

NORTH-WEST SECTOR EXCAVATIONS 1979-80

By H. M. WHEELER

In advance of building of new changing rooms at Darley Playing Fields excavations were carried out for the Trent Valley Archaeological Research Committee under the direction of Hazel Wheeler, funded by the Department of the Environment. The area was in the North West Sector of the fort, probably just east of the intervallum road and some 35m south of the northern fort boundary as recorded by Stukeley in 1721 (Pl.1 and Fig.2). There was unfortunately neither time nor money available to extend the cutting across the defences, which would have provided linked stratification to the interior. These excavations need therefore to be considered in conjunction with the only adequate examination of the Little Chester defences, Sparey-Green's 1971-72 excavations of the diametrically opposite south-east corner, which are not yet available in print (Wilson, 1973, 285).

The 1979-80 excavations, the first large-scale examination of the interior of the fort, lay outside the central range, in the presumed *retentura* of the fort, and were expected to produce evidence of barracks or stabling. Timber buildings were present in phases 1, 3 and 5, but apart from a small granary-type structure their functions were uncertain. Two problems in particular determined excavation strategy. Sparey-Green had excavated Anglian burials dug through the ditches of the south-eastern corner, and had apparently recovered evidence of some refortification, or strengthening of the defences in the Anglo-Scandinavian period. If the fort had been used in the Anglo-Scandinavian campaigns in Derby, associated occupation debris might be present inside the fort. The second problem concerned the earliest history of the site. Traces of Roman occupation, presumably military, had been found beneath and outside the ramparts by the West Gate, and in the excavations of the south, south-east and east defences (Annable, 1967; Todd, 1967; Webster, 1961; Sparey-Green, unpublished, see Fig.2). The date and nature of this first occupation were uncertain and it had been suggested that the military had given up the site in Hadrianic times (Todd, 1967, 7). When it became apparent that there was no surviving evidence of the post-Roman occupation in the North West Sector, the objective became to investigate the earliest occupation in as much detail as possible. The complexity of the stratigraphy and the uneven subsidence led to a doubling of the time planned for excavation, from three to six months. Even so, it was not possible to complete the excavation of an area of approximately 14m by 22m.

To provide the maximum opportunity to study the earliest occupation, the lower parts of the larger pits and wells were left unexcavated below the modern winter watertable. The cost of hiring pumping and shuttering equipment would have precluded the excavation of their earliest levels. The south-west quarter of the site was likewise left unfinished. A layer of mixed silt and soil, PM (Fig.15), was clearly subsiding into some large phase 1 or earlier feature, which would have demanded considerable time to study. This area was therefore left undisturbed and all attention given to recording the plan of the first structures elsewhere on the site. Other limitations were imposed by physical conditions. A small ramp was retained on the western side to facilitate the removal of spoil. In the south-east corner a modern subterranean brick feature had removed all Roman layers and was left undisturbed. The brick flood wall above the southern edge of the excavation prevented the cutting of a vertical section,

and the loose humic deposits of the north-west also demanded the support of some batter, if the expense and impediment of shuttering were to be avoided.

Context codes: three letter codes were used on site. The first two letters denote the context and the third specifies layers or components of that context.

PHASE 1

Description

The earliest recorded feature was a ditch, QD, running north-south against the eastern edge of the excavations (Fig.15). It was dug through the natural river silts which formed the subsoil to a depth of .7m with a width of 1.7m. Two sections were recorded, in one of which much of the ditch had been removed by the later pit BU. The similarity of the ditch filling of greeny-grey silts to the matrix, combined with heavy iron-panning, made it difficult to ascertain its exact profile (Fig.16). It contained two sherds of handmade and no Roman pottery. While it is possible that it predated, and was unrelated to the Roman occupation of the site, it could equally well be part of the first Roman phase.

Dug into the edge of the upper filling of ditch QD, was the end of the trench PJ, which apparently formed a sub-rectangular enclosure. This suggests that QD was still a significant line when PJ was dug. Only one corner of this presumed enclosure lay within the excavated area, but its boundary trench was almost completely excavated and five profiles recorded. The trench had a fairly consistent depth of approximately 0.2m and showed no signs of recutting or post setting except at its terminal against QD (Fig.16). Here it was 0.4m deep, and contained a slot, PK probably for a post setting, 0.2m deep.

A large number of slots for timber buildings were dug through the same river silts as QD and PJ. Features in these silts were not readily identifiable, showing more clearly as their iron content oxidised, and great care was needed in excavation. It was particularly difficult to distinguish the edges of features which intersected, and negative evidence must be treated with caution. The upper deposits of silt contained pottery of the late first and early second centuries AD including samian wares of the Flavian-Trajanic period.

The pattern of individual buildings was obscured by later pits and wells dug at various times during the Roman occupation. Building slots were found in all undisturbed parts of the site, and were densest within the enclosure defined by PJ. Here too the slots produced the clearest indications of resetting and alteration. Only one slot, MR, was dug through the filled PJ and the earliest settings in the south-east corner of the site may be contemporary with PJ. The slots were in general some 0.15-0.25m deep with rounded bottoms and fairly steep sides. Individual posts could not be positively identified and either a sill-beam or a post-in-trench method of construction was probably the predominant technique. Some slots may have been enlarged by the dismantling of the buildings within. The enclosure bounded by PJ, slots MH and NN suggested an apsidal building, its eastern end removed by the well BP and by post-Roman disturbance. MH survived as a substantial slot, though its southern edge was obscured by the baulk: NN, though slighter was readily distinguishable (Fig.15). The only indication of an extension of the MH line was a possible post-setting PW, of only 0.3m depth. The line of slots westward from NN was more substantial, and appeared to have been reset with a slight alteration of line. A possible outer wall enclosing the apse was represented by NAC and NAE. The sequence of individual settings was difficult to distinguish, particularly as many consisted of short lengths, but NA, NW, MN and NL seem to have been related. MZ, a straight-sided slot 0.26m deep proved on excavation to contain a baby burial (Figs. 15 and 17). It was not the primary feature, but was dug through an earlier post-hole, and its filling, size and shape were similar to the other timber settings. It is possible that this was a dedicatory burial. The western end of the

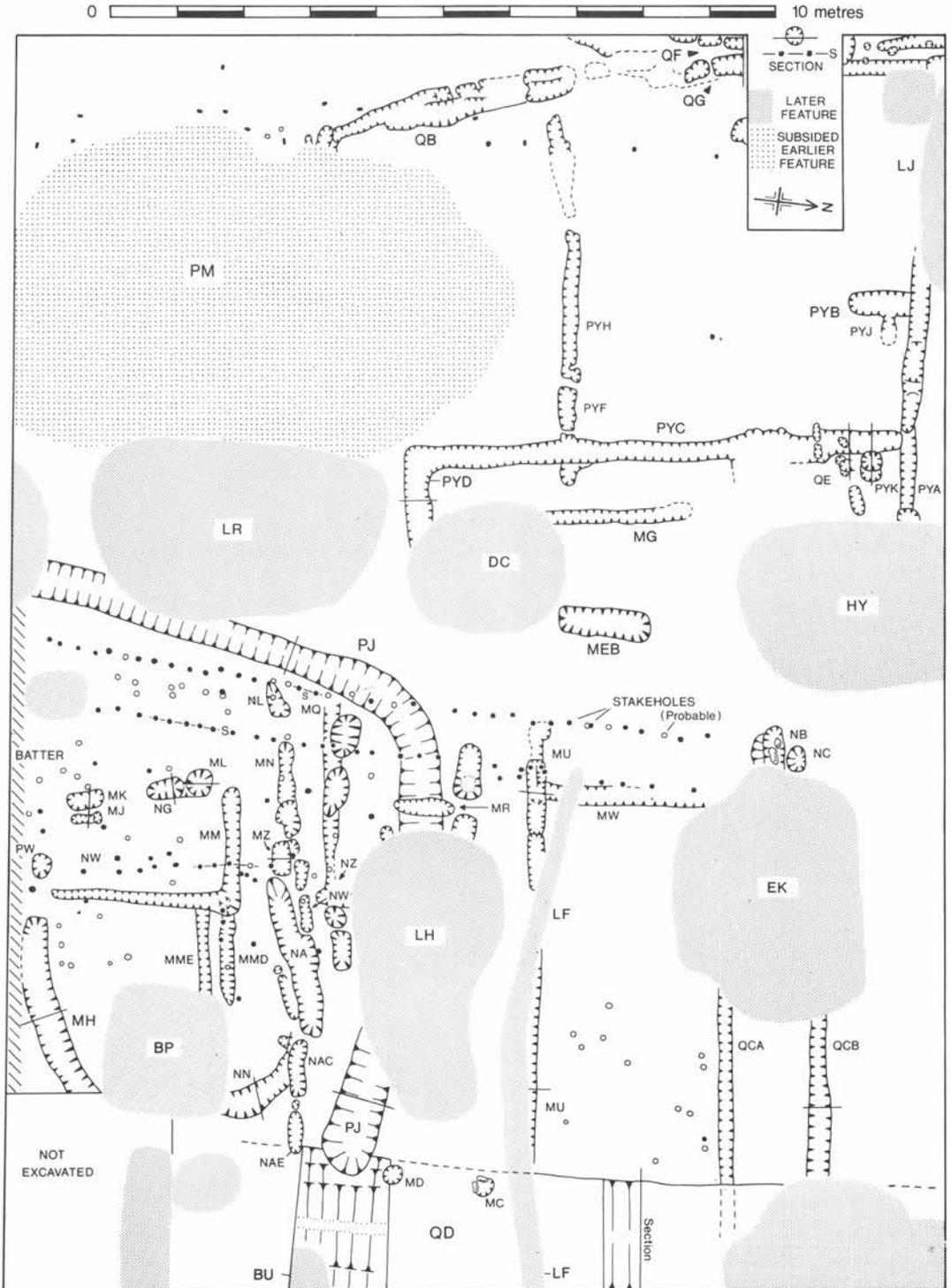


Fig. 15 Derby North-West Sector: phase 1, plan. Scale 1:100.

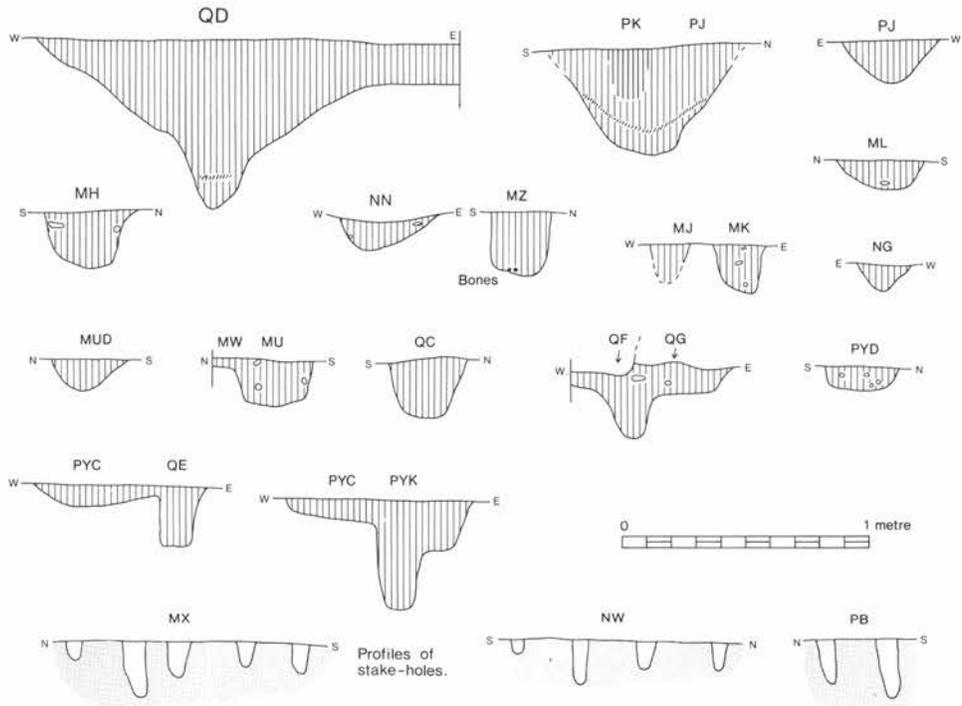


Fig. 16 Derby North-West Sector: phase 1, sections. Scale 1:30.

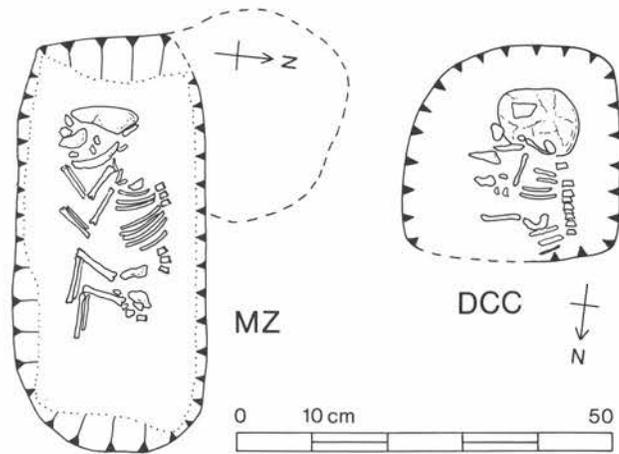


Fig. 17 Derby North-West Sector: phase 1, baby burials. Scale 1:10.

apsidal building was unclear. It might be represented by ML, NG and MK, linked perhaps by shallow settings which have not survived. MK was 0.19m deep and straight-sided, the other two, less regular in profile, (Fig.16). If the building extended beyond PJ, its western end would have been removed by pits LR and PM. Possible internal features were represented by the L-shaped slot, MM, with a deeper post setting at the corner, and by slight traces of very shallow slots MMD and MME, extending eastwards.

Alternatively the MM group of slots may represent an earlier or later building. The shallowness of these two last settings, under 0.3m, suggests that others have been entirely lost. The coarse pottery from these slots could have dated to the late-first or early second century. No samian ware was recovered from the slots except one Hadrianic sherd in MH, but Flavian-Trajanic samian ware was found in the silts (LAA and LAB) immediately underlying the slots and probably dating from that occupation. Since the evidence for the eastern end of the presumed apse had been destroyed it is possible that MH should not be classed with the other slots, though this seems unlikely. It is possible too that this sherd was intrusive.

To the north of the PJ enclosure were two small post-holes dug through QD, MC and MD, and to the north again were three parallel slots, MU, largely dug away by the later trench LF, QCA, and QCB. MU consisted of one long slot some 0.13m deep and shorter settings, partially replaced, of depths between 0.13 and 0.2m (Fig.16). QCA and QCB were only partly excavated. QCA was irregular in depth ranging from 0.06 to 0.14m, but QCB was bigger, some 0.24m deep (Fig.16). The relationship between QCA and the early ditch QD was not established, but QCA was likely to be the later. Traces of a very shallow slot MW, joined MU at right angles. Its relationship with QCA and QCB could not be examined because of the later pit EK which had penetrated the natural silt. Neither QCA nor QCB were observed west of EK though two other settings NB, and NC were recorded. There was little pottery from this group of slots. Their alignment was roughly parallel to those inside PJ, and to those to the west.

Throughout the excavation it was difficult to directly link the stratified deposits of the east and west sides of the area under study, because of a row of deep pits or wells, LR, DC and HY, cutting through the earlier occupation layers, and causing massive subsidence of the later ones. The south-western part of the site was not fully excavated. Layers of subsidence, PM were recorded, containing Flavian-Trajanic pottery and one vessel, a BBI jar, of Hadrianic date. These were sinking into a yet earlier disturbance, which must have been of early- or pre-Roman date. Time did not allow their excavation.

Both rectilinear and curving timber settings were identified in the western side of the site. They were similar to those of the east, and parallel to them, but no exact alignments were found, and with the exception of QF, against the western edge of the excavations, which was 0.24m deep (Fig.16), they were in general shallower, none being more than 0.12m deep. A rectilinear pattern was formed by the PY group of slots, 7.3-7.5m north-south, and of uncertain length east-west. The eastern end of the L-shaped slot PYC/PYD was removed by the later Roman well DC, but the northern end of PYC terminated against another timber slot at right angles to it, PYA. The eastern edge of this structure was not located, unless MEB was part of a line of discontinuous settings. A second roughly parallel slot MG, only 0.75m east of PYC seemed too close to be related even as an internal feature. Adjacent to the northern end of PYC were two deep post-settings, QE 0.24m deep, and PYK 0.57m deep (Fig.16). The western extension of PYA was removed by the later Roman feature LJ. PYB and PYJ were two smaller lengths of timber slot to the south. Parallel to PYA, and earlier than or contemporary with PYC was another long discontinuous setting PYF. MEB contained Flavian-Trajanic samian but otherwise few sherds were recovered from these slots.

Traces of a double line of discontinuous slots, including the deeper QF (Fig.15), lay just inside the western edge of the excavations, on a slightly different axis to the PY group. They extended beyond PYF to the south, curving slightly and probably turning east under the subsided layers of PM.

Later than PJ, and later than some, if not all of the timber slots, were series of stake holes. Two lines over 10m long and some 0.8m apart could be distinguished roughly

parallel to and inside the line of the western arm of PJ. The stake-holes were dug through PJ and a number of slots. Although they were first recognised in the very lowest layers of the site it soon became apparent that they had been dug from the top of the river silt. Many of the stake-holes were pointed and some were sloping (Fig.16). Of the 56 stake-holes in the double line, 3 were 0.3m or more deep, 17 were between 0.2 and 0.29m, 32 between 0.1 and 0.19m, and 4 were less than 0.1m. A third and less convincing row, NW, only 4m long lay 4m away to the east. Of the 18 stake-holes roughly aligned, 4 were less than 0.1m and 14 were between 0.1m and 0.2m deep, so that this third group was not only poorly aligned but also slighter than the double row. Most of the stake-holes were approximately round in plan, though some were rectangular. On the western side of the excavation a roughly aligned but widely and irregularly spaced line of stake-holes was identified. These occurred as voids in the river silts at the same level as the stake-holes. There were no obvious signs of recent animal disturbance and although this cannot be totally discounted, the holes were mainly rectangular in plan, suggesting squared stakes.

Phase 1. Discussion

It should be stressed that the disturbance of the earliest levels by later Roman features makes all interpretation tentative. Not all the early features of this excavation were typical of a Roman fort interior. The ditch QD may be pre-Roman, but it could belong to the first Roman occupation, and if so would form a substantial boundary. The sub-enclosure trench PJ terminated on its line. This sub-division of areas by ditches or fence-settings would be unusual within a Roman fort, and, though the plans of the timber buildings are incomplete, some of them also exhibit features unusual for military interiors. Apsidal buildings are not known inside early timber forts, though stone ones in the later compounds at Corbridge have been designated *schola*, a mixture of shrine and social club. If the baby burial MZ was dedicatory this might reinforce the interpretation as a shrine. The rectilinear PY group of slots was the most convincing piece of military architecture. They resemble the plan of the standard barrack block, at the junction of the narrower men's accommodation with the more extensive centurion's quarters. Unfortunately there was no convincing eastern end, and it was difficult to explain why PYD and PYA were not located to the east of the later disturbances, DC and HY, if they had existed. Careful examination of this part of the site produced evidence of other rectilinear arrangements, QC, MV, but not a convincing end of a PY barrack.

The purpose of the double line of closely set stakes less than a metre apart was unclear. The alignment did not fit well with the timber buildings, though they were roughly parallel to the western side of the earlier PJ. The stakes with diameters of 0.5-0.7m were too flimsy to be defensive, but combined with woven wattle might have been used as a stockade, or to divide areas of different functions. Whatever its use, it seems out of place inside a fort.

The defences of the presumed earliest fort at Little Chester have never been identified, but traces of its interior have been found outside the Antonine defences on the south, east and west sides (See Fig.2). The Antonine fort was a large one, some seven acres, large enough for a cavalry unit (Webster, 1969, 205). If the earlier fort extended beyond it on three sides, and shared its boundary on the fourth side it would be very large indeed. Since the structures of the 1979/80 excavations seem atypical of a fort interior, it is possible that Derby had some other kind of military installation. It might have been a defended annexe, including a shrine and possibly stabling. If the ditch QD was Roman it might form the boundary of the annexe or a major subdivision within it. Inside that the sub-enclosure (PJ) might have been fenced off to separate

animals, horses or meat animals, from other areas of activity, particularly the apsidal building. The PY group of slots, and those to the east of them might have provided stabling. If the stake-holes are part of a stockade this too would suggest the presence of animals. Alternatively, these early structures may represent some less formal military depot, acting as a collecting point for supplies northwards and perhaps lead southwards. (I am indebted to Prof. Todd for this suggestion.) Recent excavation results do, however, suggest that the planning of forts in the early-Roman period was much less regular than was once thought.

The dating of phase 1 depends on its ceramics, of which the samian ware is the most useful, suggesting that Roman occupation of the site began in the 80s. Phase 1 covers the Flavian-Trajanic period (80-117) though some Hadrianic types were present, possibly intrusive or belonging to the abandonment of this occupation.

PHASE 2

Description

Above the natural river silts and above the features already described were layers of sandy gravel, mixed with loam and interspersed with patches of burnt material, charcoal, daub and some clay, containing pottery of the earlier second century. The thickness of the different spreads varied, and the whole may have formed a levelling deposit after the removal of both timber buildings and the stake lines. In these mixed layers was a distinctive line of flat stones KF set in a strip of sandy gravel 1.3m wide (Fig.18). There was no mortar and the stones may have acted as a sill or as pad stones for a wall. Parallel to this line and 0.2-0.3m north of it was a lighter gravel streak, KME, but this was poorly defined, and seemed a discolouration within the gravel rather than a separate feature. To the north again was a steep sided trench, LF, 0.2-0.5m deep and 0.3-0.5m wide. Its western end was parallel to the stone setting, KF, but it curved slightly northwards as it approached the eastern edge of the excavations. It was dug through the mixed gravel deposits into the river silts, removing much of the phase 1 timber slot MV. Its filling was mixed gravel, clay and rubbish in the form of broken pottery, daub and charcoal, and was readily distinguishable at its western end. The eastern end was filled with much cleaner greenish grey silt, difficult to distinguish from the river silts, and its shape was to some extent ascertained by the formation of hard iron pan around its lower edge. Its eastern end had probably been redug at some time producing a deeper narrower trench to the north (Fig.19), which probably held timber uprights, and a rounder shallower profile to the south. The sequence could not be ascertained. Localised variations in filling suggested post settings within the trench but none could be satisfactorily demonstrated in section. Pottery from LF was mainly of the first half of the second century in date. Its upper filling was part of the overlying stratum which had sunk into the top of the trench.

In the north again only a short length remained of the slot KU, between the two later pits EK and FZ. KV was much slighter than LF, 0.2-0.25m wide and 0.11m deep (Fig.19). It was similar in size and profile to the earlier timber slots, but was stratigraphically later. It contained no pottery and could have belonged to either phase 2 or 3, but it was parallel with KF and the western part of LF and for that reason is included here.

In the north-west corner of the site a group of three post-holes certainly, and six possibly, belonged to this phase. QK, and QL were substantial stone-packed post-holes some 0.25m wide and 0.3 and 0.26m deep respectively. A third post-hole QJB was filled with charcoal, and its upper part dug away by a shallow pit QJA. The silt mixed with red clay, charcoal and pottery sherds that filled the pit also spread over QJB and formed the upper filling of QK and QL. It covered part of a fourth post-hole of less

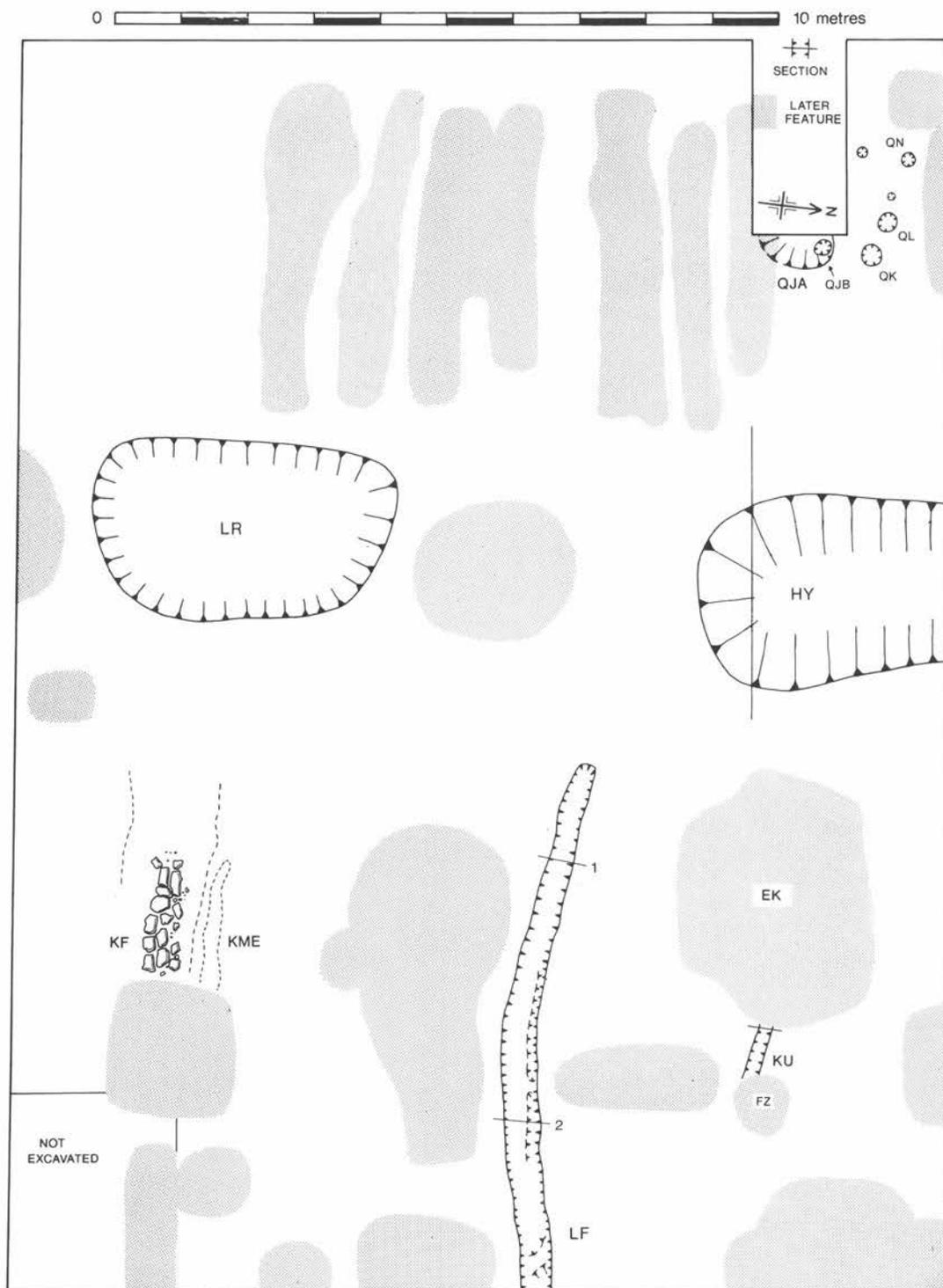


Fig. 18 Derby North-West Sector: phase 2, plan. Scale 1:100.

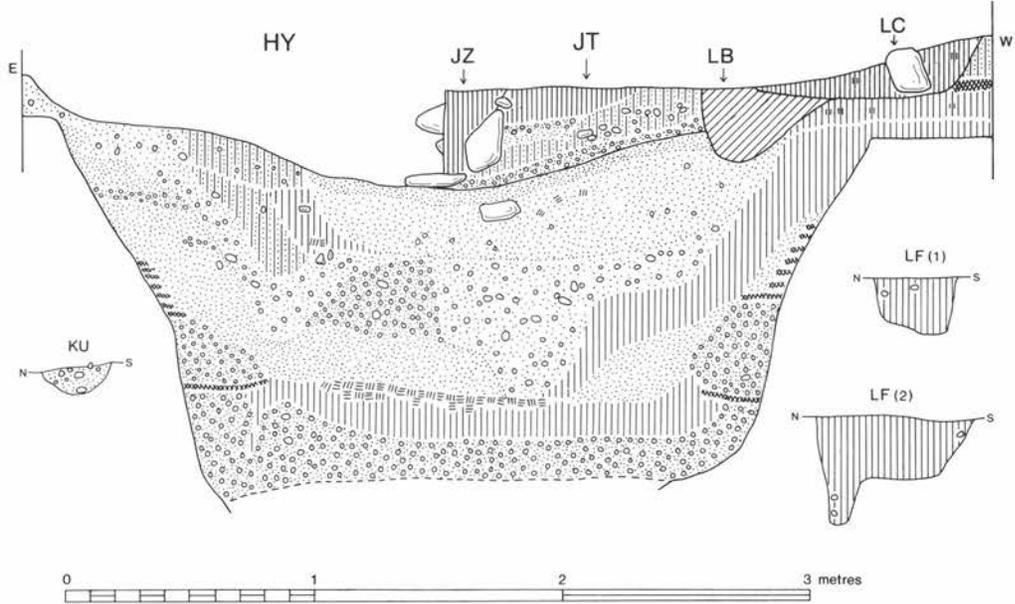


Fig. 19 Derby North-West Sector: phase 2, sections. Scale 1:30.

regular shape, QN. Close to and possibly related to these post-holes, were two smaller post or stake-holes.

A small ramp of earth was left unexcavated in this part of the site, to facilitate the removal of wheelbarrows, and the pattern of the post-holes was unclear. They may have belonged to phase 1.

After the timber buildings of phase 1 had been removed, two large deep pits HY and LR were dug. These were the earliest of a number of such features, some of which were wells. HY was subrectangular in plan, nearly 3m wide and probably over 4m long, with its northern edge outside the excavated area. Its sides were steep and it was redug at least twice (Fig.19). It was excavated to a depth of nearly 2m, which was below the modern winter watertable, and its lowest layers of fine silt, sand and gravel contained no artifacts, or bone. It is uncertain whether the bottom of the shaft was reached. The lowest deposits containing pottery dated to the early to middle second century.

LR was excavated to a depth of only 1.3m again below the winter watertable. Less steep-sided than HY it showed no signs of re-digging. Its lower levels consisted of fine silts, sands and gravels, but with more ash, charcoal and burnt material than HY. Again artifacts were sparse in the lowest excavated layers, but the pottery suggested that it was filled in the first half of the second century. It is uncertain whether the bottom of the pit was reached.

Discussion

While there is a common alignment between KF, LF and KU, the three features are otherwise dissimilar, and apart perhaps from reflecting some more dominant feature outside the excavated area, tell us little. All appeared, like the QJ group of post holes, within a series of gravel sand and rubbish deposits which covered the earliest timber buildings but the patchy nature of the stratigraphy leaves it unclear whether they were all in use at the same time. The wide spacing of features might suggest little occupation. The pits are difficult to date. LR may have remained in use for a comparatively short time, its apparent upper levels being due rather to subsidence than deliberate filling. HY

in contrast remained open and in use, with occasional re-digging, into the third century. The comparative paucity of occupation evidence during this phase might suggest a little used annexe, rather than the interior of the fort, or possibly even a civilian interlude. The pottery from phase 2, and in particular the samian ware indicates a date in the Hadrianic period (117-138) with possibly a little early-Antonine activity.

PHASE 3

Description

The layers of pebble and finer grained material interspersed with patches of clay and burnt material (FL) continued above the phase 2 features. A layer of pebble with some sand lay immediately below a patchy deposit of red clay and brown humic material (JR) with some pebble, which was covered in turn with a series of overlapping gravel spreads (FL). The pottery in these layers dated to the middle- to late- second century. There was no single clear layer that could be followed across the entire site. The gravels in particular seemed in places to form distinct deposits, but further work inevitably showed them to be interleaved and patchy, no doubt the results of dumping loads of pebble or an indication of the making or compressing of parts of a hard standing. This made it particularly difficult to ascertain from which level the larger pits were dug, which caused so much later subsidence. Some of the pits discussed in this phase may have been dug in phase 2 or even earlier.

Phase 3 was marked by new timber buildings and a greater use of the available space. Two wooden structures were found within the excavations (Fig.20), a granary-type building of which substantial foundation trenches remained, and a slighter rectilinear timber building of sill-beams and post-holes.

The granary-type building consisted of a series of trenches, very substantial in the south, but becoming slighter towards the north. The seven most southerly trenches were indisputably part of this building, giving dimensions of 5m by 8m. To the north of these slighter and less regular trenches continued, though the plan was obscured by the unexcavated ramp. If these were part of the same structure its length would be 10m or more.

The trenches were straight-sided and flat-bottomed with clear evidence of post-settings and replacements (Fig.20). JQ, LX and HF were all approximately 0.9m wide and 0.5-0.6m deep, CG and JW were approximately 0.7m wide and 0.3-0.4m deep, and JX was apparently slighter still, though it was difficult to define the edge between JX and KA. The trenches were dug very close together and in two cases, DQ, RA and JW, JX, the division between two trenches had collapsed in antiquity. In the case of DQ the stratigraphy was further complicated by a shallow disturbance to the north, EY, whose filling was hardly distinguishable from the upper, subsided layers in the top of DQ.

The ridge between DQ and RA must have collapsed during the original constructions. The two lines of posts were set, and the double trench filled in one operation with only slight traces of the double setting in the layers of filling (Fig.21). The surface was then firmed and consolidated with a deposit of compacted gravel around and between the lines of posts, and this had survived, slightly subsided, along the line of the division between the two trenches, to be recorded in the pre-excavation plan. The seven more southerly trenches all preserved evidence of post-settings, frequently stone-packed. All showed signs of repair and maintenance, with individual post replacements. These substantial stone-packed posts seemed to have formed two lines of major supports. Wherever the details of stratification was clear they were dug through the main trench fillings and may indicate a complete renewal of this structure. The trench CG was also redug, as was the west end of LX.

The continuation of the structure to the north was suggested by the features KA and

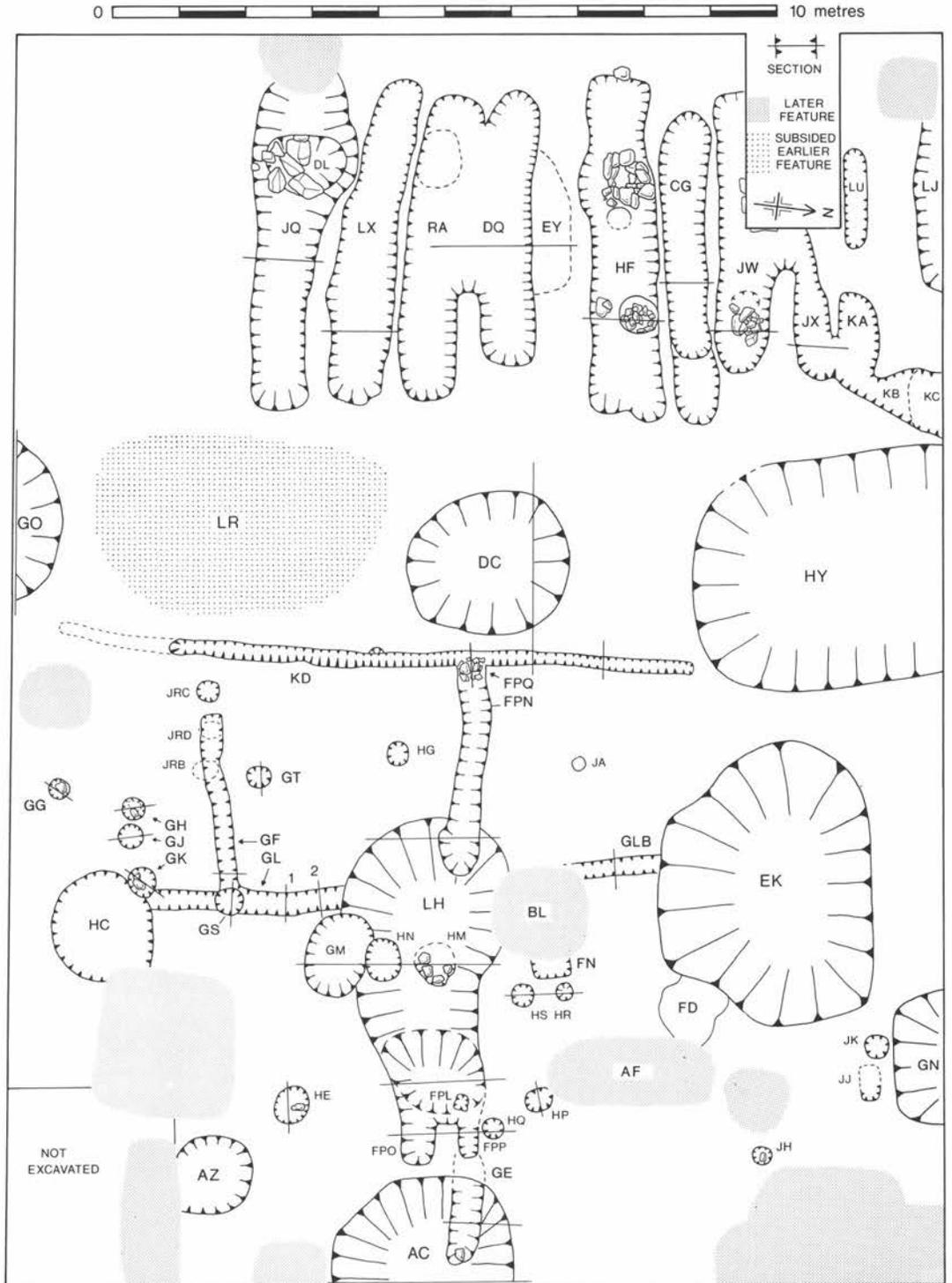


Fig. 20 Derby North-West Sector: phase 3, plan. Scale 1:100.

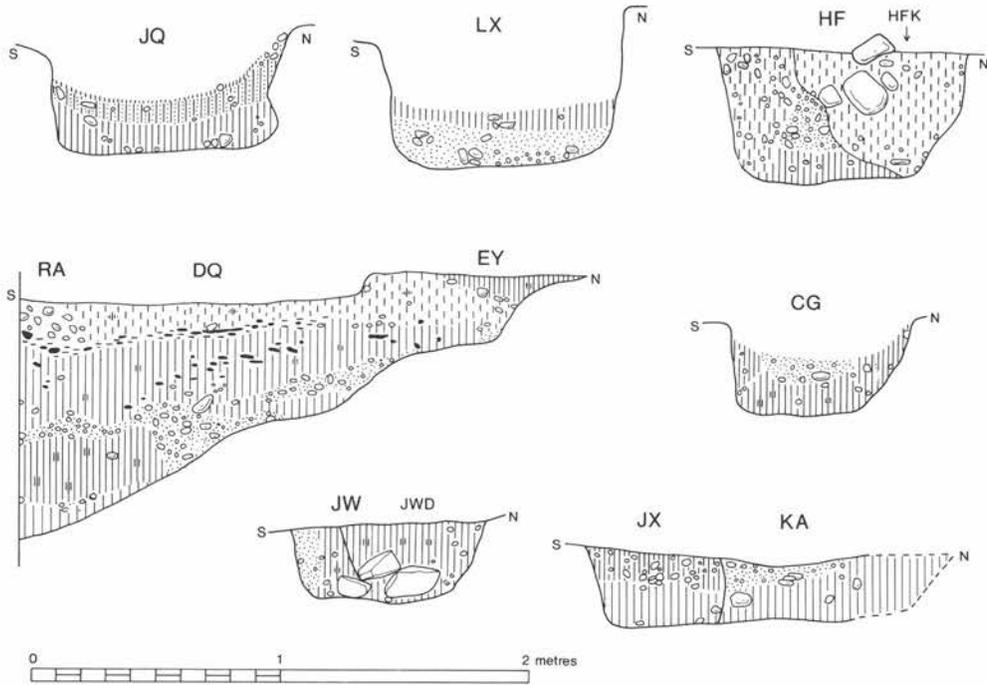


Fig. 21 Derby North-West Sector: phase 3, granary type building, sections. Scale 1:30.

LU, which, while discontinuous, conformed to the line of a single parallel trench, and, with a wider spacing, LJ which continued under the northern edge of the excavations. Although these were slighter than the other trenches this part of the site had suffered more modern erosion. The later Roman levels were not present in the north-west corner of the site and the modern overburden lay immediately above the phase 3 features, perhaps because this area was higher in Roman times, sloping down to the south and east. Because the bottoms of these northern trenches were actually higher than those to the south, their upper parts may have been more vulnerable to erosion. The present ground surface is flat. North of the east end of KA was a spread of dirty grey humic material with gravel, labelled KB and KC, and disappearing beneath the northern baulk. If these features did belong to the structure they may have been connected with the provision of a loading platform. Neither the trenches nor the post-settings and replacements, produced pottery later than the second century.

On the eastern side of the excavations a number of sill-beam slots and post-holes were found (Fig.20). Their pattern was obscured by later features and possibly by subsidence from earlier ones. Nevertheless elements of at least one long rectilinear building with some evidence for internal divisions were recorded (Fig.20). The sill-beam slot, GL was readily identified south of the large pit LH, its southern end being removed by the pit HC. A further length GLB was recorded north of LH on a slightly different alignment, and with a narrower profile (Fig.22). Internal divisions to the west included the slot GF which joined GL at right angles. At the junction was the post-hole GS. When GF had been excavated three patches of staining, JRB, JRC and JRD were recorded which might indicate individual post-settings. To the south of this line a second internal division, or perhaps the terminal wall was formed by the post-holes GH, GJ and GK. To the north three more post-holes, GT, HG and JA might mark further divisions or internal fittings. These post-holes were not uniform in profile, but

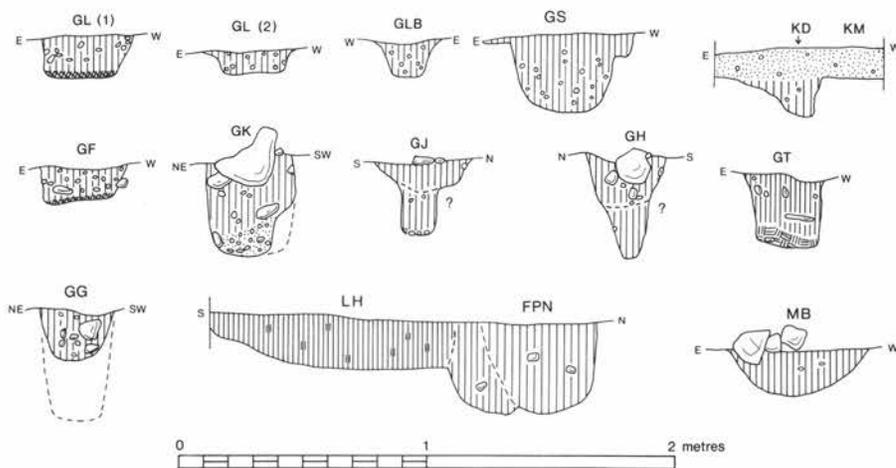


Fig. 22 Derby North-West Sector: phase 3, rectilinear building, sections. Scale 1:30.

with the exception of JA they shared two characteristics: their lower parts were narrower and generally steep-sided suggesting the post position, with a filling of fairly clean pebbly material, the upper parts were wider, interrupted the lower post pipes, and had a darker more humic filling, suggesting disturbance by removal of the post.

To the west of these was a long shallow slot KD, parallel to the southern part of GL. It lay just east of the filled phase 2 pit, LR and of the well DC, dug at about this time. Its relationship with HY, was not clear. The subsidence of these three pits caused the disassociation of all the upper strata on the east and west sides of the excavation, and hampered the recognition of KD. KD was joined to a second shallow slot FPN, with a stone-packed post-setting FPQ at the junction. FPN lay north of GF, and was not quite parallel to it. Where it joined the pit LH a deeper post-setting was dug through the pit's filling. On the same line as FPN, and east of LH was a further length of slot, GE. A number of post-settings were dug through the filling of LH, two of which also lay on this line, FPL and FPP. What was not clear was whether GL, GF and KD, FPN were components of the same structure. The large pit LH, appeared in excavation to have removed a length of GL, but all these slots were difficult to recognise, and particularly so where they crossed subsiding pit fillings. While traces of a number of post-settings were found in LH, few could be fully detailed, and the edges of LH itself, and of its rediggings, were recorded only after long and patient effort. The depth of GL, just to the south of LH was only seven centimetres. Broken by the subsidence of the pit filling it may well have proved impossible to identify if it traversed LH. If GL was later than LH a building might be suggested 4m wide, 9m or more long with at least two internal divisions. Alternatively GL, GF and some post-holes may have belonged to a building dismantled before the digging of the pit LH. After LH was filled, a second building using KD and FPN was set in almost the same position. The stratigraphic evidence of LH suggested the earlier rather than the later part of this phase. It was certainly later than the end of phase 2, allowing a very short length of occupation for the GL GF building. The pit would have fitted better in the comparatively open phase 2 particularly as its slightly curving northern edge reflected the curve of the phase 2 feature LF. Its apparent stratigraphic relationship, later than GL, and some later pottery types placed it in phase 3.

Other post-settings were more difficult to interpret. FPP lay on the line of GE dug through the filling of the pit LH, and to south and north of it were two more post-holes,

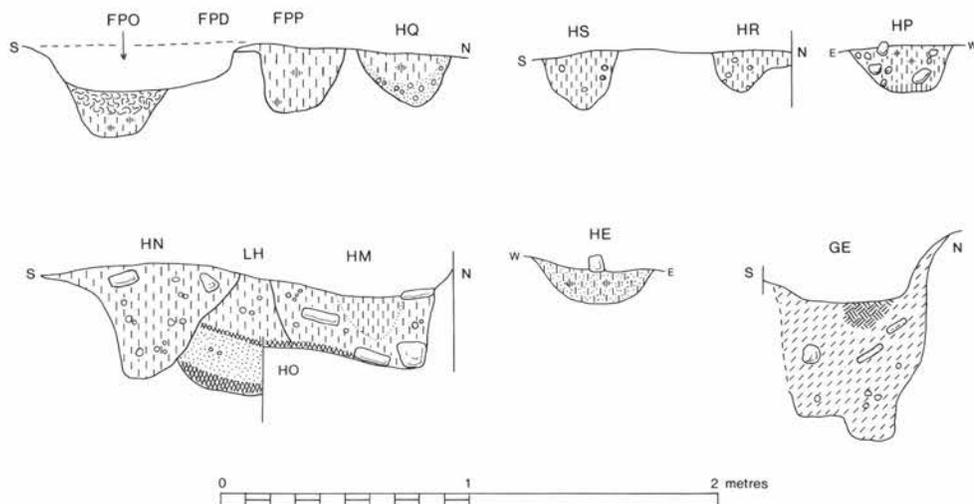


Fig. 23 Derby North-West Sector: phase 3, post-settings, sections. Scale 1:30.

