar in pink ware.
 7. Rim of *mortarium* in reddish-brown ware.
 8.Handled bowl in pink ware (Holt 212³⁵).

This mixed group contained pottery extending over the whole of the second century; the latest pieces probably belong to c. A.D. 200.

C. Tile layer (trench 12).

- Fig. 13, 9. Cavetto rim jar in black burnished ware.
 Fig. 12, 5. Sherd of black Castor ware with white slip decoration.

Both pieces can be dated to the last years of the third century.

D. Above tile layer (trench 13).

Rim of samian, Dr. 31 (not illustrated).

Fig. 13, 10. Platter in buff ware with orange-pink slip.

E. An interesting series of sherds of late Saxon pottery was found during the 1954 excavation in Crypt Court and submitted to Mr. G. C. Dunning, F.S.A., who has kindly contributed the report which follows:—

Trench 10.1; six sherds. The layer also contained much Romano-British pottery and some medieval.

²⁸*J.R.S.* XLV, p. 101 and pl. XXX, no. 2.

²⁹*V. C. H. Somerset*, vol. 1 (1906), p. 259 and fig. 34.

³⁰A. H. Smith, *Catalogue of the Sculptures at Woburn Abbey* (1900), no. 61 (p. 37).

³¹*J.R.S.* XLV, p. 101 and pl. XXX, no. 1.

³²*C.I.L.* VII, 169; R. P. Wright and I. A. Richmond, *Catalogue of the Roman Inscribed and Sculptured Stones in the Grosvenor Museum*, p. 15, no. 9.

³³*ibid.*, p. 54, no. 165.

³⁴I am indebted to Professor Eric Birley for comments on the Samian ware (F.H.T.).

³⁵*T Cymmrodor* XLI, 168-9 and fig. 73.

Trench 4.6 b; six sherds. The medieval layer (4.6) immediately overlay the Roman levels. 4.6 b was a pit of the same period dug to a depth of at least 5ft. through the Roman levels. This pit contained much Romano-British pottery, some medieval, and a fragment of a penny of Edward I.

Trench 3.5; six sherds. Same layer as 4.6.

Trench 5.2; two sherds. From filling of a roughly built stone-lined pit.

The Saxon pottery was thus not found in an occupation layer of this period, but in disturbed levels also containing material both earlier and later in date. It is unfortunate that the only coin is medieval; its association with the pottery is fortuitous, as there is no possibility of the pottery being of this date.