FPO and HQ, also dug at least in part through LH (Fig.20). They were 0.19-0.24m deep, with rounded profiles, and to the north were three more post-holes of similar shape, HR, HS and HP, the last, and a possible fourth larger one FN, partly removed by the later pits AF and BL (Fig.20). In the centre of the pit LH were two more substantial post-settings (Fig.20). HN, 0.45m deep, with a steep narrow profile at the bottom and a wider spread above which might be caused by the withdrawal of the post, and HM, only 0.22m deep but wide, flat-bottomed and stone-packed with clear evidence of the post position. Another post-hole HE similar in shape and size to HM lay to the south (Fig.23). These post-holes with the slot GE might have belonged to another structure, east of that already described. If two building periods occurred, then these, later than LH, must belong to the later. To the north-east was JH, a straight-sided post-hole, JJ and JK. These last two were observed only at a lower level, with a depth of 0.07-0.09m, but their upper parts had been removed making it uncertain to which phase they belonged. A large post-setting or more probably a small pit GM was dug through the filled pit LH, adjacent to the post-hole HN. To the south just on the edge of the slot GL and post-hole GK was a wide shallow pit with steep sides, HC, which contained late-second-century pottery.

During phase 3, or the end of phase 2, a number of large deep pits were dug, probably not all at the same time. Most of these, like HY and LR which were certainly of phase 2, were not completely excavated because they penetrated the modern winter watertable. Some of them seemed to have been wells, remaining open for several phases of occupation. The pit LH has already been mentioned in connection with the timber buildings of this phase. Its irregular shape in plan (Fig.20) led to an initial interpretation as two pits, but as excavation progressed it became clear that it was originally one feature dug early in phase 3. The shape may have been dictated by the earlier post-setting LF. Its lower filling contained large amounts of mid- to late-second-century pottery (Fig.24). It was excavated to a depth of 1.5m, and was probably not much deeper. The main pit had been redug at least once. There was also a separate redigging of its eastern end, FPD, within phase 3, pre-dating the post-settings described above. The lowest two excavated layers were fine clean silts and sand with no pottery, similar to the flood deposits into which the pit was dug. Adjacent to and south of the early pit

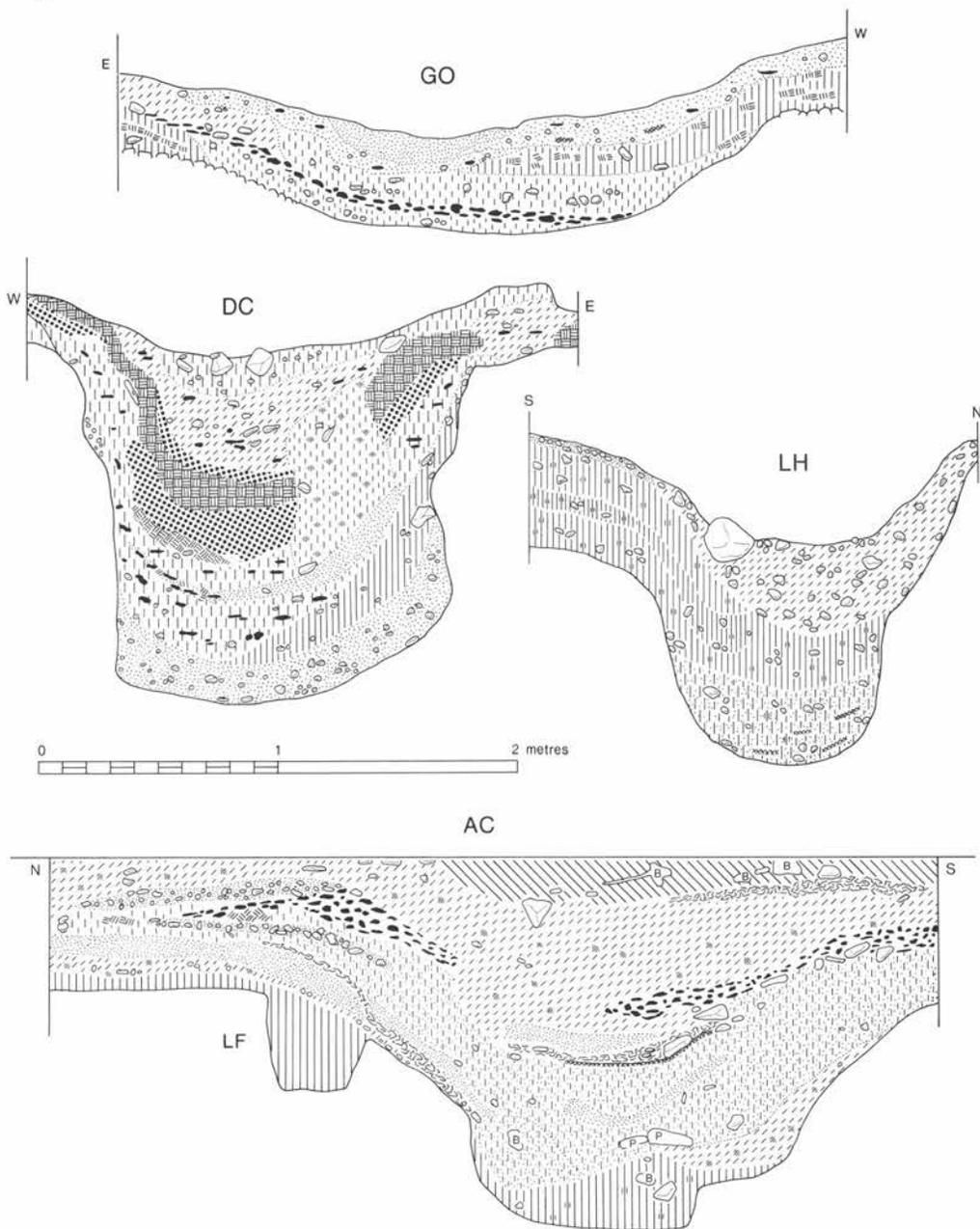


Fig. 24 Derby North-West Sector: phase 3, pits, sections. Scale 1:30.

LR was another pit of similar size GO (Figs.20 and 24) most of which lay beyond the excavation and could not be examined. It was originally dug either late in phase 2 or early in phase 3. Pottery and window glass from the accessible layers of its deliberate back filling dated to the mid-second century. Its upper filling was formed of subsided layers from later phases.

The pit AC lay partly beyond the eastern edge of the excavation, but it was possible to excavate its whole depth of 1.2m. Nearly 2m wide it had caused the subsidence of all layers above it up to post-Roman times (Fig.24). Its lowest filling which consisted of silts and sands with some pebbles contained pottery not later than the second century, and it was probably dug in phase 3. A redigging or cleaning of its northern edge, which had removed its original profile, was later than LF of phase 2 (Fig.24), and it appeared to have remained at least partially open during most of phase 3, when the slot GE was dug through its lip and some of its lower filling. The south edge of pit AZ, was removed by a builder's test hole, dug shortly before excavations began. Fortunately only a little of it had been damaged. The pit was 0.7m square in plan and was excavated in three stages as far as the modern winter watertable. The dictates of safety made it impossible to preserve or draw a section through the layers of filling within so narrow a compass, so layers were recorded in plan at successive levels. Its steep sides must surely have been revetted, possibly with timber, which did not survive. It was presumably dug as a well, either late in phase 2 or early in phase 3. The lowest layers excavated consisted of silt with some burnt material and pottery dating to the late-first to second century. The well continued open until the end of phase 3.

Like AZ, the pit DC with steep fairly straight sides, was probably dug as a well, either very late in phase 2 or more probably in phase 3 (Fig.20). It was probably revetted in timber, which did not survive, but the sides of the pit had crumbled and collapsed behind and against the presumed casing. In contrast to the well fillings there was no pottery found in this sandy silt. Inside it the straight sides of the well were very clear especially on the west side. This feature was excavated to the level of the winter watertable. Among the lower layers was a deposit of clean silt over 0.2m thick, at first thought to be natural, but below this was a further deposit of mixed rubbish, burnt material, pottery and red clay. The section through the pit filling proved on excavation to be north of the pit's centre, and did not show these lowest disturbed layers (Fig.24). Above the band of clean silt was mixed sandy silt, and pebbles with later second-century pottery. The upper part of this pit remained open through phase 4 though it was not then in use as a well.

Another pit which appeared to have been dug in phase 3 but which remained in use in phase 4 was EK, in the north-eastern part of the excavation. This pit some 3.5m in diameter was 1.5m deep, and its original function is obscure. It was certainly not used as a well. Its lowest fillings contained the silt and sands which are natural to this site with some pebble and rubbish incorporated, including red clay, carbon and other burnt material, and pottery of the mid- to late-second century. Its upper fillings will be described with phase 4, when its partially filled hollow was lined with clay and used for industrial purposes. It was dug through another small pit FD, which was also filled early in phase 4.

North-east of EK, part of a pit GN was excavated, but part lay under the northern edge of the excavation. It was probably dug in phase 3, but its earliest filling may have lain entirely beyond the excavated area. The lowest filling available contained dirty sand with some flecks of charcoal. Above this was a thick layer of gravel, part of the levelling deposit which introduced phase 4.

The earlier pit, HY had already accumulated at least 1.3m of filling during phase 2. This presumably continued to fill during phase 3 but most of the phase 3 material was removed by a later feature JT in phase 4.

Discussion

The levelling of the site, and the erection of new timber buildings probably coincided with the construction of the Antonine rampart whose line was recorded by Stukeley (Plate I). Whatever the status of the area examined in phase 2, by phase 3 it was surely

within the defences. The granary-type building, with its substantial and close-set timber trenches for a raised floor, was not in the conventional location for a fort granary, being well outside the central range. Nor is it large enough for a normal granary, especially when we remember that the Antonine defences enclosed approximately seven acres. However, buildings of this type are known both in civilian contexts, as at Willington (Wheeler, 1979, 121-3), and in a military context at Wall, Staffordshire (Gould, 1964, 7-8 Fig.6). This example is of particular interest, because not only is it similarly placed in the north-western quarter of the fort, adjacent to the rampart (north rampart at Wall, west rampart at Little Chester), but it seems to be of a similar size, much smaller than the main granary of a fort would be. Neither plan is complete, but the width of the Little Chester granary was 5m. The width of the Wall granary was 5.03m. Its five trenches were narrower, apparently c0.3m wide, its eastern end was formed by a continuous trench, and the trenches ran longitudinally, instead of on the short axis. As at Little Chester its length is unknown. It was earlier than Little Chester, dating to the Claudian period, but seems to be the closest military parallel (Manning, 1975, 126). It seems unlikely that either the Wall or Little Chester buildings were officially granaries, but they were presumably used for some sort of storage, possibly for animal fodder or leather gear. Both are close to the rampart, to give easy access for delivery.

Of the other phase 3 buildings little can be said with such incomplete plans. If KD and GL were two sides of one structure, its width of under 4m, would be small for a barracks, but long narrow buildings with some evidence of internal partitions have been interpreted as stores or stables at Bearsden (Breeze, 1979, 22) and Hod Hill (Richmond, 1968, 89). Why at least two wells, AZ and DC were required in this area in phase 3 is puzzling, as is the presence of so many large pits. It suggests that this part of the fort never comprised living quarters, but was always used for storage, workshop, or stabling purposes, which perhaps accounts for the maintenance of efficient hard standing with renewed dumps of gravel.

PHASE 4

Description

When the buildings of phase 3 were removed the whole area of the excavation, with the exception of some of the larger pits and wells, seemed to have been levelled again with layers of gravel. This produced an open area of hard standing, most of which seems to have been used for industrial purposes (Fig.25). Hearths and kilns were clustered in the north-east of the excavated area and extended into the west side. In the south-east, a large stone-lined well, BP was constructed, and on the gravel surface north and west of it there appears to have been a large coal pile. Smaller pits of uncertain function were dug, and a number of post-settings were placed in the central and western parts of the excavated area.

Close to the eastern edge of the site a stone mortar had been set between two vertical stone slabs on a clay base in a little pit EJ, 0.46m in diameter and 0.25m deep. The mortar which was broken when excavated had evidently been used in that position. The pit and the mortar had then been filled with soil and pebble and above it was a circular hearth ED. The central red scorched area of mixed clay and pebble was surrounded by a wide ring of charcoal with some indications of scorching beyond it to the east.

Just to the north of GD, was a long narrow channel, AY lined with clay, and heavily scorched. Its western end had been removed by the later pit AF. The surviving channel was 2m long and 0.45m wide internally at each end, narrowing in the middle to only 0.24m. The whole channel had been lined with clay, above and below which were deposits of ash and charcoal. The clay had been formed into ledges on either side of the channel, possibly to support a covering, and was fired to hard red daub. It contained a

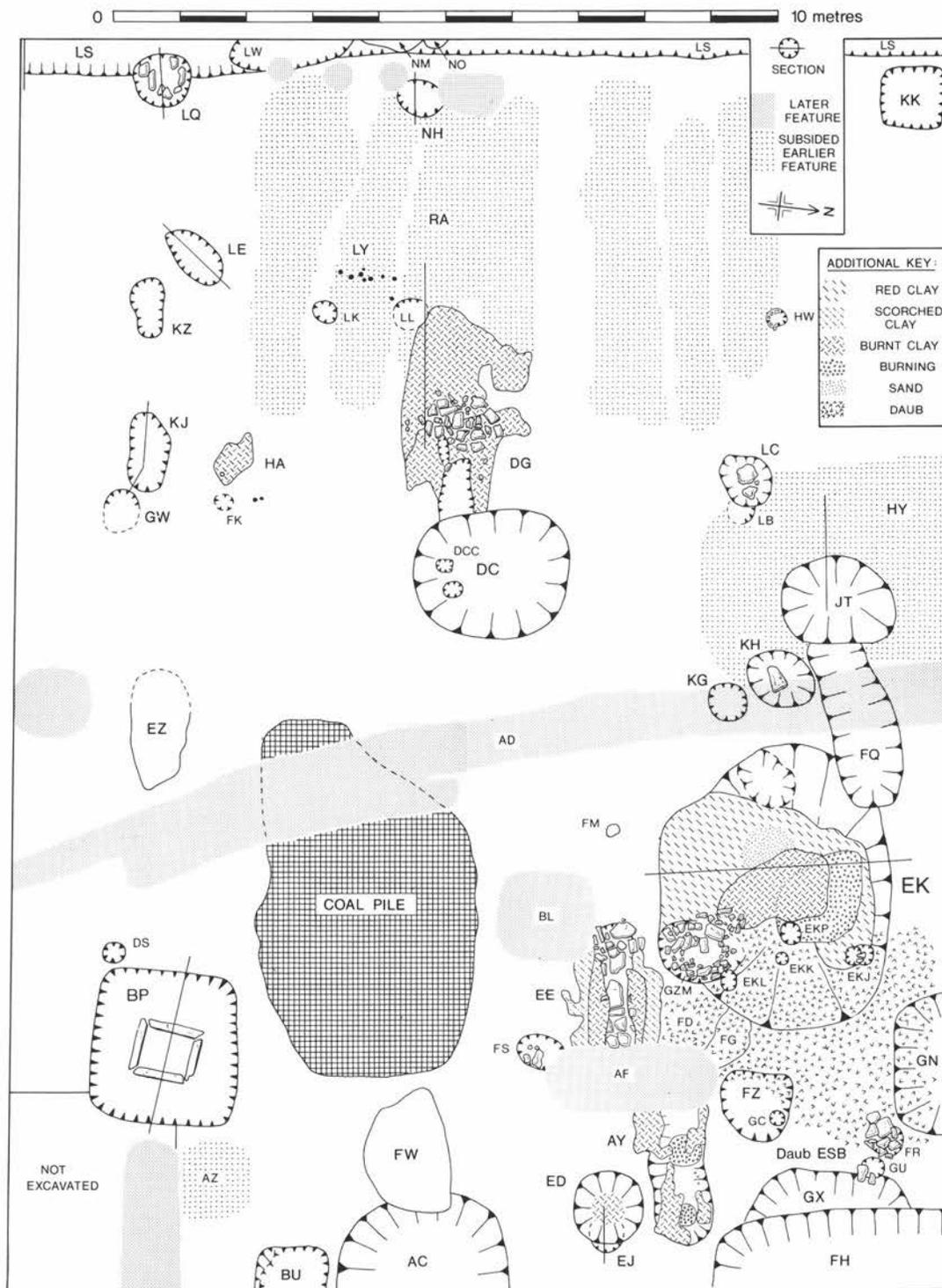


Fig. 25 Derby North-West Sector: phase 4, plan. Scale 1:100.

second-century brooch (No.27) and a small quantity of pottery dating to the late-second century.

EE, the east end of which had been removed by the pit AF, was probably a similar structure. A length of 1.2m of a narrow (0.3m wide) channel survived, with a circular area, possibly a chamber at its western end. The channel was lined with fired clay and the floor and sides of the channel and the circular floor were paved with a mixture of flat stones and tiles. Within the channel were ash and broken burnt daub, probably from the collapsing sides and roof of this flue. The heat from this structure had scorched a considerable area of ground around it. No evidence of stakes to support the walls of a chamber at the west end was found. EE contained pottery of the late-second to early-third century. Both EE and AY were reminiscent of corn-drying kilns, but though a careful examination was made of these and of the other hearths and kilns no charred grain was found.

On the western side of the site, the kiln DG had been damaged by earlier rather than later features, as its western end had subsided into the granary slot RA, and its eastern end was confused by the large pit or well DC. A roughly oval area of flat stones was set onto clay, which had been scorched where unprotected (Plate 2). Its flue and possible stoke-hole were apparently to be found in the partly-filled DC. From DG there was a continuous spread of burnt red clay down the steep west side of DC and across the whole area of the pit (Figs.25 and 26). Samples of this were taken for remanent magnetism analysis, but without result. To the west, beyond the paved oval area of

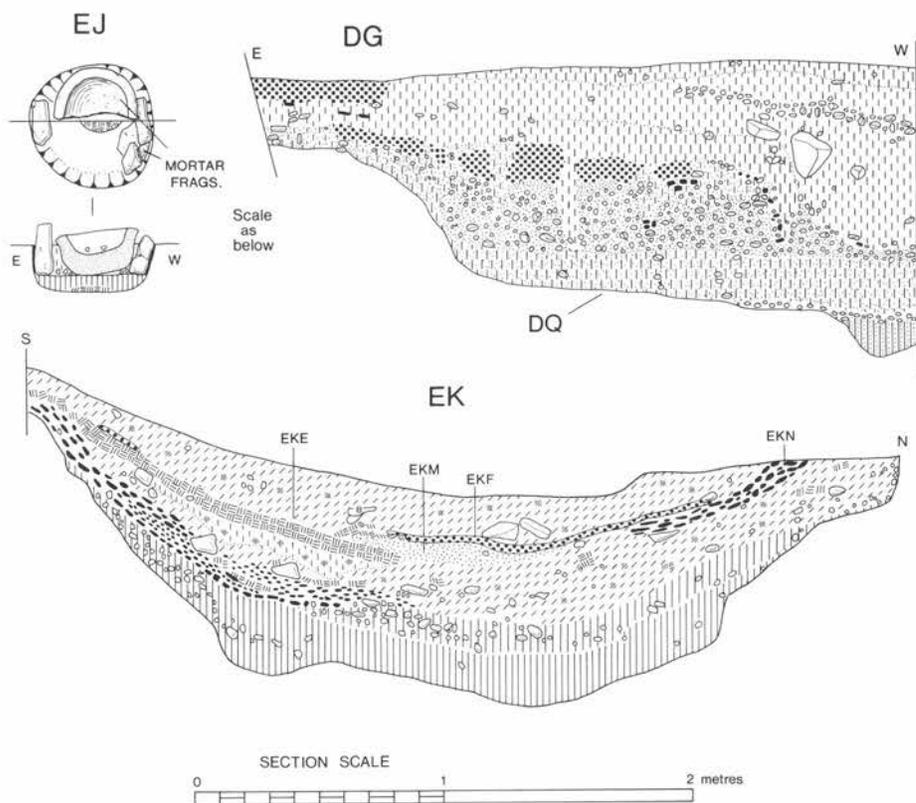


Fig. 26 Derby North-West Sector: phase 4, hearths, sections and details. Scale 1:30.

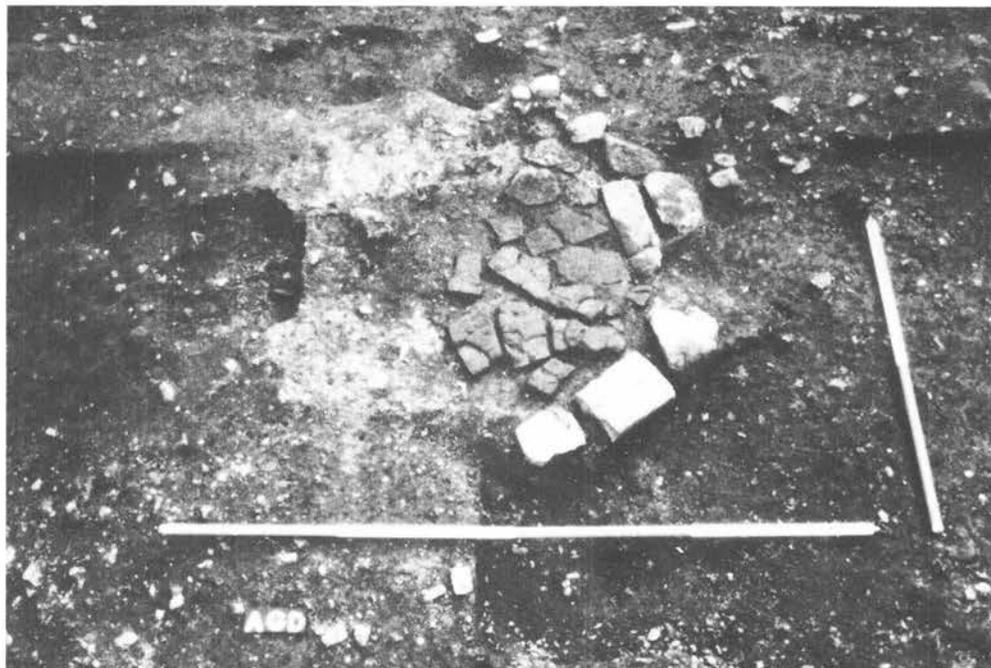


Plate 2 Derby North-West Sector: phase 4 AGD part of hearth DG.

burning, partly burnt red clay had subsided into the end of RA and was not immediately recognised as connected with DG. Stake-holes identified in this clay (Fig.26) may have held supports for a clay dome. Another subsidiary feature which may have been a hearth was FW. Two successive patches of red clay covering burnt material had sunk into the top of the phase 3 pit FP and spread down the side of the pit AC. Later-second-century pottery was found in FW.

The biggest of this group of features was EK. The digging of this pit and its earlier layers of filling have been described in phase 3. In the later-second century this pit must have appeared as a wide shallow hollow, and it was not levelled with gravel. To the east and north was a layer of burnt daub ESB, which spread over the sides of the hollow. Above this EK was lined with red clay, most of which had survived. Its surface was scorched and fired in places to daub, but its lower part was unaltered red keuper marl. Set into this lining on the south-east edge of the hollow was a horseshoe shaped arrangement of stones and red clay, GZM. Its floor, which was fired hard, presented a dimpled appearance with little scoops like shallow stake-holes, and sealed the presumably disturbed limb bones of an infant burial. The interior had been filled with a mixed dark earth and charcoal. Near the bottom of the hollow where the clay lining was thinnest, two additional layers or patches of clay had been placed, each in turn being scorched by fire, with burnt material and carbon between them. A number of flat stones lay to the north of these patches, but arranged in no discernible pattern. A small pit EKP was then dug through both the clay patches and the original clay lining. This had been filled with burnt material and charcoal, and had then been sealed by a third patch of clay, the surface of which was also burnt. A fragmentary and patchy layer of burnt clay spread over the whole of the hollow may indicate a complete relining of the pit, alternatively it may have been a collapsed dome or covering to the area. A number of

post-holes were found on the eastern side of the pit, EKJ, EKK and EKL, which seemed to have been dug through this last layer of burnt clay, but the layer was so fragmentary and crumbling that it might well have collapsed around them. Two of the identified posts were vertical and one, EKJ, seemed to be sloping outwards from the pit (Fig.26). Two, EKJ and EKL, had been packed with stone slabs. EK contained middle- to late-second-century pottery, metal fragments including an iron staple, a quern stone, bottle glass and the limb bones of an infant, possibly disturbed from elsewhere. Its function is uncertain, but seems to have been connected with an industrial purpose involving fire.

The burnt daub ESB, which lay over the sides of the partially filled hollow EK before it was adapted for industrial purposes, spread over the gravel of the north-eastern part of the site. It overlapped the edge of a small shallow pit FZ, which must have belonged to the beginning of phase 4. The pit's filling of brown loam contained fragments of red clay and charcoal. Dug through this was an isolated post-hole, GC, only 0.12m deep, containing early-third-century pottery. Little remained of the phase 3 pit, FD, which underlay the daub ESB. It had been partially removed by AF, a phase 6 pit, and by FG, which was dug in phase 4. Both FD and FG were filled with layers of charcoal and ash with lumps of red clay, and the bottom of FD showed signs of scorching. Both contained pottery of the second century. The daub ESB also covered the edge of the pit GN against the north edge of the site. It overlay a thick deposit of gravel, evidently part of the levelling deposit which had sunk into the subsiding filling of GN.

The lowest filling of GX, a pit in the north-east corner of the site, was thick layers of charcoal and red clay. Overlying parts of these and the edge of GX was a patch of stones, FR, possibly a dump, possibly a deliberate setting. The stones appeared to have been placed in a hole dug through the burnt daub layer ESB. GX itself was steep-sided and flat-bottomed, but its eastern part was removed by a second, deeper pit FN, much of which must have been beyond the excavated area. Its filling consisted mainly of burnt material, ash, charcoal, coal and lumps of fired daub. It contained limb bones of an infant, and pottery of the later-second and early-third centuries. It was filled towards the end of phase 4.

A linear feature FQ was also late in phase 4. It was dug into the upper fillings of the large pits EK and HY, and was mostly filled with brown loam, though its eastern end, above EK, contained burnt material, clay and charcoal. Its sides were gently sloping with a rounded bottom, its function uncertain, but it contained late-second to third-century pottery.

What little remained of another apparently small feature FS was filled with red clay, charcoal and pebbles, its northern end removed by the later pit AF. A patch of burnt clay HA was probably another hearth. Many of these smaller features are too damaged to allow of detailed interpretation, but the repeated fillings of burnt material, fuel and red clay link them to whatever industries were being carried out in phase 4.

In the south-east of the excavated area where there were no hearths or kilns a thick layer of coal, EO, lay directly on the gravel. To the north and west this spread more thinly, being mixed with loamy material, but forming a useful marker horizon in the stratigraphy. It could be dated by its pottery to the late-second and early-third century. This coaly layer surrounded but did not cover a well, BP, in the south-east of the site (Fig.25). An almost square well-pit 2.3m by 2.1m tapering slightly as it went down, was excavated to a depth of 2.3m, just below water level. Inside the pit was a square well, lined with carefully tooled slabs of re-used sandstone (Plate 3). For the well construction the narrow sides of each stone were chamfered, to produce mitred corners throughout. The well pit outside the stone well consisted of a mixture of the green silty material from the bottom of the well pit, and red keuper marl, with a larger proportion of green silt in the lower filling and of red keuper in the upper filling. It contained no pottery which

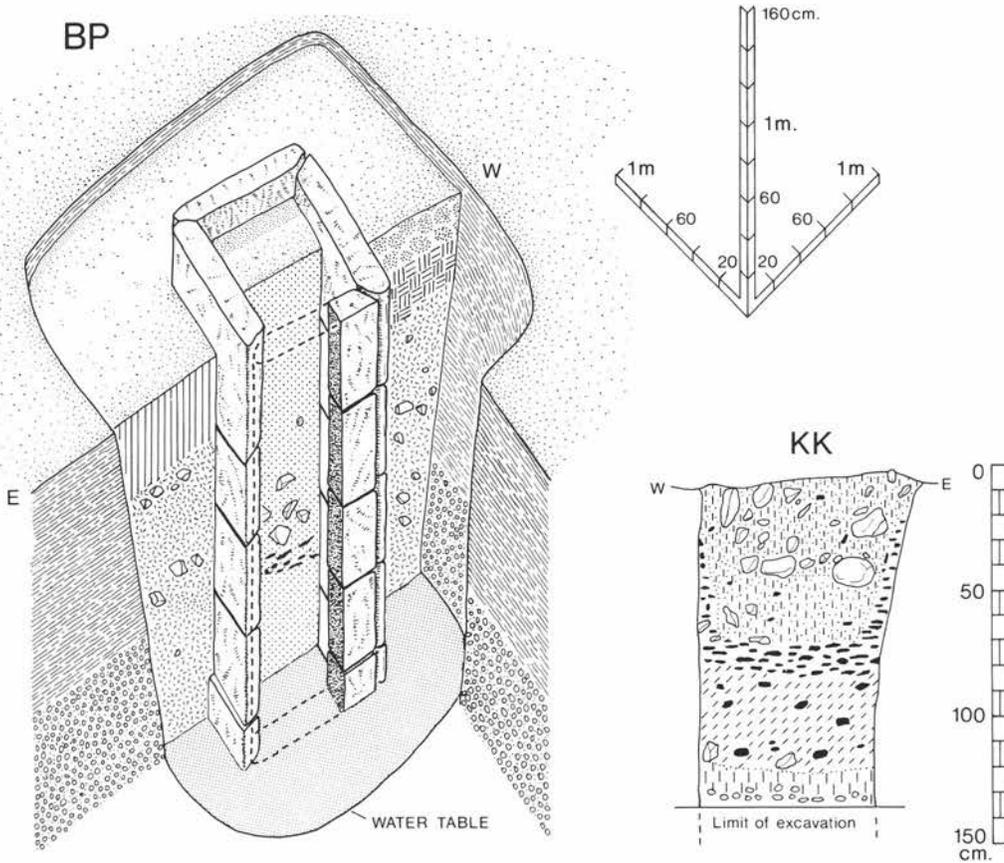


Fig. 27 Derby North-West Sector: phase 4, wells, sections of KK. Scale 1:30. BP 1:40.

need be later than the second century. The lowest excavated level of the inner filling also contained late-second-century pottery, and probably accumulated while the well was in use. Above this was a layer containing a large amount of charcoal, large stones, and pottery of the third to early fourth-century, probably indicating the end of the well's use. The filling from here to the top was a uniform grey loamy material. BP appears to have been constructed at about the same time as AZ was filled, and was perhaps intended to replace it. A coin of 'Tetricus I' (no.28) was found in the upper levels of the well filling.

A steep-sided pit, KK, 0.9m square in the north-west corner of the site may also have been intended as a well. It lay close to the edges of the excavation, where a heavy overburden of loose humus demanded care. A depth of 1.3m of KK was excavated before safety considerations halted its investigation. Its straight sides (Fig.27) suggested a timber lining. Its filling contained considerable amounts of charcoal and pottery of the late-second and third centuries.

The probable well DC, had already begun to be filled in phase 3 (Fig.24). Above the layer of burnt clay associated with DG, the whole pit was covered by a layer of buff unburnt clay, up to 0.13m thick. Above this was another layer of burnt material only 0.03m thick including much-baked daub, but this was patchy. A scoop had been made in the south edge of the pit, which contained a layer of pebbles below mixed loam, clay burnt and unburnt, and pebbles. Most of the pit, including the southern edge was then

Plate 3 Derby North-West Sector: phase 4 stone lined well BP.

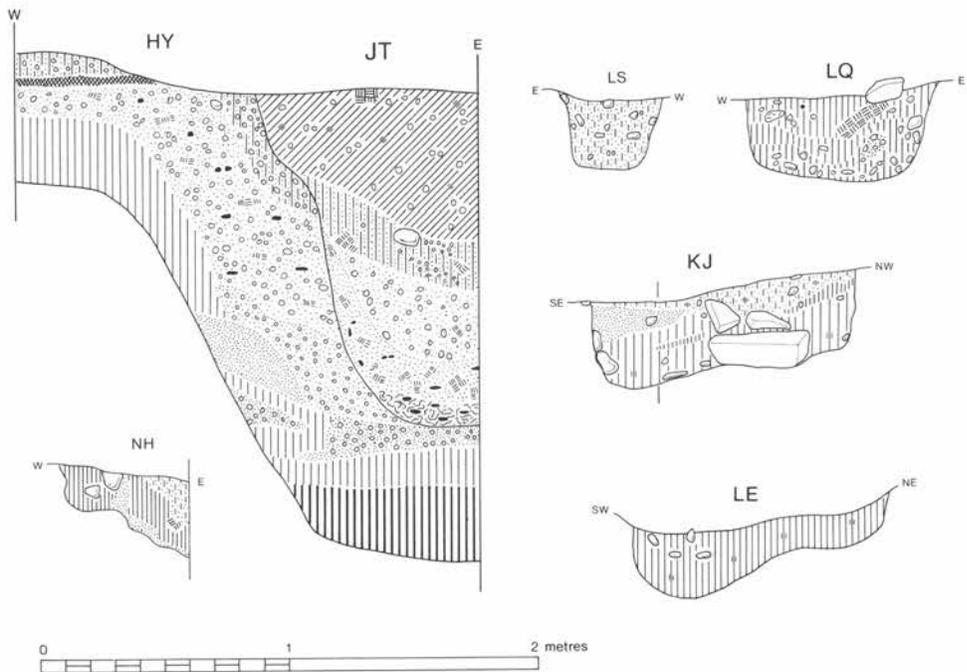
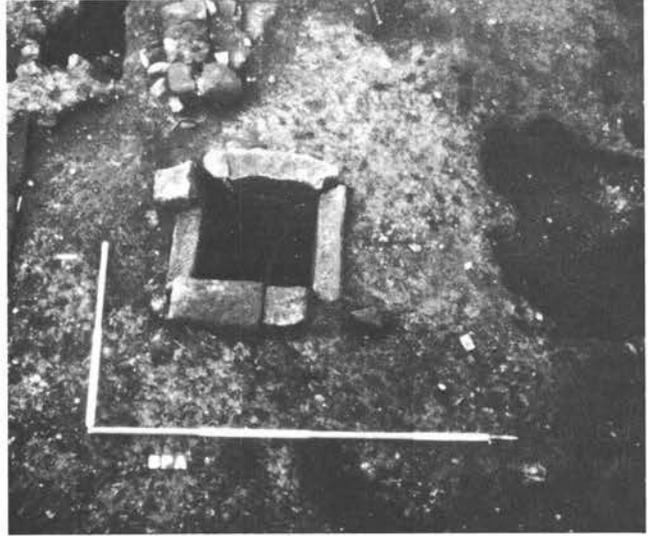


Fig. 28 Derby North-West Sector: phase 4, gullies and post-settings, sections. Scale 1:30.

covered by a layer of unburnt red keuper marl. Through this, on the southern edge were dug two small slots, one of which, DCC, contained a baby burial (Fig.17).

The very highest layer of apparent filling, which covered the whole pit including the baby burial, contained some third-century material, but this mixture of soil and clay may have subsided from a higher level. The phase 4 levels of this well contained window glass, iron and bone artifacts, a bronze pin and brooch No.21.

AC, the phase 3 pit in the east edge of the excavations was filled or nearly so before phase 4. Those layers which contained the coal, burnt debris and slightly later pottery associated with phase 4 are more likely to have subsided into it, than to be deliberate filling.

The large pit against the northern edge of the excavation, HY, must also have been almost filled by the end of phase 3, but in phase 4 another steep-sided pit, JT, was dug through its southern part. It was unclear whether this was a deliberate replacement of HY, or whether the position of JT was a coincidence. The latter seems more likely. JT (Fig.28) was 1.4m deep, and some 0.8-0.9m in diameter. Its lowest fillings contained burnt material though there was no sign of any scorching in the pit. Above this were mixed sandy layers with some clay and pebbles, containing mid- to late-second-century pottery, a brooch fragment, window glass, and iron objects including a field anvil.

Along the western edge of the excavations was a steep-sided gully, LS. A complete profile could be seen only at the southern end of the excavated area. Nearly two metres of it appeared to have been redug, unless this was a later feature LW. Dug through it were post-settings: LQ a substantial stone-packed post-hole 0.4m deep (Fig.28), NM and NO, smaller, only 0.16-0.2m deep with loamy fillings. These may represent posts set directly in LS, though no others were found. Just east of these was NH, similar in size and shape. The gully LS contained late-second- to third-century pottery. These post-settings may have been related to features beyond the western end of the excavation.

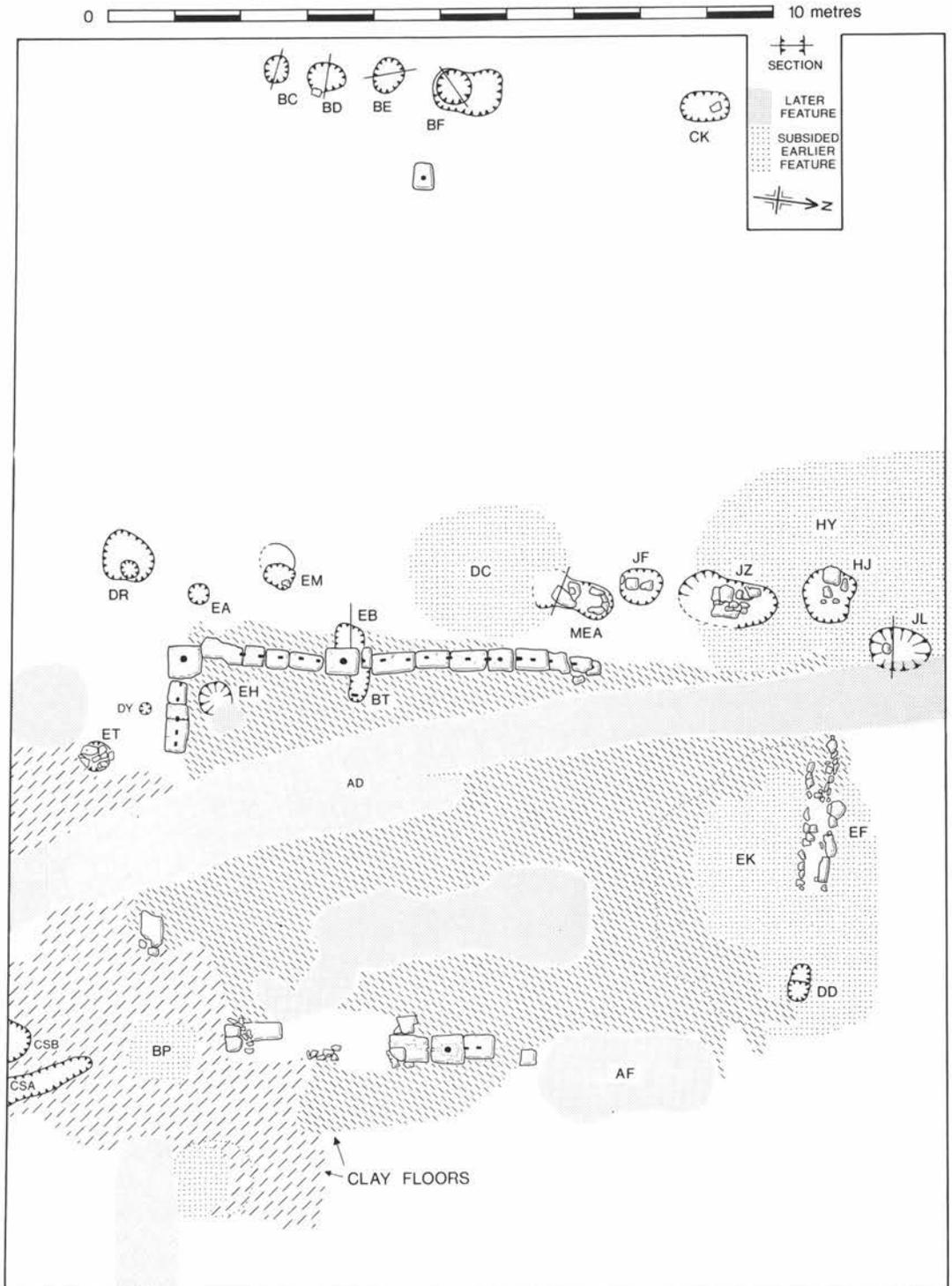
A number of other probable post-settings were made during phase 4, though none of them formed coherent plans within the area excavated. LK and LL, small post-holes 0.3m in diameter and 0.25 and 0.3m deep were linked by a group of eight stake-holes, LY. They were dug into the levelling deposit of gravel, here subsided into earlier granary trenches. Another small post-hole, FK, was close to three stake-holes HT, one of which was sealed by the burnt daub of HA.

To the south were three large post-holes, KJ, KZ and LE (Fig.28), each of which had a ramped or sloping base. They were filled with a mixture of loam and gravel, containing late-second-century pottery, and they were between 0.35m and 0.5m deep. GW, though flat-bottomed, was also a substantial post-hole, 0.4m deep and perhaps belonged with this group. In the northern part of the site, KG and KH were either post-holes or very small pits. Each was filled with a mixture of loam and pebble containing second-century pottery, and they were 0.25 and 0.3m deep. LB and LC nearby, of similar size and filling were dug into the upper filling of the large pit HY, and HW, further west, contained a number of angular stones, possibly packing for a post. Just south of EK was a small clay-lined post or stake-hole, FM only 0.1m deep. DS, an isolated post-hole in the south of the excavations, was 0.2m deep with clear indications of post-position and stone-packing.

At the close of phase 4 the whole of the excavated area was covered by a thick layer of fine brown soil containing varying amounts of burnt daub, coal and charcoal, but consistent in its humic quality. It was generally 0.2-0.3m thick and filled the tops of all the features described except the stone-lined well BP. This brown soil overlay the coaly deposits spread over the gravel hard standing. It contained mainly third-century pottery.

Discussion

The levelling deposit of gravel, sealing and filling the slots of the buildings of phase 3 indicated a complete change of use of the area excavated. The gravel formed a hard-standing for outside industrial use, with a large coal-pile dumped on the south-east part of the site and a new well constructed. Evidence of successive hearths and kilns occurred over the northern and central part of the site, possibly connected with metal-



working. The coal to fire it was obtainable some six and a half kilometres (four miles) to the north. This coal field is mined today by open cast methods. Coal has been found in several Roman contexts in the vicinity (O'Brien and Todd, 1976). The change of use of part of the fort interior might indicate a smaller garrison, leaving more space to bring industrial processes within its walls, though even in phase 3 of this part of the interior seems not to have formed living quarters. The slot LS along the western side of the site, if it was left open, might have formed the gully to the intervallum road, though its steep sides perhaps favour its interpretation as a post-setting. Too little was available for excavation to be certain. If it did change from road gully to post-setting this would be a second radical change of use, and it is possible that Little Chester ceased to have a military use some time in phase 4. The final humic deposit is the most difficult to account for if the site remained in military hands. It certainly functioned as a levelling and covering deposit, but its texture was too soft and fine to allow it to be consolidated for further building. Indeed its texture seemed to be that of a tilth, suggesting an open cultivated area, or garden. The pottery from the 1980-81 excavations suggested a much less intense period of occupation at this time. Phase 4 was characterised by late-second-century pottery with comparatively little early-third-century material. Phase 5, however, can be dated to the fourth century. If the humic deposit was a cultivated soil, this might account for the presence of a few fourth-century pieces in it. It would not be typical of military occupation, nor does the building of the succeeding phase (5) resemble any recognised form of military building. It is possible therefore that Little Chester fort ceased to be commissioned either in the late second century, when the industrial phase began, or in the early-third century, when it ended.

PHASE 5

Description

Above the brown humic layer which sealed phase 4, a patchy layer of red keuper marl was laid in the later-third or early-fourth century. It was thickest where the large early pits were still subsiding, causing hollows, but was probably never a continuous layer. In the south-east of the site (Fig.29) a linear feature CSA and a small pit CSB, both disappearing under the edge of the excavation, were dug through this red clay, and a shallow post-setting with flat packing stones ET also penetrated it. Another small pit EH was filled with animal bones, mainly from one sheep, and sealed by a clay floor. In the eastern half of the site a building of stone and timber (Plate 4), 10m long and 6.2m wide (externally) was erected. Its floor of red keuper marl was laid first, and the stone wall-sills were laid on this clay. The main supports were squared timbers with round tenons at the bottom. They rested on square blocks of millstone grit with round mortice-hole in the centre of their upper surface (Plate 5). A slight socket for the square

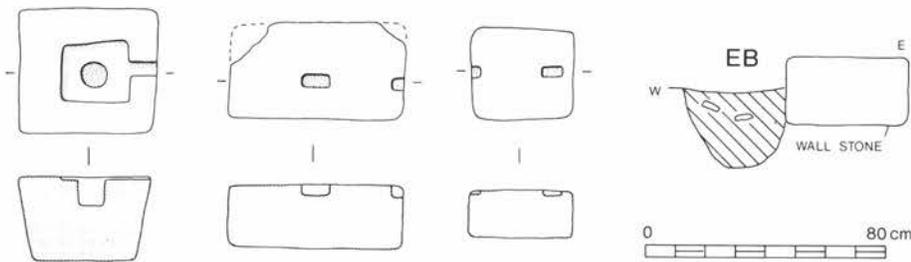


Fig. 30 Derby North-West Sector: phase 5, stone-sill building, details. Scale 1:25.

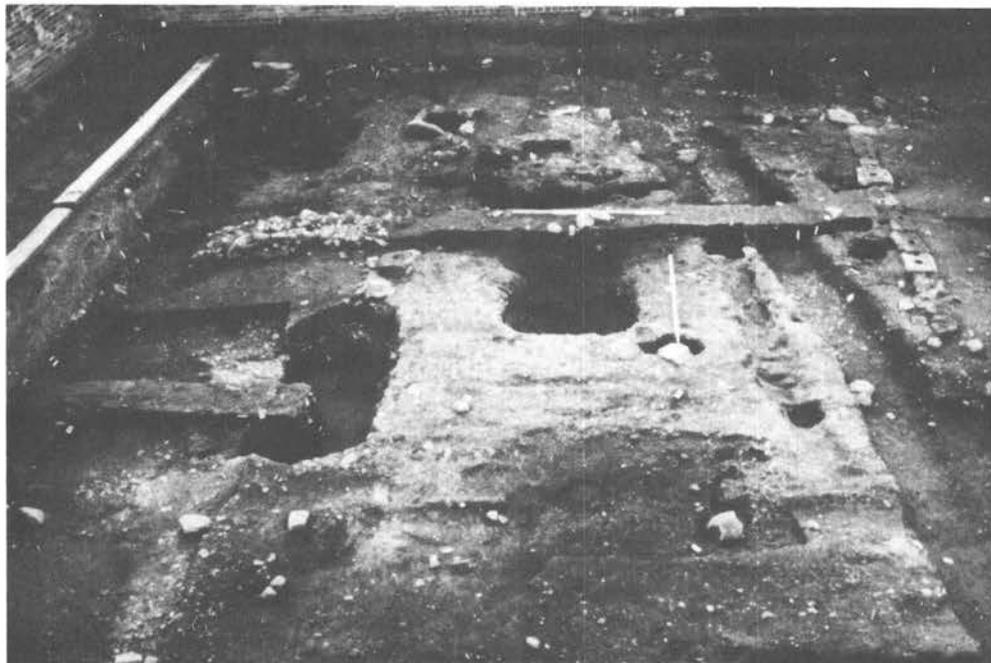


Plate 4 Derby North-West Sector: phase 5 stone sill building.

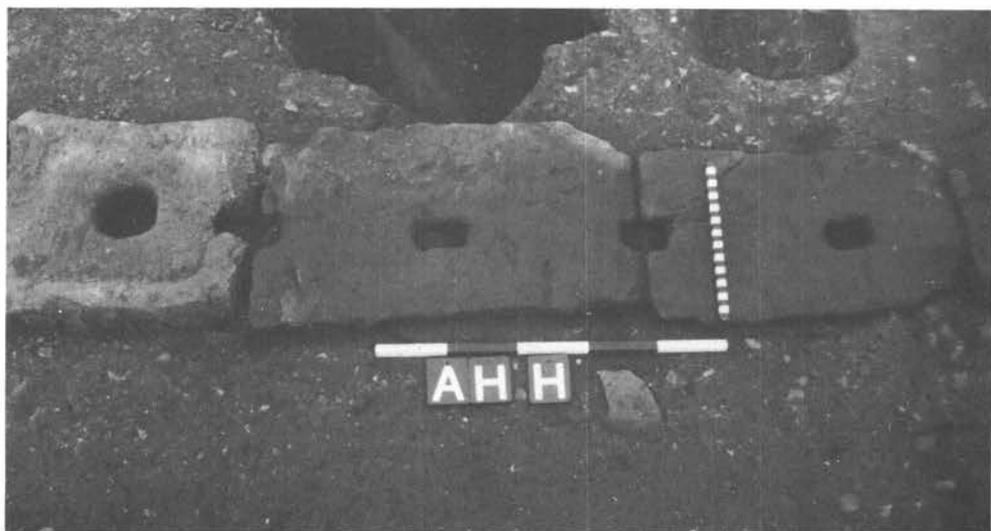


Plate 5 Derby North-West Sector: phase 5 stone sill building detail showing gritstone support for round-tenoned principal post and sandstone base for laths.

timber base was visible on two of them (Fig.30). These sill-stones had not all survived in place, but where they had they were spaced at approximately 2m intervals. Between these stones were smaller rectangular blocks of sandstone in which little rectangular holes were made to take the laths of the wall cladding (Fig.30). An entrance to the building was indicated on the west side. Adjacent to a large gritstone block was a post-slot, BT, 0.5m long, set partly into the wall and partly into the interior. It was 0.22m deep and capable of holding two posts. An unusually short length of sandstone formed the sill here, to accommodate it. Outside the wall at this point was another post-hole EB (Fig.30). BT no doubt held the door pivot, the function of EB is less clear. The northern end of the building had sunk into the subsiding filling of the large pit EK. Although no sill-stones were found here, the line of the wall was identified in a line of rubble, probably laid to guard against this weakness. The very shallow feature, DD, in line with this foundation appeared to be the impression of a larger stone. The south-east corner of this building would have directly overlain the well BP, suggesting that this had been out of use long enough for its position to be forgotten. Much of the east wall was removed by the later Roman pit AF. Parts of the stone-sill were visible immediately below the overburden and parts of it had been removed either deliberately or by cultivation in post-Roman times. One of the square millstone blocks, shaped with its mortice-hole, was found at this level close to the western edge of the excavation.

Alongside the western edge was a row of five post-holes, BC, BD, BE, BF, CK. Although varying amounts of them survived, they were dug to a similar depth, and shared the characteristics of straight sides and fillings of sandy soil with pebbles. BF and CK were set in larger post-pits, the others seemed to have been set closely into their holes, with little evidence of packing (Fig.31). Like the post-settings of phase 4, in a similar position, they probably related to other features beyond the excavation. They contained a little residual second-century pottery and one sherd of third to fourth-century date.

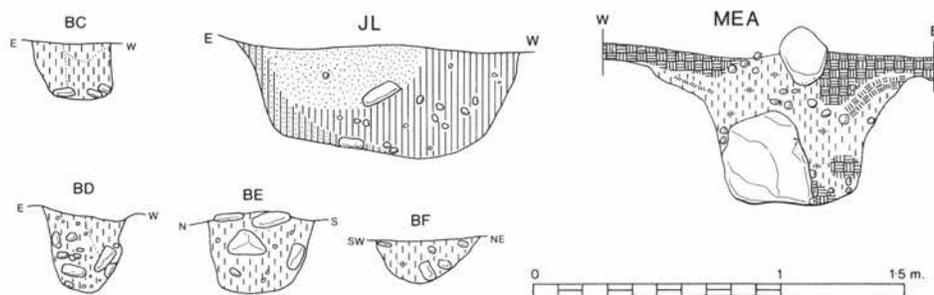


Fig. 31 Derby North-West Sector: phase 5, section. Scale 1:30.

Five post-settings, DR, MEA, JF, JZ and JL and a possible sixth, HJ badly eroded, were set in a north-south line west of the stone-sill building with which they may have been contemporary. They contained late-third- and fourth-century pottery. All were stone packed and, while the larger stones had remained in position, some of their upper fillings had been eroded by ploughing. One, MEA, was set above the now filled well DC and may have been affected by the subsidence of its filling. Others overlay the equally unstable fillings of the pit HY. This made it difficult to determine whether the pits were of phase 5 or 6. All were substantial, (Fig.29) and were set to roughly similar depths. Two other post-settings on the same line, EM and EA also contained fourth-century pottery but their profiles were quite dissimilar. Neither contained stone-packing and

instead of a flat bottom the post of EM had penetrated some 0.3m through the base of its pit. DR and another simple post-hole DY might have been associated with a later phase 6 feature DK, a linear setting of stones. DK covered DR and DY but its loose stones might have fallen over the gaps when the posts were removed. The sequence could not certainly be distinguished.

Discussion

The construction of the stone-sill building was similar to one of the same date found outside the south-east defences in the 1971 excavations (Sparey-Green, unpublished). The external building was more elaborate in plan, but used the same type of stone bases. It is not a type recognised as military and reinforces the doubt that Little Chester was occupied by the army in the later Roman period. The use of such carefully fashioned sill-stones suggests a degree of prosperity but there was no evidence for such luxuries as plastered walls or heating. The walls were presumably infilled with daub or cob. The roof may have been of slate since a number of Charnwood slates were found in the upper levels of the excavation, though these might have derived from other buildings beyond the area excavated. Charnwood slates were also associated with the external colonnaded building (Wilson, 1973, 285). The line of post-settings to the west may indicate a verandah if they were contemporary with the building. The clay floor sealed pottery of early-third-century date and contained fourth-century pottery. The well, BP, which must surely have been completely filled before the building was constructed, contained late-third-, possibly early-fourth-century pottery, and a coin of 'Tetricus I', AD273+. The building was probably constructed in the early-fourth century.

PHASE 6:

Description

Patches of pebble accumulated or were laid over part of the southern and western sides of the excavation where the possible cultivation soil which marked the end of phase 4 was thinner, and where the red clay layers of phase 5 were absent. Elsewhere dark humic deposits containing burnt material overlay the red keuper marl. Below the modern overburden were areas of rubble, slabs and small stones, especially above subsided pits as AC (Fig.32). The phase 5 building went out of use and its superstructure was presumably removed. Pits were dug through its floor and through one of its walls, and elsewhere. A number of post-settings may belong to this phase including the line of post-holes just west of the building, described in phase 5, and another line of post-holes close to the western edge of the excavation. Some of the larger early pits were still causing hollows above their subsiding fillings.

Dug through the thick red keuper marl floor of the building were three pits and some small features. BL was 0.6m deep and roughly 1.25m square as excavated, though its southern end had been removed by the later pit BQ. Its sides were vertical its bottom almost flat. BQ was larger, 2.2m long and 1.3m wide, though less regular in shape, and of a similar depth. AF (Fig.33) which was dug through the east wall and the floor of the building, was roughly rectangular 2.3m by 1.2m flat bottomed, and slightly deeper. All three pits had been carefully dug and were presumably used for some sort of storage. They were filled mainly with soil, with amounts of red clay and some burnt material. All contained fourth-century pottery.

Small features were dug into the top of the red clay floor. Some of them, CQ, CW and BX, did not even completely penetrate the layer. CC a small round pit just inside the west wall contained fourth-century pottery and next to it, CH, held late-second-century pottery as did BZ, on the edge of BQ. In the south-west corner CP contained second-century samian ware and two coins of Hadrian (117-38) and Severus Alexander (225-35).

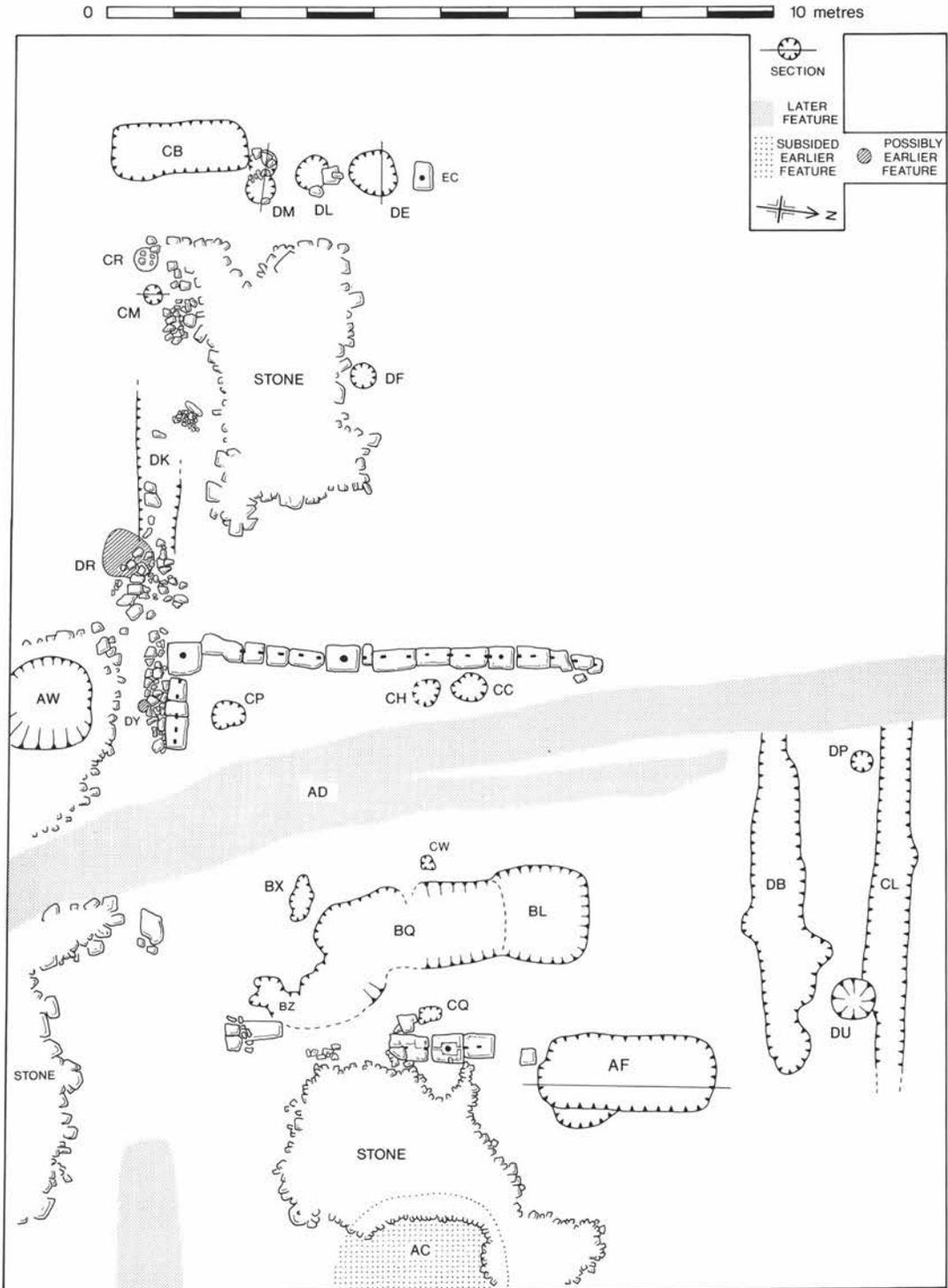


Fig. 32 Derby North-West Sector: phase 6, plan. Scale 1:100.

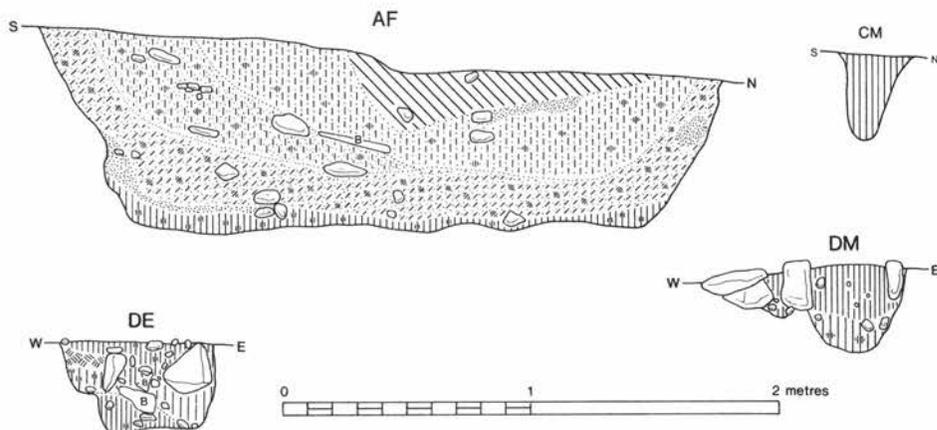


Fig. 33 Derby North-West Sector: phase 6, sections. Scale 1:30.

Immediately outside the southern wall of the building was a line of mainly flat rubble DK, some carefully laid, some looking more like tumble. This was the only feature that could be distinguished from the quantities of small stone rubble immediately below the modern overburden. The line of DK was continued to the west as a shallow trench with a loose stony filling. This feature seemed to be the base of a wall, perhaps a shack of some kind. It covered two post-holes, DR and DY, which have been described in phase 5, and two post-holes CM and CR were roughly in line with it to the west. Both CM and CR (Fig.33) showed clearly the position of the post. CR was stone-packed and both had similar soil and pebble fillings. Neither contained dating material. North-west of these was a line of three post-settings, DM, DL and DF, and beyond those one large gritstone block, CC, from the phase 5 building. The three post-holes were all substantial stone-packed features (Fig.33). DL contained a little third-century pottery. DF was an isolated post-hole 0.3m deep with a humic filling.

Two pits were dug outside the building. AW, partly under the southern edge of the excavations was straight-sided, and 0.7m deep, and CB with a homogenous loamy filling was roughly rectangular, 2.00m by 0.7m. They were probably used for the same purposes as those dug through the building. Both contained fourth-century pottery.

To the north of the phase 5 building the ground dipped towards the north. No clear feature could be distinguished, and no lower feature should have caused subsidence in this place. South of this a hollow had been produced above the pit EK, into which the north wall of the building had sunk. Again there seemed to be a linear feature, DB, running east-west across this hollow and beyond it, slightly off the wall-line. But the edges of DB were never clearly established. Both these features may be the product of later cultivation, though this was not recognised elsewhere on the site. Two possible post-holes were also identified in this area. DP, very shallow, and DU, with wide sloping sides, possibly caused by the removal of a post, but again too shallow for certainty.

Discussion

Phase 6 dated to the fourth century, when again, as in most of the third century, occupation seems to have been comparatively sparse. No permanent buildings could be identified, after the sophisticated stone sill structure of phase 5. Only further excavations elsewhere within the defended area will show whether this was typical of Little Chester Fort, or whether it was special to the north-west corner. The post-pits and the stone

setting DK may indicate some structures at this time, but with the exception of those features actually dug through the phase 5 building, all other post-settings could be contemporary with it.

LATER OCCUPATION

In contrast to the excavations of the south-east defences (Sparey-Green, unpublished) there were no features of Anglo-Saxon or Anglo-Scandinavian date in the area of these excavations. Two objects only, from the topsoil indicated a late Saxon presence: one sherd of St. Neot's type pottery and one bone comb of Anglo-Scandinavian type.

Very little mediaeval pottery was recovered even from the topsoil. A ditch, AD, had been dug and re-dug across the site, presumably for agricultural purposes, and contained a little later-mediaeval and seventeenth-century pottery. A horse had been buried above the still subsiding filling of the pit AC. There were few other modern disturbances affecting the area of excavation, apart from four builders' test pits dug just before the excavation began. In post-Roman times there was a considerable accumulation of humus, to a depth of nearly a metre over all of the site and considerably more in the north-west. The later Roman levels survived less well there, and levels related to ordnance datum suggested that in antiquity there may have been a slight slope down to the south and east, leaving this corner more exposed to later damage.

FINDS SUMMARY

The finds summary (Table 1) records the range of finds from each feature by phase. The production date range is given for samian ware, mortaria and coins and the earliest and latest dates likely for the assemblage is given for the coarse pottery. References are given to the published catalogue where such exists. The mortaria serial numbers refer to the archive catalogue. In some cases, the artifact was not worthy of further comment.

(Table 1)

Phase 1

Context	Coarse Pottery		Samian		Mortaria			Coins	Other
	Date	Nos.	Date	No.	Date	Serial No.	Stamped No.	Date No.	
LA	1 1c-e2c	5-8	Flav-Traj		2c	6		'54-64' nos. 4-5	Oyster Ae tweezers No.1
MC		X							Oyster
MF	1 1c-2c								
MEB	1 1c-2c	X	Flav-Traj						
MH		X	Had						Oyster
MR									Ae frag.
MU		X							
MW									Oyster
MY	1 1c-e 2c	9-10							
MT		Had 11							
MZ		X							
NA		X							Oyster
NB		X							
NN		X							
NY	1 1c-2c		70-90 Flav	133					Oyster, Brooch No.10 Ae pin no.3
PE		X	Flav-Traj						
PL					2c	8			
PF		X							
PJ	? 1 1c-e2c	12							
PM	e 2c	2-4	Flav-Traj						Ae fitting no.2
PY		X							
QD	Pre	1							
QE		Had		136					

Phase 2

Context	Coarse Pottery		Samian		Mortaria			Coins	Other
	Date	Nos.	Date	No.	Date	Serial No.	Stamped No.	Date No.	
FT	e-m 2c	13-38	75-95	71	70-120	7			Bottle glass, glass jug or jar no.4a-b
		191	Traj-Had Traj before 145	57 29 32	2c 2c	9 185			Brooch no.35, Oyster, quernstone, worked stone, Ae probe no.5., Pipe-clay figurine no.191
			100-120						
			Flav-Traj Had Had or Ant						
PD	e-m 2c	39-43	Flav-Traj 70-85		100ff 1c or 2c	135 136			Oyster Ae Steelyard no.6 Bone shovel no.17
			Traj	29	100-140	137			
			100-120	136	c130-190	138			
			Nero-Flav	77	110-160 80-120	139 140			
LD/NU LZ	1 1c-2c				100-140/60	198			Brooch no.8 Ae phallus pendent No.4 Oyster, quernstone
LF	e-m 2c	44-46	100-120						
KF	X								
KME			100-120	41					
LM	X								
LP	X								
KN									Glass no.4
KT	X								
PP	X								
QJ	e 2c								
QL									Quernstone
HY lower Phase 2	e-m 2c		Pre Flav		100-130	76	4		Quernstone, oyster
	1 1c		Flav-Traj 75-85 90-110	64 65					
middle Phase 3	m 2c		Traj Ant						Lead frag
upper Phase 4-6	2c-4c	183	125-140	22					Quernstone. Bone object no.13.
LR lower	e-m 2c	47-51	Flav-Traj Had or e Ant		100-40	141			Oyster Graffiti sherd
			90-110	73					
			90-110	132					
			110-130	91					
upper	m 2c		125-40 Had or e Ant Traj Flav-Traj Had	72	110-160	1	9		Quernstone

Phase 3

Context	Coarse Pottery		Samian		Mortaria			Coins	Other
	Date	Nos.	Date	No.	Date	Serial No.	Stamped No.	Date No.	
JR	e-m 2c	52-59	Flav-Traj 150-180 125-145 140-160 Had or e Ant	124 58 59	100-140	14-15			
FL/FCJ	m-l 2c	60-71	80-110 80-95 90-110 110-125 Traj-Had Flav-Traj	19 116 56 95 57 20	115-145 120-150ff 2c 100-140 100-140 120-150 2c	18-19 26 20 21 22 23-5 26 28	8 10 10	Glass jug or jar no.3. Brooch no.6 Ae pin Bone shovel no.17	
FCF	m-l 2c	72	Flav Had					Oyster Fe joiners dog no.1	
FC	m-l 2c	78-83	125-150 135-160 90-110 Had-e Ant Flav-Traj Ant	18 54 55 114	100-140 150-185	16 17	11		
FD KED-J	e-m 2c m 2c		m-l 75-95	Ant 71	Flav-Traj 70-120 2c	10 11 12-13		Ae frag Ae fitting no.7	
GY JP	X X		Flav-Traj 125-145	58	100-170				
LT NJ	m 2c		Flav-Traj Flav-Traj 100-120	134				Ae tweezers Window glass	
FPO/P/N GE	2c m 2c	75-77 73	100-120 Flav-Traj		100-160 100-140 2c	101 96		Oyster Quernstone	
GK GL GM	X X 2c ff		1c Flav-Traj						
GT HC	e-m 2c m-l 2c	74	Flav Had or e Ant		2c 70-110/20	268 192			
KD	X								
JQ lower phase 3	m-l 2c	103-105	Had-Ant 140-170 Flav-Traj Had	123 67				Ae plate Bone pin no.1 Bone 'shovel' no.17	
Phase 4 subsidence	1 2c-3 3c		125-140	122	115-145 110-140	70 71	7	Brooch no.25 Oyster Fe joiner's dog no.15	

Context	Coarse Pottery		Samian		Mortaria			Coins	Other
	Date	Nos.	Date	No.	Date	Serial No.	Stamped No.	Date No.	
DQ lower Phase 3	m-l 2c	106-107	90-110 Had 125-155 90-110 130-160 Flav-Traj Had or Ant	99 48 49 50 51					Fe bar Ae ring Bone pin, no.4
DQ Phase 4 subsidence	m-l 2c		150-180 160-190 Ant Had-Ant	46 47	140-200	74			Quern
Phase 5 subsidence	m 2c-?e 3c		Flav-Traj Ant		m 2c	75	12		
JX	m 2c		125-150 Had or Ant	69					
JW	m-l 2c	98-102	125-150	69					
HF	1 2c-e 3c	84-91	100-120 Had-Ant e-m Ant	121	100-130 2c	69 68	3		
LX	2c	92-94	Had-Ant 125-45 e Ant	133 75	100 ff	72			
CG	2c	95-97	80-110 125-150 Had-e Ant	95 42					
KA	X		Had-Ant						Oyster
KB	X		Had-Ant						
KC	X								
LJ	m 2c				140-80	197			
LT	m-l 2c		Flav-Traj						
HM	X								
HN	X								
HP	X								
HQ	X								
JJ	1 1c-2c								Lead frag.
JK	X								
HE	X								
AC lower	m-l 2c		Flav-Traj 100-150		100-130	1	4		Melon bead
middle	1 2c-3/?4c		135-170 140-170 Had or e Ant m Ant	86 87	135-180	94			Oyster
upper	3c-4c	181-2	160-190 1 2c or e 3c m-l Ant e Ant	85	3c 180-240 2c 140-360 130-170	89 90 91 92 95 269	81-98 no.2		Oyster, bottle glass, bone blade no.15.
AZ lower	1 1c-2c		Flav-Traj 1 Nero or e Flav		115-145	128	8		Oyster
middle	e 3c								
upper	3c-4c	186	m-l Ant 1 2c or e 3c		140-360 230-300ff 130-360ff	124 126 126			Bottle glass

Context	Coarse Pottery		Samian		Mortaria			Coins	Other
	Date	Nos.	Date	No.	Date	Serial No.	Stamped No.	Date No.	
FP/LH lower	m-l 2c		110-130	23	200-360ff	126			Oyster, glass jar no.5 Ae pin no.8, Fe plate no.12, Fe ring angle binding no.11, bone shovel no.17.
			90-110	55	240-320ff	127			
			Flav-Traj Traj Had		100-140	99-100	2c	103	
upper	m-l 2c or e 3c		125-145	58	115-145	97		8	
			125-150	18	100-360	98			
			Flav-Traj		100-140	102			
EK lower	m-l 2c		130-150	52	2c	119-120			Glass jug or flask no.8 bottle glass
			?Traj	61					
			Flav-Traj Had or e Ant						
upper	m-l 2c	143	150-190	102	100-360ff	114			Quernstone bottle glass, Oyster, Ae plate frag. Fe joiner's dog no.2 Fe plate frag.
			130-150	52	150-185	115			
			125-145	62	100-360ff	117			
			Flav-Traj	14	100-140	118			
			m-l Ant	15	150-360ff	121			
			140-180	21	100-360ff	271			
			135-150 e-m Ant lc						
DC lower	e-m 2c		Ant	12	100-170	109			Glass jug no.2, glass jug or jar no.4. Bottle or window glass Fe plate, Fe hooks.
			125-150	17					
			Had	111					
			Had-Ant	112					
			140-170	113					
			e-m Ant Traj						
upper	l 2c-l 3c		140-170	97	120-150ff	3	10		Brooch no.22, window glass, Ae pin, Fe bar, Fe binding, Fe pin. Bone pin no.5, bone needle no.10, bone ?handle no.16.
			Ant		130-360ff	107			
			m-l Ant		140-360ff	108			
			Had or e Ant						
			Flav		100-170	109			
			Claudio-Neronian		100-360	110			
			lc		Flav	111			
GO lower	m 2c		Flav-Traj		100-140	142			Window glass
middle	m 2c-e 3c	146	Flav-Traj	27	100-130/40	2	2		Brooch no.28, oyster, bottle glass, bone 'shovel' no.17. bone object no.14
			135-160	109	100-140	5	5		
			135-160	54	100-150	148			
			160-190	119	120-150ff	149		10	
			Flav-Traj	60	130-360ff	150-1			
			Traj		?100-145	155			
			Ant Had-Ant						
upper	m 3c-4c		150-180	107	100ff	145			Brooch no.31, graffiti sherd, frag of shale bracelet no.2.
			160-190	108	130-360ff	146-147			
			Flav-Traj		100-360ff	152-153			
			m-l Ant		2c	154			
			l 2c or e 3c						

Phase 4

ABO-Z	m-l 2c	144	75-100	2	100-140	183	13
			160-190	3	130-360ff	182	
			160-190	4			
			l 2c or e 3c	5			

Context	Coarse Pottery		Samian		Mortaria			Coins	Other
	Date	Nos.	Date	No.	Date	Serial No.	Stamped No.	Date No.	
ABO-Z			150-180 125-140 Ant 150-180 150-180 Flav-Traj	81 82 83 30 84					
AY	1 2c		Had or Ant						Brooch no.27, oyster, Ae pin
DG	m-l 2c		125-150 135-160 Had or e Ant	40 92					Ae frag.
EE	1 2c-e 3c		150-180 90-110 Ant Ant	100 55					
ES	m 2c	130	Ant						
EW	m 2c								
FW	m 2c		160-190 Flav-Traj	47	2c	104			Oyster
CU assoc. DG	1 2c-3c		Ant		180-250 130-360ff	106 107			
EO	1 2c-e 3c	108-118	100-120 150-180 Ant 160-190 160-195 e-m Ant 1 2c or e 3c	103 104 105 106 53	2c 160-360ff 100-140	30 & 32 31 33	68-78 No.1	Brooch no.26, Ae strip Fe drop hinge no.3 Bone pin Bone pin no.3	
BA sealed	1 2c-e 3c	131-41	m-l Ant		150-200 130-360ff 100-360ff	43 44-45 48			Greyware spindle whorl
JY	1 2c-e 3c	142 145	150-180 125-140 125-145 Flav-Traj Had e-m Ant m-l Ant	128 70 129	2c	143 144			Brooch no.49, oyster, Ae pins, Fe key bone pin no.2 melon bead.
CF	m-l 2c		160-190 m-l Ant Flav-Traj	11 94					Oyster, Ae wire no.9
FE	m-l 2c		125-160	115					
HU	m 2c		Flav-Traj						
DW	X								
ED	X								
EY	X								
BP well pit	1 2c	119-21	100-120 Traj or Had	41				273 + no.27	Oyster
BP well	3c-?e 4c	122-29							Glass bowl no.6
BU	3c		m-l Ant		130-360ff	187			Fe binding
EJ	X		Had or e Ant						Stone mortar
EQ	1 2c-3c				140-360ff	191			
FQ	1 2c or 3c		m-l Ant Flav-Traj						Worked bone

Context	Coarse Pottery		Samian		Mortaria			Coins	Other
	Date	Nos.	Date	No.	Date	Serial No.	Stamped No.	Date No.	
FZ	1	1c-e 2c							
GA		m 2c							
GN		e 3c	130-150	118	100-140	29			
			140-160	59					
			m-l Ant						
GX		2c	135-150	52					
			125-145	120					
LW		X	Flav						
NM			Had						
NO		2c							
KL									Oyster
FN		X			100-130/40	27	6		
FP		X							
FS		X							
JT/HY		m-l 2c	125-140	63	100-360ff	77-8			Brooch no.19,
			150-190	125	120-160	79			window glass, Fe
			140-170	126	130-360	270			ring, Fe field
			125-150	68					anvil no.13, Ae
			Had or Ant	127					pin, Fe iron
			125-145						object no.14.
			Flav-Traj						
FH		1 2c-e 3c	m-l Ant		3c	83			Fe spike
			135-160	54	220-270	84			
					230-300	85			
					150-210	86			
					140-360				
					3c or 4c				
					140-360				
					230-300	87			
					2150-185	88			
KG		X							
KH		e 2c	78-85						
KJ		m-l 2c			130-360ff	193			Ae object no.10
					100-160	195			
KK		1 2c-3c	Ant						
LE		X							
LS		1 2c-e 3c	100-120	132					
			Had or e Ant	74					
DS		m 2c							
DZ		X	Had or e Ant						
FG		X	Had or e Ant						
GC		? e 3c							
GQ		m-l 2c	Had or e Ant						
GU		X							
GW		m 2c							
JG		X	first half of 2c		250-320	194			
KS		X							
KY		X							
KZ		2c							
LE		X							
LK		m 2c							
LQ		X	Flav-Traj						
			Had or e Ant						

Phase 5

BA unsealed	3c-4c	160-200	8	160-200ff	35			Oyster, bottle glass
phases 4-76		150-180	9	200-260	36			Fe spearhead no.10
		140-170	10	230-300	37			Fe binding.

Context	Coarse Pottery		Samian		Mortaria			Coins	Other
	Date	Nos.	Date	No.	Date	Serial No.	Stamped No.	Date No.	
			160-190	38	250-310	38			Ae openwork frag, Bone needle no.9, bone comb no.19, melon bead.
			160-195	91	3c or 4c	39			
			110-145	39	100-360ff	40			
			Had		3c or 4c	41			
			Ant		150-200	42-3			
			1 2c-e 3c		130-360ff	46			
					100-360ff	47			
					2c	190			
BB (layer over BA)	1 2c-3c		150-180	92					
BW	m-l 2c		140-170 Traj m-l Ant	93	150-200	49			
EP					100-130	167	3	96-8 no.3	
AR	e 3c-4c		Had or e Ant						
ALC-G	1 2c		m-l Ant						
ALB	4c	153-55	150-180 m-l Ant	35	100-140	55			
ALA	4c	156-60	m-l Ant						Glass cup no.10 bone pin no.6 Lead frag. Fe key no.4
AJ	4c	149-50			140-360ff	53			
AH	2c		Had or e Ant		130-360ff	54			
CN	3c		m-l Ant						
CY	3c-?e 4c	151-52	Ant						
EB	2c		m-l Ant		170-230	50			
BM	3c-4c		m-l Ant		130-360ff	51			
					180-240ff	52			
BC	X								
BD	3c or 4c								
BE	X								
BF	m-l 2c		Flav-Traj						Fe stylus
BT	X								
CS	m 2c								
CW	1 2c-e 3c								
DR	1 2c		Flav						
DX	m-l 2c		170-200 Ant						
DZ	X		Had or e Ant						
EA	m 2c								
EH	m 2c								
EM	1 3c-4c	161-3	Flav-Traj Ant		100-130	34	2	159 no.8	
MEA	m-l 3c	164-7	Had or e Ant						
FA	X								Fe pin
JF	X				110-180	113			
JM	X								
JZ	m 2c								Glass jug or jar no.4c
HJ	4c	168							
JL					3c or 4c	80			
					180-240	81			

Phase 6

ABE-N	1 2c-3c		160-190	3	3c	173		193-211	Brooch no.21, AE plate frag.
			Ant	26	160-200	174		no.12	

Context	Coarse Pottery		Samian		Mortaria			Coins	Other
	Date	Nos.	Date	No.	Date	Serial No.	Stamped No.	Date No.	
DN	m 2c								
DU	X				150-200	57			
BG	? 1 4c		1 2c or e3c		240-400ff	134			
Late									
CA (subsidence in EK) m-l Ant	3c-4c	180	170-200		140-360ff 130-360ff 280-360ff	122 123 123		c160 no.9 268-7 no.22 286-93 no.38	Ae fitting Ae pin Ae vessel frag no.11 Ae disc plate Fe binding no.8 Ae stud no.12
DA (subsidence in DC)	3c-4c		1 2c or e3c Ant		130-360ff	189			Bone pin no.6
ABA-O	3c-4c	184-5	75-100 160-200 Flav-Traj Ant 1 2c or e3c	2 79	160-200 140-200 150-200 2c 100-360ff 200-360ff 150-200	168 169 170 171 171 171 172	270+no.32	Bottle glass, brooch no.21, Ae ring no.16 Ae openwork frag no.17 Ae plate. Fe bar Bone pin shaft	
AGA-C/F/G	3c-4c Medieval		m-l Ant 1 2c or e3c 160-190 Had-Ant Had 170-200 1c	6 7 88 33 34	3c 130-360ff 140-360ff 250-360ff 270-360ff 130-360ff 120-150ff 140-360ff 230-400ff 180-250 160-230	156 157 158 159 160 161 162 163 164 165 166	100-200 no.7 273+no.29 354+no.43 10	Glass bowl no.1 Ae pin Ae stud Fe plate Fe binding Ae tweezers no.14 Bone bobbin no.12	
Unphased									
AEA AD	Modern Medieval		m-l Ant Traj-Ant		130-360+ 100-400ff	186 184	270-3 no.26	Glass cup no.5 Bottle glass	
BH	1 2c-?3c		Ant					Bottle glass Ae pin no.15	
DF	X								
HL	e 2c		Ner or e Flav					Oyster	
JH	X								
NE	X								
MA	X		130-155		2c	199		Bone pin Brooch 15	
U/S									
Topsoil		188-90	135-155 m-l Ant Traj Ant	1 28 29	120-150 150-185 2c-4c	218 206 201-229	10 11	170-80 no.10 193-211 no.13 193-211 no.14 225-35 no.15 238-49 no.17	Bone comb no.19 Bone pin shaft no.8 Ae beads no.18 Ae stud no.19 Ae bracelet no.20

Context	Coarse Pottery		Samian		Mortaria			Coins	Other
	Date	Nos.	Date	No.	Date	Serial No.	Stamped No.	Date No.	
								258-68 no.19	Ae pin no.21
								258-68 no.20	Ae spoon no.22
								268-70 no.21	Fe hinge no.9
								270 no.23	
								270-3 no.24	
								270-3 no.26	
								273+ no.31	
								273+ no.35	
								286-90 no.36	

Table 1 Derby North-West Sector: finds summary (see p.13 for key)

SAMIAN

By B. DICKINSON

The material from the excavations of 1979-80 contains a few pre-Flavian pieces, but there is no suggestion that this part of the site was occupied before the 70s AD, and no significant quantities of samian were being discarded before cAD70.

The average annual losses were greatest cAD95 and 155. The quantity of samian being discarded on this site in the period cAD115-135 is roughly half of that discarded in the preceding and succeeding decades. This may reflect the intensity of occupation, changes in the use of samian or a drop in supplies for some external reason. It is noticeable that Les Martres ware, most of it Trajanic, accounts for approximately 14 per cent of the Central Gaulish samian, a higher proportion than is usual in Britain.

After cAD180 the use of samian seems to have declined sharply and to have continued at this reduced level until the end of the second century. Some of the late-Antonine pieces and all which may be third-century are East Gaulish, and the proportion of these is normal for Britain.

Decorated and stamped sherds are described below and in the appendices. The details of the samian from key groups are given in Table 2 and the full catalogue is available in the archive.

Samian (Fig.34)

1 Form 18/31 or 31, stamped RVFFI-MA, with Die 1a of Ruffus ii of Central Gaul. His distribution suggests origin at Lezoux, though the fabric of this piece is rather brickly in colour and texture. A few examples of the stamp have been noted in the Rhineland, but most come from Britain and include three from Newstead, one from Cappuck and two from an early-Antonine context at Castleford. The sherd has been used as a plaything, to judge by the wear under the centre of the base. cAD135-155. Topsoil.

2 Form 15/17R or 18R, stamped [SE] CVNDINIMA by Secundinus i of South Gaul, probably La Graufesenque (Die 4a). There are three examples of this stamp from the Saalburg and vessels stamped with his other dies reached Cannstatt (2) and the main site at Corbridge.

cAD75-100. ABD gravel spread. Late.

3 Three fragments of form 31R (Ludowici Sb), stamped MΛ[.IHN^V] by Maianus iii of Rheinzabern, where the die (6a) is known to have been used. The stamp occurs on the late forms 32, 40 and Ludowici Tb, but since Maianus iii started work at Ittenweiler and since this stamp and one of his others occur in graves at Rheinzabern with stamps of some of the earlier potters working there, it is unlikely to be later than cAD160-190. ABN. Gravel spread Phase 6.

4 Three fragments, two joining, of form 38 or 44. The base is stamped [MER]CATO[R.M] by Mercator iv of Lezoux, where the die (3a) is known to have been used. The stamp occurs on both plain and decorated ware (the latter belonging stylistically to the Paternus v group)

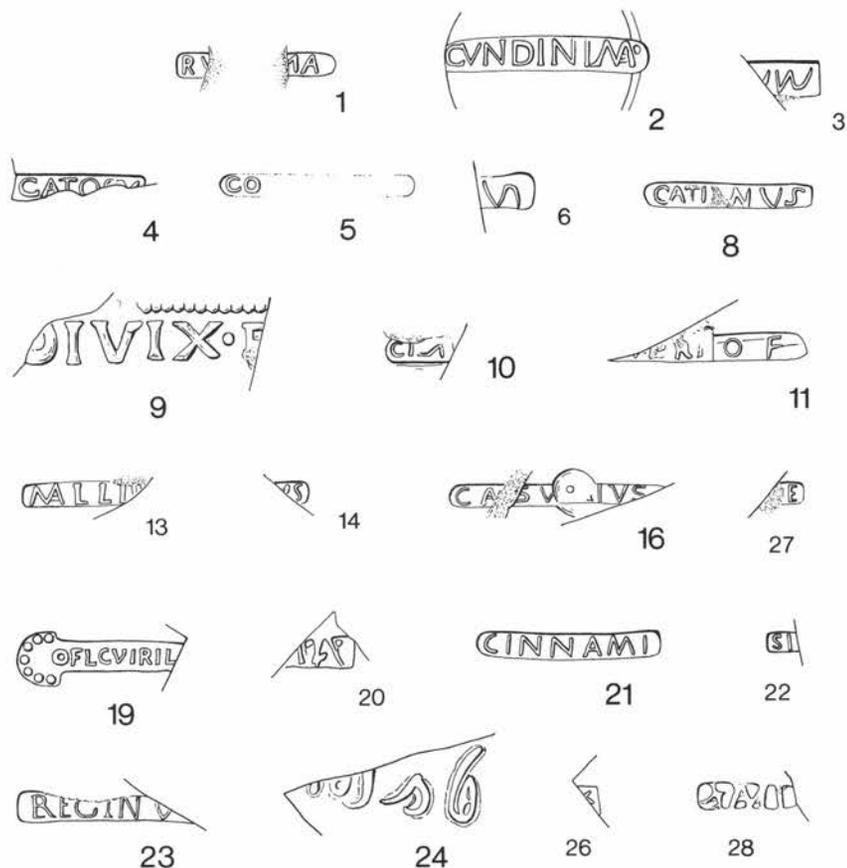


Fig. 34 Derby North-West Sector: samian stamps. Scale 1:1 except no. 9 at 1:2.

and appears on a form 37 from Little Chester. The site record includes Hadrian's Wall and Pennine forts reoccupied cAD160. cAD160-190. ABO Gravel spread Phase 4.

5 Form 33?, East Gaulish?, stamped CO.... Late-second- or early third-century. ABQ Gravel spread Phase 4.

6 Form 33, Central Gaulish, stamped [AVII]~. Almost certainly illiterate, unless Avens was intended. Stamps from the same die occur at Canterbury and Shepton Mallet. The fabric and glaze suggest origin at Lezoux in the mid-to late-Antonine period. AGB Gravel spread Late.

7 Form 32 etc., stamped [I] and two joining fragments of form 37 rim, both East Gaulish, the latter probably from Trier. Late-second- or early-third-century. AGB Gravel spread. Late. Not ill.

8 Two joining fragments, heavily burnt, of form 31 base, stamped CXTIA N/V S by Catianus

ii of Lezoux (Die 6a). There are several examples of this stamp from Pudding Pan Rock, and it was used on forms 79, 80 and Ludowici Tx. cAD160-200. BAA Humic layer Phase 5-6.

9 Form 30, stamped DIVIX·F by Divixtus i of Lezoux, where the die (9d) is known to have been used. Decorated bowls with this stamp are relatively common in Scotland, and there is one from South Shields. The panels include: 1) A slave (0.591). 2) A satyr (0.627). Both figures are attested on his stamped bowls (S.&S., 1958, pl.115, 1-2). cAD150-180. BAA Humic layer Phase 5-6.

10 Form 37, Central Gaulish, with mould-stamp CIN[NAMI] retrograde, from a die known to have been used at Lezoux (5a). The stamp occurs also on plain forms, including 18/31 and 18/31R. The panels include: 1) a vine-scroll (Rogers M2). 2) Neptune (D.14). Both details are known on standard Cinnamus ii bowls, but as the stamp appears on bowls in

the Cerialis ii-Cinnamus style, a date cAD140-170 is likely. BAJ Humic layer Phase 5-6.

11 Form 38 or 44, stamped SEVERI OF by Severus iv of Lezoux (Die 1a'). The stamp comes from a damaged die with originally gave SEVERIOF. An example from the damaged die occurs on form 31R at Bainbridge. Severus's decorated ware is mid- to late-Antonine. cAD160-190. CFB Gravel layer Phase 4.

12 Form 37 base, heavily burnt, Central Gaulish. There is a faint graffito, D[(?), upside-down under the base, which was inscribed in the mould after firing. Antonine. DCZ Primary filling of Phase 3 pit. Not ill.

13 Form 31, stamped MALLI[ACI.F] by Malliacus of Lezoux, where the die (2a) is known to have been used. Examples of the stamp have been noted on forms 18/31R, 33 and (mainly) 18/31. His output also includes form 27. His work occurs at Balmuildy, Binchester, Corbridge and in a group of cAD140-150 at Castleford. His overall range will be cAD135-165, with cAD135-160 for Die 2a. DLA. Posthole Phase 6.

14 Form 27, South Gaulish, stamped JVS. Flavian-Trajanic. EKC Upper filling of pit. Phase 4.

15 Forms 31 (with illegible stamp), 33, 37 (with double medallion and seated Cupid (D.261), as used by members of the Paternus v group) and 38 (three joining fragments, slightly burnt). All Central Gaulish and mid- to late-Antonine. EK Upper filling of pit. Phase 4. Not ill.

16 Two joining fragments of form 33, stamped CASVRIVS[F] by Casurius ii of Lezoux, where the die (5a) is known to have been used. The stamp was also used on moulds, and appears on decorated bowls from Bainbridge, South Shields and Cappuck. One of his other stamps occurs in Antonine I at Birrens, but the bulk of his output, including the Little Chester piece, falls within the range cAD160-190. EQA. Phase 4 soil.

17 Three fragments of form 37, one stamped [OF.A]TT retrograde by Attianus ii of Lezoux, where the die (4a) is known to have been used. The decoration includes a goat (D.892) and partly-impressed acanthi (Rogers K2). cAD125-150. FBD Primary filling of pit FB/DC Phase 3. Not ill.

18 Form 37. Below the decoration, upside-down, is a mould-stamp QVINTILIAN[IM], retrograde. The die (1b) is attested at Lezoux for Quintilianus i. The stamp occurs on decorated bowls from Hadrian's Wall and on

plain ware from Inveresk and in a group of burnt samian of the 140s from Castleford. The panels include: 1) A small, double medallion, over a Hercules (D.460). 2) A series of ram's-horn motifs (Rogers G359). 3) A seated Jupiter (D.4) and a mask suspended from a wavy line. The ovolo, eight-beaded rosettes and trilobed motifs in the basal wreath are Rogers B28, C281 and G178, respectively. The decoration shows Quintilianus's characteristic laying-out lines for the ovolo and the basal wreath. For an unstamped bowl almost certainly from the same mould, see S.&S.m 1958, pl.70, 19, from the Birdoswald Alley. This bowl would add a Pan-mask (D.675), a man in tunic (D.626), a pair of warriors (D.130) and a lozenge. cAD125-150. FCB gravel layers Phase 3, LHA upper filling of pit FP/LH Phase 4, GZX lower filling of pit EK Phase 3. Not ill.

19 Form 15/17 or 18, stamped OFLCVIRIL[I] by L. Cosius Virilis of La Graufesenque, where the die (12a) is known to have been used. The stamp occurs at Domitianic foundations, such as Butzbach and the Saalburg, but was also used on form 29. cAD80-110. FLA Gravel layers. Phase 3.