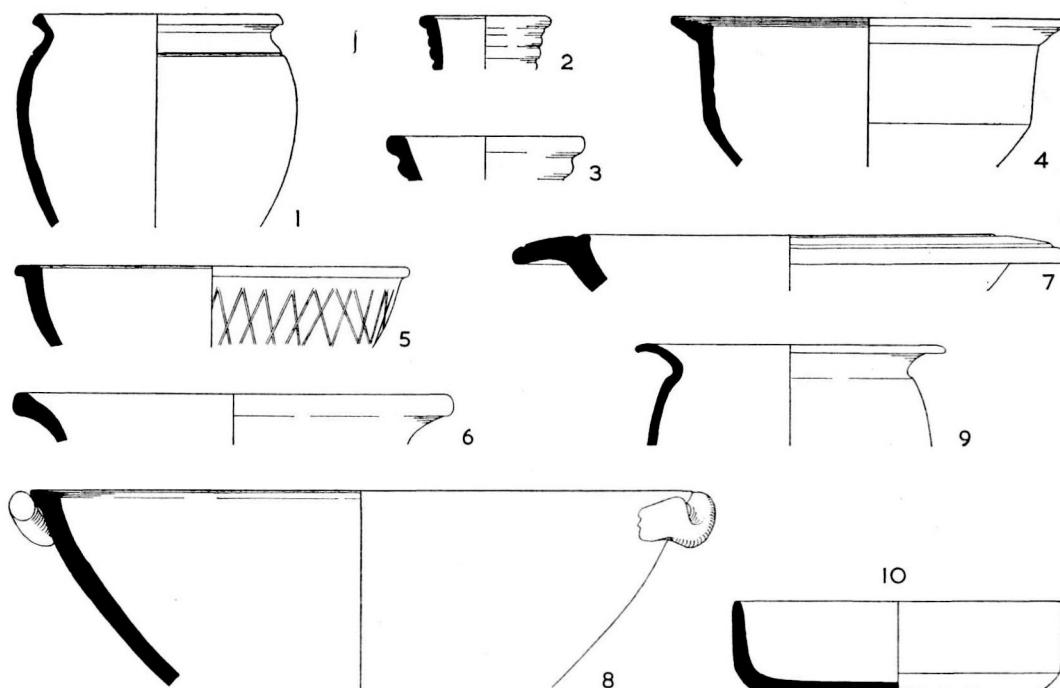


Fig. 13. Commonhall Street: coarse pottery ($\frac{1}{4}$).

The pottery is wheel-turned. The ware is fired very hard and varies from grey to buff in fracture; the surface colour is mainly buff or light brown, sometimes discoloured grey by subsequent use. The paste is fairly consistent and mixed with sand, giving a slightly harsh feel to the surface; one rim sherd (10.1) has a very free admixture of fine quartz granules and is coarse in texture. A few sherds (one from 10.1 and two from 3.5) are thicker and coarser than the rest, but probably are to be associated with them in date.

The sherds with any features belong to the cooking-pot type, globular in shape, with sagging base. The decoration consists of a band of trellis or diamond pattern impressed by a roller-stamp round the upper part of the body. The sherds of this cooking-pot type were distributed thus:—

Trench 10.1 Rim and neck, with part of rouletted decoration (fig. 14, 1). Body sherd with rouletted decoration (fig. 14, 5), and piece of sagging base (fig. 14, 7).

Trench 4.6 b. Three different rims (fig. 14, 2-4).

Trench 5.2. Body sherd with rouletted decoration (fig. 14, 6).

Trench 3.5. Sagging base.

It is evident that several pots are represented by these sherds, so that it is not possible to reconstruct a type drawing. Clearly, however, the pots agree closely in shape, decoration and ware with the cooking-pot used as the container of the tenth-century coin hoard found in Chester in 1950³⁶. Two of the rims from 4.6 b are flat on top with thin outer edges, and agree precisely with the rim of that pot. The other rim from 4.6 b is narrower and more rounded at the edges. The remaining rim, from 10.1, is strongly everted with a thin outer edge. The rouletting on two sherds from 10.1, and on one sherd from 5.2, is cleanly made and shows diamond-shaped impressions in a regular pattern. It is thus better defined than the stamp on the coin-container.

It remains to mention one sherd from 10.1. This is part of a flat base with a slight thickening at the edge (fig. 14, 8). The sherd is distinguished by the presence of small spots of yellow glaze on both the outside and inside surfaces. The spots are up to 4mm. across and the larger ones have a dimple at the centre; probably they result from bubbles of glaze bursting in the process of firing, and are quite accidental. Similar spots of glaze are present on the other cooking-pot from Chester referred to the late Saxon period³⁷. Flat bases occur on a small proportion of the pottery of this

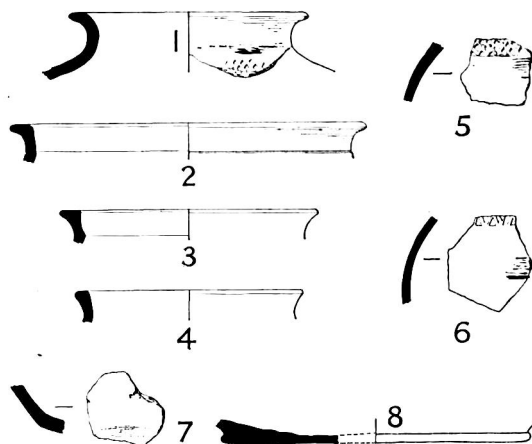


Fig. 14. Commonhall Street: late Saxon pottery (4).

period in the eastern Midlands and in East Anglia, usually on open bowls with flanged rims. The base from Crypt Court thus gives a hint that the usual range of pottery types of the late Saxon period may be expected at Chester as fresh discoveries are made.