20 Forms 27 (with illiterate stamp] \·/·\·/), 30 or 37 (rim) and a scrap, South Gaulish. Flavian-Trajanic. FLC Gravel layers. Phase 3.

21 Form 33, stamped CINNAM I by Cinnamus ii of Lezoux (Die 5e). There is no site dating for the stamp, but Cinnamus's range is cAD140-180. GZO, GZP Upper fillings of pit EK. Phase 4.

22 Two joining fragments of form 46, stamped SI[LVINVS·FE] by Silvinius iii (Die 5a). This potter worked at both Les Martres-de-Veyre and Lezoux, and Die 5a was probably used at both centres. The Little Chester cup is in Lezoux fabric. The stamp occurs on forms 18/31, 18/31R, 27, 33a, 42(?) and 81. Name-stamps, apart from those round the outer borders of rosette stamps, are rare on form 46. cAD125-140. HYA Phase 5-6 subsidence in pit HY.

23 Nine fragments, some joining, of form 18/31. The dish is stamped REGINV[S:F] by Reginus ii of Les Martres-de-Veyre, where the die (2a) is known to have been used. This stamp occurs in the London Second Fire deposits and at sites evacuated when Hadrian's Wall was built. One of his other stamps occurs at Camelon and Mumrills (2). There is a cream slip below the glaze. cAD110-130. LRK Primary filling of pit LR Phase 2. LHF lower filling of pit FP/LH Phase 3. Not ill.

- 24 Two fragments of form 37, Central Gaulish. Below the decoration is a cursive signature Doci[, retrograde. A saltire panel includes bifid motifs (Rogers G390), as on a bowl in the Docilis i/Doccalus style from Cannstatt (S.&S., 1958, pl.93, 17) and on one in the style of Docilis from Walton-le-Dale. The lettering resembles Docilis's. cAD130-155. MAA Un-phased.
- 25 Form 18/31, stamped JIM, Central Gaulish. Hadrianic. NMA posthole Phase 3 or 4. Not ill.
- 26 Form 31R in Central Gaulish ware stamped]<, probably from the latter half of the Antonine period. ABE Gravel spread Phase 6.
- 27 Form 33a, a cup without an internal moulding or an external upper groove, with stamp]F Flavian-Trajanic. EXX pit EX/GO Phase 4 layer.
- 28 Illiterate potter's stamp on form 31 + [, Central Gaulish. Mid- to late-Antonine. Topsoil Fig.35-8
- 29 Form 37. A bowl in the pale, micaceous fabric with dull, orange glaze produced at Lezoux in the early second century. However, the style of decoration shows that the mould came from Les Martres-de-Veyre, where all the details, including the ovolo-replacement of circles, the fine beaded borders without junction-masks, the stag (0.1704A) and acanthus (Rogers K2) were used by a potter who supplied moulds to Donnaucus (cf. S. & S., 1958, pls. 46-7). The festoon is on bowls from Cirencester and York (*ibid.*, pl.47, 548). Presumably Trajanic, in view of the fabric. Topsoil, Phase 2 gravel spreads KMA and PDC.
- 30 Two fragments of form 37, Central Gaulish, with a repeated panel containing a Jupiter (D.4). The ovolo (Rogers B52), beaded ring junction-mask and cornucopias flanking the Jupiter (Rogers U248) all occur on stamped bowls of Divixtus i. The figure-type is on a bowl in his style from Corbridge (S. & S., 1958, pl.115,7). cAD150-180. ABY Gravel spread Phase 4. Not ill.
- 31 The material ranges from the late first to the mid or late second century and is mostly Central Gaulish. One bowl, form 37, with sherds in BAA and BAB (2), all joining, comes from Trier. The tongueless ovolo is on a bowl from Old Penrith. The bust was used in both Werkstätte I and II (Huld-Zetsche, 1972, M2). The leaf is Fölzer, 1913, Taf.XXXI, 764; the rosette is similar to 856, but the hole in the middle is apparently smaller. Antonine. AD Mediaeval ditch.
- 32 Two fragments of form 37. A small bowl in the style of Geminus iii, with his commonest ovolo (Rogers B76) and panels: 1A) A festoon (Rogers F70), with small dolphins (S. & S., 1958, fig.15, 4); 1B) a shield (Rogers U209). 2) A scarf-dancer (D.212). 3A) A double astragalus, placed diagonally and supporting a trilobed motif (S. & S., 1958, fig.15, 11). Another panel, different from 1 to 3, is followed by 1A. Small trilobed motifs (Rogers G112) act as junction-masks. The dancer is on a signed bowl from York (S. & S., 1958, pl.65, 1, under Stanfield's rendering of G. I. Vibius). The shield is on signed bowls from Richborough (Cunliffe, 1968, pl.LXXXV, 56) and Lezoux. Although most of Geminus iii's output is in Lezoux fabric, a few bowls, including this one, seem to have been made at Les Martres-de-Veyre. There is no way of telling whether he started his career there, or sold moulds to Les Martres, but none of his bowls is likely to be later than cAD145. ACM primary filling in pit AC, Phase 3 and KMC gravel layer Phase 2.
- 33 Form 37, Central Gaulish, with panels: 1) A small, double festoon. 2) A bear (0.1590?) and leaf (Rogers J162). One of the vertical borders, of fine beads, continues upwards into the ovolo zone. The ovolo (not in Rogers) is on a bowl from recent excavations at Carlisle, by a member of the Quintilianus i group. It is probably the early work of Lactucissa, though the fine borders of the Little Chester bowl do not suggest a connection with him. Hadrianic-Antonine? AGC Gravel spread. Late.
- 34 Form 37, Central Gaulish. The decoration, which includes a Neptune (D.14), Venus (D.176 variant) and Mercury (D.291) perhaps depicts a pantheon. The trifid motifs depending from the upper border are either Rogers G174 or 175. The ovolo (Rogers B21) was used by Secundinus iii (Rogers' Secundinus 1). Hadrianic. AGG Late gravel spread.
- 35 Two fragments of form 37, Central Gaulish, with two more, one joining, in BAE and one, joining, in EKB. The ovolo (Rogers B52) was often used, with a straight line underneath, by Secundus v, though it has not yet been found on a stamped example. One panel contains a double festoon with lion (?) to left. The adjacent panel has a caryatid (D.655a, but with a pedestal, instead of a mask) and a third panel has a Victory (D.474) in a double medallion. Both the figure-types occur on bowls in Secundus's style. cAD150-180. ALB Clay floor Phase 5. Not ill.
- 36 Form 37, Central Gaulish. The ovolo, a

version of Cinnamus ii's ovolo i (Rogers B223), with straight line below, suggests the work of Secundus v, and both occur frequently on bowls in his style. The decoration includes a lioness (D.793) and, possibly, the scarf-dancer 0.361A. cAD150-180. ANA Stone spread Phase 6. Not ill.

37 Two fragments of form 37, with the ovolo commonly used by the Cerialis ii-Cinnamus ii group at Lezoux (Rogers B144). The lower concavity of a scroll contains a leaf (Rogers H181) and buds (partial impressions of Rogers J178). One upper concavity includes a large leaf (Rogers H51) and the same buds. The arrangement of the lower concavity is unusual for this group, and the leaf in it is not attested for any of the potters in the group. The glaze is very good and the beads are larger than usual. cAD140-170. AWB Pit Phase 6.

38 Two joining fragments of form 37, Central Gaulish, with square-bottomed, straight-tongued ovolo (not in Rogers) and borders of separate, square beads. The leaf in the narrow panel (Rogers H185) is on stamped bowls of Priscus iii from Lezoux and Exeter (S. & S., 1958, pl.129, 1), and the latter has the same type of border. He is also known to have used the astragalus (Rogers R3). The stag is 0.1723. cAD160-190. BAA Humic layer. Phase 4-6.

39 Form 37, South Gaulish. The basal wreath of coarse chevrons was used in the second century at Montans, where it occurs on a stamped bowl of Felicio iii. cAD110-145. BAE Humic layer. Phase 4-6. Not ill.

40 Form 37, Central Gaulish, so heavily burnt that the ovolo (Rogers B12) is smaller than usual. The decoration perhaps includes a double arcade in series in a panel. No parallels have been found for the widely-spaced borders, but the ovolo suggests a member of the Sacer i group. Hadrianic or early-Antonine. BBA Black layer. Phase 4-6. Not ill.

41 Form 37, in the fabric of Les Martres-de-Veyre. The Priapus, seated figure and crowns (Rogers U61) are on a bowl from Leicester in the style of X-2, but with a stamp of Ioernalis i added, after moulding, under the base. cAD100-120. BPE Well pit Phase 4 and KME Phase 2 beam slot impression.

42 Form 37, Central Gaulish, in the style of Quintilianus i, with single-bordered ovolo (Rogers B28) and border of separated beads. cAD125-150. CDO Slot of granary type building Phase 3. Not ill.

43 Form 37, Central Gaulish, with scroll decoration. Probably by a member of the Sacer

i-Attianus ii group, with ovolo Rogers B18, a leaf (Rogers H74 variant?) and a crown (Rogers U64?). The leaf was used by an early Paternus of Lezoux, whose style shows the influence of the Sacer group, but the bowl is not necessarily by him. cAD125-150. DGK Oven Phase 4. Not ill.

44 Form 37, in the style of Cettus of Les Martres-de-Veyre. One panel contains a plant (Rogers G2). The ovolo is Rogers B263. Cf. S. & S. 1958, pl.142, 17. cAD135-160. DGK Oven Phase 4. Not ill.

45 Form 37, in the style of Geminus iii of Lezoux, with his characteristic zig-zag borders. The junction-masks (approximately Rogers C297, but apparently with 10 or 11 petals) do not coincide exactly with the panel junctions. The animal and the trilobed motif are not known for him, but he frequently used the double astragalus (Rogers R91). cAD125-140. DKB Wall rubble Phase 6.

46 Form 37, with ovolo (Rogers B145) and astragalus border used at Lezoux by Illixo. cAD150-180. DQE Slot of granary type building. Phase 4 subsidence. Not ill.

47 Form 37, Central Gaulish, with panels: 1) A satyr? (D.369). 2) A leaf tendril. 3) A single festoon or medallion, with circles two-thirds impressed round the inside, over the motif Rogers U295, with the bottom part added to the top (as on S. & S., 1958, pl.137, 60). All the details were used at Lezoux by Casurius ii. cAD160-190. DQE Slot of granary type building Phase 4 subsidence and FWB oven Phase 4. Not ill.

48 Form 37, Central Gaulish. Unusual scroll decoration, with a tendril ending in a ram's-horn motif and a bifid motif, back-to-back. Across the tendril is a cornucopia (not in Rogers). Perhaps by Silvius ii, who made non-standard scrolls, and who probably worked at Lezoux, where this bowl was made, as well as Les Martres-de-Veyre. Hadrianic. DQJ Slot of granary type building. Phase 3.

49 Form 37, Central Gaulish. The ovolo (similar to Rogers B233) was used at Lezoux by Pugnus ii and associated potters. It occurs on a bowl from Baines Farm, Catterick, in the style of X-5, who used the leaf (Rogers J33) and striated spindle; Sissus ii also used the spindle. The decoration presumably involves a double arcade or a scroll formed by impressing festoons first one way up, and then the other. cAD125-155. DQN Slot of granary-type building. Phase 3.

50 Form 37, South Gaulish. The animals,

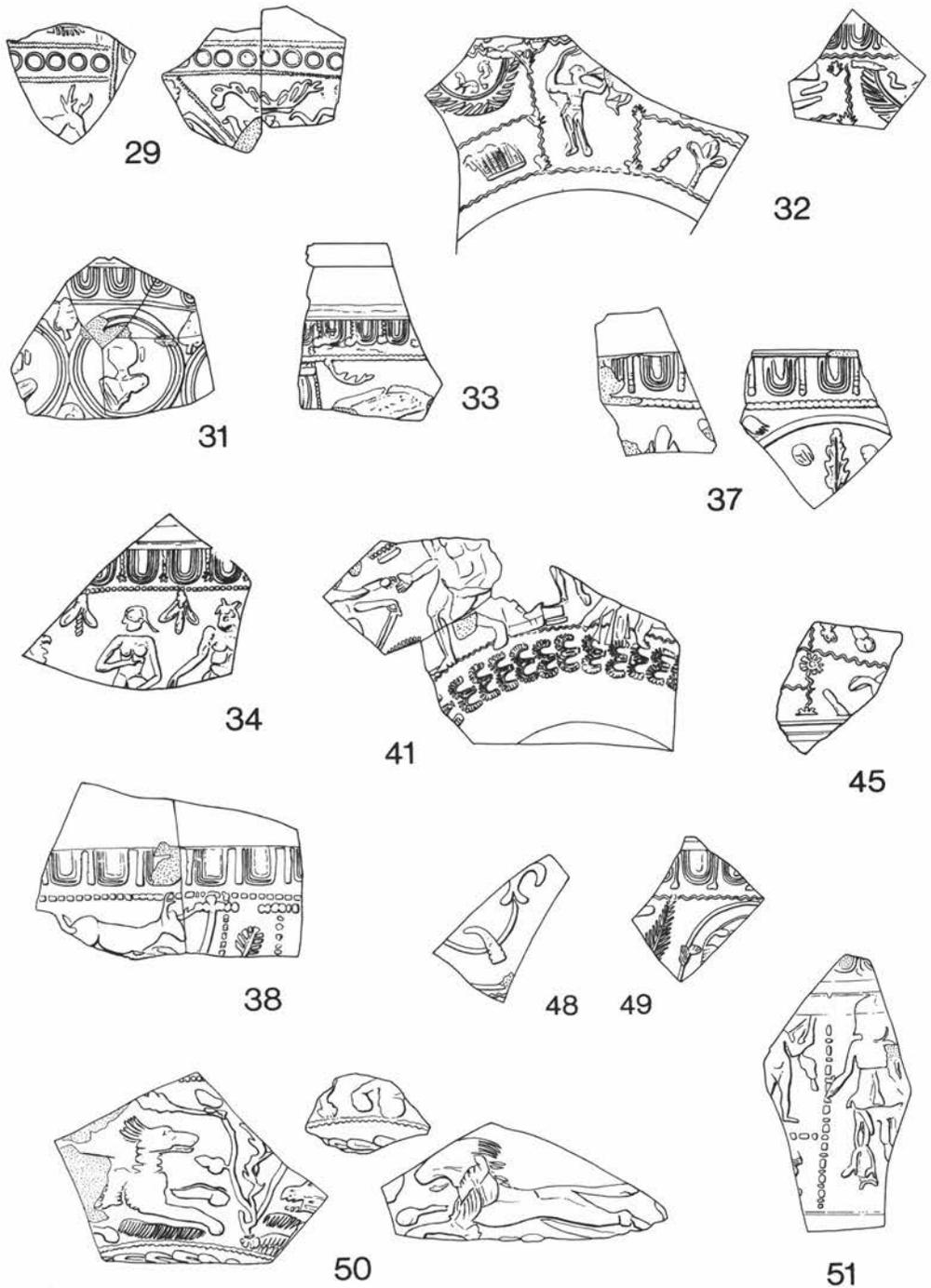


Fig. 35 Derby North-West Sector: decorated samian. Scale 1:2.

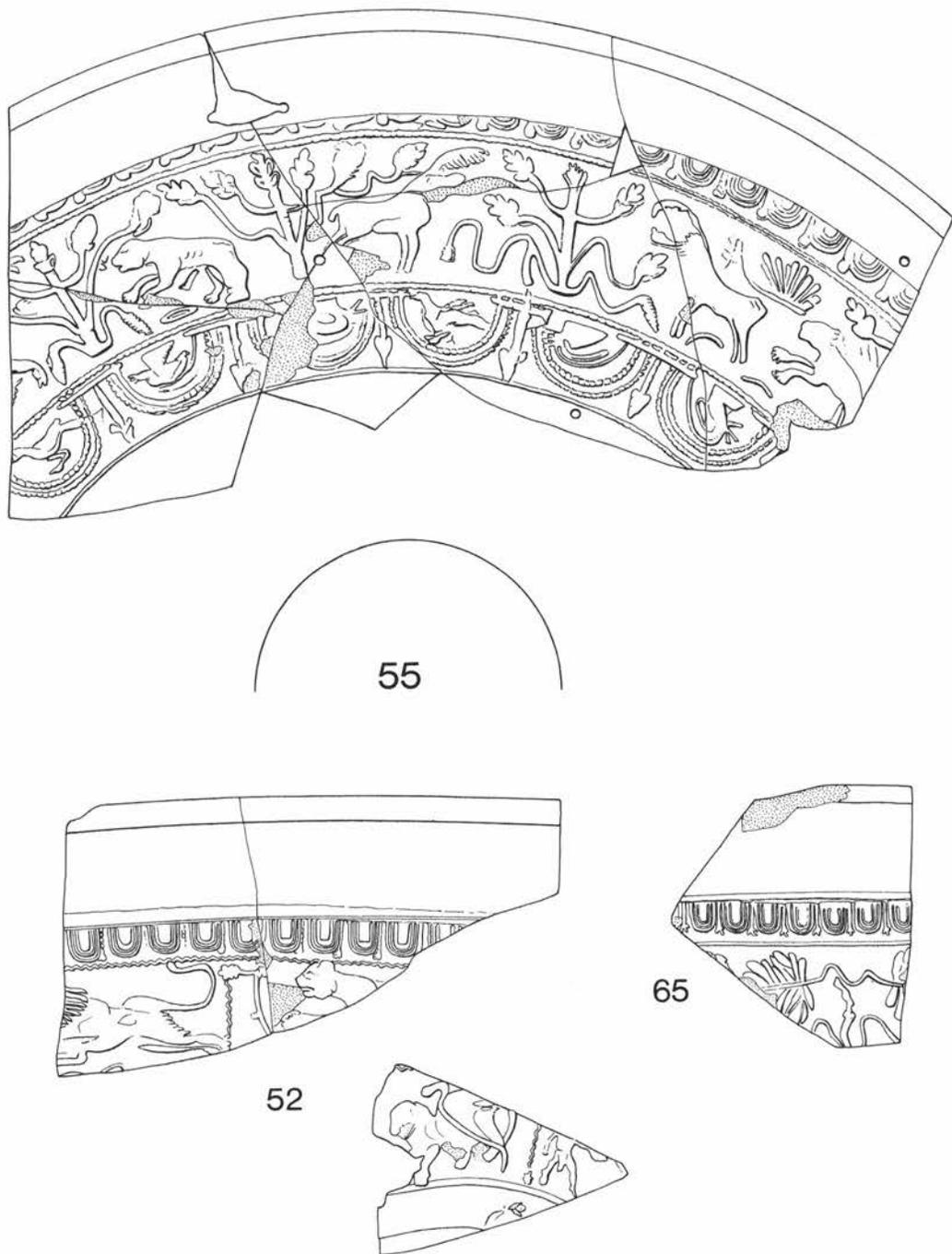
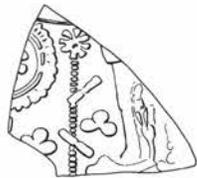
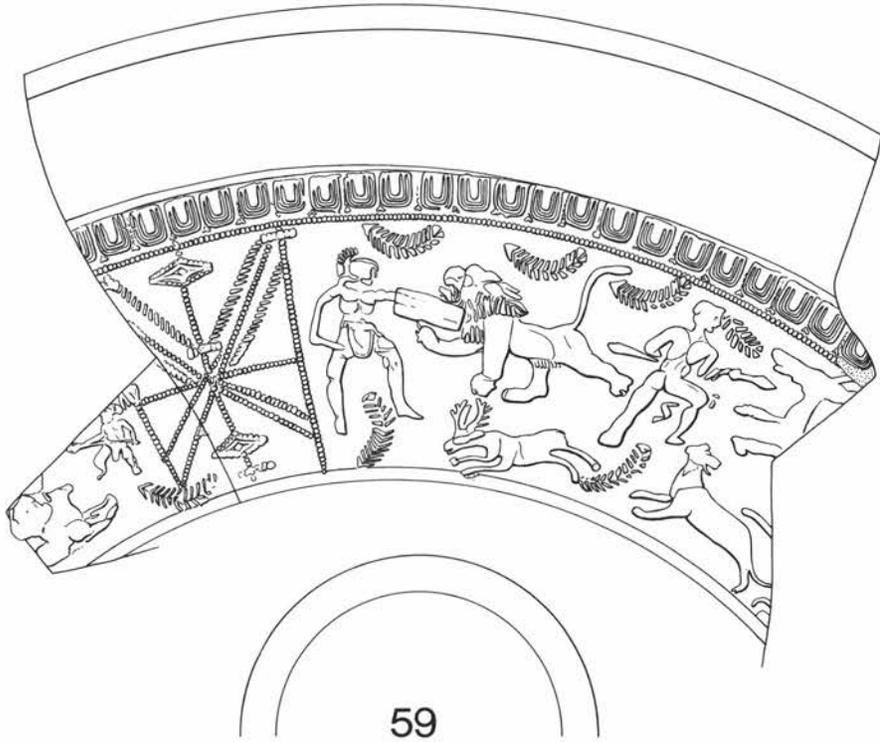
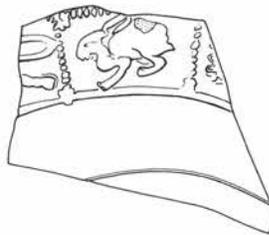


Fig. 36 Derby North-West Sector: decorated samian. Scale 1:2.



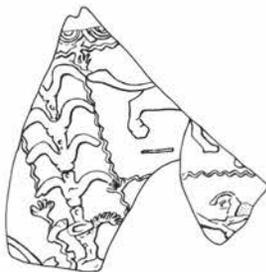
66



67



69



70



Fig. 37 Derby North-West Sector: decorated samian. Scale 1:2.

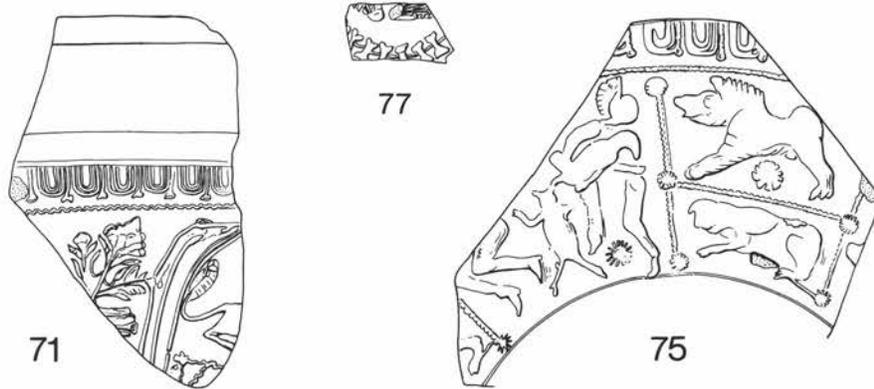


Fig. 38 Derby North-West Sector: decorated samian. Scale 1:2.

stag, lion and boar, are unusual ones, as is the tree, with oak leaves and acorns. The general style, however, recalls potters working in the Germanus i tradition. cAD90-110. DQQ, DQF and LXA Slots of granary type building Phase 3.

51 Form 30, Central Gaulish, with panels: 1A) Cupid with torches (a smaller version of D.265). 2)A Minerva (D.77). The ovolo is probably single-bordered (Rogers B77?). Sissus ii used astragalus borders (Rogers A10) and, probably, the ovolo (on an unsigned bowl from Baines Farm, Catterick). The fabric and glaze are rather orange for Lezoux ware, as Sissus's often are. cAD130-160. DQZ Slot of granary type building. Phase 3.

52 Form 37, Central Gaulish. The ovolo (Rogers B233?) is on stamped and signed bowls of Pugnus ii from Corbridge (S. & S., 1958, pl.154, 13) and Carlisle, respectively. Adjacent panels include: 1) A lion (D.766). 2) A panther (D.795). Other panels include a panther with snake (S. & S., 1958, pl.25, 309) and a pygmy (D.437A). The long, thin astragalus (Rogers R22) is on bowls in his style, or that of one of his associates (S. & S., 1958, pl.154, 18,19). This particular style, involving elements also used by such potters as Mapillus, Tittius and X-6, suggests a date cAD130-150. There is possibly the end of a cursive signature below the decoration. EKB, GZA and GZQ lower and upper pit filling Phase 4.

53 Two fragments of form 37, Central Gaulish. The ring-tongued ovolo (Rogers B105) was used at Lezoux by Paternus v and some of his associates, including Lastuca. Paternus and Lastuca also used the leaf in the scroll (Rogers H35). cAD160-195. EOD Coal layer Phase 4. Not ill.

54 Form 37, Central Gaulish, with panels: 1)A kilted figure (D.103). 2)A scarf-dancer? The ovolo (Rogers B41), astragalus (Rogers R25) and figure are on bowls in the style of Pugnus ii (S.&S., 1958, pl.153, 4-5). The figure is on a signed bowl from Augst, but appears also, with the astragalus, on a stamped bowl of Mapillus from Archelles (Rouen Mus.). cAD135-160. FCB Phase 3 gravel layer, EXN Phase 4, layer in pit GO and FHE Phase 4 pit. Not ill.

55 Many joining fragments, giving approximately half a bowl of form 37, South Gaulish. The footring is very worn and the bowl has been drilled in several places for rivets; it was made in a cracked mould. The ovolo (Hermet, 1934, pl.35, 31) is on bowls from the Bregenz Cellar (Jacobs, 1913, no.34), together with the bear (Hermet, 1934, pl.26, 4) and Rottweil (Knorr, 1912, Taf.XVIII, 1). A similar, if not identical festoon occurs on two other bowls from Rottweil (*ibid.*, Taf.XVIII, 7,8). The stag to right (Hermet, 1934, pl.27, 12) is on a bowl from Augsburg with a similar tree (Rogers, 1913, Taf.XV, 5). No parallel has been found for the corresponding stag to left. The bird in the basal zone is not closely identifiable. The combination of leaves and spindles on the trees is unusual. The freestyle zone suggests some connection with Germanus i, and the bowl is probably by one of the Flavian-Trajanic potters who worked in his tradition. The fabric suggests origin at La Graufesenque, though bowls in the same general style are known from Banassac. cAD90-110 FCB & FCE Phase 3 gravel layers, AFC Phase 6 pit, EEM Phase 4, oven FPH Phase 4 filling of pit and possibly FLB. Phase 3 gravel layers.

56 Form 37, burnt, South Gaulish. Possibly from the same bowl as FCE, i, but apparently

with a human figure in the upper zone. The lower zone has a stirrup leaf to right, as on FCE. cAD90-110. FLB Gravel layers Phase 3. Not ill.

57 Two fragments of form 37 rim, one burnt and drilled for riveting. The fabric is orange and micaceous. The ovolo (Rogers B14) was used by several Trajanic-Hadrianic and Antonine Lezoux potters. The zig-zag line below the ovolo was made by joining up stylus impressions with inverted V's. The fabric suggests Trajanic-Hadrianic date. FLB Gravel layers Phase 3 and FTB gravel layers Phase 2. Not ill.

58 Form 37, Central Gaulish. The ovolo (similar to Rogers B185205) was used at both Les Martres-de-Veyre and Lezoux, by potters (at the latter) such as Attianus ii, Drusus ii and Criciro v. The decoration consists of either a zone of double festoons or two, side-by-side, in a panel. The birds are D.1019 and 0.2298. Probably by Attianus, who occasionally used festoons in series. cAD125-145. FPF Phase 4 filling of pit FP/LH; JR Phase 3 occupation spread, JP Phase 3 sand layer. Not ill.

59 Form 37, Central Gaulish, with ovolo Rogers B208 and panels: 1) Dog? (not in D. or O.) and pygmy (D.439). 2) A saltire, including striated spindles and lozenges (Rogers U28). 3) A very wide panel, with gladiator (not in D. or O.), lion to left (D.757), stags (O.1777 and not in D. or O.) *bestiarius* (O.1086C), leopard (not in D. or O.) and leafy spray (Rogers J161). Many of the details are on stamped or signed bowls of Docilis i, the dog, gladiator and spray from Templeborough (S. & S., 1958, pl.92, 12) the lozenge from Lancaster (*ibid.*, 16), the lion from Aldborough, the *bestiarius* on an unprovenanced bowl in Bourges Museum. The ovolo is on bowls in a mid-Antonine group from Lezoux. Cf. also bowls assigned to Doccalus (*ibid.*, pl.93) cAD140-160. GNH Phase 4 pit and JRA Phase 3 occupation layer.

60 Form 37, South Gaulish. The unusual scroll decoration includes a lower concavity with a series of striated spindles impressed diagonally in the lower part, with an animal above. The decoration is very blurred, as though the bowl had come from a worn mould. The added footring is also very worn. Flavian-Trajanic, though the mould is probably Flavian. GOD Phase 4 filling of pit GO. Not ill.

61 Form 37, burnt, Central Gaulish, with ovolo Rogers B42. The festoon with cogged outer border (Rogers F70) recalls Silvius/Silvio of Les Martres-de-Veyre. Cf. S & S., 1958, pl.19, 1-2 for the festoons and astragali.

Trajanic? GZB Phase 3 pit EK. Not ill.

62 Form 37, Central Gaulish. The ovolo (Rogers B18) was used at Lezoux by Attianus ii. The freestyle decoration includes a stag (D.867), panther to right (D.799, used twice), snake on rock (D.960 bis), horse and rider (D.159), man with spear (O.684A with added, beaded spear, once the right way up and once upside-down) and hare (D.950A). All the details are known for Attianus. The man with spear is sometimes shown without it, sometimes with a spear with solid shaft. A beaded version, as here, is on a stamped Attianus bowl from Fishbourne (Dannell, 1971, no.81). cAD125-145. GZA, GZQ and GZP Phase 4 pit EK. Not ill.

63 Form 37, Central Gaulish, with a large scroll bound with striated spindle. The lower part of one of the upper concavities (divided from the upper part by a wavy line ending in a cross) includes a pillar (Rogers P10). The lower concavity has a large leaf (Rogers H43?). The spindle and cross are on form 29 from Heddernheim stamped by Ranto (S. & S., 1958, pl.27, 325). The pillar is on bowls in the so-called Medetus-Ranto style (*ibid.*, pl.29, 347). This bowl is in Hadrianic Lezoux fabric and so was presumably made after the mould-maker had migrated from Les Martres-de-Veyre. cAD125-140. HYF and JTF of Phase 4 pit JT. Not ill.

64 Form 29, South Gaulish. The leaf and scroll-binding were used by Mercator i, but the scroll is not known for him. A scroll of very similar chevrons was used by Biragillus i on a signed bowl from La Graufesenque, together with a detached tendril, as here, though he is not known to have used the spindle or any of the other details. This is almost certainly one of the latest examples of the form. cAD75-85? HYH Filling of Phase 2 pit HY. Not ill.

65 Form 37, South Gaulish. The trident-tongued ovolo was used at La Graufesenque by potters working in the Germanus i tradition. The composite tree is one of his commonest motifs, but the leaf is not known for him, though it is perhaps copied from his usual one (i.e. Knorr, 1919, Taf.35, 53). cAD90-110. HYK Filling of Phase 2 pit HY.

66 Form 37, Central Gaulish. The panels include: 1) Venus at an altar (D.194) and a trefoil motif (not in Rogers). 2) The same motif, and a medallion with a looped border (Rogers F74) containing an eight-petalled rosette, which is also used as a junction-mask. The panel border has double astragali (Rogers R91) impressed diagonally across it, in the manner

of Geminus iii, i.e. Stanfield's G.Iul-Vibius and Ricken's Gelenus (S. & S., 1958, pls.65-6). He is known to have used the Venus and the medallion is on bowls in his style from Chester and Gloucester, but there are no parallels for the trefoil or the rosette. This style, his less-common one, seems to be slightly later than his more familiar one, and includes a bowl from Camelton. cAD130-145. JEA Filling of pit GO Phase 4.

67 Form 37, Central Gaulish. The panels include 1B)A trifold motif (Rogers G67) impressed sideways. 2B)Hare (O.2117). 3)A rosette (Rogers C56?). The junction-masks are seven-beaded rosettes (Rogers C280). All the motifs, but not the hare, are on a bowl from the Barnsley Park villa, from a mould signed by a Lezoux Paternus (iv) whose style is related to that of the Sacer i group, though his work is somewhat later (*Bristol and Gloucester Archaeological Society Transactions for 1982* (1983), p.171, fig.57, 9). cAD140-170. JQJ Lower filling of slot of granary type building Phase 3.

68 Form 37, Central Gaulish. The ovolo (Rogers B35) occurs on bowls in the style of X-6, including one from Lezoux with a fragmentary cursive signature Catull[retrograde. The upper parts of the panels have double festoons with Nile geese alternating to right and left (D.1013 and its reverse). There are no junction-masks at the central junctions of the panels. Astragali are impressed along the vertical borders, as often on X-6's bowls. cAD125-150. JTF and JTC pit Phase 4 and HYA Phase 5-6 subsidence in this pit. Not ill.

69 Form 37, Central Gaulish, in the style of X-6 or one of his associates. The scroll is formed by impressing festoons first one way up, and then the other (cf. S. & S., 1958, pl.76, 30). The decoration includes his S-motif, a stylised tree with the leaf Rogers J67, another leaf (Rogers H131), an astragalus (Rogers R22) and a cockerel (O.2360 var.). Cf. S. & S., 1958, pl.74, 5 for the cockerel, which also appears on a bowl from Lezoux in the style of X-6, with a cursive signature Catull[, retrograde, below the decoration. Both leaves are on a bowl from Cambridge with an ovolo used by X-6, Pugnus ii and Tittius. cAD125-150. JWA and JXB Slots of granary type building. Phase 3.

70 Two joining fragments of form 37, Central Gaulish. The decoration includes panels: 1)A vertical series of ram's-horn motifs (Rogers G396). 2)A panther (O.1501); 2B)A plant (Rogers M35, impressed sideways). The ovolo (Rogers B76?), trilobed junction-masks (Rogers

G112), plant and zig-zag borders were all used regularly by Geminus iii (Stanfield's G. Iul-Vibius); cf. S. & S., 1958, pl.65, 66, 20. The less-common ram's-horn motif and panther are on bowls in his style from London (BM) and Cirencester (*Liverpool Annals of Archaeology & Anthropology* XXVIII (1948),pl.V,18), respectively. cAD125-140. JYS Gravel spread Phase 4.

71 Eighteen fragments of form 37, South Gaulish, with scroll decoration. The blurred, trident-tongued ovolo is on a stamped bowl of M. Crestio from Strasbourg and the griffin to right (O.879) is on one of his stamped bowls, from Mainz (Knorr, 1952: Taf.19A). There are no parallels for the leaf or the leaf-tips. cAD75-95. KEA, KMG Phase 2 gravel spreads, KEJ Phase 3 gravel spread.

72 Three fragments of form 37, Central Gaulish. The freestyle scene includes a lioness (D.795), bear (O.1618), partly impressed), stag (D.854?) and partly-impressed leaves. The fabric and glaze suggest the Large S Potter, who used the stag and leaves. cAD125-140. LRD Upper filling in pit L. Phase 3. Not ill.

73 Form 37, South Gaulish, with a zone of animals, including a lion (D.747) and stag (D.859) over a partly-impressed grass-tuft, alternating with plants; one consists of two impressions of the motif Knorr, 1919, Taf.57, 11; the other has a bunch of grapes at one side. The basal zone consists of double festoons containing spirals, with drumstick tassels between (*ibid.*, 20). There are some connections with Mercator i, but the bowl is not necessarily by him. cAD90-110. LRK Lower filling in LRK Phase 2. Not ill.

74 Form 18/31R. Presumably Central Gaulish, though the bricky fabric and blistery glaze resemble the work of a British potter (P.V. Webster, 1975, 163-170). His distribution is in the south and south-east, however, and his work is unlikely to have reached Little Chester. Hadrianic or early-Antonine. LSC Gully. Phase 3 or 4. Not ill.

75 Form 37, in the style of Acaunissa of Lezoux. The ovolo is Rogers B22 and the panels include: 1)Panther, as in 3? 2)Figure to left (not in D. or O.), Pan (not in D. or O., but on bowls in his style from Stonea and *Verulamium*) and gladiator (O.1024 variant). 3A)Boar (D.834): 3B)crouching panther (as on a signed bowl from Lincoln (BM): S. & S., 1958, pl.81, 22). The rosettes are Rogers C249 and a smaller, similar one. cAD125-145. LXB Slot of granary type building. Phase 3.

76 Form 37, Central Gaulish. The upper part of a panel has a cross composed of fan-shaped motifs (Rogers G29). These were used by several Lezoux potters but not, apparently, in this type of arrangement. The motif occurs in series on a Hadrianic bowl from Housesteads, and this bowl may be the same date. LXC Slot of granary type building Phase 3. Not ill.

77 Form 29, South Gaulish. There is no parallel for the wreath or festoon of 'butterflies',

but the glaze suggests Neronian-Flavian date. PDG Phase 2 gravel spread.

78 Form 37, Central Gaulish, by a Hadrianic Lezoux potter who always used a bead-row below his decoration, and never used ovolos. He used the lioness (D.795), but the lion? (O.1403A) and panther (O.1519) are not known for him. QEB Phase I posthole and LRD upper filling of pit LR. Phase 3. Not ill.

COARSE POTTERY

by R.S. BIRSS with contributions from K. GREENE

The pottery was catalogued by fabric and form noting details of decoration, evidence of wear, repair and abrasion. Quantification was by rim percentage and sherd count. The full archive is housed at Derby Museum. The key groups and forms otherwise not published are illustrated and discussed below. Details of samian ware and mortaria from key groups are given in Tables 2 and 3. The bracketed codes are part of a type series used in the archive tables and catalogues. The archive consists of a full catalogue of pottery by context, tables giving fabric and form types by context and phase and detailed catalogues of the samian, mortaria and colour-coated wares.

Fabrics

The pottery fabrics were defined by examining a sample with a x20 binocular microscope and, thereafter, identified macroscopically except in doubtful cases. Heavy mineral analysis was carried out on a sample of BB1 ware to assess the homogeneity of the group and establish the source. A sample of Little Chester ware was also submitted for comparison. All fabrics are described according to Peacock's recommendations (1977) in the archive.

CTA1 A hard calcite-gritted fabric (?shell), usually orange-buff-brown in colour, often with a grey core. It felt rather sandy and had a laminar fracture. It was used for everted-rim storage jars (no.2) and rebated-rim jars (no.26). Similar forms in calcite-gritted ware were found in the Racecourse kilns 1-3, 4 and 5 but there was no evidence to suggest they were made there (pers. comm. M. Brassington).

CTA2 A hard calcite-gritted fabric usually dark grey with a laminar fracture and smooth feel. The fabric was found in contexts belonging to phases 4-7 and compared well in fabric and form to the products of the Greetham and Bourne kilns dating from the third century (samples in the University Museum, Nottingham).

GRY Reduced or oxidised sandy wares. This group comprises of several fabrics which were recorded in more detail in the archive catalogue. A local origin is postulated. One fabric was fine, hard and compared well with Little Chester ware. All the forms in this ware occurred in both oxidised and reduced fabrics but the bowls and beakers were normally oxidised and

the jars and flasks were normally reduced. A second fabric was orange, coarse and similar to Brassington's pre-Derbyshire ware (Brassington, 1980). It was used for rebated-rim jars, also made in a finer grey ware. The later grey wares tended to be coarser and often pale or silver grey in colour. These may have come from the grey-ware kilns associated with Derbyshire-ware kilns such as at Lumbrook (Brassington, 1980, 45-6). Heavy mineral analysis was carried out on some Little Chester ware.

BB1 Black-burnished ware Category I. A hard, granular, sandy fabric with abundant quartz and some shale inclusions. This fabric was normally black or dark grey. In the archive separate codes were used for the black sherds and those partially oxidised. However, heavy mineral analysis demonstrated the homogeneity of the two groups and indicated a Dorset source for the bulk of the material with a small percentage from Rossington Bridge or an unknown Midlands source.

BB2 Black-burnished ware Category 2 (Williams, 1977). Only one sherd was present.

DBY Derbyshire ware (as Kay, 1962). Heavy mineral analysis was carried out.

DW A shell-tempered fabric used for Dales-ware type jars and double lid-seated jars. Only one true Dales-ware type rim was found (in phase 4). The other two rims were of the fourth-century double lid-seated type (no.185) but the fabrics of the two types were indistinguishable under x20 magnification.

FL Flagon wares.

FLA A fine white or cream fabric, slightly micaceous. It was hard with a smooth fracture and feel. In some cases, the self-slip had fired to a darker hue than the paste suggesting the fabric was generally slipped, perhaps because of the inferior quality of the paste clay.

FLB A hard sandy orange fabric with a cream or white slip.

Both fabrics were found in the Racecourse kilns (Brassington, 1971, nos.256-9) and a green-glazed flagon waster from kiln 1 showed that flagons were part of the potters' repertoire. The occurrence of carinated bowls, and a rough-cast ware jar, both of Little Chester type, in these fabrics (Tables 7 and 9) and a distorted Hadrianic ring-necked flagon in pit FP suggests that these were made at Little Chester. This would be another example of the association of flagon and mortaria production as at *Verulamium*, Lincoln and Colchester (Castle, 1972; Webster, 1944; Hull, 1963).

MG A hard, fine, orange fabric with traces of a gold mica rich slip. Only one example, an early globular beaker, came from the site.

CG A fine orange fabric with a black, usually metallic colour-coat. Central Gaulish ware. (cf. Greene, 1978, 18).

COB A fine orange fabric with a brown colour-coat identified by K. Greene as probably belonging to Anderson's northern Gaul fabric group (1980, 28ff) which was either imported or made in western Britain.

CWB A fine buff/cream fabric with brown colour-coat, identified by K. Greene as probably belonging to Anderson's northern Gaul fabric group (1980, 28ff) as COB.

NV Nene Valley or Nene Valley type colour-coated ware. The variations in colour were recorded in the archive catalogue only.

ROX Oxford red colour-coated ware (as Young, 1977).

AMP The bulk of the amphora sherds were of Dressel 20 type. Samples of these and unidentified sherds were sent to D. Williams for comment (see below).

THE KEY GROUPS (Figs.39-46)

The form codes used in the archive are given in brackets.

Phase 1

QDA Pre Roman or early Roman ditch.

1 Two bodysherds with traces of oblique combed decoration and burnishing in a fine brown micaceous fabric with an orange-brown internal surface. Similar sherds were found in the silts LA. Sherds of this type from Moulton Park, Northants. (Williams, 1974, Fig.14, no.46) were given a pre-Roman date while examples from Dunstons Clump (Garton, forthcoming) and Strutt's Park (Dool, Fig.10 no.31) may be iron-age or early Roman. The sherds are certainly of 'native' type but not necessarily pre-Roman date.

PMA Trajanic-Hadrianic subsidence in pit.

2 CTA1 everted-rim storage jar (PA). This was not a common form and was restricted to phases 1-4 (Table 5). It occurred in the Trajanic Racecourse kilns 1 and 2 (Brassington, 1971).

3 GRY everted-rim jar (NA1). This was the commonest jar form until phase 4 when it was superseded by Derbyshire ware jars. A shoulder groove was characteristic (cf. Webster, 1971, Fig. 12, no.73).

4 GRY Flat-rim jar, cf. Gillam, 1970, no.100.

A BBI jar (MBI of early to mid second-century type) was analysed by D. Williams and a Dorset source was indicated (Fig.51). Most of the coarse wares and samian from this context was consistent with a Flavian-Trajanic date. The presence of a BBI jar was probably the result of subsidence or late filling in the Hadrianic period.

LAA silts

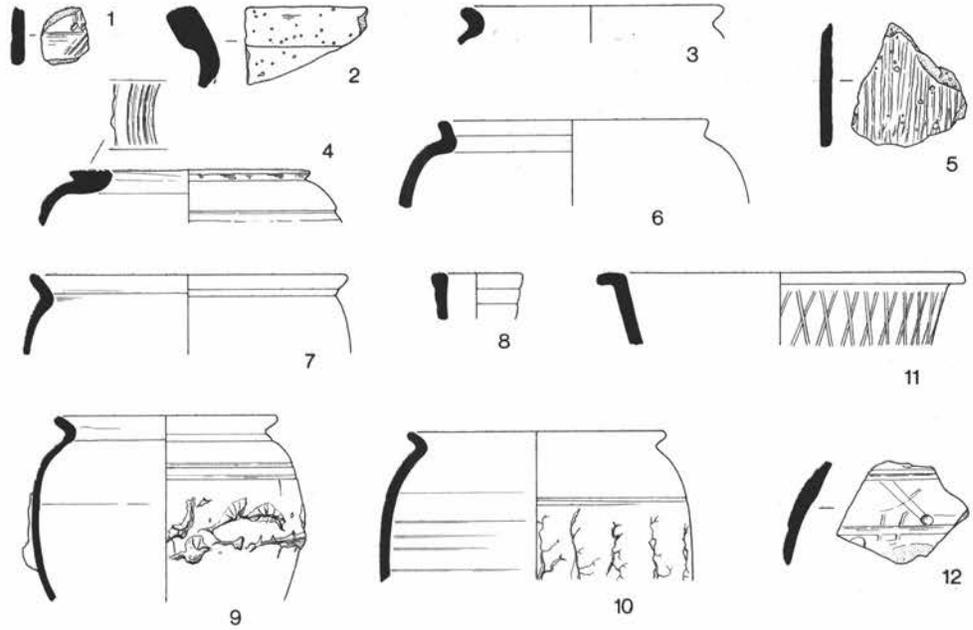
5 CTA1 bodysherd of jar with combed decoration (cf. Racecourse cemetery, Structure 1 pottery).

6 GRY rebated-rim jar (LA2) in a rather coarse sandy, orange fabric with an uneven surface comparable to Brassington's proto-Derbyshire ware (Brassington, 1971, nos.205-226; cf. rebated rim jars of south-east England, Jones and Rodwell, 1973, type F). This form stops in phase 3 (Table 4), when true Derbyshire ware begins, apart from residual examples in phase 6.

7 GRY everted-rim jar (NA1) with shoulder groove.

8 FLA ring-necked flagon with slightly flaring rim (JA1) which compares well with examples

PHASE 1



PHASE 2

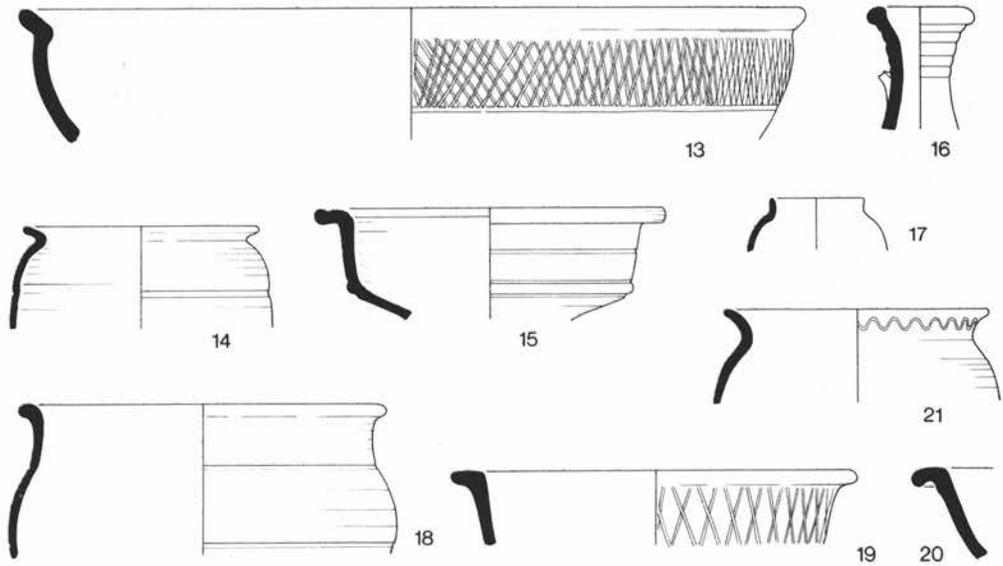


Fig. 39 Derby North-West Sector: coarse pottery nos. 1-21. Scale 1:4.

MYB

9 GRY everted rim jar with random rustication (NB1), late-first to second century.

10 GRY everted-rim jar with linear rustication (NB1), late-first to second century.

MTA

11 BB1 Flat-rim dish (B3). The steepness of the wall angle suggests an early date, perhaps Hadrianic (cf. Gillam, 1976, nos.54 and 58).

PJA

12 GRY bodysherd of ovoid jar (OA1) with obtuse lattice burnishing (cf. Brassington, 1971, nos.151-152 from Trajanic kiln 1). These ovoid jars were superseded by a heavier version by phase 6 (cf. coarse wares associated with Derbyshire ware production, Brassington, 1980, Fig.23 nos.580-581). These two forms graded into one another and during phases 4 and 5 a single transitional form only could be distinguished.

The remaining slots yielded a similar range of rusticated sherds (NB1), everted-rim jars (NA1) and a bead-rim bowl (CC/CD 2). Only MT and MH need be later than the Flavian to Trajanic period and the Hadrianic sherds from those slots may date to the demolition of the structures.

Phase 2

FT Hadrianic gravel layers predating features LF and KF (includes site codes FT, KX, KM and KE).

13 GRY everted-rim bowl (CF1) with a zone of lattice burnishing. This was apparently not a common form but the rim sherds were difficult to distinguish from the painted bowls (no.28) so more may have been present. It was most numerous in phase 4 and was probably a variant of the painted bowls made in Racecourse kiln 5 and dated to the middle of the second century.

14 GRY everted-rim jar (NA1).

15 GRY reeded-rim bowl (CC5. Cf. Brassington, 1980, no.366 from a first-century AD well under kiln 4a; Brassington, 1971, nos.17-20 from Trajanic kilns 1-3). This type is generally dated to the late-first to early-second century (Gillam, 1957, nos.214-217).

16 FLA splayed ring-necked flagon (JA2) with a slight internal rebate. This form was dated to the middle of the second century at Trentholme Drive, York (Wenham, 1968, Fig.19 nos.1-3) and the Hadrianic period in London (Marsh and Tyers, 1978, type 1B5). At Little Chester, it was commonest in phase 3

(Table 8) suggesting a Hadrianic to mid-Antonine date.

17 GRY everted-rim globular beaker (G1). Beakers tended to become less globular during the second century.

18 GRY wide-necked jar (DA1. Cf. Brassington, 1971, nos.26-36 from Trajanic kilns 1-3; Brassington 1980, nos.315-325 from kiln 4 dated to the second half of the second century). As with the ovoid jars (no.12) this form became heavier and coarser through time and was superseded by no.186 by phase 6 (cf. Brassington, 1980, no.582 from Holbrook II).

19 BB1 flat-rim dish/bowl (B3. cf. Gillam, 1976, no.34, early- to mid-second century).

20 BB1 as no.19.

21 BB1 jar (MB3. cf. Gillam, 1976, no.3, mid- to late-second century).

22 FLB cupped-rim bowl (CC4) with external grooves (cf. Brassington, 1971, nos.16 and 23 from Trajanic kiln 3; Brassington, 1980, no.524 from kiln 6 dated to the first half of the second century). A similar form occurred in the early fine ware range of the London area (Marsh, 1978, type 44.7) and at Wroxeter and Usk (Darling, 1977, Fig.6.7, nos.21-2 and Fig.6.5 no.21). At Little Chester, it was found in contexts belonging to phases 2, 3 and 5 suggesting a Hadrianic to early-Antonine date, but the evidence of the kilns extends the date range back into the Trajanic period. It was made in fabrics FLA, FLB and GRY.

23 FLB trefoil-mouth flagon (JD1. cf. Marsh, 1978, type 1).

24 GRY flanged bowl with spout in unusually coarse brown sandy ware. The form is atypical but can be broadly paralleled in the early-second-century London fine ware range (Marsh, 1978, type 34.14.).

25 GRY dish with lightly grooved rim.

26 CTA1 rebated-rim jar (LA2).

27 GRY necked beaker with burnished surfaces.

28 GRY bodysherd of bowl with white painted decoration (CE1). This form often had a cordon around the lower body and was sometimes undecorated (no.144). It was found in kiln 5 (Brassington, 1980, 383-5) dated to the mid second century and was most common in phase 3 at Little Chester. This type and the everted rim bowls (CF1, no.13) seem to be primarily Antonine types (Table 6) with a Hadrianic start. They may have been influenced by samian forms Dr.44 and 81 or have the same prototype as these. Comparable painted bowls from Wilderspool were dated to AD110-

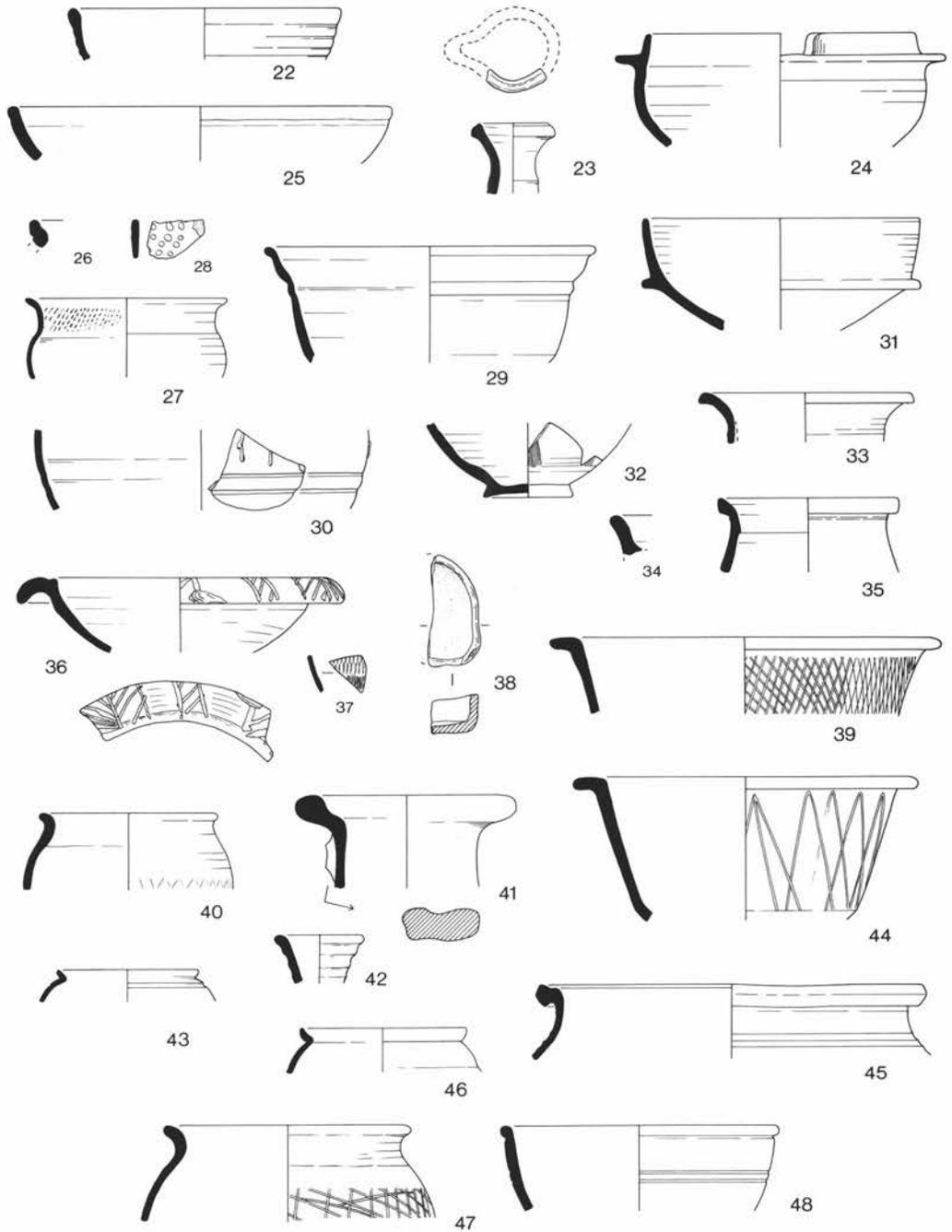


Fig. 40 Derby North-West Sector: coarse pottery nos. 22-48. Scale 1:4.

160 and a similar ancestry postulated (Hartley, 1980, 474). The form is also known at *Margidunum* (Oswald, 1952, Pl.VII, no.7).

29 GRY bead-rim bowl with rounded carination (CC2) paralleled in kilns 2B, 6 and the London fine ware repertoire (Brassington, 1971, no.2; Brassington, 1980, no.523; Marsh, 1978, type 44). This and a hemispherical bowl (CD2, no.48) were often difficult to distinguish. Certain examples of CC2 were restricted to phases 1-4 and most numerous in phases 1 and 2. Sherds which may belong to carinated or hemispherical bowls continued into phase 5 but were most numerous in phases 1 and 2. An early- to mid-second-century date range would agree with this and the evidence from other fine ware industries at York, London, Wroxeter and Usk.

30 GRY rusticated sherd.

31 GRY plain-rim bowl with stubby flange (CE10). This form was found in kiln 8, dated Hadrianic to early Antonine (Dool, below nos.65-66). It bears some resemblance to samian form Dr.44 and also one of the London fine ware types (Marsh, 1978, no.14) which was rather smaller and probably influenced by Terra Nigra vessel forms.

32 GRY beaker with combed decoration similar to London ware (Marsh, 1978) and known from the Racecourse kilns (Brassington, 1971, 21b).

33 GRY narrow-necked jar (OA 1), see no.12.

34 GRY platter (A. cf. Hawkes and Hull, 1947, no.24, mid-first century).

35 GRY butt beaker in fine orange fabric with grey core. Late-first century.

36 GRY flanged bowl in orange ware with brown painted decoration (CD7) on the flange. Flanged bowls were made in kilns 1-3, 4a, 5 and 7 on the Racecourse. The absence in kiln 6 may be due to the small quantity of pottery recovered. It was paralleled in the London area (Marsh, 1978, types 33 and 34) in the early second century. At Little Chester, the form was commonest in phase 2 and was present in quantity until phase 4 (Table 6). Thereafter it was rare and almost certainly residual. All the examples from phase 5 came from the BA deposit laid down in phase 4. A Hadrianic to Antonine date range is likely.

37 FLA fine white ware rouletted sherd probably from a first-century butt beaker.

38 Handmade lamp in a sandy orange ware with grey surfaces.

Not illustrated: everted-rim jars (NA1), carinated

bowls (CA1), wide-mouthed flagon (JA4 see no.41), BB1 flat-rim bowls (B3), Dressel 20 amphora rim, Hadrianic ring-necked flagon (JA2 see no.16), a globular beaker and a BBI lid.

A small amount of Hadrianic samian and a mortarium dated AD70-120 was found in these layers. This and the Hadrianic to Antonine coarse ware types suggests these layers were deposited during the Hadrianic or possibly early-Antonine period.

PD Hadrianic gravel layers on east side of excavated area.

39 BB1 flat rim bowl (B3), early- to mid-second century.

40 BB1 jar (MA. cf. Gillam, 1976, no.31, mid second century: Brassington, 1980, no.460 from mid second-century kiln 5).

41 FLA wide-mouthed flagon with internal rebate (JA4. cf. Robertson, 1975, no.s2-3). This form was restricted to phases 2-4 suggesting a Hadrianic to Antonine date range.

42 FLA ring-necked flagon (JA3. cf. Marsh and Tyers, 1978: type 1B7, mid-second century).

43 MG globular beaker.

Not illustrated: indented rough-cast ware sherd, everted-rim jar (NA1), wide-mouthed jars (DA1), ovoid jars (OA1), rebated-rim jars (LA2), painted sherds (CE1), carinated bowl (CQ1), flanged bowl (CD7), colander, Dressel 20 amphora rim, and a tette (see no.55).

The samian from these layers was Flavian-Trajanic with no later types. However, the presence of BB1 sherds vouchsafes a Hadrianic date, in keeping also with the painted sherds, flagon types and mortaria types, and highlights the problem of residual pottery in the gravel layers.

LFA Hadrianic feature

44 BB1 flat-rim bowl (B3), early-second century.

45 GRY rebated-rim bowl (LA2).

46 GRY beaker with slightly dished, everted-rim.

Not illustrated: everted-rim jar (NA1), trefoil-mouth flagon (JD1 as no.24) and a cupped-rim bowl CC4).

The BB1 ware gives a Hadrianic date at the earliest.

LR Hadrianic pit. Lower filling.

47 BB1 jar (MB, cf. Gillam, 1976 no.1, early- to mid-second century).

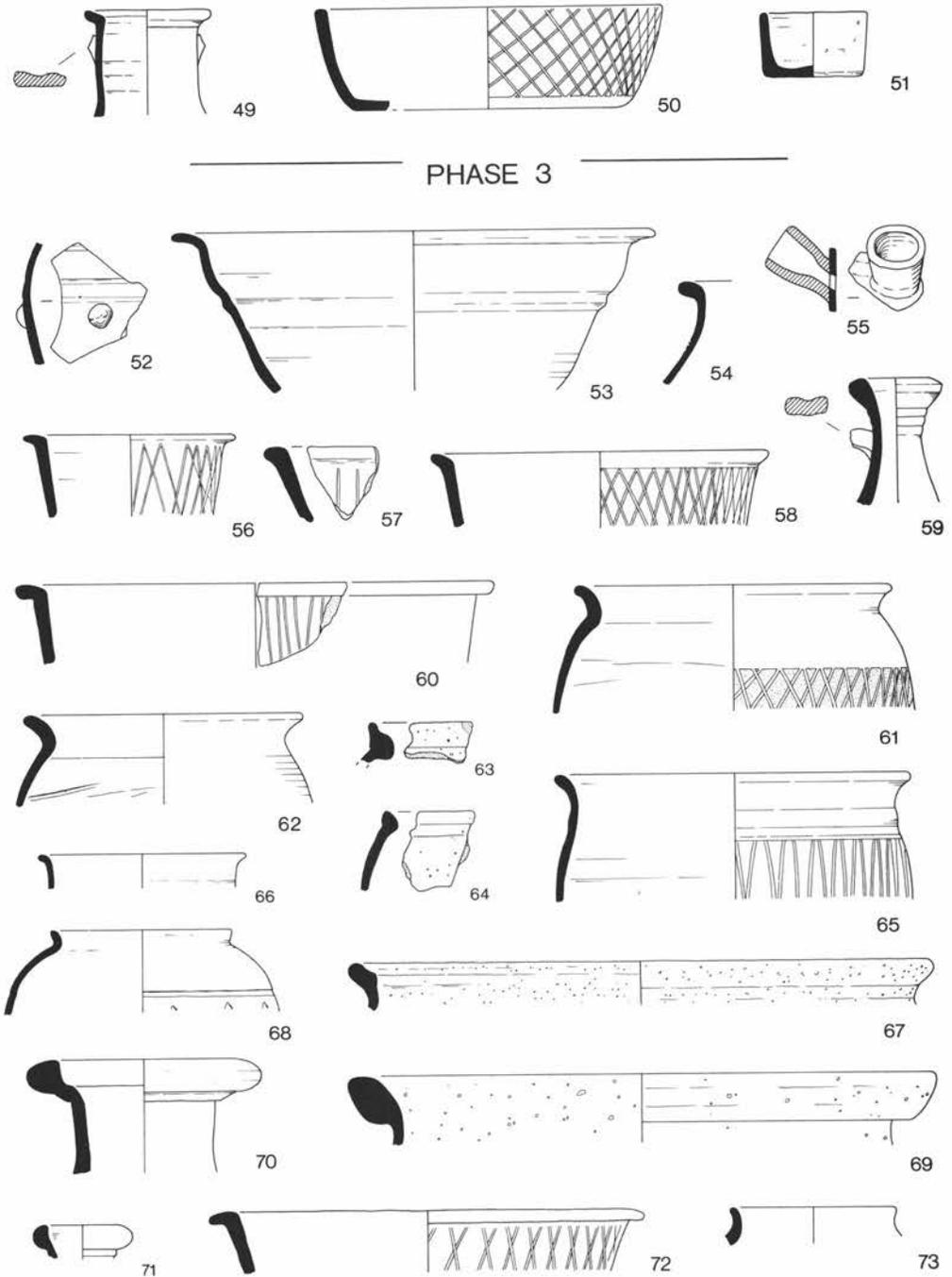


Fig. 41 Derby North-West Sector: coarse pottery nos. 49-73. Scale 1:4.

48 GRY bead-rim hemispherical bowl (CD2) see no.29.

49 GRY two-handled jug (KA1). A four-handled jug waster was found in kiln 4 (Brassington, 1980, no.336) and a two-handled jug in kiln 2 (Brassington, 1971, no.145). At Little Chester, the form was restricted to phases 2-4 but may have been residual in phases 3-4 (Table 4).

50 BB1 plain-rim dish (B1. cf. Gillam, 1976, no.76, mid- to late-second century).

51 GRY small dish.

Not illustrated: everted-rim jars (NA1), flanged bowls (CD7), ring-necked flagons of the first half of the second century (JA1-2) triple vase, Dressel 20 amphora sherds and one sherd of Derbyshire ware.

The samian included some Hadrianic or early-Antonine types. This and the BB1 ware types suggests a late-Hadrianic or early-Antonine date. The upper filling contained similar types and included late Hadrianic to early-Antonine samian indicating this pit belonged to the end of phase 2.

Pit HY yielded a similar range of pottery.

Phase 3

JR early- to mid-Antonine occupation layer lying above the phase 2 gravels.

52 GRY closed vessel with applied bosses.

53 GRY carinated bowl with everted-rim (CC1) similar to no.29 early- to mid-second century.

54 GRY fairly coarse orange ware narrow-necked jar/flask (KA2) which was superseded by a Derbyshire ware equivalent in phases 5 and 6 (Table 9). Some examples bore handle scars.

55 FLB nozzle of tette (cf. Brassington, 1980, no.555). This form was made in samian ware (Webster, 1981) and in coarse wares, notably at Longthorpe, Usk and Wroxeter (Webster, 1981, 253). The suggested uses vary: an invalid cup, lamp filler, baby's bottle and a vessel used for the application of clay on barbotine.

56 BB1 flat-rim dish (B3), early to mid-second century.

57 BB1 flat-rim dish (B3), mid-second century.

58 BB1 flat-rim dish (B3), mid-second century.

59 FLA ring-necked flagon (JA2), mid-second century.

Not illustrated: Hadrianic ring-necked flagon (JA2), flanged bowl (CD7) and everted-rim jars (NA1).

The latest sherd from this deposit gave a terminal date of AD150-80. The bulk of the material was early to mid second century so a date range centred on AD150 is acceptable.

FL/FCJ early to mid-Antonine gravel layer predating slots GL and GF.

60 BB1 flat-rim dish (B3), early- to mid-second century.

61 BB1 jar (MB1. cf. Gillam, 1976, no.1), early-second century.

62 BB1 jar (MB4. cf. Gillam, 1976, no.4), late-second century or no.3, mid- to late-second century.

63 CTA1 rebated-rim jar (LA18). A type restricted to phase 3.

64 CTA1 rebated-rim jar (LA2) with vestigial neck cordon.

65 GRY carinated bowl (CA1). This form was made in kilns 1-5 and 8 (Brassington 1971; 1980; Dool, below nos.60-62). The upper body was normally more concave than this example but compare Brassington, 1980, no.310 for convexity and decoration. The form has clearly developed from the late La Tène cordoned cup range (cf. Marsh, 1978, type 44.11, 14, 17; Todd, 1969, Fig.13, no.9) and occurred in all phases at Little Chester although it was possibly residual after phase 4.

66 GRY rim of closed vessel possibly a long necked carinated jar (DC1), cf. at North Hykeham (Thompson, 1958).

67 DBY unusual rim form.

68 GRY rusticated jar (NB1).

69 CTA1 storage jar (PA see no.2).

70 FLA wide-mouthed flagon (JA4 see no.41).

71 FLA narrow-necked flagon with internal rebate (JA5). This type was most numerous in phase 4. It was dated to the late- second to early- third century at Trentholme Drive, York by Gillam (Wenham, 1968) and Webster cited Antonine parallels (1961, 105).

Not illustrated: everted-rim jars (NA1), everted-rim bowl as no.13 globular beaker (G1), wide-mouthed jar (DA1), Dressel 20 amphora rim, Derbyshire ware everted-rim jar (LA1) and some ?Nene Valley colour-coated sherds. A flat-rim dish (B3) and an unusual lipped vessel in BB1 ware were identified as Dorset products by D. Williams (Fig. 51).

There were no types present which demanded a date late in the mid-Antonine period, indeed an early Antonine date is possible.

FCF Antonine gravel layer into which the phase 3 slots were dug.

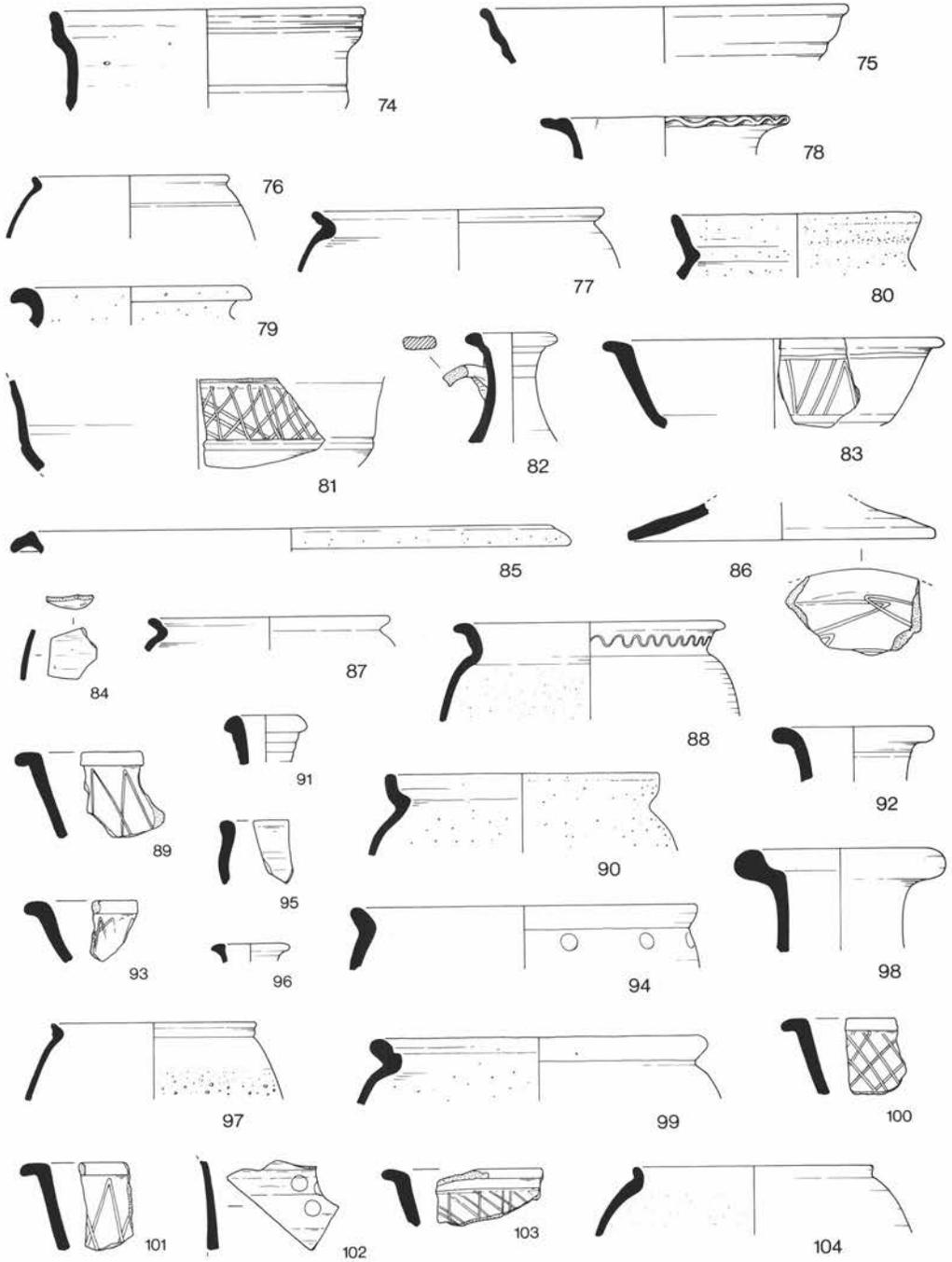


Fig. 42 Derby North-West Sector: coarse pottery nos. 74-104. Scale 1:4.

72 BB1 flat-rim bowl (B3. cf. Gillam, 1976, no.63), mid- to late-second century.

Not illustrated: everted-rim jars (NA1), wide-mouthed jar (DA1) and a carinated bowl (CA1).

Slots

GE

73 GRY everted-rim jar.

GT

74 FLA carinated bowl with slightly cupped rim (CC4) as no.22.

GK

Not illustrated: ovoid jar (OA1).

FPN

75 GRY bead-rim bowl (CC2) as no.29.

76 GRY everted-rim beaker (G1).

FPP

77 GRY everted-rim jar (NA1).

Not illustrated: bodysherd of BB1 dish with burnished intersecting loops.

FC gravel layers containing mid-Antonine pottery overlying slots and underlying phase 4 industrial features. These layers may belong to the end of phase 3 or the beginning of phase 4 but in either case the pottery is residual phase 3 material and is therefore considered here.

78 GRY flanged bowl with frilled rim.

79 DBY rolled-rim jar (LA4).

80 DBY cupped-rim jar (LA5).

81 GRY carinated bowl with lattice burnishing (CA1) as no.65.

82 FLA splayed ring-necked flagon (JA2), Hadrianic to Antonine as no.16.

83 BB1 flat-rim dish (B3) mid- to late-second century.

Not illustrated: everted-rim jars (NA1), rebated-rim jars (LA2), and BB1 flat-rim dish (B3). A flat-rim dish (B3) in BB1 ware of mid- to late-second century type was identified as a Dorset product by D. Williams (Fig.51).

These gravels contained early-Antonine samian but the mortarium no.17 suggests they date to the end of that period at the earliest.

HF Granary-type building

84 NV indented beaker, late-second century to early-third century (Howe, *et al.* 1980). Post packing.

85 GRY an abraded rim sherd of a flanged bowl (CD7). Post packing.

86 BB1 lid with burnished lattice or inter-

secting loops on under-surface. Humic outer filling.

87 GRY rebated-rim jar (LA2) in a rather coarse orange ware, ?pre-Derbyshire ware. Humic outer filling.

88 BB1 jar (MB3), mid- to late-second century. Posthole.

89 BB1 flat-rim dish (B3), mid- to late-second century. Posthole.

90 DBY cupped-rim jar (LA5). Posthole.

91 FLA ring-necked flagon (JA1), early-second century. Posthole.

Not illustrated: everted-rim jars (NA1), oxidised sherd with roughcast decoration and narrow-necked jar (OA1).

LX filling of slot.

92 GRY narrow-necked jar (OA1).

93 BB1 flat-rim bowl (B3. cf. Gillam, 1976, no.62), mid-second century.

94 GRY everted-rim bowl with white painted spots (CE1) see no.28.

Not illustrated: everted-rim jars (NA1), BB1 jar and Derbyshire ware sherds.

CG filling of slot.

95 GRY everted-rim bowl, cf. Brassington, 1971, no.125.

96 FLA ring-necked flagon (JA2) see no.16.

97 COB cornice rim roughcast beaker; late-first to early-second century, cf. Anderson, 1980, fig.11.

Not illustrated: everted-rim jars (NA1).

JW filling of slot.

98 FLB wide-mouthed flagon (JA4), see no.41).

99 DBY rebated-rim jar (LA2).

100 BB1 flat-rim dish (B3. cf. Gillam, 1976, no.59) mid-second century.

101 BB1 flat-rim dish (B3. cf. Gillam, 1976, nos.37 and 40) mid- to late-second century.

102 GRY sherd with white painted spots probably from bowl cf. Brassington, 1980, no.525.

Not illustrated: everted-rim jar (NA1) and carinated bowl (CA1).

JQ lower filling.

103 BB1 flat-rim dish (B3) ?mid-second century.

104 BB1 jar (MA. cf. Gillam, 1976, no.32) mid- to late-second century.

105 FLA splayed ring-necked flagon (JA3) ?mid-second century.

Not illustrated: everted-rim jars (NA1), Derby-

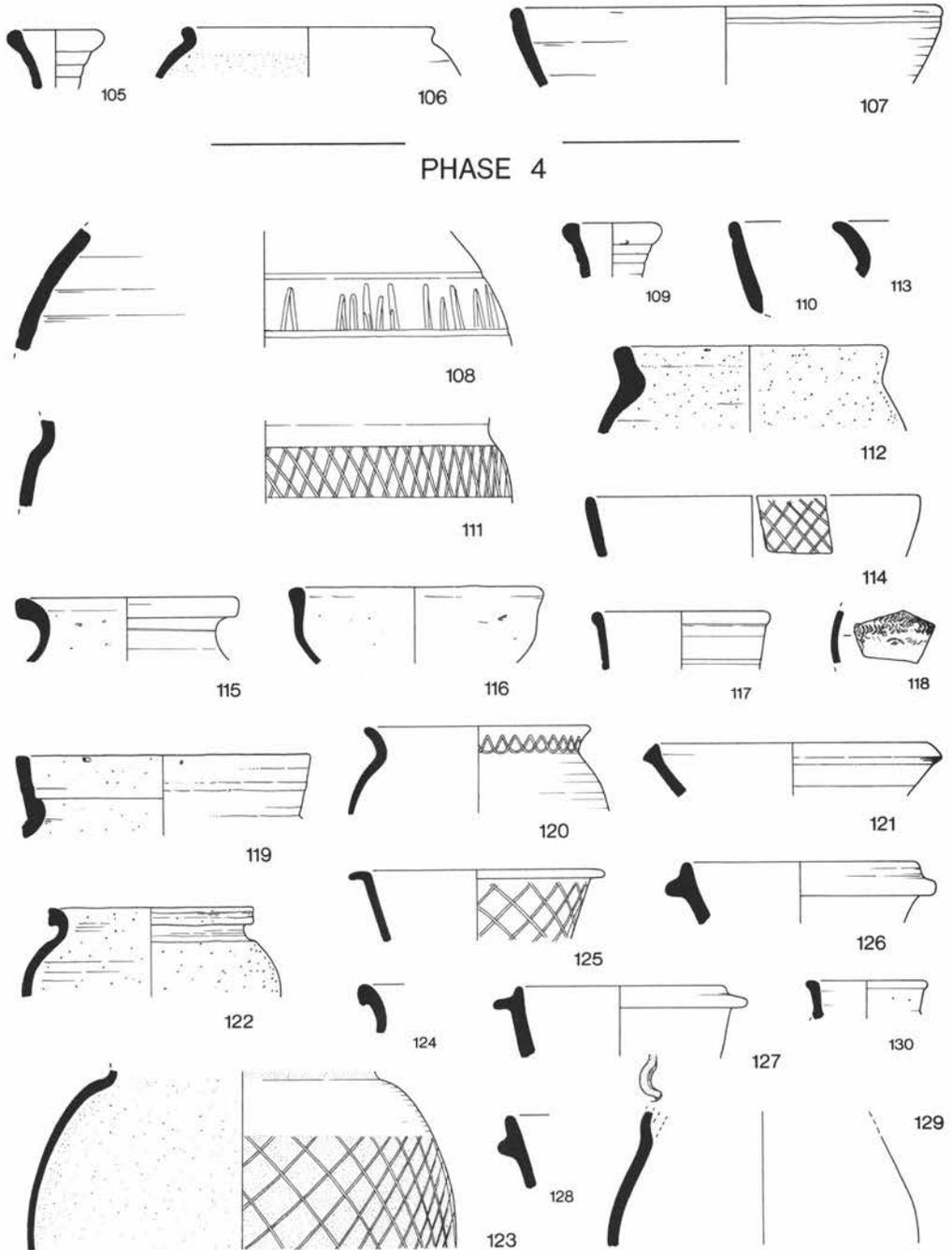


Fig. 43 Derby North-West Sector: coarse pottery nos. 105-130. Scale 1:4.

shire ware jar (LA2), carinated bowl (CA1) and beaker (G1).

DQ lower filling.

106 BB1 jar (MA.Cf. Gillam, 1976, no.30) early- to mid-second century.

107 BB1 grooved-rim dish (B2).

Not illustrated: Derbyshire ware jar, flanged bowl (CD7), carinated bowl (CA1), everted-rim bowl (CE1) and everted-rim jar (NA1). The lower fillings of these slots included early- to mid-Antonine samian while the upper fillings yielded some mid- to late-Antonine samian in relatively small quantities. The structure probably went out of use in the mid-Antonine period. The pits FP/LH, EK, AC, AZ, GO and DC contained phase 3 type pottery in their earliest fillings.

Phase 4

EO mid- to late-Antonine coal layer.

108 GRY bodysherd of ovoid jar in a hard brick orange fabric with large reddish brown inclusions (OB1), see no.12.

109 FLA ring-necked flagon with internal seating (JA5), late-second- to early-third century, see no.73.

110 GRY grooved-rim dish (B2).

111 GRY wide-mouthed jar with lattice burnish on shoulder (DB1), see no.18.

112 DBY cupped-rim jar (LA5).

113 BB1 jar (MB3) mid-to late-second century.

114 BB1 plain-rim dish (B1).

115 GRY narrow-necked ovoid jar (OA1, see no.12).

116 GRY bead-rim hemispherical bowl (CC/CD2), cf. Marsh, 1978, type 29.

117 GRY bead-rim bowl.

118 GRY roller-stamped sherd.

Not illustrated: NV rouletted sherd. A flat-rim dish in BBI ware was identified by D. Williams as a Dorset product (Fig.51).

Both the samian and the coarse wares point to a late-second to early-third century date for this deposit.

BP ?late-Antonine well pit filling.

119 DBY cupped-rim jar (LA5).

120 BB1 jar (MB3) mid- to late-second century.

121 NV unusual dish or lid.

BP second to third/?fourth century well filling.

122 DBY rolled-rim jar (LA4).

123 BB1 jar bodysherd with obtuse lattice burnishing, late-third century ff.

124 CTA2 hooked-rim jar (LA10), late-second to third century, see under fabric CTA2.

125 BB1 flat-rim dish (B3. cf. Gillam, 1976, no.60), mid-second century.

126 GRY flanged bowl (B6) third to fourth century.

127 As above.

128 As above.

129 GRY unusual sherd of closed vessel with pierced lug.

Not illustrated: NV rouletted sherd.

The NV sherd from the pit filling suggests a late-second to early-third century date for the construction of the well and the flanged bowls, the BB1 and CTA2 jars indicate it was receiving ceramic rubbish in the third to fourth century. It was stratigraphically earlier than the phase 5 building and must have gone out of use in the late-third or early-fourth century (see p.).

ES Antonine hearth.

130 GRY flask (HA2) in fine orange fabric (cf. Kay, 1962, Fig.13 no.19 from Hazelwood).

Not illustrated: BB1 plain-rim dish.

The pottery from this and the other hearths and ovens of phase 4 suggest they were in use during the late-second and early-third century.

BA late-second- or third-century humic layer sealed by ALA phase 5 clay floor.

131 DBY cupped-rim jar (LA5).

132 FLA wide-mouthed flagon (JA4), Antonine.

133 GRY lid.

134 GRY rebated-rim jar (LA9).

135 BB1 flat-rim dish (B3), mid- to late-second century.

136 BB1 dish with incipient flanged rim (B5. cf. Gillam, 1976, no.42), late-second to early-third century.

137 BB1 plain-rim dish (B1. cf. Gillam, 1976, no.79), early-third century.

138 GRY narrow-necked jar (OAI).

139 GRY indented beaker with rough cast decoration (cf. Gillam, 1968: no.76, mid- to late-second century).

140 NV indented beaker, late-second to early-third century.

141 NV everted-rim beaker.

Not illustrated: bodysherd of cream ware bowl with painted decoration, everted-rim jars (NA1) and flanged bowl (CD7).

The pottery was consistent with a deposit laid down in the late-second to early-third century.

Other forms present in Phase 4 features.

142 GRY undecorated example of form CF1, see no.13. JYN gravel layer on east side of excavated area.

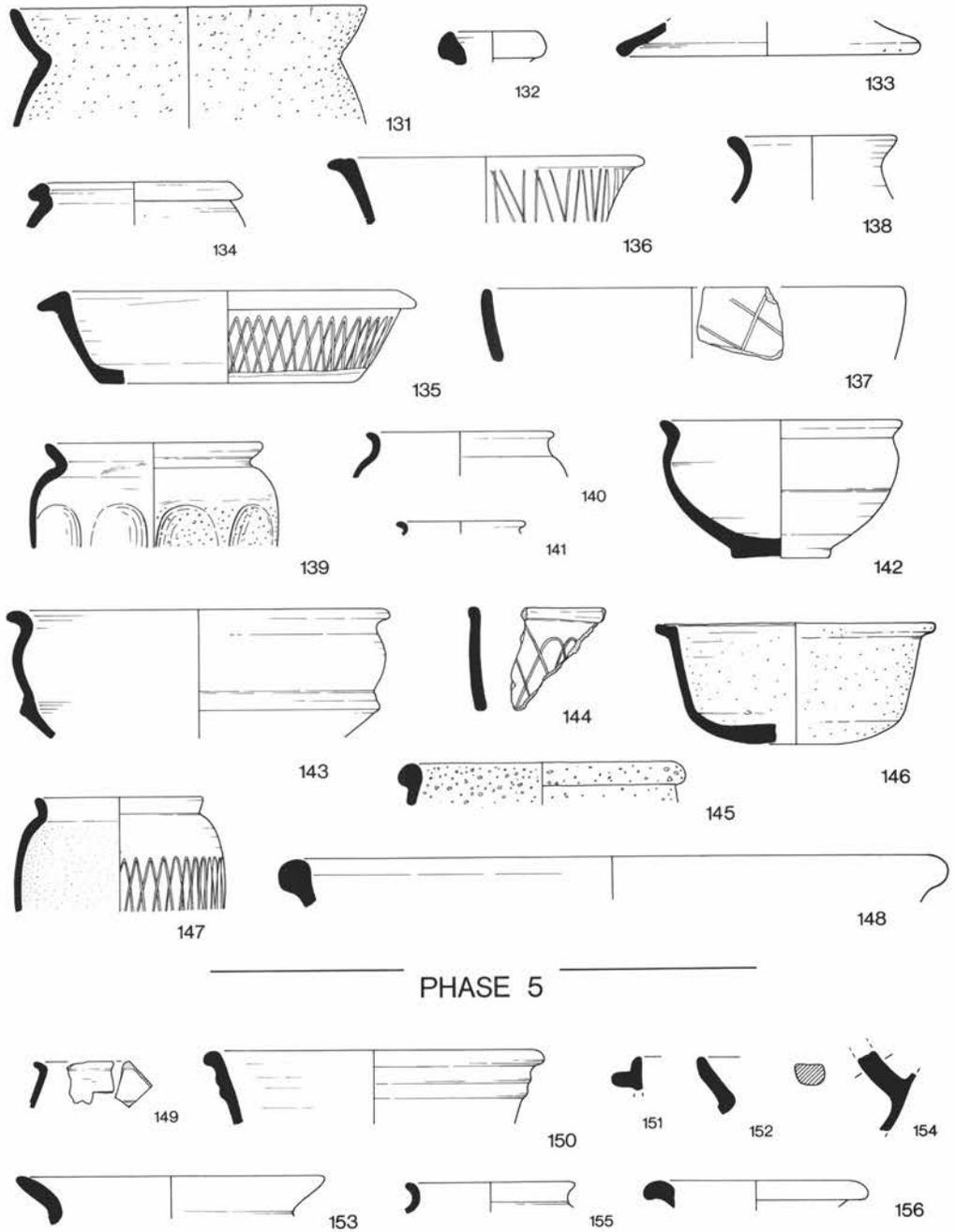


Fig. 44 Derby North-West Sector: coarse pottery nos. 131-156. Scale 1:4.

143 GRY undecorated variant of CE1, see no.28. GZP Phase 4 layer in pit EK.

144 BB1 grooved-rim dish (B1. cf. Gillam, 1976, no.73), early-third century. ABQ gravel layer on east side of excavated area.

145 CTA2 bead-rim jar (LA8) similar to products of the third-century Bourne kilns, Lincs. JYN gravel layer on east side of excavated area.

146 DBY slightly rebated-rim bowl. EXP Phase 4 layer in pit EX/GO.

147 BB1 jar (MA. cf. Gillam, 1976: no.31). JT Phase 4 pit.

148 GRY bead-rim deep bowl (EA1) similar to bowls produced by the S. Yorkshire kilns (Buckland *et al.*, 1980: type H c and d). JT Phase 4 pit.

Phase 5

Stone-sill building, fourth century.

AJ wall

149 NV everted-rim beaker with rouletted zone on shoulder (cf. Howe, *et al.*, 1980, nos. 54-7), fourth century.

150 FLA variant of bowl CC4, see no.22.

CYA foundation trench of AJ.

151 GRY flanged bowl (B6) probably fourth century.

152 DBY cupped-rim jar (LA5).

ALB clay floor.

153 GRY jar with everted rim (cf. Brassington, 1980, no.458).

154 ?NV handle in fabric with pale grey surfaces and greyish white paste,? Nene Valley flagon (cf. Howe, *et al.*, 1980, nos.63-8), fourth century.

155 ?NV fabric as no.155. Everted-rim beaker (cf. Howe, *et al.*, 1980, nos.40-1), late-second to early-third century.

Not illustrated: Derbyshire ware jars and lids.

ALA surface of clay floor.

156 GRY narrow-necked jar with outcurving rim (OB4).

157 FLA closed vessel with brown painted decoration.

158 NV long-necked beaker (cf. Howe, *et al.*, 1980, no.54), fourth century.

159 NV funnel-necked beaker (Howe, *et al.*, 1980, 18), mid- to late-third century.

160 NV folded beaker sherd, late-second to third century.

Not illustrated: Derbyshire ware jars, an Oxford red colour-coated ware sherd (late-third to fourth century) and a Mediaeval or Post-

Mediaeval tile.

This building certainly was constructed in the fourth century and probably went out of use in the first half of that century.

Post structure: DR, EM, MEA, JF, JZ, HJ, HL. Fourth century.

EM

161 BB1 jar (MB3 or 4), late-second to early-third century.

162 BB1 flat-rim dish (B3), mid-second century.

163 BB1 flanged bowl (B6), late-third to fourth century.

MEA

164 GRY everted-rim jar (NA1).

165 GRY everted-rim bowl (CF1).

166 DBY cupped-rim jar (LA5).

167 BB1 jar (MB9. cf. Gillam, 1976, no.9), mid- to late-third century.

HJ

168 NV everted-rim jar (cf. Howe, *et al.*, 1980, nos.75-7) fourth century.

In addition JL contained a Mancetter-Hartshill mortarium dating to the third or fourth century. If these postholes were contemporary, they must date to the late-third to fourth century. Postholes BC, BD, BE, BF and CK contained mostly second-century pottery although BD included a flanged bowl (B6) suggesting a third- or fourth-century date.

Phase 6

BL fourth-century pit cutting ALA.

169 CTA2 everted-rim jar (LA12). This form was restricted to phase 6.

170 BB1 jar (MB10. cf. Gillam, 1976, no.10), late-third century.

Not illustrated: Derbyshire jars, everted-rim jars (NA1), the base of a fourth-century NV dish and a painted sherd of fourth-century type.

BQ fourth-century pit cutting pit BL and ALA.