TILE STAMPS³⁸.

The following stamps on roof tiles were noted:

Cellar I (tile layer):	Holt 1 (2) ³⁹ , Holt 12 (3), Holt 13 (2) and new type (fig. 12, 6).
(unstratified):	Holt 1 (2), Holt 12 or 13 and Holt 13a (probably).
Trench 1 (tile layer):	Holt 1, Holt 2, Holt 29 (2) and one uncertain.
Trench 7 (tile layer):	Holt 12 or 13, Holt 5 (possibly).
Trench 11 (tile layer):	Holt 29.
Trench 12 (tile layer):	Holt 8, Holt 29 and new type (fig. 12, 7).
Trench 12 (unstratified):	Holt 8.
Trench 13 (tile layer):	Holt 1.

³⁶*Antiq. Journ.* xxxiii, 31, fig. 3a.

³⁷*ibid.* fig. 3b.

³⁸We are indebted to Mr. R. P. Wright, F.S.A., for a report on these.

³⁹*T Cymmrodor* xli, 139-43 and fig. 59.

PLATE V.



a. Cellar I: buttress of Granary 3 (from north).



b. Cellar I: foundation of outer wall of Granary 3.



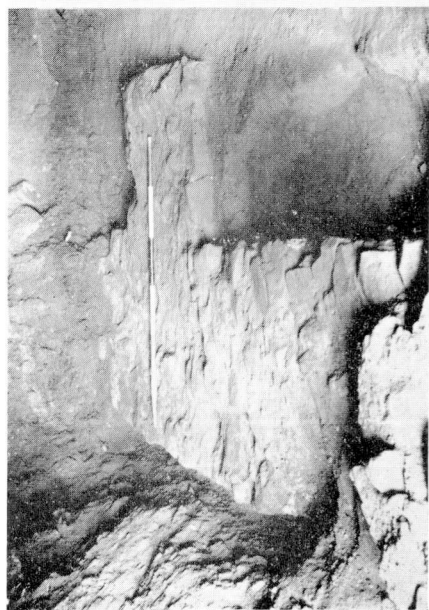
c. Cellar I: medieval foundation (from west).



d. Cellar I: buttresses of Granaries 2 and 3 (from south).

COMMONHALL STREET

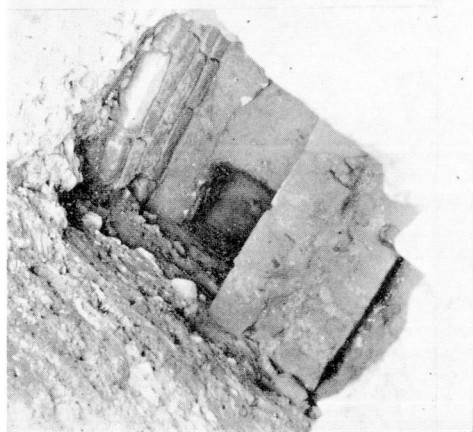
PLATE VI.



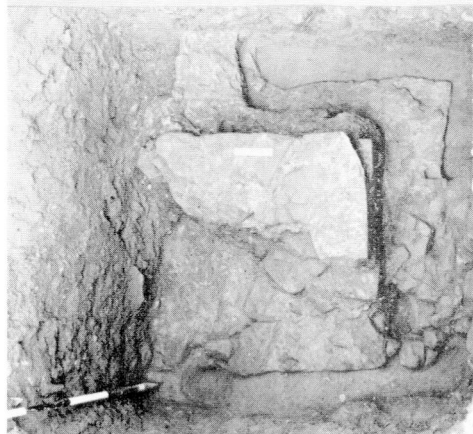
a. Cellar II: wall and buttress foundation of Granary 2 (from west).