171 CTA2 rouletted sherd.

172 BB1 flanged bowl (B6), fourth century.

173 DBY rolled-rim jar (LA4).

174 GRY plain-rim dish (B1).

175 NV fourth-century dish (cf. Howe, *et al.*, 1980, no.87).

176 NV long-necked beaker (Howe, *et al.*, 1980, nos.50-3), third century.

177 NV neck of cordoned flagon (cf. Howe, *et al.*, 1980, nos.64-65), fourth century.

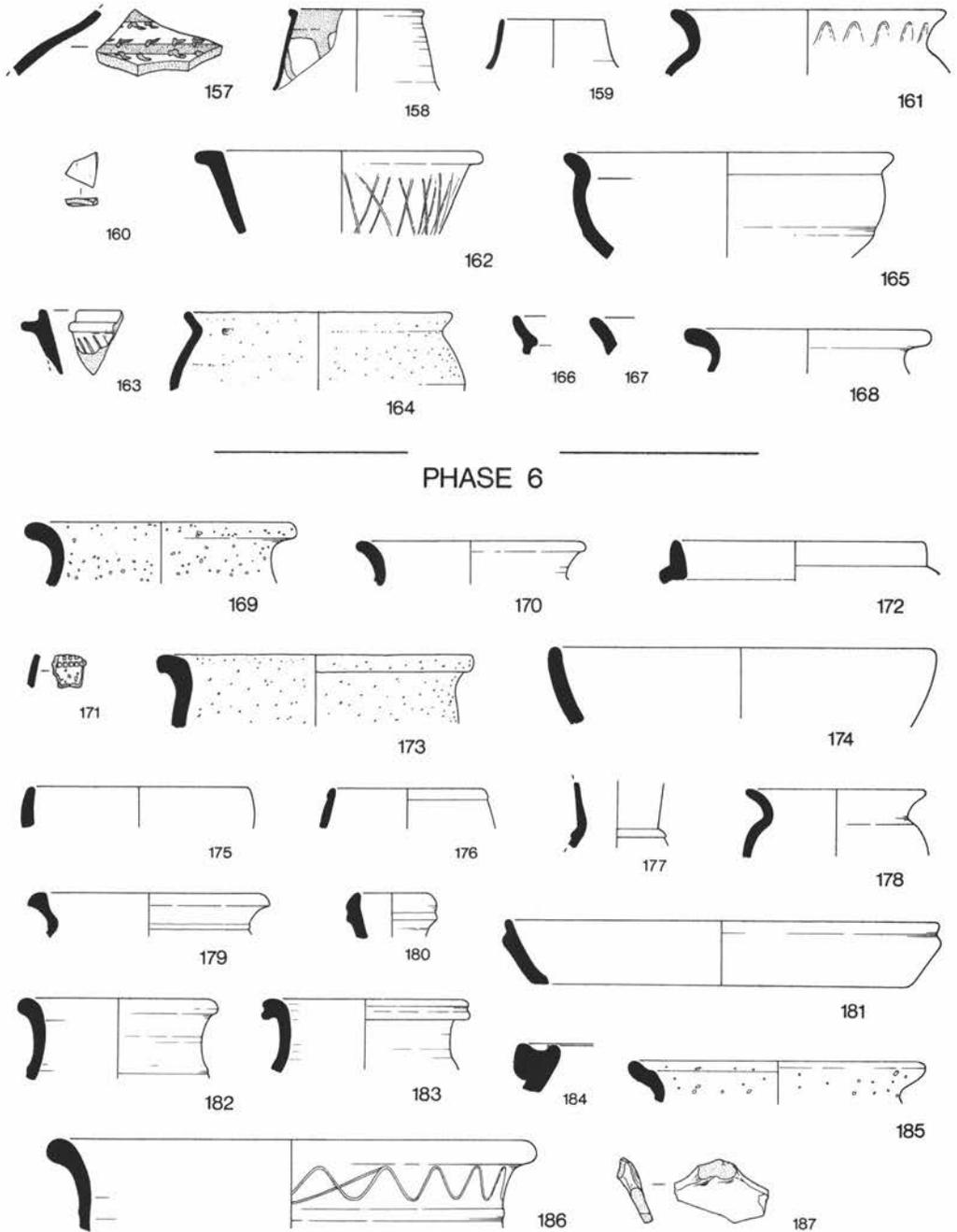


Fig. 45 Derby North-West Sector: coarse pottery nos. 157-187. Scale 1:4.

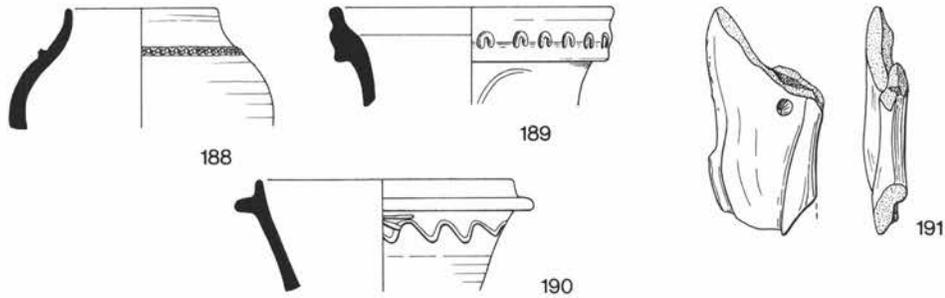


Fig. 46 Derby North-West Sector: coarse pottery nos. 188-190. Scale 1:4. Pipeclay figurine fragment no. 191. Scale 1:2

Not illustrated: NV painted vessel, probably Howe, *et al.*, 1980, no.85, fourth century, an Oxford red colour-coated bowl (Young, 1977, C51, AD240-400+).

Derbyshire ware jars, flanged bowls (B6) and calcite-gritted everted-rim jar (LA12).

Other forms present in phase 6 or late.

178 BB1 jar (MB8 cf. Gillam, 1976, no.8), mid-third century. ANA spread.

179 GRY lid-seated jar (LA11) BNA subsidence over GO.

180 FLA pulley-wheel rim flagon (JA6). CAB subsidence over EK.

181 BB1 unusual dish form. ACA top of phase 3 pit AC.

182 GRY late narrow-necked jar (OB1), see no.12. ACA top of phase 3 pit.

183 GRY late narrow-necked jar with bifid everted rim (OB5). HYA top of phase 2 pit, HY.

184 GRY flanged rim bowl cf. Swanpool type D19-23 (Webster and Booth, 1947), fourth century. ABC late gravel layers.

185 DW double lid-seated jar (cf. Darling, 1977, 30), fourth century. ABA late gravel layer.

186 GRY wide-mouthed jar (DB1) with double wavy line burnish on neck. AZA top of Phase 3 pit.

187 NV rim of wide-mouthed vessel with handle in an orange fabric with a brown colour coat (cf. Howe *et al.*, 1980: no.74). Late fourth to fifth century. BSA Phase 6 subsidence.

4th century grey ware from the topsoil

188 Silver grey ware flask. Cf. Swanpool C12 (Webster and Booth, 1947).

189 Grey ovoid hooked-rim jar with impressed decoration. Cf. Corder, 1951, no.8). Late fourth century.

190 Granular grey ware flanged bowl with external wavy line.

191 Fine white pipeclay fragment of upper leg of adult figure. The figurine is perforated. The gap between the front and back portions suggests the two halves were mould-made separately and luted together. FTD.

Context	Source	Form	Decorated No.	Stamped No.	Date
Phase I					
LA	SG	37			Flav-Traj
	SG	18			Flav
MEB	SG	18/31			Flav-Traj
MH	CG				Had
PM	SG	30			Flav-Traj
	SG	30 or 37			Flav-Traj
Phase 2					
FT	SG	18/31			Flav-Traj
	SG				Flav
	SG	18/31			Flav-Traj
	SG	27			Flav-Traj
	SG	37			Flav-Traj
FT & FLB	Lezoux	37	57		Traj-Had
FT	SG	18R			Flav
	SG	27			Flav
	SG	37			Flav

Context	Source	Form	Decorated No.	Stamped No.	Date
	CG				Had or Ant
	SG	18/31			Flav-Traj
	SG	27			Flav-Traj
	SG	30 or 37			Flav-Traj
	SG	37			Flav-Traj
	Les Martres	18/31			Traj
	SG				Flav-Traj
	SG	18			Flav-Traj
	SG	27			Flav-Traj
	SG	dish			Flav-Traj
FT & LF	Les Martres	18/31			Traj
FT etc.	SG	18			Flav
	SG	37	71		75-95
	SG	Cup			Nero or e. Flav
FT, AAS & PD	Les Martres	37	29		Traj
FT	SG	18/31			Flav-Traj
	Les Martres	18/31			Had
FT & JT	Les Martres	27			Had
FT & ACM	Les Martres	37	31		pre 145
FT	SG	15/17 or 18			Flav or Flav-Traj
	SG	18			Flav or Flav-Traj
	SG	30 or 37			Flav or Flav-Traj
	SG	37			Flav or Flav-Traj
	Les Martres	18/31			Traj
	Les Martres	37	130		100-120
	SG	33a			Flav-Traj
	SG	30 or 37			Flav
		46 with Curle 15 rim			Flav
KME & BPE	Les Martres	37	41		100-120
LF	SG	18R			Flav
LF & FT	Les Martres	18/31			Traj
PD	SG	27			Flav-Traj
	SG	15/17R or 18R			Flav-Traj
	SG	18			Flav-Traj
	SG	27			Flav-Traj
	Les Martres	37	136		100-120
PD, AAS & KM	Les Martres	37	29		Traj
PD	SG	29			70-85
	SG	27			Flav-Traj
	SG	29	77		Nero-Flav
	SG	15/17R or 18R			Flav-Traj
	Les Martres	18/31			Traj
	SG	15/17			Flav
	SG				Flav-Traj
LR lower fill	CG	18/31R			Had or e Ant
LR lf, uf & JT	SG	30			Flav-Traj
LR lf	Les Martres	18/31			Traj
	Les Martres	18/31			Traj
	SG	18			Flav
	SG	18R			Flav

Context	Source	Form	Decorated No.	Stamped No.	Date
	SG	37	131		90-110
	SG	37	73		90-110
LR lf & uf	Les Martres	18/31			Traj
LR lf & LH lf	Les Martres	18/31	91		110-130
LR lf & LS	Les Martres	37			Traj
LR uf	SG	15/17 or 18			Flav
	SG	37			Flav-Traj
	Les Martres	18/31			Traj
	CG	18/31			Had
LR uf & QE	CG	37			Had
LR uf	CG	37	72		125-40
	CG	37			Had or e Ant
Phase 3					
JR	SG	18R			Flav
	SG	27			Flav-Traj
	SG	37			Flav-Traj
	SG	37			Flav-Traj
	CG	37	124		150-180
	CG	37			Had or e Ant
JR, FP & JP	CG	37	58		125-145
JR & GNH	CG	37	59		140-160
FL	La	Dr 18 or		19	80-110
	Graufesenque	15/17			
	SG	37			Flav-Traj
	SG	37	116		80-95
	SG	18R			Flav-Traj
	SG	37	56		90-110
	CG	37	117		110-125
FL & FT	Lezoux	37	57		Traj-Had
FL	SG	30 or 37		20	Flav-Traj
	SG	27			Flav-Traj
GE	SG	33c			Flav-Traj
	Les Martres	18/31			Traj
FPN	SG	15/17R			Flav-Traj
	SG	18R			Flav-Traj
	Les Martres	30 or 37			Traj
FCJ	SG	Curle 11			Flav-Traj
	SG	Curle 15			Flav-Traj
	Les Martres	30 or 37			Traj
FCF	SG	36			Flav
	CG	27			Had
FC	Les Martres	18/31			Traj
	Les Martres	18/31R			Traj
FC with GZX & LHA	Lezoux	37		18	125-150
FC with EXN & FHE	CG	37	54		135-60
FC & AF, EE,FP & FL	SG	37	55		90-110

Context	Source	Form	Decorated No.	Stamped No.	Date
FC	SG	18/31			Flav-Traj
	Les Martres	18/31			Traj
	Les Martres	18/31R			Traj
	CG	37	114		Had - e Ant
	CG	38 or 44			Ant
FD	Les Martres	18/31			
	CG	31			m - 1 Ant
HF	CG	33			Ant
	Les Martres	37	121		100-120
	SG	29			70-85
	SG	15/17			Flav
	SG	18			Flav-Traj
	SG	18/31			Flav-Traj
	SG	30			Flav-Traj
	Les Martres	27			Traj
	CG	33			e - m Ant
	SG	37			Flav-Traj
	Les Martres	18/31 or 31			Flav-Traj
LX LXA,DQF & DQQ LX	SG	18/31			Had-Ant
	SG	37	50		Flav-Traj
	CG	30 or 37			90-110
	CG	37	133		Had
	SG	18/31			Had-Ant
	SG	27			Flav-Traj
	Lezoux	37	75		Flav-Traj
	SG	27			125-145
	SG	18/31			Nero or e
	Les Martres	18/31			Flav
LX & NJ LX	Les Martres	18/31	134		Flav-Traj
	CG	37	76		Traj
	CG	38			100-120
	SG	18/31			? Had
CG	Les Martres	15/17R			e Had
	SG	37	95		Flav-Traj
	CG	37	42		Traj
	CG	33			80-110
	CG	37			125-150
JW & JX	CG	37	69		Had or e Ant
	Les Martres	18/31			Had or e Ant
JX with JW	CG	37	69		2nd century
	CG	Scrap			125-150
	SG	18/31			Had or Ant
JQ If	SG	27			Had or Ant
	CG	33			Flav-Traj
	SG	33a			Had
	CG	CG	37	86	Flav-Traj
	CG	37	67		Had-Ant
	CG	37			140-170
	CG	Cup			Flav-Traj

Context	Source	Form	Decorated No.	Stamped No.	Date	
uf	CG	33			Ant	
	SG	37			e Flav	
	Les Martres	37			second half of 2c	
	CG	37	66		125-40	
	SG	27			Flav-Traj	
	SG	Cup			Flav-Traj	
DQ 1f	Les Martres	18/31			Traj or e Flav	
	SG	18/31			Flav-Traj	
	La Graufesenque	37	99		90-110	
	CG	37	48		Had	
	SG	27			Flav-Traj	
	CG				Had or Ant	
	CG				Had or e Ant	
	CG	37	49		125-155	
	DQ & LX	SG	37	50		90-110
	DQ 1f	CG	30	51		130-160
DQ mf	SG	15/17 or 18			Flav	
Phase 4	SG	Inkwell			Flav or Flav-Traj	
	CG	31			Ant	
	EG				Had-Ant	
	Lezoux	37	96		150-180	
	CG	37	97		160-190	
DQ & FW	SG	33a			Flav-Traj	
DQ uf Phase 5	SG	36			Flav-Traj	
	Les Martres	30 or 37			Traj	
	CG	31			Ant	
	SG				1 c	
	CG	27			Had or e Ant	
	CG	31			Ant	
	CG				Had or Ant	
	CG				Had or Ant	
Phase 4 EO	Les Martres	37	103		100-120	
	CG	30 or 37			Had or e Ant	
	CG	18/31R			E-mid Ant	
	CG	30 or 37			Ant	
	CG	31			Ant	
	CG	37			Ant	
	CG	Dish/bowl			Ant	
	Les Martres	27			Traj	
	CG	37	104		150-80	
	Les Martres	37			Had-Ant	
	CG	33			Ant	
	CG	37			Ant	
	CG	37	105		Ant	
	CG	37	106		160-90	
	CG	37	53		160-95	
	EG	38			1 2c-e3c	
	BP (pit)	Les Martres	18/31R			Traj
BP & KME	Les Martres	37	41		100-120	

Context	Source	Form	Decorated No.	Stamped No.	Date
BP (pit)	CG	Curle 11			Traj or Had
ES	Les Martres	33			Had or Ant
	CG	31			Ant
BA	CG	31			m - 1 Ant
(sealed)					
	CG	38 or 44			Ant
	CG	31			m - 1 Ant
	CG	33			Ant
Phase 5					
AH	CG	30 or 37			Had or e Ant
ALA	CG				m - 1 Ant
ALB	CG	31			Ant
	CG	33			Ant
	CG	37			Ant
	CG	38			Ant
	CG	31R			m - 1 Ant
ALB, EK & BAE	CG	37	89		150-180
DCT	CG	33			Had or e Ant
EM	SG	18R			Flav-Traj
	CG	33			Ant
Phase 6					
BL	SG	27g			Flav
	CG	33			Ant
BQ	CG	31			e - m Ant

Table 2 Derby North-West Sector: samian from key groups (see p. for key).

Context	Serial No.	Fabric	Type	Date	Comments
Phase I					
LA	6	?3	BS	Probably 2c	Three worn sherds from same mortarium
Phase 2					
FT	7	14	FF	70-120	
	185	9	FF	Probably 2c	Burnt
	9	3	IRS	2c	
PD	135	9	BS	Later than AD100	
	136	12	BS	1c or 2c	
	137	3	IRS	100-140	
	138	?10	IRS	2c probably 130-180	Slightly burnt
	139	3	IRS	c110-140/160	No.198 from LZA may be same vessel. There may be a fragmentary stamp.
	140*	14		c80-120	Worn. No stamp on surviving part
LR	1*	9		110-160	Stamped (No.9)
	141*	3		100-140	Worn. Slightly burnt

Context	Serial No.	Fabric	Type	Date	Comments
Phase 3					
JR	14*	9	100-140	14	sherds from the same mortarium. Worn
FCJ	18	3	BS		Burnt. ?Part of no. 128 from pit AZ primary fill.
	19*	3		115-145	Joins no.128. Burnt (see stamped no.8).
	20	9	BS	Probably 2c	
	21		FF	100-140	Joins no.24 FL
	22		BS	Probably 2c	Burnt
FL	23	9	IRS	100-140	Joins no.99, Pit FP phase 3, and possibly part of 24.
FL	24	9	FF	100-140	Joins 15, JPA, and 21, FCJ.
	25	9	IRS	100-140	Sliced with a knife or wire at spout. Joins no.105 FXC, filling of phase 3 pit FP/LH.
	26		BS	?AD120-150	Possibly part of stamped mortarium no.10.
	28	8	BS	Probably 2c	Joins no.104 FWE Phase 4.
FC	16*	3/9	IRS	100-140	
	17*			150-185	Burnt. Joins 88 FH phase 4 pit. Same vessel as stamped mortarium no.11 from phase 4 levels in pit EK and topsoil.
HF	68	3/9	BS	Probably 2c	
	69*	3		100-130	Joins no.167 AR Phase 5. Stamped mortarium no.3.
LX	72	4	BS	Later than 100	
JQ (Phase subsidence)	70*	?3	FF	115-145	Burnt. Stamped mortarium no.7.
	71*	8?		100-140	Style very much like G. Attius Marinus.
DQ (Phase 4 subsidence)	74*	2		140-200	Slightly burnt
DQ (Phase 4 subsidence)	75*	1		m 2c	Worn. Burnt trademark stamp No. 131, Pit AF, has same stamp and could be same vessel.
EO	30	9	BS	Probably 2c	Worn. Slightly burnt
	31	6	BS	160-360+	
	32	3	BS	Probably 2c	

Context	Serial No.	Fabric	Type	Date	Comments
	33*	2	IRS	Probably 100-140	Probably part of no. 183, ABQ Phase 4 or 5 gravels. Fragmentary stamp no.11.
BA(sealed)	43*	5		150-200	Slightly burnt and well worn.
	44	4	BS	130-360+	Worn
	45	3	BS	130-360+	
	48	3/4	BS	100-360	Base. Heavily worn. Dis-coloured in parts.
Phase 5					
AH	53	4	BS	130-360+	Slight burning
AJ	54	4	BS	130-360+	
ALB	55	3	IRS	100-140	
JL	80	5	BS	Probably 3c or 4c	
	81	6		180-240	Joins no.90 pit AC, top layer. Waster. Distorted and over-fired. Collared.
EM	*34	8		100-130	Joins no.2 EXN Pit 40. Phase 4 subsidence. Stamp of G. Attius Marinus. Stamped mortaria no.2.
Phase 6					
BQ	61*	3		100-140	
	62*	4		4c	Decorated with red-brown stripes. Unusual smooth hammerhead.
	63*			270-360	Joins with no.66 from ANA stone spread, phase 6. Burnt.

Table 3 *Derby North-West Sector: mortaria from key groups. (The serial numbers are used in the archive catalogue and the key is as p. except * : drawn, stamped in figs. 48-50 and unstamped in fig. 51).*

CHRONOLOGY

Pre Roman Occupation

Very little prehistoric pottery was recovered from the excavations. Small amounts of abraded handmade pottery of early iron age type (id. S. Elsdon) were found at Little Chester and the Racecourse cemetery and this accorded with the lack of evidence for occupation at this time. Some late-iron-age to early-Roman sherds came from the silts LA and ditch QD at Little Chester. A similar sherd was found at Strutt's Park (Fig.10 no.31) and although the type was certainly native in character (see no.1) it probably continued in use after the arrival of the army. Similarly late La Tène types from the fillings of the mausolea and some contexts at Little Chester can be paralleled at Strutt's

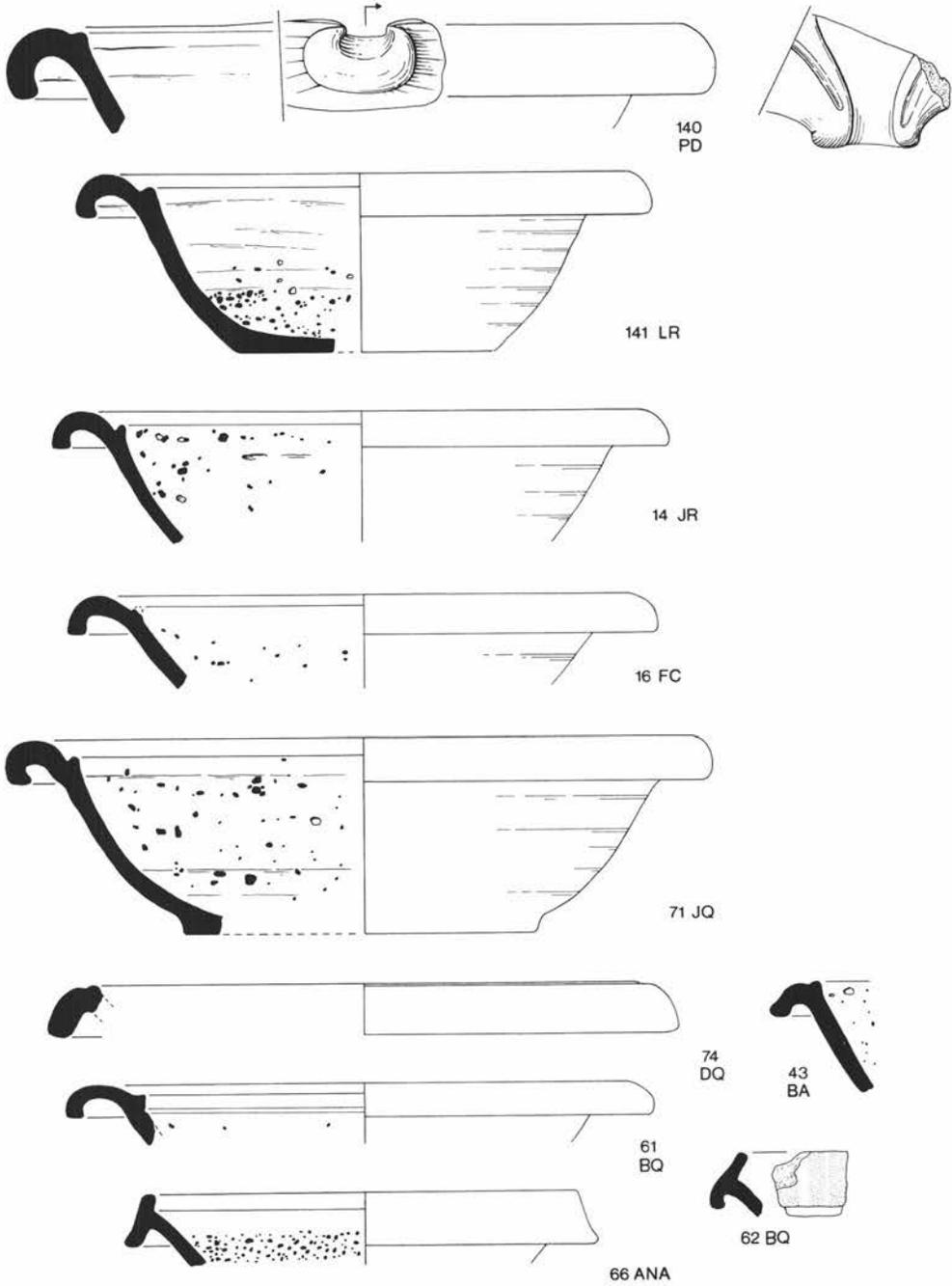


Fig. 47 Derby North-West Sector: mortaria from key groups. Scale 1:4.

Park and perhaps should be associated with that occupation. There is therefore little evidence for activity on these sites prior to the military occupation at Derby Little Chester.

Phase 1

Occupation at Strutt's Park is dated to the Neronian-Flavian period with a removal to Little Chester in the early 80s. At Little Chester (NW sector) features belonging to phase 1 yielded only 248 sherds of pottery and few of these came from the building slots making it difficult to date individual features with any certainty. However, most of the samian was of Flavian-Trajanic date and the coarse pottery need not be dated later. One sherd of samian and a few BB1 vessels must date to the Hadrianic period but could belong to the demolition phase. The coarse pottery contrasted with that from Strutt's Park in the small numbers of first-century collared-rim flagons and late La Tène cordoned cups, beakers and platters. One collared-rim jug was present on the Racecourse as a cremation receptacle but it was accompanied by two Flavian-Trajanic ring-necked flagons and the evidence from the North West Sector (Table 8) suggests the latter form was more popular by this time. Most of the coarse ware was supplied by the Little Chester kilns and there was a larger percentage of calcite-gritted wares and rusticated ware than in later phases. Hadrianic-Antonine types were absent apart from the BB1 ware mentioned above and if the latter did belong to the demolition phase a terminal date before AD120 is indicated.

Phase 2

A consideration of samian from earlier excavations and the 1979/80 season at Derby Little Chester suggested the possibility of an abandonment or reduction in the extent of the occupation in the Hadrianic period (Hartley, 1961, 103). Marsh, in a paper examining the pattern of samian supply to Britain, discussed the small amount of Hadrianic samian noted by Hartley. The shortage of Hadrianic samian was paralleled at Chesterfield (Marsh, 1981), where BB1 wares indicated occupation as late as AD140, and Marsh questioned whether the small number of Hadrianic samian vessels at Little Chester reflected a national shortage of samian or a diminished occupation of the site, looking to an examination of the coins and coarse pottery for clarification. However, most of the coarse pottery was locally produced and is itself dated by associated samian from the 1979/80 excavations. Independently dated wares, particularly BB1, were not prolific but included some Hadrianic types, and most of the mortaria was dated to this period. Indeed some of the Little Chester types present in phase 2 contexts are generally dated to the Hadrianic-Antonine period elsewhere (nos. 13,16,28,31,41 & 42; Tables 6 & 8) and three of the Racecourse kilns are dated to that time (Brassington, 1980; Dool, below). The evidence of the coarse pottery therefore points to some occupation during the Hadrianic period.

Stratigraphically, the phase 2 features LF, KF and KME cut into the gravel layers FT, which contained Hadrianic samian and coarse wares. These gravels and features, in contrast with the overlying gravels, contained no Derbyshire ware nor indeed did any phase 2 context except the pit LR belong to the end of phase 2. Despite the difficulties in dating the gravels and the amount of residual pottery within them, the presence of BB1 vessels and Hadrianic samian gives a date after AD120 and the absence of Derbyshire ware suggests a date in the beginning of the Antonine period at the latest. At Melandra and Chesterfield (Webster, 1971; Anderson, pers. comm.) BB1 ware arrived in the Hadrianic period while Derbyshire ware was present in small quantities in the mansio destruction deposit at Melandra (Webster, 1971, fig.16 no.18) dated to the beginning of the Antonine period and absent in earlier deposits. At Little Chester, this ware was associated with Antonine or later pottery.

A Hadrianic date can therefore be given to some features at Little Chester (NW sector). At the Racecourse cemetery only a small number of burials were attributable to this phase. This was true also of phase 1, however, and may indicate burial rites which did not involve deposition of datable material in the pit fillings. At Little Chester there may have been some lessening of activity. Alternatively the types of vessels present may reflect their availability rather than the nature of the occupation.

Phase 3

An occupation layer, JR, stratified above KF and LF (phase 2) and below slots GL and GT (phase 3) contained samian dated to AD150-180 and some Hadrianic to early-Antonine coarse pottery. Above this a further series of gravel layers were laid down into which the phase 3 slots were dug. The pottery from these layers was consistent with an early- to mid-Antonine date for the slots. The trenches of the granary type building contained early- to mid-Antonine samian in the post-hole and lower trench fillings and mid- to late-Antonine samian in the subsided upper layers. Thus the occupation layer, sill beam buildings and granary type building should all be dated to the early to mid-Antonine period in agreement with the peak noted in the samian loss rate.

The phase 3 deposits were characterised by the appearance of Derbyshire ware and Antonine flagon types (no.71: Tables 8 & 10). Typological changes in the Little Chester products were apparently minimal and most of the types common in the Antonine assemblages had appeared in the phase 2 features (Tables 6 & 9). The BB1 ware was of early to mid-Antonine date and late-second to early-third-century types such as Nene Valley, Central Gaulish, Dales ware and fabric CTA2 did not appear until phase 4. By reference to these diagnostic types it was possible to relate the Racecourse cemetery to the North West interior sequence of the fort and to this phase belonged the walled cemetery and the greatest number of burials.

Phase 4

The industrial features of phase 4 contained mid- to late-Antonine samian and late-second to early-third-century coarse wares absent from earlier phases (see above). It is difficult to ascertain how soon after the demolition of the phase 3 buildings the industrial phase began. Some features such as ES and EW contained pottery datable to the mid-second century only, while others date to the mid- to late-second century. It is thus impossible to demonstrate a hiatus in occupation between phases 3 and 4.

Activity seems to have stopped in the early-third century. No pottery later than the early-third century was found in accumulation deposits such as the coal layer, EO, nor the parts of the humic deposit, BA, sealed by the phase 5 building. It is unlikely that the industrial phase continued far into the third century.

Phase 5-6

Only the phase 4 well, BP, and the humic deposit, BA, were receiving pottery in the period between the end of the industrial phase and the construction of the phase 5 building, in the fourth century. At the Racecourse cemetery both inhumations and cremations were found containing mid- to late-third-century pottery and the relatively small number of vessels of this date from the North West Sector suggests activities leaving little ceramic debris rather than a gap in occupation.

The stone-sill building was dated by the fourth-century colour-coated ware from its clay floor (no.154) and the fourth-century wares from the foundations, AJ and CY (nos.149 and 151). The pottery from the possible posthole structures (BC, BD, BE, BF, CK and HJ, JL, JZ, JF, MEA) suggested they could be similarly dated. Pits cutting the clay floor were fourth century but closer dating was not possible. Indeed, the pottery from phases 5 and 6 was virtually indistinguishable on typological grounds (Tables 4-9). The hooked- and everted-rim calcite-gritted jars were restricted to phase 6. Oxford ware

sherds were found in the unsealed layers of BA, possibly as a result of cultivation, but otherwise occurred only in phase 6 deposits and was best considered a phase 6 type. However, all these types were scarce making close dating difficult.

Some mid- to late-fourth-century sherds of colour-coated ware, coarse ware (nos.184, 185, 190) and mortaria (Table 3) were found in the late gravel layers, in pit BSA and elsewhere at Little Chester (Brassington, 1982, 82 no.8). However, no features have been dated later than the mid-fourth century with any certainty. A pit at Carsington (Birss, unpublished) suggested there may have been a late-fourth-century assemblage characterised by the absence of Derbyshire ware and the presence of everted-rim calcite-gritted jars. No context at Derby yielded such an assemblage. In view of this and the small number of diagnostically mid- to late-fourth-century types, it is unlikely that occupation continued on these sites far into the late-fourth century.

Sources of Pottery

During the Flavian-Trajanic occupation at Little Chester the pottery sources were comparable to the neighbouring forts of Melandra, Manchester and Chesterfield. At all four sites the bulk of the pottery was locally produced (Brassington, 1971 & 1980; Jones, 1971, 93; Webster, 1971, 63 and A. Anderson, pers.comm.) with non-local rough-cast ware in small quantities, samian, amphora and mortaria. There is no evidence for an adequate ceramic tradition to supply the army's needs locally and the potters at Derby Racecourse were clearly imported, bringing with them new forms and exotic techniques such as lead glazing. Many parallels for the forms were found among the products of the London fine ware industry, the Wroxeter, Usk and Wilderspool potteries. This and the contrast between the Little Chester pottery and that from other East Midland kilns (cf. Oswald, 1937 and Buckland *et al*, 1980) suggested the potters came from the south-east (cf. a similar suggestion for Longthorpe: Darling, 1981, 405) or another military installation. In view of the mortaria stamp links between the Little Chester and Mancetter-Hartshill kilns already demonstrated by Hartley (Brassington, 1971, 53 and 1980, 40), the latter situation is likely. In a preliminary examination of Mancetter-Hartshill coarsewares, several parallels for Little Chester types were identified (nos.3, 15, 18, 36 and 65). Further work on that material may well disclose stronger links but the possibility of potters also moving to Little Chester from other centres remains (cf. at Lincoln, Darling, 1981, 404).

In the Hadrianic period Little Chester contrasted markedly with the neighbouring forts in the small proportion of BB1 ware present (Table 10) and the continued dominance of the local products. The small amount of BB1 ware in contrast to other Midland and northern sites is puzzling. Although in East Anglia and York BB1 ware may have been less common because of native pottery supplies (Perrin, 1977, 103) at Little Chester there was little evidence for a native element in the pottery production. The only form which had any similarity to native wares was the rebated-rim jar (no.6) which can equally well be paralleled by the first- to second-century rebated-rim jar series in the south east. The situation can be compared with that at Wilderspool (Hartley and Webster, 1973) and Rossington Bridge where non-local potters were able, for varying lengths of time, to compete successfully with BB1 ware for both local and more distant military and civilian markets. The Little Chester kilns may have depended perhaps on a market which owed its existence to the lead industry rather than military deployment as has been suggested for Derbyshire ware (Loughlin, 1977, 116) and which was both civilian and military in character. A study of the distribution of Little Chester ware would clarify this.

During phase 3, Derbyshire ware appeared in small quantities and by phase 4 the quantity had risen dramatically (Table 10) while the number of Little Chester jars

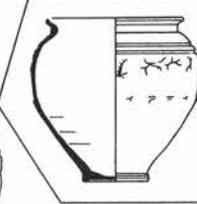
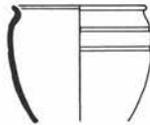
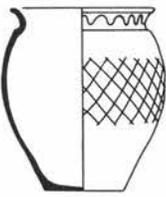
FABRIC	FORM	RIM TYPE	PUB No.	PHASES :									
				1	2	3	4	5	6	LATE	UNK.		
GRY			6	2	4	3	x			1			
			9	9	2	1	1				2		
			3	46	56	51	17	3	9	2	47		
					x	x	1	1	x	1			
	OTHER			16	3	1	1	1	1			22	
BB1			40		x	3	3	1	2	1			
			61	6	2	x	x	x					
			21		1	1	4	1	1	1			
			62			1	2	x	x				
			178					3	2	1			
			167					1	1				
			170					1	x				
						x	x						
						1	x						
	OTHER				x	x				x	x		

Table 4 Derby North-West Sector: relative percentages of jars and lids by phase, quantified by rim percentages (X: present).

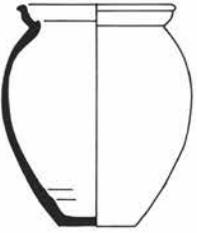
FABRIC	FORM	RIM TYPE	PUB No.	PHASES :							
				1	2	3	4	5	6	LATE	UNK.
DBY			99			1	4	2	2	2	
			80			2	14	34	30	27	21
			79			x	3	11	10	16	
							2	1	x		
						x	x		1		
CTA 1			6	1	1		x	x			
			63			1				x	
			2	2	x						
CTA 2			145				x	1			
			124				x		x	x	
			169						1		
DW							x				
			185							x	

Table 5 Derby North-West Sector: relative percentages of jars and lids by phase, quantified by rim percentages (X: present).

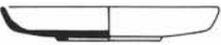
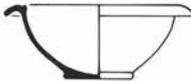
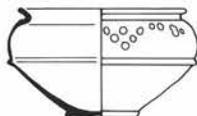
FABRIC	FORM	RIM TYPE	PUB. No.	PHASES :								
				1	2	3	4	5	6	LATE UNK.		
GRY			34		x							
			174					x	1	x	2	
			110					x	x		x	
			cf 103				x	x				
			cf 136								x	x
			cf 126					x	1	4	8	
			65	4		3	4	3	2	x		
			53			x						
			29		1	x	1					
			22		1				1			
			15		x	x	x			x		
			cf 29	4	1	1	1	2	1			
			36		3	1	2	1	x	2		
		28		x	1	1	x	x				
		31		2				x				
		13		x		3	1		x			

Table 6 Derby North-West Sector: relative percentages of dishes and bowls by phase, quantified by rim percentages (X: present).

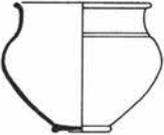
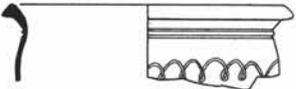
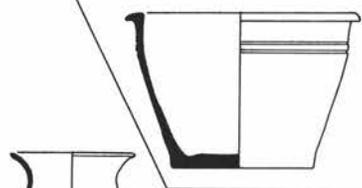
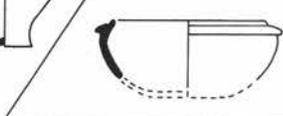
FABRIC	FORM	RIM TYPE	PUB No.	PHASES :							
				1	2	3	4	5	6	LATE	UNK.
GRY			18		x	1	x	2	1		
			186						2	3	
			148				x				
			66			x					
			184							x	
	OTHER					x	x		x		
BB1			50		1		2	1	2	3	
			107			1	1	2	1	1	
			11		3	5	8	4	4	2	9
			136				x	2		x	
			163				x	1	1		
		OTHER					x		x		
FLA			74			x					
FLB			22		1						
DBY			146				x				
BB2								x			

Table 7 Derby North-West Sector: relative percentages of dishes and bowls by phase, quantified by rim percentages (X: present).

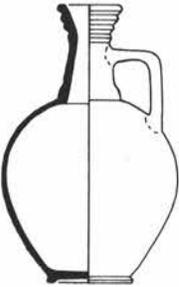
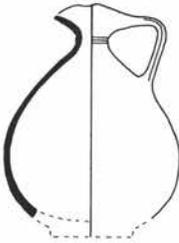
FABRIC	FORM	RIM TYPE	PUB. No.	PHASES:							
				1	2	3	4	5	6	LATE	UNK.
FLA			8	6	1		x				
			16		1	8	x		x		
			42		1	1					
			41		2	2				1	
			71			2	9	3		1	
			180							1	
FLB			8						1		
			41		1	1					
FLA			23		x						
	OTHER										
FLB			23		1						
			55		x						

Table 8 Derby North-West Sector: relative percentages of flagons and tettines by phase, quantified by rim percentages (X: present).

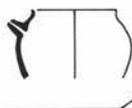
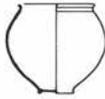
FABRIC	FORM	RIM TYPE	PUB. No.	PHASES :								
				1	2	3	4	5	6	LATE	UNK.	
GRY			2		x							
			cf 12		3	1	4	4	5	2		
			182				1		5	5		
			183						1			
			49		1	x	x					
			54		1	x	x					
			130				x	1				
DBY			54				x	x	x			
GRY			17		1	2	2	3	1	1		
							x	x				
			139				1					
		ROLLER STAMPING					x			x		
		OTHER			x							
MG			43		x							
FLB	ROUGH CAST SHERD					x						
NV						x	6	4	4			
ROX							x	1	1			
COB					x	x						
CG							x		x			

Table 9 Derby North-West Sector: relative percentages of tettines, ovoid jars, jugs and beakers by phase, quantified by rim percentages (X: present).

correspondingly halved. The relative quantity of BBI ware doubled as did that of Little Chester type bowls and dishes. The monopoly of the Little Chester kilns was clearly at an end either because of competition from the Derbyshire ware kilns or because of the migration of their potters to them. The BBI distributors were perhaps able to take advantage of the dislocation of pottery markets caused by these changes and increase their sales in the Little Chester area. Certainly BBI ware was most numerous in phase 4. As rather less fine ware might be expected in industrial phase 4 than phase 3 the increase in the number of Little Chester type bowls and dishes was probably due to a change in the repertoire of the potters rather than the change in the function of the area. In the face of competition from the Derbyshire ware potters the production of jars was perhaps no longer profitable and some of the potters may have specialised in bowls and jars for a short time until they were supplanted by or moved to grey-ware kilns such as Lumbbrook (Brassington, 1980, 44). These kilns were associated with the Derbyshire ware kilns but seemed to supply a local market only. The Little Chester bowl forms from phase 4 could be paralleled in the Racecourse kiln 5 debris and there was a notable lack of everted-rim jars from this kiln. The kiln was perhaps contemporary with the earliest Derbyshire ware kilns and possibly produced bowls and dishes only, for part of its working life. Derbyshire ware continued to dominate the assemblage to the end of the occupation with a small percentage of BBI ware. The grey ware was probably

Fabric	Phase 1	2	3	4	5	6	Late	Unphased
GRY	68	43	60	35	34	27	33	45
BBI	5	6	8	16	13	14	9	9
DBY		x	4	26	30	40	36	24
FLA	10	22	10	9	5	3	4	11
FLB	2	7	1	x	x	x	x	
CTAI	3		1	x	2	2	x	2
CTA2				1	1	1	x	
DW				x			x	
COB		x	1	x				
CWB		x		x				
NV			?x	1	3	5	8	
ROX					x	x	x	
CG				x		x	x	
MG		x						
TS	7	12	7	6	4	5	6	9
MOR	1	4	2	2	5	2	2	
AMP	3	4	6	3	3	1	1	

Total Sherd Count: 14027

Total rim percentage: 25861%

Phase I : 217	Phase I : 248
2 : 1014	2 : 2788
3 : 3274	3 : 5990
4 : 4651	4 : 7839
5 : 661	5 : 2915
6 : 2783	6 : 3894
Late: 1372	Late: 1972
Unphased: 55	Unphased: 57

Discrepancies in the total relative percentage for each phase are due to the rounding up of percentages to whole numbers.

Table 10 Derby North-West Sector: relative percentages of pottery fabrics, quantified by sherd count (X: present).

locally produced since, although the material was not available for examination, grey ware continued to be made at Lumbbrook after the Little Chester potteries had stopped operating. Small quantities of third- to fourth-century calcite-gritted ware were found (nos.145 and 169) similar to types from Greetham and Bourne, Lincs. (type series in Nottingham University Museum) and also a few sherds of Dales ware type.

The fine ware followed a similar supply pattern to other Midland sites (Table 10). A small amount of rough-cast ware and Central Gaulish colour-coated ware was present in phases 2-4. Nene Valley ware types accounted for most of the fine wares from phases 5-7 and the small amount of Oxford red colour-coated ware can be paralleled at Lincoln (Darling, 1977) and Leicester (Young, 1977, 133). Thus the pattern for non-local pottery matched that from other Midlands sites, but the types of pottery produced locally and the continuation of this production beyond the Trajanic period were unusual. Research on the distribution of both Little Chester and Derbyshire ware and their connection with the lead industry could be productive as would further work on the ancestry of the Little Chester types, especially with regard to the Mancetter-Hartshill kilns and perhaps contemporary assemblages from *Margidunum* and Brough-on-Noe.

MORTARIA

by K.F. HARTLEY

Fragments from at least 98 mortaria were examined, dating from the Flavian period to the fourth century, quite possibly the second half (see Table 11). The greatest use of coarseware mortaria was undoubtedly in the second century, especially in the first forty years of the century (see Table 11). This pattern is not mirrored in the samian ware and I can only suggest that the difference is the result of having large-scale suppliers, twenty-six miles away at Mancetter and Hartshill, as well as having a local workshop which was particularly active in this period. These workshops are undoubtedly the reason why only 10 mortaria (10.2%) are from sources outside the region. Between 67.3% and 82.7% of the total are from the Mancetter-Hartshill potteries and between 7.1% and 22.5% from the Little Chester workshop.

The earliest mortaria are from the Verulamium region and from south-west England. The latter may be the result of army movements and is not surprising since Chesterfield

Dates (Approx.)	M/H	LC/MH	L.C.	Ox.	Ver.	SW	LNV	Total
AD70-100						1		1
AD70-120					3			3
AD100-140	12	6	3					21
AD120-150		3	1					4
AD140-200	17		1					18
2nd century		2	1					3
AD180-240	6	1						7
3rd century	19							19
AD240-400				2			1	3
AD250-360	7							7
4th century	5			2				7
Not known		3	1			1		5
	66	15	7	4	3	2	1	98

Table 11 Derby North-West Sector: summary of mortaria (Key: M/H — Mancetter — Hartshill; LC/MH — Little Chester or Mancetter — Hartshill; LC — Little Chester kilns, Derby Racecourse; Ox — Oxford; SW — South-West England; Ver — Verulamium region; LNV — Castor — Stibbington area of the lower Nene Valley).

and the Lunt also have a few early mortaria from the Gloucester area. The remaining five mortaria from outside sources, are from the potteries at Oxford and in the lower Nene valley and cannot be closely dated. Both of these potteries seem to have flourished right up to the end of the fourth century, whilst the Mancetter-Hartshill potteries declined after losing their northern markets cAD360-370; the extent of their activity after this date is not known, nor is the date when manufacture ceased. A date in the second half of the fourth century would certainly be possible for the five vessels from Oxford and the lower Nene valley.

All mortaria sherds are described in the archive. Those from key contexts are described in table 3 and illustrated in Fig.47.

Fabrics

Although Mancetter-Hartshill mortaria are generally considered to be in a characteristic and readily recognisable fabric there are, in fact, some quite distinct variations; the normal ones are listed under Fabrics 3-6. The proximity of the kilns on Derby Racecourse to the site at Little Chester and some similarities in fabric with Mancetter products have made it necessary to distinguish Fabrics 1-10 in some detail.

The Little Chester kilns seem to have been most active in the first half of the second century and the numbers found at the kiln suggest that mortarium production may have been fairly minimal even then (Brassington, 1971 and 1980). Some of their mortaria are in an orange-brown fabric and these present no difficulty; some, however, were made in cream or white fabrics and those few mortaria of this category, which can be attributed to Little Chester, suggest considerable variation in the fabric.

Although Fabrics 3 and 4 were probably the most common at Mancetter and Hartshill in the period AD100-140, there was more variation in this period than at any other, especially in the trituration. As a result there can be occasional difficulty in distinguishing their mortaria from those made at Little Chester.

There are also undoubted links between the workshops. Septiminius seems to have worked on both sites at some point in his career and other known potters may have done so. Nor are one known potter's products always consistent in this period: no.5 and no.27, both with stamps of Victor, are both in fabrics which differ slightly from that of the mortaria in Victor's kiln at Mancetter. Little Chester is only 26 miles from Mancetter and Hartshill so that some movement between the sites is to be expected.

Whilst the Little Chester potters made little impression on the Province as a whole, relatively high numbers of their mortaria can be expected in local groups and I have, therefore, distinguished any fabric which could be from the local kilns, although many of the mortaria in Fabrics 7-9 will probably be from Mancetter.

There are two mortaria which are technically wasters, one perhaps unusable. No.81/90 is distorted as well as overfired, but there is no other evidence to suggest manufacture of this type of mortarium at Little Chester. The heavily overfired no.71 is much more likely to be a product of a Little Chester workshop than those at Mancetter and Hartshill despite the rim-profile which is typical of G. Attius Marinus though it does not have a stamp.

Fabric 1. Little Chester, Derby Racecourse. Fine, pale brownish-cream fabric, sometimes with pink core and with few, very fine red-brown inclusions; traces of brownish-orange slip; abundant, translucent, whitish quartz trituration.

Fabric 2. Perhaps Little Chester. Hard, fine-textured, usually white fabric with

few ill-sorted inclusions (quartz, red-brown and blackish); red-brown, black, quartz and perhaps flint trituration.

Fabric 3. Mancetter-Hartshill.

Hard, fine-textured, creamy-white fabric with cream surface and some tiny inclusions, mostly quartz with a high proportion of rose quartz, and very occasional red-brown particles; tritu-

ration consists of blackish, red-brown fragments, mostly grog, with very occasional whitish grit. This fabric sometimes has a pink core which can be very thick and the trituration can include quartz.

Fabric 4. Mancetter-Hartshill.

Fine-textured, creamy-white fabric, similar to fabric 3 but with scarcely any temper; blackish and/or red-brown trituration (grog). This fabric can vary in hardness; any temper present is fine and similar in kind to that of fabric 3; the trituration can very occasionally include the odd quartz grit.

Fabric 5. Mancetter-Hartshill.

As Fabric 4 with some red-brown and/or blackish inclusions.

Fabric 6. Mancetter-Hartshill.

As Fabric 4 but fired to pale orange-brown colour and very hard.

Fabric 7. Mancetter-Hartshill or Little Chester.

Very hard, pale brown fabric with abundant tiny transparent quartz inclusions; blackish, brown and quartz trituration.

Fabric 8. Mancetter-Hartshill or Little Chester.

Very hard, fine-textured, pale brown fabric sometimes with pink core, with a good amount of quartz and occasional red-brown and black inclusions; trituration, quartz with a little red-brown material. Self-coloured, or brownish-buff slip.

Fabric 9. Mancetter-Hartshill or Little Chester.

Fine-textured, usually cream fabric sometimes with pink core; inclusions mostly quartz with occasional, sometimes ill-sorted, red-brown or blackish particles; black, red-brown, quartz and occasionally some sandstone and/or flint trituration.

Fabric 10. Possibly Little Chester, Derby Racecourse.

Hard, fine-textured, deep cream fabric with few inclusions, mostly white quartz and a few red-brown; trituration consists primarily of white quartz with occasional blackish grits.

Fabric 11. South-west probably.

Hard, red-brown fabric, packed with quartz inclusions; white slip; quartz, red-brown and occasional black trituration.

Fabric 12. South-west probably.

Hard, red-brown fabric with some fine quartz and a few ill-sorted red-brown inclusions; trituration included quartz and red-brown particles.

Fabric 13. Little Chester, Derby Racecourse or another local workshop the most likely source.

Hard, pale orange-brown with grey core and

with a good amount of ill-sorted quartz inclusions; no trituration survives; self-coloured or brownish-buff slip. This fabric is somewhat pimply to the touch.

Fabric 14. *Verulamium* region, including kilns at Brockley Hill and Radlett.

Granular, greyish-cream fabric sometimes with cream to buff slip. The texture is obtained by addition of a massive quantity of well-sorted tiny quartz grit to the clay, possibly with a little flint. Trituration consists of flint, red-brown material and a little quartz.

(Description limited to fragments present.)

Fabric 15. Castor-Stibbington area of the lower Nene valley.

Hard and smooth, fine-textured, off-white fabric with a little very fine quartz temper and a few ill-sorted red-brown inclusions; trituration normally consists of iron slag fragments.

Fabric 16. Oxfordshire (Young, 1977).

Slightly sandy, off-white fabric, sometimes pinkish or with pink core; very distinctive trituration consisting of mixed transparent, pinkish and brownish quartz.

Fabric 17. Oxfordshire (Young, 1977).

A fine-textured, slightly micaceous, orange-brown fabric, sometimes with grey core; distinctive red-brown, samian-like slip. Trituration as Fabric 16.

Stamped mortaria

(Second numbers used are those in the archive.)

Figs.48-50

1 4. ACM Fabric 3. Dr. 29 cms.

2 2/34. EXN/EMC Fabric 8. Dr. 33 cms.

3 69/167. ARC/HFF/HFH on fragments.

Fabric 3. Dr. 31 cms.

(FECIT retrograde).

4 76. HYK Fabric 3. Dr. 33.5 cms. Slightly burnt.

Stamps 1 and 2 are retrograde name-stamps of G. Attius Marinus, no.2 is a retrograde *fecit* counterstamp used by him and no.4 has a fraction of border which can be attributed to him. All are on different vessels, and the condition of the dies when used suggests that no.1 (and possibly no.4) was made earlier than the others. Nos.1, 3 and 4 were made in the Mancetter-Hartshill potteries, no.2 perhaps at Little Chester, although the Mancetter-Hartshill potteries cannot be entirely ruled out.

Marinus is one of the most interesting of mortarium potters since fabric and distribution point to activity in the vicinity of Colchester, probably not earlier than AD90, some brief activity at Radlett within the period AD95-110

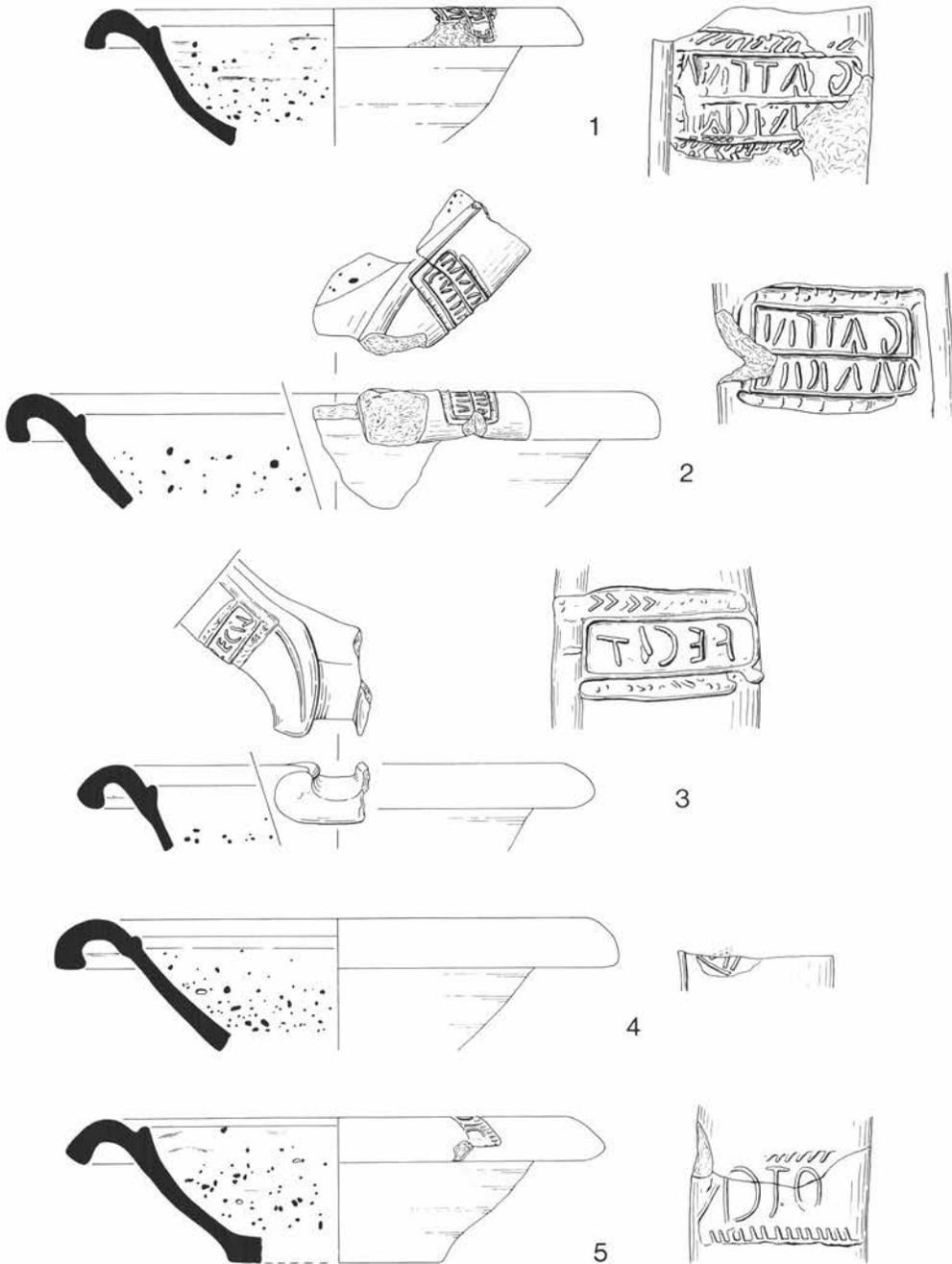


Fig. 48 Derby North-West Sector: stamped mortaria nos.1-5. Mortaria at 1:4, stamps at 1:2.

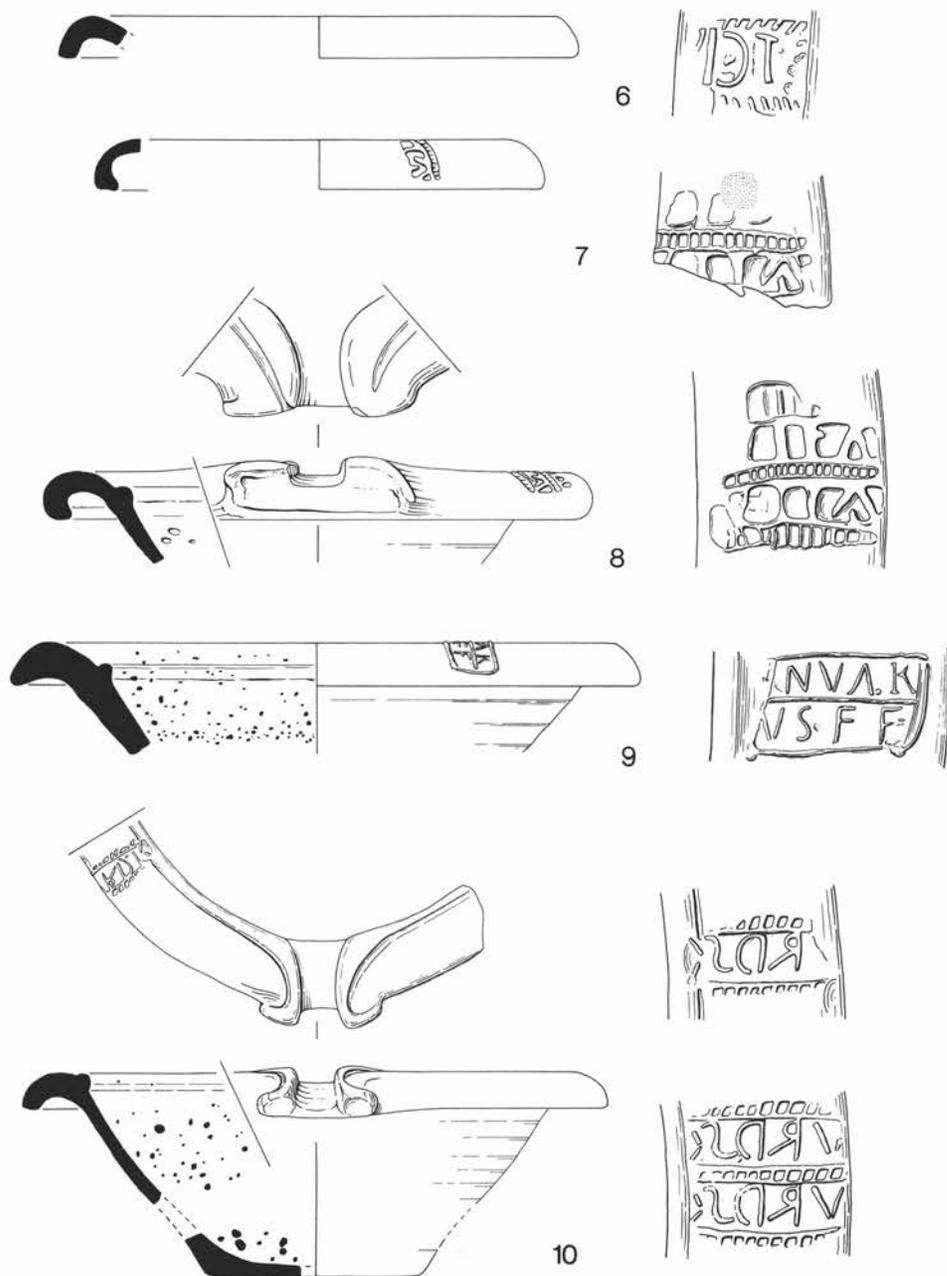


Fig. 49 Derby North-West Sector: stamped mortaria nos.6-10. Mortaria at 1:4, stamps at 1:2.

and a long production at the Mancetter-Hartshill potteries within the period AD90-130. He has, however, at least one distinctive, extra fabric not present in this sample which is probably of midland origin. The extra fabric could well have been produced at Little Chester (Derby Racecourse). (For some further information on G. Attius Marinus see Frere, 1972, 373, no.12).

It is worth noting that no.71 (unstamped fragment) which is almost certainly from the Little Chester kilns, is very much in the style of Marinus.

5 5. JEA Fabric 7. Dr 31 cms. Slightly burnt.
6 27. FNA Fabric 3/9. Dr c. 29.

Two mortaria with incomplete impressions from a die of *Victor* (C and R reversed in this die). Stamps of his are now known from Catcote, Hartlepool, Chester, Holditch, Leicester (2), Lincoln, Little Chester (2), MANCETTER (9), Melandra Castle, Rocester (3) and Wall. One kiln used by him has been excavated at Mancetter. No.5 is in a different fabric from those at his kiln and it could just as well be from the workshops at Little Chester. The problem is that the fabrics produced on both sites in the first half of the second century can vary considerably, but unless, or until there is evidence to the contrary, *Victor's* work should be attributed to Mancetter. His rim-profiles and the distribution fit a date before AD140 and perhaps earlier than AD130.

7 70. JQG. Fabric ?3. Burnt.

8 19/128/97 and probably 18. FCJ AZH/FPF & FCJ. Dr 29.

Five pieces, not all joining, which make up more than half the rim of a heavily burnt mortarium in Fabric 3.

Two mortaria with incomplete stamps of Vitalis IV, whose work is now known from Aldborough, Baginton, Benwell, Brough-on-Noe (2), Cardurnock, Chesterfield (2), Nr. Chesterton, Corbridge (2), HARTSHILL (several), Leicester (5), Little Chester (4), London, Mancetter, *Margidunum* (4), Maryport, Melandra Castle (2), Newstead, Northampton Museum (3), Ribchester (3), Rocester (2), Rothley, Templeborough, *Tripontium*, Wall, Wilderspool and Yorkshire Mus. (3).

One kiln used only by Vitalis and another probably shared with Minomelus and Gratinus have been excavated at Hartshill, Warks. His rim-profiles, and the general distribution pattern for his work are also typical for a pre-Antonine potter working at the Mancetter-Hartshill potteries, except for the single stamp

at Newstead which must belong to the Antonine occupation; association with Minomelus and Gratinus would also be likely to be early Antonine. The work of Vitalis and G. Attius Marinus is so similar that one may reasonably assume some association, possibly that Vitalis had worked for or with Marinus at some time. A date within the period AD115-145 would best fit the evidence.

9 1. LRD Fabric 9. Dr 36.

The incomplete, two-line stamp reads JNVAR/JVS FE, which must indicate Ianuarius *Fe(cit)*. No other stamp of his is known. Two-line stamps of this type were most common in East Anglia, and the lower Nene valley, stemming from East Anglia: it would be unusual in the Mancetter-Hartshill potteries, though he could have been an immigrant. The likeliest sources for the fabric are the lower Nene valley and the Mancetter-Hartshill workshops whose fabrics can be similar in the second century. Further examples of his work will clarify the problems but the rim-profile indicates a date within the period AD110-160.

10 3. (DCA)/149 EXP/218 AAS/162 AGC. 26 FLB/58 CDA (body sherds) may belong to the same mortarium. Dr.31. Fabric 9.

The whole of the rim of this well-worn mortarium survives; unusually, it is stamped once to one side of the spout and twice, close together, on the other side of the vessel. The stamps are incomplete but collation of all known impressions permit the reading >VRDS< retrograde; stamps from the same die are known from Cirencester, Grantham, Holditch, Little Chester (3) and Water Newton. The rim-profiles indicate a date cAD120-160+.

11 115 EKB/206 AAA. 17 FCG/88 FHG are from the same vessel. Dr. c.28. Fabric 9.

Three-quarters of the rim of this partially burnt mortarium survives. Better examples of the potter's stamp give RVTICO or more probably RVICCO if clearer stamps from a different die are considered. Stamps from these dies are now recorded from Catterick, Carrawburgh (2), Chesterholm, Corbridge, East Stoke (*Ad Pontem*), HARTSHILL (several), Ilkley (2), Little Chester and Mallows Cotton, Northants. The rim-profiles and the spout of the present example point to a date cAD150-185. He can be attributed to Hartshill where stamps of his have been found on the kiln-site.

12 75 DQE Fabric 1. Dr.25.5. Partially burnt, and worn. 131 AFA Fabric 1.

Two pieces, probably both from the same mortarium, and both with incomplete trade-

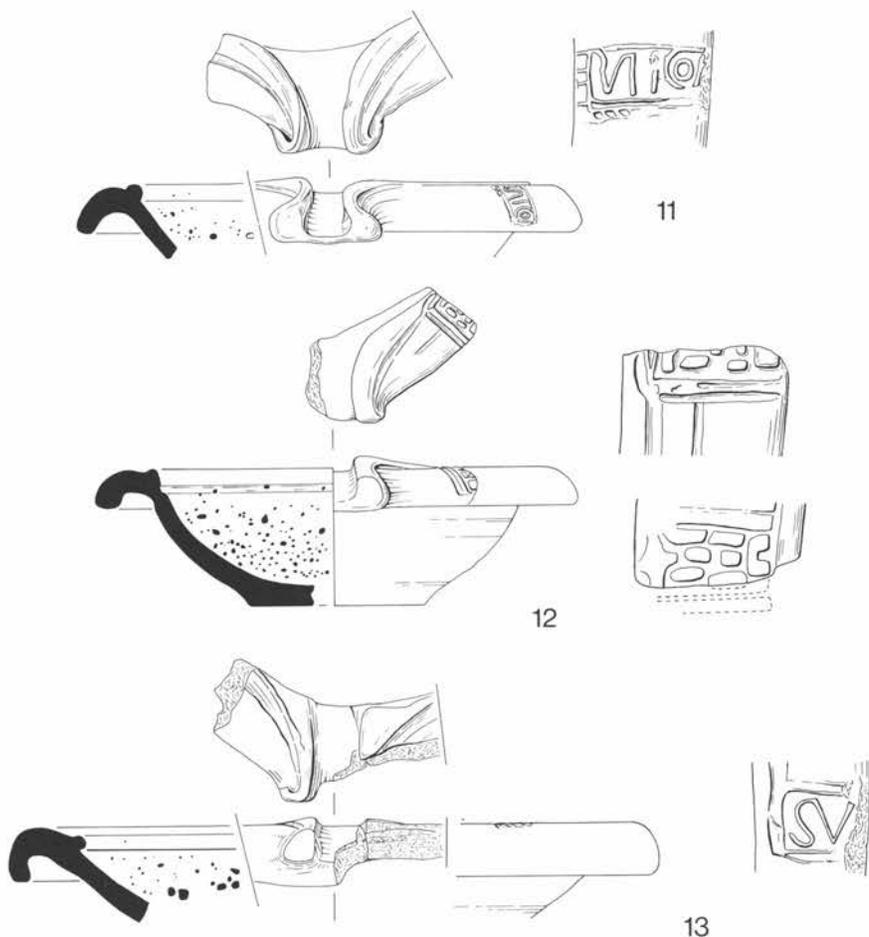


Fig. 50 Derby North-West Sector: stamped mortaria nos. 11-13. Mortaria at 1:4, stamps at 1:2.

mark stamps from the same die. This potter can be attributed to the Little Chester kilns. He used two fabrics, neither confusable with Mancetter fabrics, and both consistent with production at the Little Chester kiln (Derby Racecourse). His work is known from Little Chester (2 vessels) and Templeborough. The rims would best fit a date in the mid-second century.

13 183 ABQ. Fabric 2. Dr. 28.

A slightly burnt mortarium with fragmentary stamp reading SV[, possibly followed by A or M. No other example is known from the same die and the stamp could, of course, be retrograde. The profile is pre-Antonine and the fabric points to a Midland origin, probably either at Little Chester or the Mancetter-Hartshill potteries.

BLACK-BURNISHED WARE AND AMPHORAE

By D.F. WILLIAMS

Sixteen sherds of BB1 (Black-burnished category 1) and twenty-four amphorae sherds from excavations at Little Chester were submitted for identification of sources. All the BB1 sherds were examined with the aid of a binocular microscope, and a number were also thin sectioned and subjected to heavy mineral separation and then studied under the

petrological microscope. Locally produced pottery in the form of a cordon-necked jar from the Little Chester kilns and a Derbyshire lid-seated jar were provided for comparative purposes.

BB1 sherds

Thin sections were made of BB1 sherds from phase 1 pit PMA, phase 3 gravels FCE, phases 4-6 humic deposit BAC, phase 4 pit EK/GZ (GZA bowl and GZG) and a Little Chester ware cordoned-neck jar K52 and Derbyshire ware cupped-rim jar and the Derbyshire lid-seated jar HBK (Fig.51). The BB1 sherds all showed frequent quartz grains, average size 0.20-0.60mm, and some pieces of shale, set in a fairly clean light brown anisotropic clay matrix. The two non-BB1 sherds also contained quartz grains,

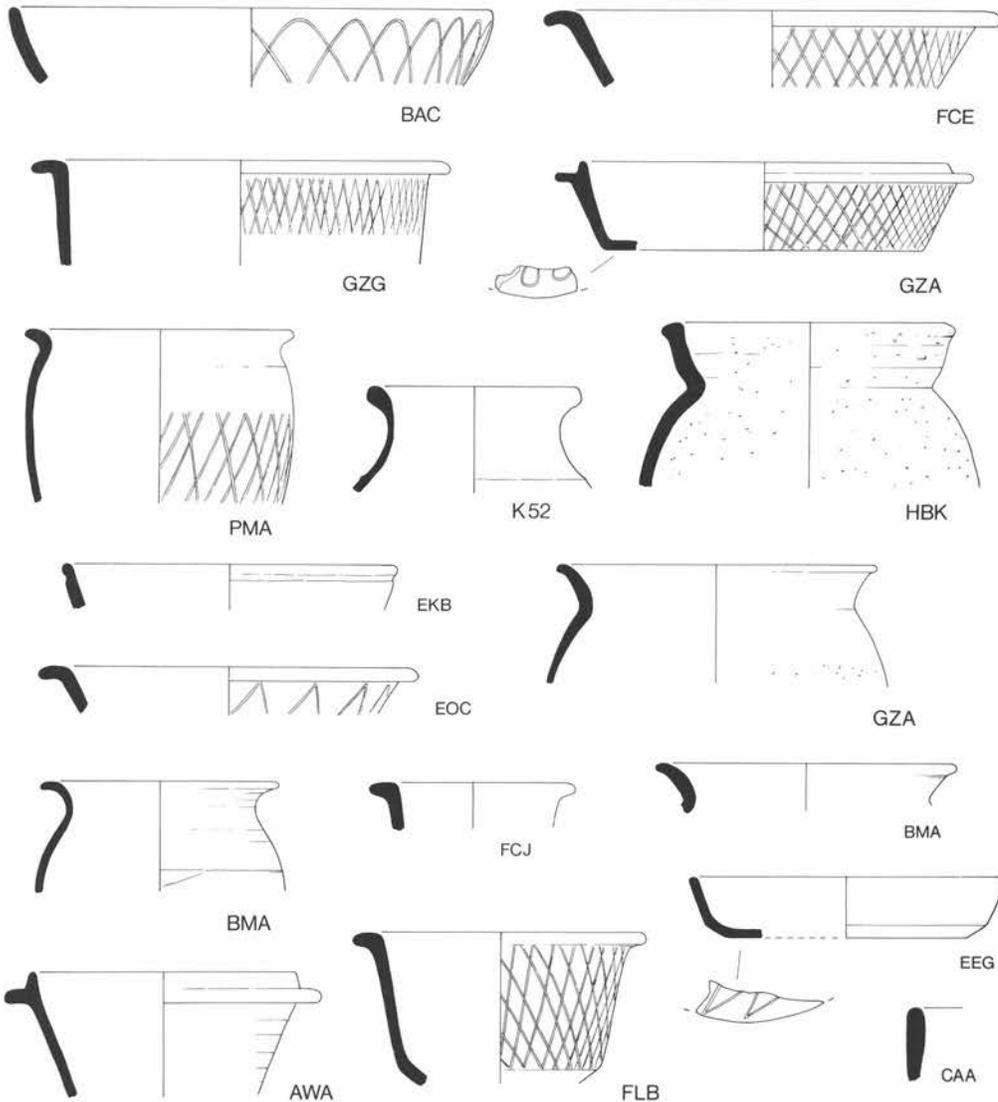


Fig. 51 Derby North-West Sector: Black-burnished ware category 1, Little Chester and Derbyshire ware. Scale 1:4.

but the size and texture were noticeably different to the BB1 material. The cordon-necked jar contained a groundmass of small quartz grains 0.10mm and under in size, with a scatter of larger grains, while the Derbyshire lid-seated jar contained a scatter of ill-sorted quartz grains up to 1.50mm in size.

A heavy mineral separation of these same seven samples showed a tourmaline-rich assemblage for each of the BB1 sherds, which agreed well with analysis on BB1 vessels shown to have been made in the Wareham-Poole Harbour area of Dorset (Williams, 1977, Group 1). A similar origin for the Little Chester material is also likely. The cordon-necked jar and the Derbyshire lid-seated jar both produced suites in which the principal heavy mineral was zircon. A hand-specimen examination of the remaining BB1 sherds revealed in most cases a fabric which appeared to be close to the analysed material and hence likely also to have originated in Dorset: from phase 4 pit EK/GZ (EKB and GZA jar), phase 4 coaly layer EOC, phase 5 rubble layer BMA, phase 1 silts LAA, phase 3 gravels FCJ, phase 6 pit AWA, phase 3 gravels FLB. The only exceptions were CAA, which was too burnt to tell, and EEG, which appears to be a different fabric — possibly ?Rossington Bridge.

Amphorae sherds

Dressel 20

DLC 79 PCS (1) phase 1 feature

DLC 79 DCZ (1) phase 3 pit DLC 79 ABA (1) late gravels.

Dressel 20 amphorae were made along the banks of the River Guadalquivir and its tributaries between Seville and Cordoba in the Roman southern Spanish province of *Baetica* (Bonsor, 1931; Ponsich, 1974; 1979). They were used for the transport of olive-oil and have a wide date-range, from the Augustan prototype (Oberaden 83) to the late-third century AD (Zevi, 1967).

Gallic Amphorae

DLC 79 FAA FAB (10) phase 5 post-hole

DLC 79 (DCZ) (1) phase 3 pit

DLC 79 ABA (2) late gravels

DLC 79 FEA (1) phase 4 spread

DLC 80 LMF (5) phase 2 or 3

Pelichet 47 probably accounts for most, if not all of the sherds. This amphora type was made predominantly in Languedoc and Provence in southern France, particularly around the mouth of the Rhone (Widemann *et al*, 1979). Panella (1973) has demonstrated that the principal content carried was undoubtedly wine. This type had a long life from about the middle of the first century AD to at least the early-fourth century AD (*ibid.*). In Britain, Pelichet 47 is not found in pre-Boudiccan contexts (Peacock, 1978).

Unassigned

DLC 79 FAA FAB (1) phase 5 posthole

DLC 75 AFA (1).

GRAFFITI

By M. HASSALL

1 Sherd from globular amphora in buff fabric. A graffito in cursive letters cut with a sharp implement, before firing, reads: ... CELSO COS ... V TI, probably to be restored as Macrinus et Celso Co(n)sulibus ... vati, 'in the consulship of Macrinus and Celsus work of ...vatus'. The restoration of the name of the

first consuls is based on the reasonable assumption that ordinary rather than suffect consuls are named in which case P. Iuventius Celsus, second of the pair of ordinary consuls for AD164, would appear to be the only possibility, his colleague in office being M. Pompeius Macrinus. In the second line Privatus

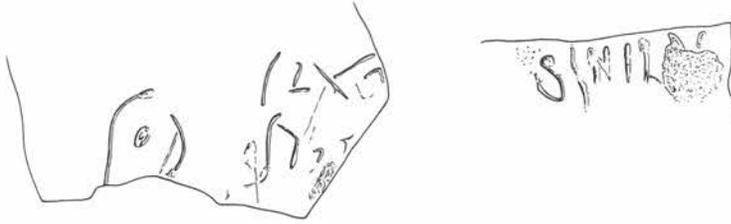


Fig. 52 Derby North-West Sector: graffiti on amphora sherds. Scale 1:2.

is the most likely of several possibilities. Pit EX/GO

2 Amphora body sherd in buff fabric. A graffito, probably cut before firing, reads

SENIL . S, *Senilis*, 'Senilis'. Of the last letter only the top survives but the restoration is virtually certain. It is a name that is most commonly found in Celtic areas. Pit LR.

THE ROMAN GLASS

By D.A. ALLEN

The glass finds from the North-West Sector and the Racecourse Cemetery span the period from the later-first to the earlier-third centuries. Most common amongst the vessels are bottles of blue-green glass, used as containers for a variety of liquid substances. Several fine items of tableware are also represented, and these include vessels made in both the strong monochrome colours popular during the first and early-second centuries, and the colourless metals which began to replace these from the Flavian period onwards. Most interesting is the engraved cup rim from the Racecourse site (no.1), which belongs to a small close-knit group of vessels found scattered mainly throughout the Rhineland and Britain. The types represented conform well with finds from sites of similar date elsewhere in Britain, and most are likely to have been imported from the Rhineland or Gaul.

Notes on Fig.53

Mould-blown

1 Side fragment of a bowl of clear blue-green glass. Mould-blown: part of five vertical ribs extant, with two horizontal cordons beneath. Slightly distorted by fire. AGA Late.

This small mould-blown fragment is most likely to have come from a ribbed bowl with concave rim, of a type made in Syria and Italy from the mid-first century until some time within the Flavian period. A few reached the north-western provinces: 19 fragments, for example, were found in pre-Flavian and Flavian deposits at *Vindonissa* (Berger, 1960, 55-6, nos.139-143, Pls.9 and 18). There is a complete deep bowl from Cologne (Fremersdorf, 1958a, 32, Pl.34) and British finds include a substantially complete bowl from a pit in the pre-Flavian fortress at Usk (Price, forthcoming), another from London (Wheeler, 1930, 122, no.5, fig.42) and fragments from *Camulodunum* (Harden, 1947, 300, no.48, Pl.LXXXVII), *Verulamium* (Charlesworth, 1972, 196, nos.1 and 3, fig.74, 2), Caerleon, Carlisle and York.

Blown

2 Neck and base fragments of a jug of brown glass; some streaky and flaking iridescence. Rim and handle missing; part of cylindrical neck extant with constriction at its base; body apparently conical, with pushed-in open base-ring and concave base. Diam. of base-ring c0.08m. DCA. Phase 4.

3 Rim fragment of a jar of greenish amber glass; flaking iridescent surfaces. Rim folded outward and downward twice, forming vertical collar, diam. c0.09m. FLB Phase 3.

4 Body and base fragments, some joining, of a jug or jar, perhaps the same vessel as no.3 above, of greenish amber glass; surfaces iridescent. Globular body, pushed-in open base-ring, concave base. Diam. of base-ring 0.08m. KNA Phase 2 and DCG Phase 4.

The following amber/brown body fragments may have come from one of the vessels catalogued above, or from vessels of the same types:

One fragment. FTG Phase 2.

Three fragments, one with optic-blown ribs. KMC Phase 2.

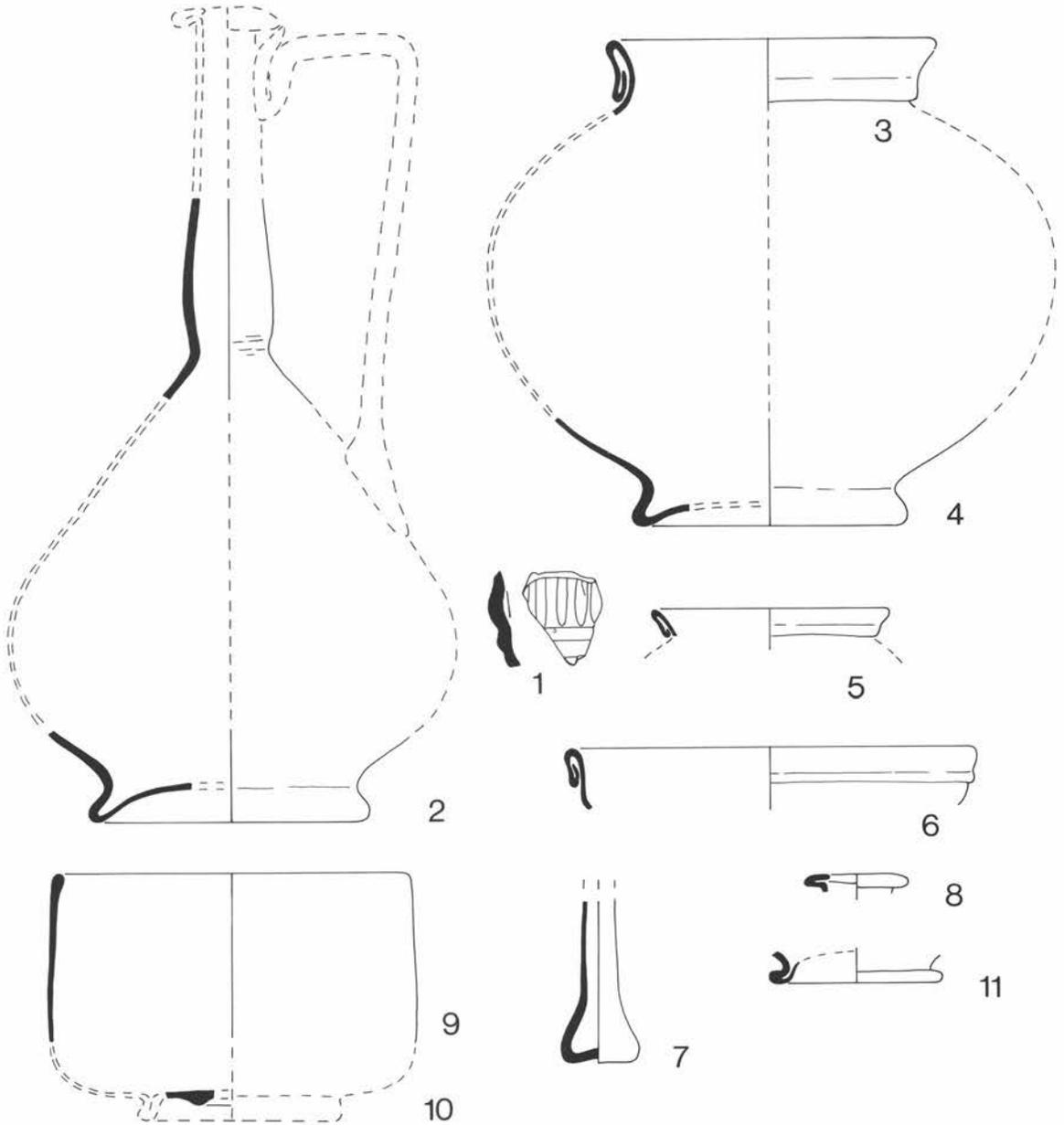


Fig. 53 Derby North-West Sector: glass. Scale 1:2.

Two fragments. JZB Phase 5.

5 Rim fragment of a jar of clear blue-green glass. Rim folded outward and downward twice forming sloping hollow collar, diam. c0.08m. FPL Phase 2 or 3.

Jugs and jars of the types catalogued here belong to a close-knit group which almost

certainly originated somewhere within the region between the Seine and the Rhine (Price 1978, 74). They are common finds throughout the north-western provinces, and occur in strong monochrome colours as well as natural blue-green glass. Characteristics include a conical or globular body, often with vertical or spiralling

ribs, the jugs having long cylindrical necks and angular handles and the jars having vertical collars. It is usually impossible to distinguish body and base fragments of jugs and jars from each other. The jugs have been fully discussed elsewhere by Harden (1967, 238-40) and Price (1977, 155-8), both of whom dated the group as a whole to AD50-125. However, more recent finds from pit groups of the mid-second century have led to the suggestion that some manufacture may have continued until this date (Price, 1980, 66, nos.7-11, fig.15).

6 Rim fragment of a bowl of clear blue-green glass. Rim folded outward and downward twice forming a hollow tube, diam. c0.12m; sides apparently curve inward beneath rim. BPB Phase 4 well.

Folding techniques for finishing rims were used throughout the Roman period, and insufficient remains of this piece to enable vessel identification.

7 Lower neck and body of an unguent bottle of blue-green glass; surfaces streaky and iridescent. Cylindrical neck, conical body, slightly concave base with pontil mark. Max. body diam. 0.02m. HYF Phase 4.

This vessel is likely to have had a folded rim, since a scar remains on the base where it would have been held by a pontil rod whilst the rim was thus finished. Unguent bottles with this feature and a rounded conical body were most common during the second century, particularly the Trajanic, Hadrianic and Antonine periods.

8 Rim fragment of a jug or flask of blue-green glass; pinhead bubbles within the metal. Rim folded outward, upward and inward, diam. c0.03m. GZB Phase 3.

This could have belonged to any of a wide variety of jugs and flasks, and cannot be closely dated.

Bottles

Bottle fragments came from the following contexts:

AAS ACA ADC AAM DLA DCY DCU GZO
GZT GZU JTF EQA FTC AMC ACF EXN
AZB BAA BHB HCA JEA ACA/CQA ABC.

As on most Roman sites in the north-western provinces occupied during the first and second centuries, most of the identifiable glass vessel

fragments belong to common blue-green bottles. The characteristics of this group of containers have been discussed by Charlesworth (1966), and include a short cylindrical neck, angular multi-ribbed handle, and mould-blown cylindrical or prismatic body, the latter with trademarks in relief on the base. Most were made during the period cAD60-130, but some manufacture continued probably until the end of the second century, and some vessels remained in use later still. These bottles would originally have contained a wide variety of liquid substances.

Window glass

A total of six fragments of window glass came from the following contexts:

DCH GOR JTE NJA EXN

All are of the cast matt-glossy variety, used during the first to third centuries.

Colourless glass

9 Rim fragment of a cup of clear colourless glass; a few cracks occur within the metal. Vertical rim, fire-rounded and thickened, diam. 0.1m. AEA. Modern.

10 Base fragment of a cup of colourless glass. Part of an applied coil base-ring extant, diam. c0.02m, almost certainly originally the inner of two concentric base-rings. ALA Phase 5.

These fragments represent the commonest type of glass cup in use during the period cAD160-230. A very fine complete example came from a grave at Airlie in Angus (Curle, 1932, 291, fig.3), and fragmentary finds are common in Britain and the north-western provinces: 30-40, for example, have been recovered at Corbridge (Bulmer, 1955, 128), over 50 at *Verulamium*, and about 40 at Caerleon. The great majority of these cups are completely plain, but a few were given elaborate painted or engraved decoration (Fremersdorf, 1970), an example of the latter group being represented at the Derby Racecourse site, discussed below.

11 Base fragment, probably of a beaker or cup, of greenish-colourless glass; iridescent. Pushed-in solid base-ring, diam. 0.05m, high domed base. AGJ Phase 6.

This piece could have come from any of a wide variety of vessel types.

Coins (Table 12)

By J. CASEY

51 coins were recovered from the North West Sector excavations. Eight illegible coins were recovered from ANA stone spread, BHB late linear feature, the late gravels and topsoil. The remaining 43 are listed in Table 12.

No.	Issuer	Denom.	Type	Ref.	Date	Condition	Context
1	VESPASIAN	As	Obv. Illegible Rev. Illegible	RIC.-	68-78,	VW/EW	EOB Phase 4 coal layer
2	DOMITIAN	Sestertius	Obv. Illegible Rev. Illegible	RIC.-	81-98	Corroded	ACB Phase 5-6 subsidence
3	NERVA	Sestertius	Obv. Illegible Rev. Illegible	RIC.-	96-98	EW/EW	ARA Phase 5 clay and soil layer
4	'CLAUDIUS I'	As	Obv. TI CLAUDIVS CAESAR AVG PM TR P IMP Rev. CERES AVGVSTA — S.C.	Copy of RIC.67	'54-64'	W/W	LAB Phase 1 silty layer
5	'CLAUDIUS'	As	Obv. TI CLAUDIVV CAESAR AVG PM TR P IMP... Rev. S.C.	Copy of RIC.66	'54-64'	VW/VW	LAB Phase 1 silty layer
5	HADRIAN	As	Obv. Illegible Rev. Illegible	RIC.-	117-38	W/VW	CPA Phase 6 pit
6	?ANTONINUS PIUS	Denarius	Obv. Illegible Rev. Illegible	RIC.-	136-61	SW/SW	BNB Phase 6 subsidence in GO
7	Illegible	Sestertius	Obv. Illegible	As RIC.	100-200	SW/UW	AGB Late gravels
8	MARCUS AURELIUS,	As	Obv. AVRELIVS CAESAR AVG Caesar PII F Rev. TR POT (...) COS II- S.C.	As RIC. (M.Aurelius)	159	SW/UW	EMA Phase 5 post-hole
9	FAUSTINA II	Sestertius	Obv. Illegible Rev. Illegible	RIC.-	c160	EW/EW	CAB Late subsidence in EK
10	LUCILLA	Sestertius	Obv. LUCILLA AVGVSTA Rev.	As RIC. (M.Aurelius)	c170-80	W/W	Topsoil
11	SEPTIMIUS SEVERUS	Denarius	Obv. Illegible	RIC.-	193-211	SW/SW	Nursery trenches
12	SEPTIMIUS SEVERUS	Denarius	Obv. Illegible Rev. Illegible	RIC.- gravels	193-211	SW/SW	ABE Phase 6
13	SEPTIMIUS SEVERUS	Denarius	Obv. Illegible	RIC.-	193-211	SW/SW	Topsoil
14	JULIA DOMNA	Denarius	Rev. VICTOR ... AVG Obv. IVLIA AVGVSTA	RIC.-	193-211	W/Corroded	Topsoil
15	SEVERUS ALEXANDER	Denarius	Obv. Illegible	RIC.-	225-35	SW/?	Topsoil
16	SEVERUS ALEXANDER	Denarius	Obv. IMP SEV ALEXAND AVG Rev. Illegible	RIC.-	225-35	SW/?	CPA Phase 6 pit
17	Illegible	Antoninianus	Obv. Illegible	RIC.-	238-49	SW/Corroded	Topsoil
18	GALLIENUS	Antoninianus	Rev. Illegible	RIC.-	258-68	SW/Corroded	Nursery trenches
19	POSTUMUS	Antoninianus	Obv. IMP C PO STVMVS PP AVG	RIC.-	258-68	SW/Corroded	Topsoil
20	POSTUMUS	Antoninianus	Rev. Illegible	RIC.-	258-68	UW/SW	Topsoil
21	VICTORINUS	Antoninianus	Obv. Illegible Rev. Illegible	RIC.-	268-70	UW/SW	Topsoil

22	CLAUDIUS II	<i>Antoninianus</i>	Obv. IMP C CLAVDIVS AVG Rev. VIRTVS AVG	RIC.109	268-70	SW/SW	CAB Late subsidence in EK Topsoil					
23	CLAUDIUS II	<i>Antoninianus</i>	OBV. DIVO CLAUDIO Rev. CONSECRATIO — altar	RIC.261	270							
24	TETRICUS II	<i>Antoninianus</i>	Obv. C PIV ESV TETRICVS CAES	RIC.270/2	270-3	UW/UW	Topsoil					
25	TETRICUS II	<i>Antoninianus</i>	Rev. SPES ... Obv. Illegible	RIC.-	270-3	UW/Corroded	ADC Late ditch					
26	TETRICUS II	<i>Antoninianus</i>	Rev. Illegible	RIC.-	270-3	Corroded	Topsoil					
27	'TETRICUS I'	<i>Antoninianus</i>	Rev. Illegible	RIC.-	273+	UW/UW	BPF Phase 4 Well					
28	'TETRICUS I'	<i>Antoninianus</i>	Rev. Illegible	Copy of RIC.-	273+	UW/Corroded	AFA Phase 6 pit					
29	'TETRICUS I'	<i>Antoninianus</i>	Rev. Illegible	Copy of RIC.109	273+	UW/UW	AGA Late gravels					
30	'TETRICUS II'	<i>Antoninianus</i>	Rev. Illegible	Copy of RIC.254	273+	W/SW	Nursery trenches					
31	'TETRICUS II'	<i>Antoninianus</i>	Rev. PIETAS AVG Obv. Illegible	Copy of RIC.254	273+	UW/UW	Topsoil					
32	'CLAUDIUS II'	<i>Antoninianus</i>	Rev. PIETAS AVG Obv. DIVO CLAUDIO	Copy of RIC.261	270+	Corroded/UW	ABA Late gravels					
33	RADIATE COPY	<i>Antoninianus</i>	posh. Rev. CONSECRATIO Obv. Illegible		273+		Plough damaged layer					
34	?RADIATE COPY	<i>Antoninianus</i>	Rev. Illegible		273+		Plough damaged layer					
35	RADIATE COPY				273+		Topsoil					
36	CARAVSIUS	<i>Antoninianus</i>	Obv. IMP CARAVSIVS PP AVG Rev. ORIENS AVG	RIC.869	286-90	SW/SW	Topsoil					
37	?CARAVSIUS	<i>Antoninianus</i>	Obv. Illegible	RIC.-	286-93	Corroded	CAA Late subsidence in EK					
38	CARAVSIUS	<i>Antoninianus</i>	Rev. Illegible	RIC.-	286-93	SW/Corroded	AFA Phase 6 pit					
39	ALLECTUS	<i>Antoninianus</i>	Obv. IMP C ALLECTVS PP AVG	RIC.-	293-6	SW/Corroded	Nursery trenches					
40	CONSTANTINE I		Rev. Illegible									
41	CONSTANTINE I		Obv. CONSTAN-TINVS AVG Rev. PROVIDEN-TIAE AVGG	RIC VII (Trier) 449 Trier	324-5 330-35	UW/UW SW/SW	BRA Phase 4 coal layer ANA Phase 6 stone spread					
42	'CONSTANTIUS II'		Obv. CONSTANTINI-NVS MAX AVG Rev. GLOR-IA EXER-CITVS Obv. DN CONSTAN TV2RP Rev. FEL TEMP REPARATIO	Copy as LRBC. 2.72	354+	UW/UW	AGB Late gravels					

Table 12 Derby North-West Sector: coins (key as p.13)

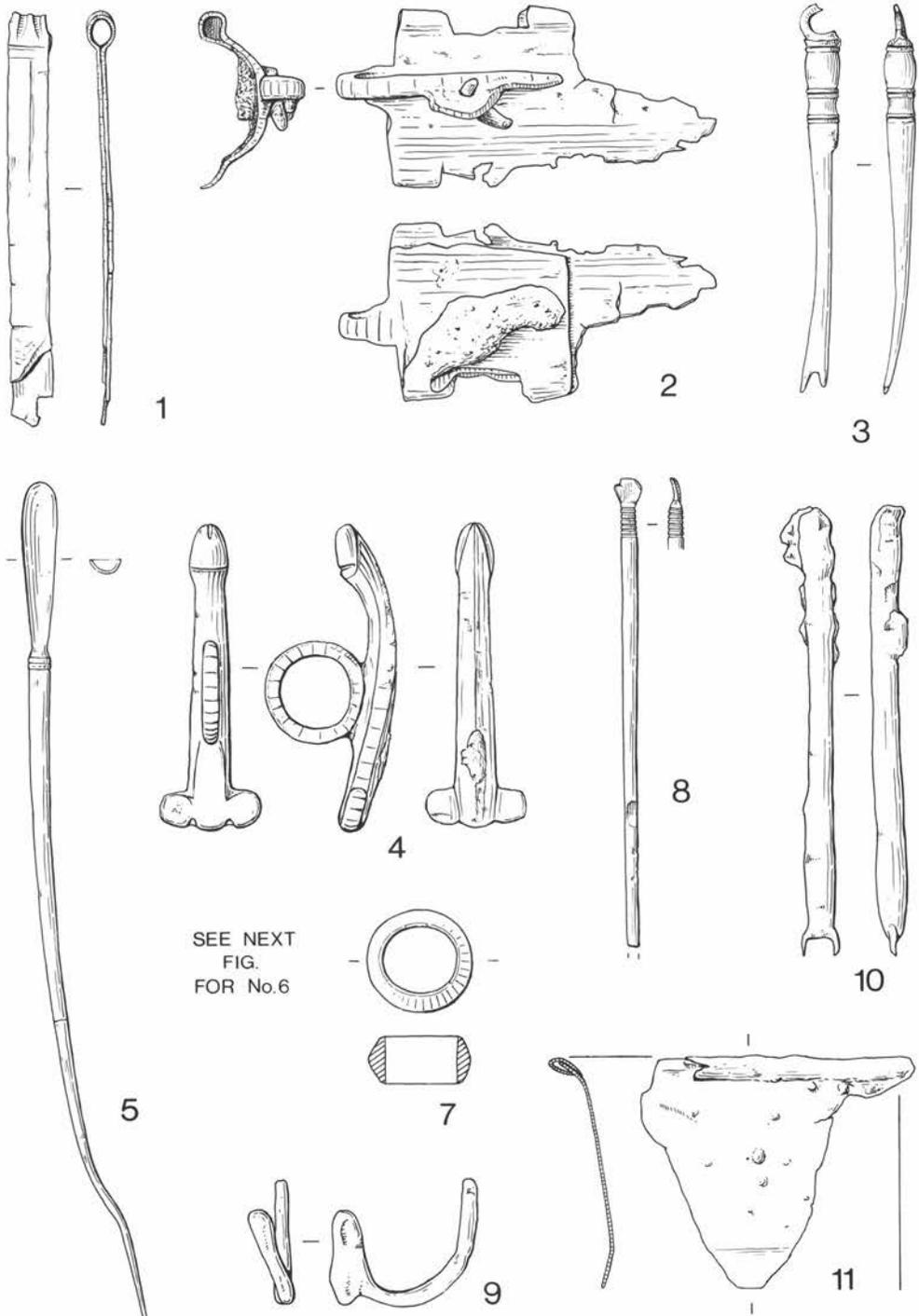


Fig. 54 Derby North-West Sector: bronzework nos. 1-11 except no. 6. Scale 1:1.