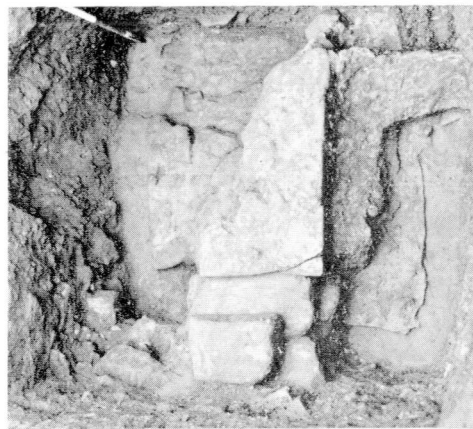
b. Trench 8: wall foundation of Granary 3 (from west).



c. Trench 1: sleeper walls of Granary 2.



d. Trench 7: corner buttress of Granary 2 (from south).



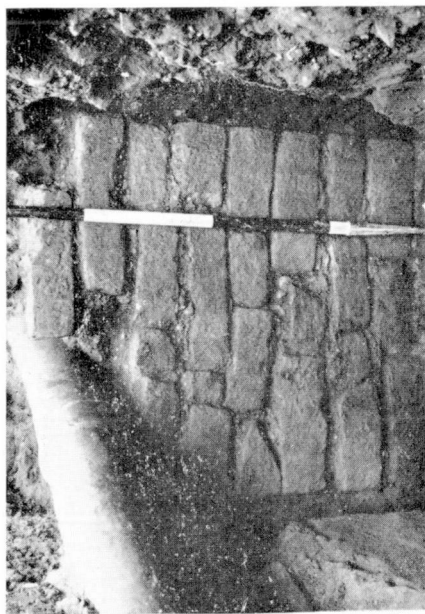
e. Trench 7: corner buttress of Granary 2 (from east)—blocking wall to left.

COMMONHALL STREET

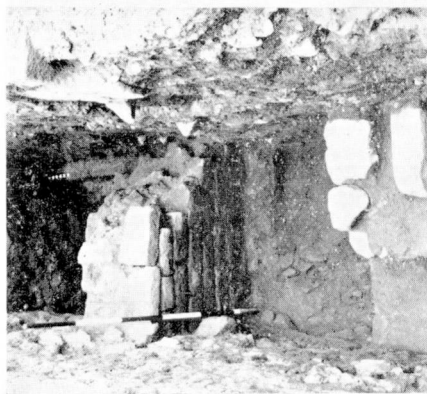
PLATE VII.



a. Trench 10: foundation at south end.



b. Trench 12: buttress of Granary 2 (from north).



c. Trench 11: outer wall and buttress, and sleeper wall of Granary 3 (from north)



d. Trench 12: general view from south.



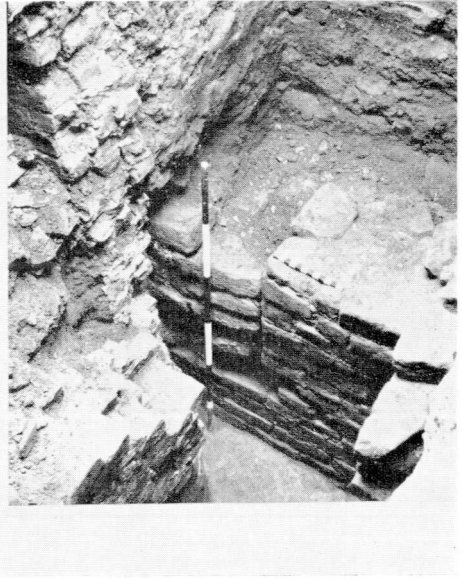
e. Trench 12: buttress and sleeper wall of Granary 1 (from south).

COMMONHALL STREET

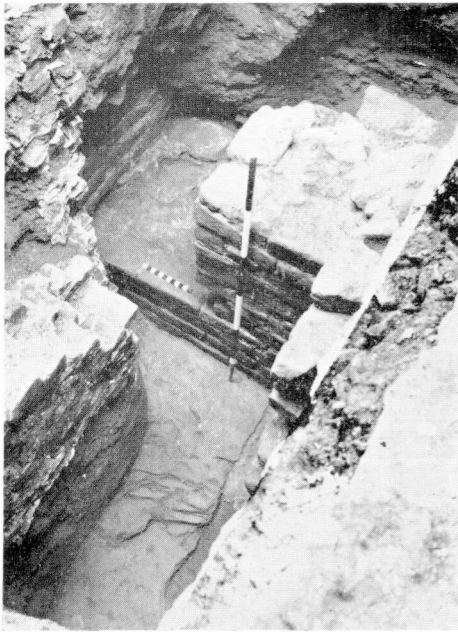
PLATE VIII.



a. Cellar IV: sleeper wall of Granary 2 (from west).



b. Trench 14: outer wall of Granary 3 (from north), showing blocked ventilator.



c. Trench 14: outer wall and ventilator of Granary 3 (from north).



d. Trench 14: outer wall and buttress of Granary 3 (from south-east).

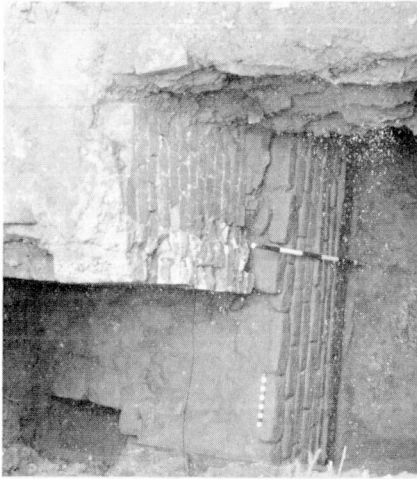
PLATE IX.



a. Trench 13: outer and sleeper walls of Granary 2, with relaid wall (from south).



b. Trench 13: outer wall, with ventilator and sleeper wall of Granary 2 (from south).



c. Trench 15: east end of Granary 3 (from east).



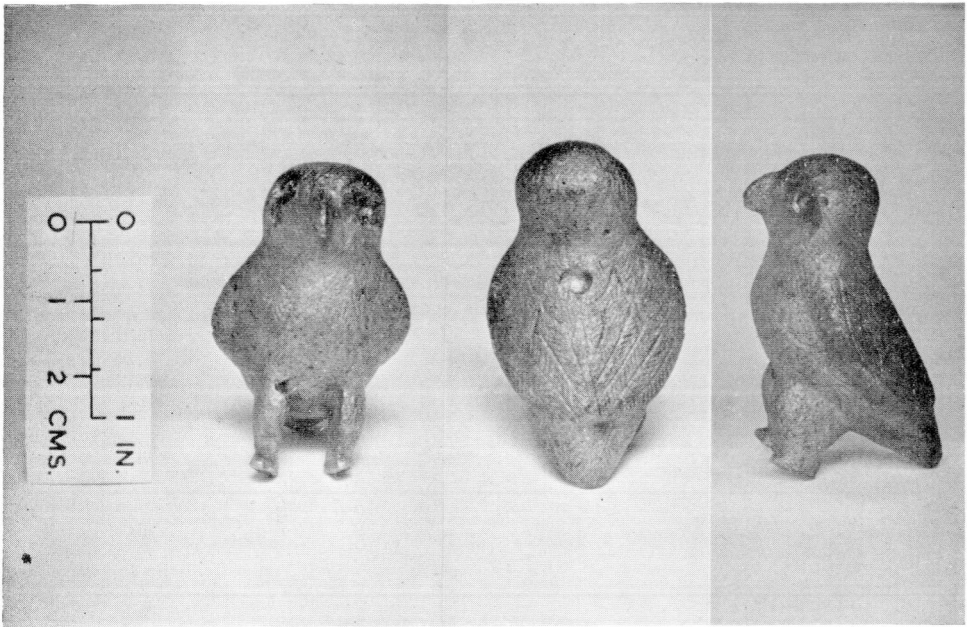
d. Trench 14: outer wall, with ventilator of Granary 3.



e. Trench 15: end wall of Granary 3 (from east).

COMMONHALL STREET

PLATE X.



a. Commonhall Street: bronze owl from Cellar I.

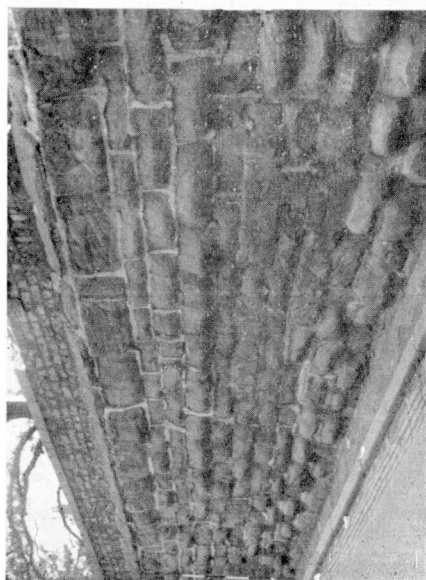


b. No. 39, Commonhall Street—door.

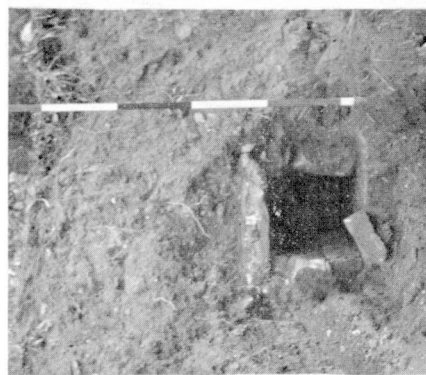


c. Weaver Street, 1956: Trench 1 from east.

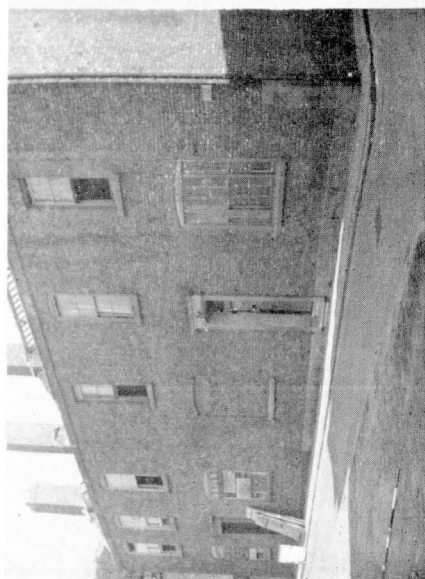
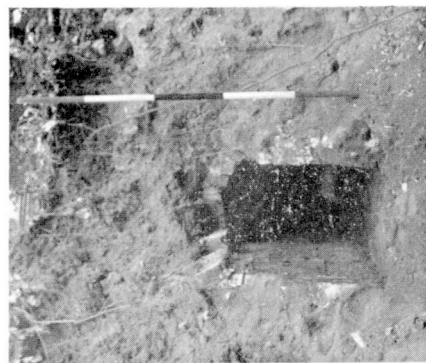
PLATE XI.



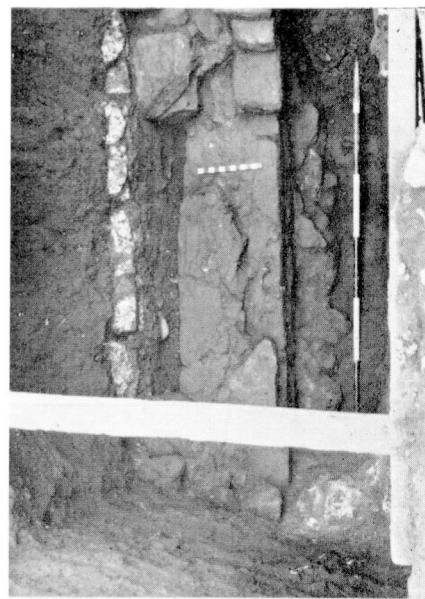
a. Weaver Street: sandstone wall before demolition, 1956.



b., c. Weaver Street: culverts exposed in garden of The Friars, 1956.



d. Nos. 39 and 41, Commonhall Street.



e. Weaver Street, 1956: Trench 1 from north.