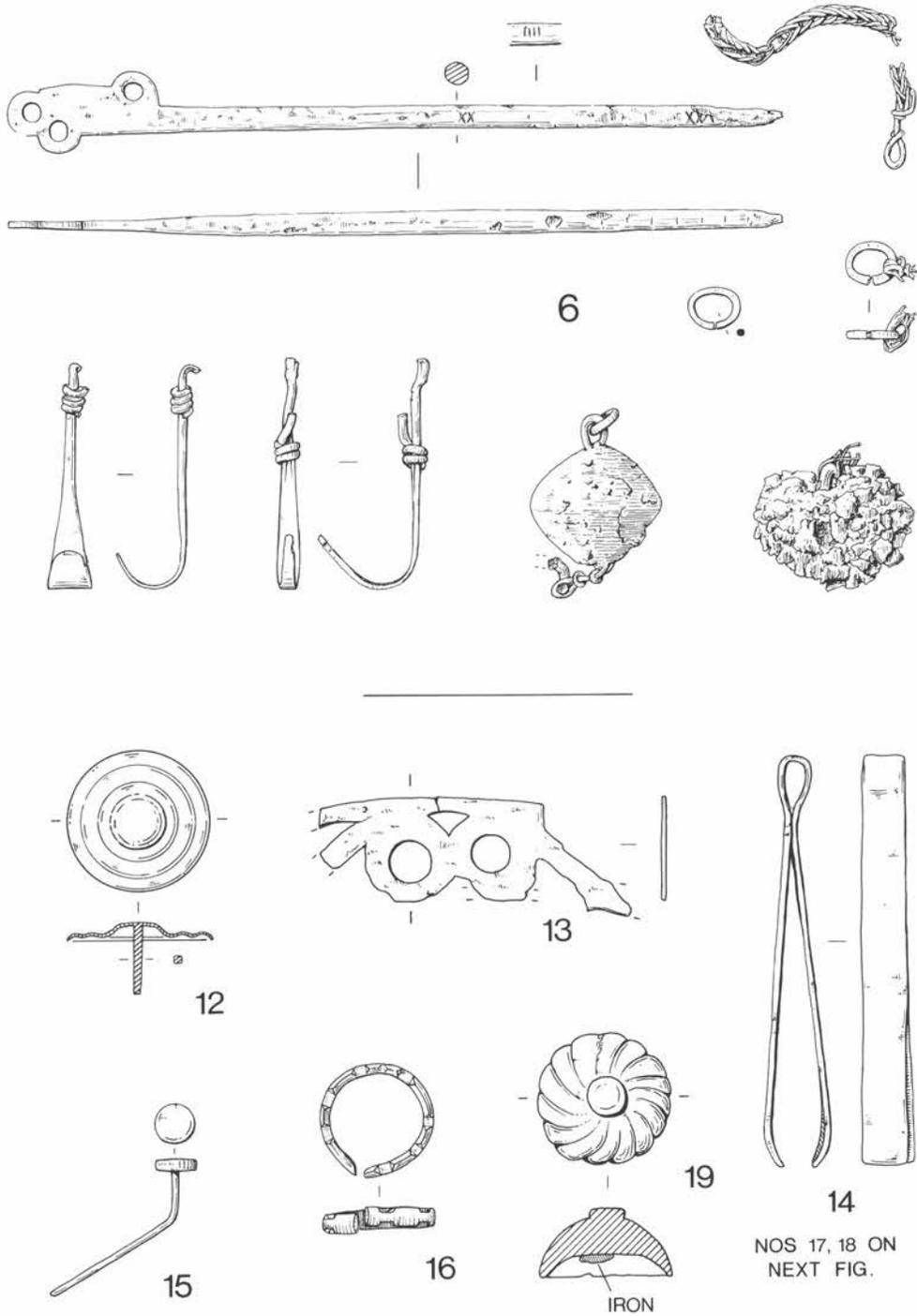


Fig. 55 Derby North-West Sector: bronzework nos. 12-19, except nos. 17 and 18, and no. 6. Scale 1:1 except no. 6 at 1:2.

THE BRONZE WORK

By M. DAWSON

Notes on Fig.54

1 Hinge of sheet bronze or damaged flattened tweezers with blade now missing. This artifact is undecorated. LAB Phase 1.

2 Tubular fitting with two lateral hinge sockets. Attachment of hook and eye situated on the body of the artifact. Use unknown. PMA Phase 1.

3 Pin with disc, spool and bead decoration on terminal. NYB Phase 1.

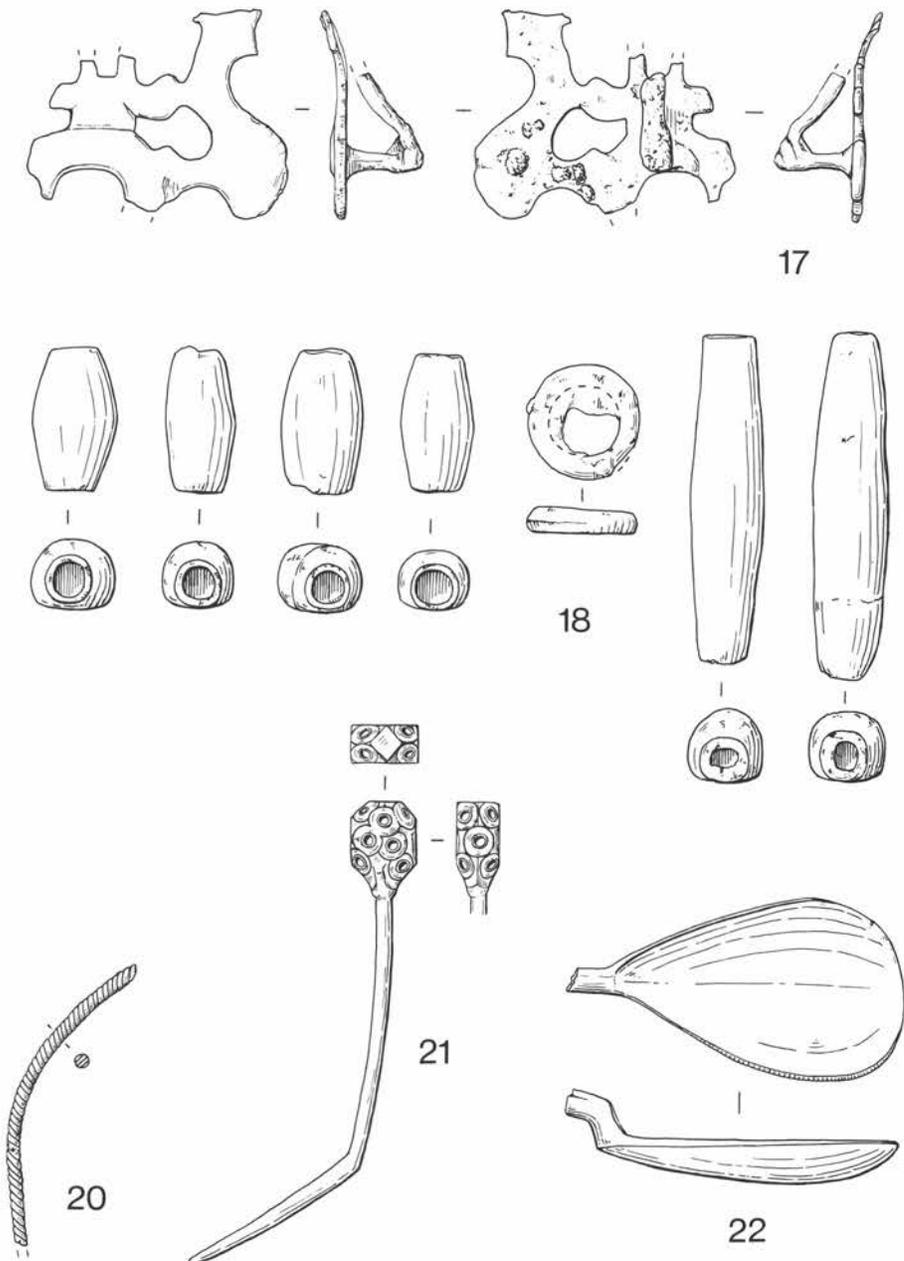


Fig. 56 Derby North-West Sector: bronzework nos. 17, 18, 20, 21, 22. Scale 1:1.

- 4 Phallus pendent (c.f. Robertson, 1975, fig.38.5 undated isolated find) for other types see Crummy, 1983, fig.164, 427; Frere, 1972, fig.33 no.47 dated AD130-150, usually associated with the Roman military. LZA Phase 2.
- 5 Spatulate headed medical probe (c.f. Hawkes and Hull, 1947, pl.c no.24). FT Phase 2.
- 6 Steelyard and two lead weights. Two bronze hooks were recovered with fragments of an iron double hook and bronze chain. One of the lead weights was badly distorted by heat and the surface of the other weight was flaked. The weights weighed 127.9g and 196.5g respectively and both had bronze rings and chains. One also had the remains of the iron double hook still in position. None of the calibrating marks survived and the mount with double suspension holes was broken. These artifacts are familiar from all periods of Roman Britain, a complete example is illustrated from Wallbrook London, (B.M.,1966, fig.40 no.11) and other examples are known (Jarrett and Wrathmell, 1981, fig.72 no.48; Neal, 1974, 31, fig.56, 47 c350AD; Bushe-Fox, 1949, L pl.xxxviii no.133).
- 7 Circular fitting with oval bezel — but no remains of mount. KEG Phase 3 gravels.
- 8 Undecorated pin fragments. FP/LH Phase 3 pit.
- 9 Twisted wire object of unknown use. CF Phase 4 gravels.
- 10 Object of unknown use. KJA Phase 4 pit.
- 11 Vessel fragment, rim diam 10 cm. CAA Phase 6 subsidence in EK.

Fig.55

- 12 Circular decorated stud identical to examples

illustrated in Hawkes and Hull, 1947, fig.62 — pit A21 (p.86) and Collingwood, R.G. and Richmond, I., 1969, fig.107, probably a decorative stud from a military helmet. CAB Phase 6 subsidence in EK.

- 13 Fragment of openwork. AFB Phase 6 pit.
- 14 Undecorated tweezers. AGG Late gravels.
- 15 Pin. BHA Late linear feature.
- 16 Finger-ring with indented decoration, (c.f. Down, 1979, p.149 No.1 Chilgrove V). ABA Late gravels.
- 17 Fragment of openwork. ABA Late gravels.
- 18 Necklace comprising two fusiform beads; four barrel-shaped beads and one small ring. Bronze barrel beads have been found at Birrens (Robertson, 1975, fig.30, 4). AAS Topsoil.

Fig.56

- 19 Convex Rosette stud (c.f. Hawkes and Hull, 1947, pl.ciii No.24: listed here as possibly Cromwellian). AAA Topsoil.
- 20 Fragment of late, twisted bracelet. (c.f. Crummy, 1983, fig.41. 1602 from 3rd-4th grave). AAS Topsoil.
- 21 Pin with ring and dot decorated faceted cuboid head. (c.f. Crummy, 1983, fig.28, 486, 487 dated to post AD250, and Clarke, 1979, Lankhills II gr.100 89F undecorated). AAA Topsoil.
- 22 Spoon bowl; a common Roman artifact (c.f. B.M. Guide to the Antiquities of Roman Britain 3rd edition 1966 fig.18-8 (silver); Crummy, 1983, fig.73. 2012. 2014; Cunliffe, 1975, fig.113.57.59). Pear shaped 2c, of Colchester type 2. AAH Topsoil.

THE IRONWORK

By M. DAWSON

The ironwork from Little Chester discovered over four years of excavation from 1971, is largely typical of ironwork from auxiliary forts. In common with other forts the iron has little of a specifically military character. (Manning, W.H., 1976, 7; Potter, T.W., 1979, 89). Even the spur which may have belonged to a cavalryman could, as Potter observed, have come from a civilian.

Like other forts the collection of ironwork was dominated by nails of types characteristic of Roman military sites — rectangular shanks of variable length and beaten heads (Mannings Type II). As with other collections few of the nails were bent or clenched.

Other similarities between the ironwork from Little Chester and other forts are apparent too: like the forts at Templeborough (May, T., 1922) and Manchester (Jones, G.D.B., 1974), amongst others, Little Chester yielded a needle perhaps illustrating the familiar concern of the soldier to have his uniform orderly for inspection.

Another feature to emerge from the site, and which could perhaps provide the basis for considerable further research, was the incidence of agricultural implements —

specifically the reaping hook and field anvil. Similar agricultural equipment has come from forts such as Maryport (Jarrett, M.G., 1976, fig.20 No.3); and Caernarfon (Wheeler, R.E.M., 1923, fig.66 No.23) reinforcing the belief that the army was in some way concerned with the cultivation of land near the fort, either in the form of personal allotments or farming military areas. (for other agricultural implements found on Roman forts see Manning, W.H., and Rees, S.E., 1979).

Another facet of the soldiers' life that is illustrated by the ironwork came from the discovery of styli — familiar from forts of all areas, for example Chesterholm (Birley, R., 1977, p.130) and Caernarfon (Wheeler, R.E.M., 1923, fig.66 16-19). They no doubt reflect the armies reliance upon administrative bureaucracy.

Understandably the ironwork discovered included no large complete items for it is to be expected that on a functioning fort any such items of iron, broken or worn out, would have been reworked or repaired and not discarded. Only where there is clear evidence of abandonment by way of closure deposits — like those for instance at Newstead or Inchtuthil — would one expect to find large discarded items.

From the foregoing brief survey it is tolerably clear that the ironwork from Little Chester is typical of that found on auxiliary forts. At the same time the general nature of the discussion highlights one of the major deficiencies in metalwork reports and that is the lack of available detailed comparisons for the metalwork in context. Many fort excavations were undertaken before the 1950s and metalwork reports abound which simply state "The iron was throughout in a very advanced state of decay. The pieces illustrated are representative of an immense quantity of fragments." (Wheeler, R.E.M., 1923, p.118) or see Cotton, A.M. and Gathercole, R.W., 1958, p.45 for a similar but later statement. Such reports reflect the administrative difficulty of dealing with large numbers of items — measuring in precisely the find spot of each iron fragment although desirable is rarely undertaken on Roman sites, even though careful recording could reveal patterns of nail or binding fragments that represent the remains of fallen structures or discarded items such as parts of boxes or chests. The problem though may be on the point of remedy for with the increased use of on-site computers, recording, even of very large amounts of metalwork, may be feasible.

Little Chester too has its own particular problem — principally the amount of time that elapsed between excavation and analysis of the ironwork, bearing in mind that none of it was conserved, meant that many pieces were beyond careful analysis. It cannot be emphasised too strongly that twelve years is too long a period to store ironwork and that a more realistic time scale would be one to two years after excavation. Metalwork specialists can only look forward to the time when material can be made available in the same year as its excavation.

Notes on Fig.57

1 Joiner's dog or staple., c.f. square section probably driven into timber, as binding or into a door jamb to act as the catch for a sliding bolt. FCF Phase 3 gravels.

2 Joiner's dog or staple. EKD Phase 4 pit.

3 This artifact with its flattened stem has a strong loop at one end and is probably the looped part of a drop hinge. The loop has twisted to one side, perhaps a distortion due to the weight of a door. EOC Phase 4 coal layer.

4 Small T shaped tumbler lift-key — a common type of key with no dating implication (for other examples see Partridge, 1981, p.117 fig.62 no.98; Frere and St Joseph, 1974, p.81

fig.43 no.34). AHC Phase 5 stone sill building.

5 Latch-lifter. ABH Phase 6 gravels.

6 Small flattened U shaped binding probably enclosing leather c.3mm thick. ABH Phase 6 gravels.

7 Ring. ANA Phase 6.

8 Right-angle binding. CAB Phase 6 subsidence in EK.

9 Angle staple of drop hinge. The staple was made in two parts, the angled section from square section iron tapers slightly towards the tip where a wedge-shaped extension of c.45mm has been forge welded with it. AAM Topsoil.

10 Ballista bolt or spearhead: this socketed

point is heavily corroded but is clearly a projectile point too heavy for an arrow head. (c.f. ballista bolts and spear point in Cunliffe, 1975, p.234, fig.134 nos.170,171.) BAA unsealed Phases 4-6. Not ill.

11 Fragment of ring angle binding. FPH Phase 3 pit. Not ill.

12 Mounting with two rivets probably an attachment to leather as a boot plate. (e.g. Clarke, 1979, Chapter 13 p.322). FPL Phase 3 pit. Not ill.

13 This object has a short (broken) tapering square shank and a domed head. It may be a T-shaped binding, more probably it is a field anvil of the type illustrated in Hawkes and Hull, 1947, pl.CV no.20 and P.343. JTH Phase 4 pit. Not ill.

14 Tapering iron object; wedge shaped at one end. JTA Phase 4 pit. Not ill.

15 Joiner's dog or staple, bent in antiquity. JQB Phase 4 subsidence of granary-type building. Not ill.

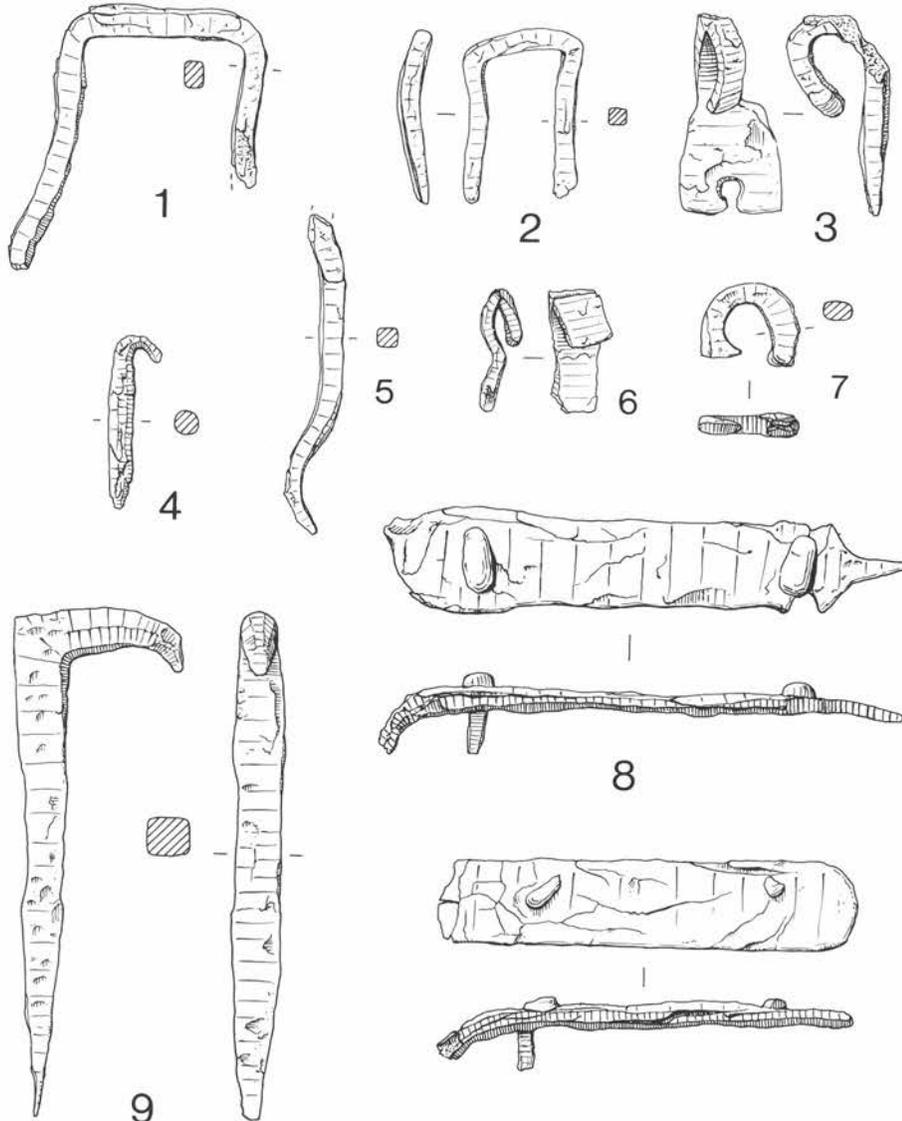


Fig. 57 Derby North-West Sector: ironwork. Scale 1:2.

THE NAILS

Four hundred and forty two nails were firmly identified and measured; all the nails, without exception were of Manning's type I following the pattern of military nails first noted by Manning in the Newcastle catalogue. Beyond this many of the nails were unremarkable — most broken, and many corroded; however such a condition suggests that many are the product of the gradual decay of the structures into which they had been hammered. If withdrawn many would have been bent in that configuration recognised at Bar Hill but for the first time illustrated in the Lancaster report.

The clenched nails formed two distinct groups, 17 from phase 4 and 7 from phase 6, one other comes from phase 5. Of the first group (phase 4) five were clenched at about 33 mm and three at half this c.15 mm, suggesting planks of c.15 mm thick. Similarly others are clenched at 41, 43, 45 and 25.22, 18.23 suggesting a planking of c.20 mm thick. From both groups one may infer perhaps two sizes of regular planking c.20 mm and c.15 mm thick, for there is only one erratic clenched at 7 mm. One remaining clenched nail comes from phase 5 and is clenched at 29 mm.

The withdrawn nails form small groups, six from phase 4, four from phase 5 and three from phase 6. Unfortunately this group is so small that little can be said except to remark that as a whole the groups form a very small proportion of 442 nails. Until collections of nails from other forts are similarly examined we shall not know whether this is typical.

WORKED BONE AND SHALE

By R.S. BIRSS, with bone identifications by M. HARMAN

Notes of Fig.58

- 1 Pin. Conical head with two grooves beneath it. Hand-cut. Polished. Crummy's type 2 dated to cAD50-200/250 (1979). JJK granary trench phase 3.
- 2 Pin. Conical head with two grooves as no.1. End of shaft broken. JYO phase 4 gravels.
- 3 Pin. Conical head with three grooves beneath it. Hand-cut. Polished. Crummy's type 2 dated to cAD50-200/250 (1979). EOB phase 4 coal layer.
- 4 Pin. Conical head with two grooves beneath as no.1. DQG granary trench phase 3.
- 5 Pin. Conical head with two grooves beneath as no.a. DCY phase 4 subsidence in pit DC.
- 6 Pin with head not differentiated from shaft but faceted at the end. Hand-cut. Polished. Broken shaft. Crummy's type 1 dated to AD70-200/250 (1979). ALA phase 5 clay floor surface.
- 7 Pin with head not differentiated from the shaft as no.6. Hand-cut. Polished. Broken. DAA late subsidence in pit DC.
- 8 ?Rough out of pin of Crummy's type 5 dated to cAD250-late fourth century/early fifth (1979). Topsoil.
Broken, hand-cut, polished pinshafts were also found in contexts ABC and AAS.
- 9 Complete needle. Hand-cut. Polished. BAE phase 4-6 humic deposit.
- 10 Needle with broken tip. Hand-cut. Polished. DCG phase 4 subsidence in pit DC.
- 11 Lathe turned toggle. Polished. (cf. Frere, 1972, fig.54 no.195) AWA phase 6 pit.
- 12 Bobbin or netting needle made from a sheep's metacarpal. The distal end is broken, (cf. Stead, 1980, fig.69, no.73; Jarrett and Wrathmell, 1981, fig.81, nos.17-19). AGB late gravels.
- 13 Left metacarpal of sheep. The distal end has broken off. The proximal end has been slightly shaped and hollowed longitudinally perhaps to receive an implement of unknown use. HYA phase 4-6 subsidence in pit HY.
- 14 Split horse bone, probably only utilised. There was some wear on the distal end and the point was broken. GOG phase 4 layer in pit GO.
- 15 Fragment of ?cattle scapula, very neatly worked into a spatula. Almost certainly all the edges were cut and rounded. ACE phase 4 subsidence in pit AC.
- 16 Handle made from horse metacarpal with cross hatched decoration and polished. Split in half. DCA phase 4-6 subsidence in pit DC.
- 17 A collection of implements was made from cattle scapulae. In three cases, the glenoid fossa had been cut off across the neck and, in the fourth, the coracoid process and the edges

of the glenoid fossa bone had been cut off so that it had the same shape and dimensions as the neck. Part of the articular surface of the glenoid fossa had been cut off so that it presented an almost flat

surface at right angles to the plane of the blade. The fifth was broken across near the neck. In all five the spine had been cut off level with the blade and the ridge of the glenoid border had also been cut off level with the blade and the

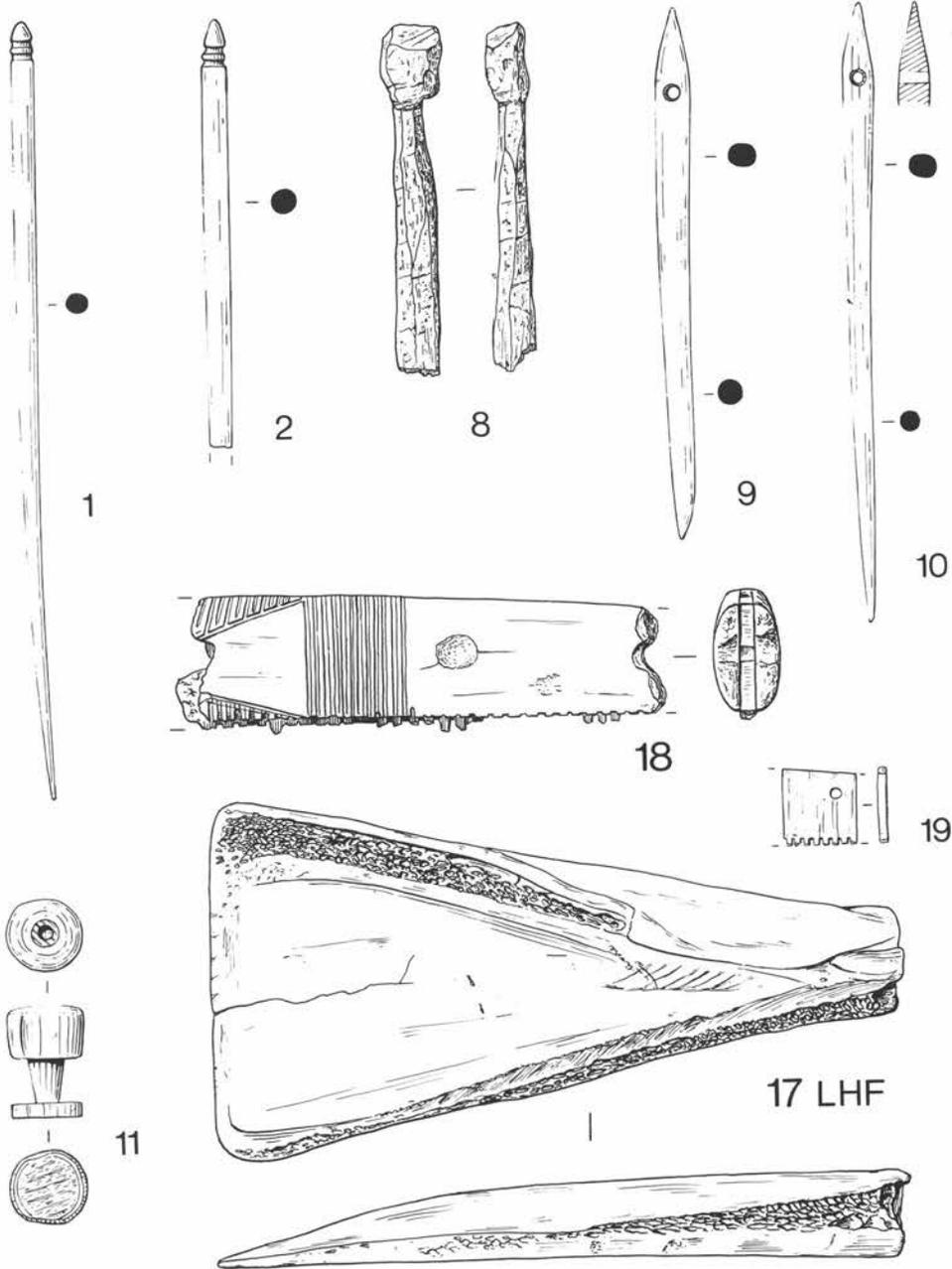


Fig. 58 Derby North-West Sector: worked bone. Scale 1:1 except nos. 17 and 19 at 1:2.

ridge of the glenoid border had also been with varying degrees of severity in the different bones. The vertebral border had been cut straight across. These cuts and trimmings, some apparently done with a sharp instrument using a whittling method rather than a saw, had reduced the scapula to a triangular blade. The central surfaces, which retained their natural hollow, showed some slight scratching and there was possibly some wear on the narrow edge of the triangle of the example from LHF although that from JQF showed no wear on this edge. Examples were found in FLB, phase 3 gravels, JEA, phase 4 pit, EX, JQK, phase granary trench, LHF, phase 3 pit and PDF, phase 3 gravels. Two possible examples were also found in pit EX/GO. Similar objects were found at Colchester (Crummy, 1977, 75), Longthorpe (Frere and St. Joseph, 1974) and Hayton (Johnson, 1978). These were interpreted as scoops or shovels. However an alternative interpretation was put forward which was that the cuts were due to butchering techniques (Frere and St. Joseph, 1974, 122 ff).

18 Part of a bone comb found in the topsoil. The comb consists of a flat plate of antler bone between two narrow strips of antler bone, flat on the inside and rounded on the outside. It is fixed by an inner rivet. That the teeth were cut after the three elements were joined can be seen by the nicks of the saw in the two centre plates. The comb was decorated on both sides with zones of incised decoration, including parallel vertical lines, some executed in pairs, and two vertically hatched triangles, in the form of a cross. The comb is of a type well known from Anglo-Scandinavian contexts and should date between AD900 and 1200 (Macgregor, 1978, 43-48).

19 Fragment of inner tooth-plate of a bone comb, with one rivet hole. It came from a comb similar to AAC, possibly from that comb. BAD.

20 Fragment of shale bracelet, polished and decorated with notches on both sides along the outer edges. BLA phase 6 pit.

21 Fragment of undecorated bracelet. Not illustrated.

WORKED STONE

By A. MIDDLETON and R.S. BIRSS

The worked stone was all of a poorly-sorted, immature sandstone with quartz grains as large as 9.5 mm from the carboniferous sandstones of the area except one lava quern and the Swithland slate. The querns were all rotary querns of Roman type. Upper quern stones came from contexts GZA (example with pivot hole and two handle slots), KMD, KJC, HYA, LFA and DQE. Lower quern stones came from contexts HYK and QLA and a fragment from GKA. In addition an upper quern stone probably of Niedermendig lava came from DKB. Imported lava querns were found at Melandra, Brough-on-Noe and Manchester (Jones, 1974, 129). A partially worked slab, perhaps an inscription stone, came from KMD and a stone mortar was found in EJ (Fig.59).

BUILDING MATERIALS

By R.S. BIRSS, with animal footprints identifications by M. HARMAN

A total of over 600 fragments of building debris was recovered from the excavation (Table 13). The tile was of a red-orange fabric with inclusions of coarse tile, iron oxides and skerry. The slate was identified by A. Middleton as Swithland slate of the Charnwood Forest precambrian period. A detailed catalogue is given in archive.

Tegulae, imbrices, box flue tiles and bricks were all represented. Little ceramic debris was recovered from phase 1 features although most of that from phase 2 came from the gravel layers and pit LR both associated with the end of phase 1 and containing much residual material. Some *tegulae, imbrices* and tile came from the trenches of the granary-type building and building slots of phase 3 but again the majority of the fragments came from gravel layers and cannot be associated with an excavated structure with any certainty. There was a drop in the absolute quantity of all types of building material in phase 5 and interpretation of the relative percentages would be unreliable. However the Swithland slate may be associated with the stone-sill building.

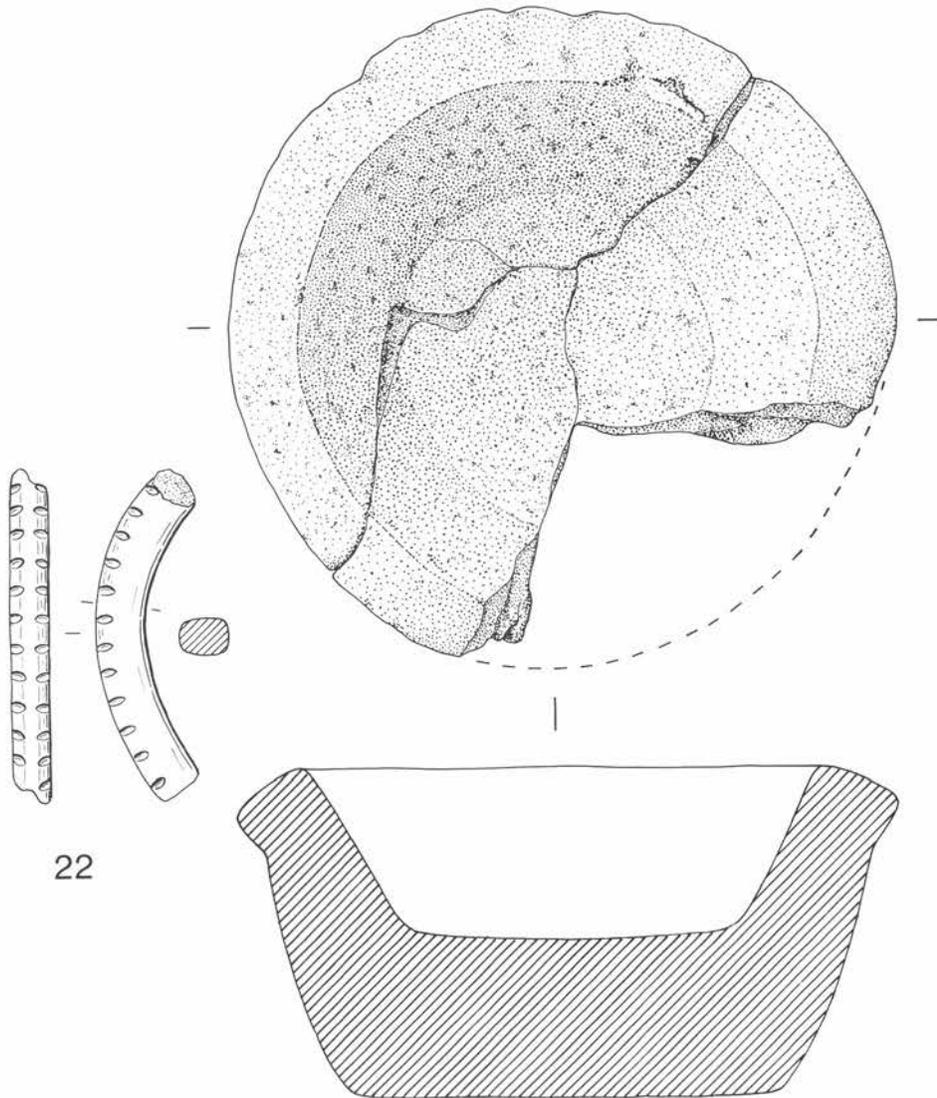


Fig. 59 Derby North-West Sector: shale no. 20 at 1:1. Dtone mortar from EJ at 1:4.

The fragments included in the phase 4 group came from the well BP which was situated underneath the phase 5 building and perhaps fell in during the collapse of that building. Swithland slates were associated with a similar building excavated by C. Sparey Green (forthcoming) in the angle of Rykniel Street and the road leading east from the fort and also a late building at *Margidunum* (Oswald, 1927, pl.XXIII). The material from phase 6 and later features may be interpreted as rubbish potentially from all phases.

Fragments of plaster including a painted example, were found predominantly in phase 1 and 2. Some tiles also had plaster still adhering to the combed decoration. The box flue tiles, tiles and some bricks bore curved, lattice and wavy-line combing and semi-circular markings. Some of the tegulae had semi-circular markings (Brodrigg, 1979, 215) and a brick from a phase 4 gravel layer (JY) had a signature. Six bricks had

animal prints. Dog prints were identified on fragments from contexts LTN and PDF. The example from PDF was rather deep suggesting the dog was running. Cat prints were identified on fragments from ACA, LTN and AGA. The AGA fragment seemed to be one print on top of another.

Phase	Imbrex	Tegula	Box Flue	Tile/ Brick	Daub	Slate	Plaster	Med/Mod	Total Sherd Count
1				25	62		13		8
2	2	4	6	43	44		1		68
3	4	7		70	19				106
4	6	13	5	58	13	4	2		120
5	10	17	23	40	6	4			48
6	8.5	8.5	2	63	4	11	1	2	178
7	4	6	9	56		13		11	159

Table 13 Derby North-West Sector: relative percentages of building material types for each phase.

THE MAMMALIAN BONES

By M. HARMAN

The human bones

A small number of human bones was found, most of them from neonatal infants, some of whom may have survived for a few weeks.

A virtually complete skeleton was found in MZB, in phase 1. From phase 4 another nearly complete skeleton was found in DCC and several limb bones were found in EKY, and in the pit FH, probably representing the remains of two infants. Single limb bones or small collections of skull fragments occurred in CUC, DXA, EQA, GRA, GXC, HYA, JTH, KGA and LQB, and also in ALA, in phase 5. In phase 6, several bones were found in ABN and in CLA, each probably representing the remains of an infant, and a few bones were found in later deposits. Thus there are two infant burials, from phase 1 and phase 4, and several disturbed burials in phase 4 and 6; the single bones found may be from these and other disturbed burials totally scattered in antiquity.

The burial of newly born and very young infants on occupation sites was quite common, and this in some measure explains the dearth of infants buried in the cemetery (this report p.222).

A skull vault fragment from a young child was found in BEB (phase 6). Adult skull fragments from more than one person were found in BAE (phase 4), CFF (phase 5), ABF and AFA (phase 6) and AMC (phase 6 or later). It is curious that there are no other adult bones from the site: the presence of the skull fragments is not readily explicable, though it is not unusual for the occasional adult human bone to be found on an occupation site.

The animal bones

All of the animal bones were examined; most of them were in reasonable condition though very few were complete. The majority were identifiable and the identifications noted. While there is scant evidence for the presence of goats, they are represented and it should be remembered that some of the bones referred to as belonging to sheep may be from goats.

The age of the animals was assessed where possible from the size of the bones, and from the state of tooth eruption and wear, and the state of epiphyseal fusion, using the sequence of tooth wear established at Barley (Ewbank et al., 1964, 423-6) and the ages

of tooth eruption and epiphyseal fusion published by Silver (1963, 250-268). Complete bones or parts of bones from mature animals were measured. Any bones exhibiting signs of injury or disease were extracted for further examination.

The number of each type of bone from each species of animal found in the various phases is shown in Tables 25-36 (Appendix 2). The minimum number of animals represented is estimated from the greatest number of any bone on one side of the body, with additions to allow for individuals of different ages represented by other parts of the body. Loose teeth, vertebrae and ribs have not been included in the totals. Vertebrae and rib fragments of large and small size are listed under cattle and sheep respectively, except for a few instances where they were readily identifiable as belonging to other species. The state of dental maturity of cattle, sheep and pig mandibles found in different phases is shown in table 14.

Most of the bones found are probably derived from domestic rubbish, and therefore reflect the stock kept in the surrounding area, and the eating preferences of the inhabitants.

Tables 25-36 (Appendix 2) are summarised in Table 15. The relative proportions of cattle, sheep and pig are perhaps more accurately represented in the percentages based on the total numbers of bones than those based on the minimum number of animals. It is clear, however, that pigs were much less important than sheep and cattle in all phases; the total numbers of bones show that throughout cattle were more important than sheep, perhaps less so in the later periods; however the figures for the minimum number of animals suggest that sheep were generally more numerous than cattle: whichever is true, the quantity of meat produced by the cattle would have been considerably greater than that produced by the sheep.

There are bones from a few very young sheep and cattle, but most of them were mature when they died or were killed, so that in addition to the meat, crops of wool, milk and lambs or calves were taken; possibly the cattle were also used for traction as is suggested by the presence of a diseased cattle pelvis in Phase 4. There is a peak in the number of sheep killed at the Ewbank p/q stages; this is common on other sites, but may not represent a real slaughtering peak as the length of time between individual stages is not known. Many of the pigs were killed at about two years, an age when they would have attained maximum size; few survived beyond three years. There is no clear emphasis on meat or waste bones, suggesting that animals were brought in whole, possibly on the hoof. The top of cattle skulls with the horn cores, cut off from the rest of the skull, may be slaughtering waste. A nearly complete sheep skeleton from a mature animal was found in the pit (EHA) from Phase 5. There is no evidence for polled cattle, but of a total of twenty seven sheep frontal bones from Roman levels, two are from polled animals. There is also part of a goat skull from Phase 2.

The number of horse bones is fairly small. Most of them are from mature animals: teeth and jaws suggest that several animals died at about seven years, while at least one was about eight to nine years, and another over fifteen years. There are eight bones from immature animals of less than four years. A larger proportion of the horse bones was found complete than the bones of other large domestic species, suggesting that the horses were not eaten or at least the meat was removed in a different way.

There is a small number of dog bones, including much of one skeleton from the well (BPM), from a small dog of about 33 cm. shoulder height, calculated from the limb bone lengths using Harcourt's formulae (Harcourt, 1974, 154). A few bones from a puppy came from the large pit EK/GZ (bones in GZO). The dog had suffered some injury in the lower thoracic region.

The only cat bones recognised were those from a young cat of between six months and a year old which were found in the gravel layers (EXC) of Phase 5. This animal had

a badly malunited fracture of the shaft of the right femur.

Bones from wild animals were rare. Six hare bones were found; red deer was represented by several pieces of antler and also by ten bones, and roe deer by a piece of antler and three bones. As bones in addition to antler were found, some of them from the meat bearing parts of the carcass, the animals were evidently hunted, but the scarcity of bones suggests either that they were only occasionally killed, or that game was not often eaten in this part of the settlement.

The general impression is similar to that gained from the bones recovered in Green's excavations at the same site (Harman, unpublished). No deposits like the one reported on by Askew (Webster, 1961, 107) consisting of a large number of fragmented bones from young cattle, possibly used ultimately in a soup kitchen or for glue, were found.

The pathological animal bones

(Based on notes by Dr. J. Baker, full notes in Appendix.)

A small number of bones with pathological conditions was found. A summary concerning those for which a diagnosis could be made is given below.

A few cattle bones were affected, nearly all from Phase 4. A mandible shows evidence of periodontal disease with secondary osteitis. A fractured rib may have formed a false joint rather than uniting. A pelvic fragment shows osteoarthritis in the acetabulum, probably the result of using the animal for draught purposes, and osteoarthritis also occurs at the lower end of a metatarsal, while another form of arthritis, probably bacterial, possibly septic, is seen at the proximal end of another metatarsal. One phalanx shows evidence of severe inflammation, possibly secondary to foul-in-the-foot.

Most of the sheep bones were found in phases 4 or 5, though a skull fragment from Phase 2 or 3 has a mis-shapen horn core which probably indicates a period of malnutrition. Severe periodontal disease was seen in one mandible, and another has a tooth root abscess, a rather rare condition in sheep. Two radii have new bone growth suggesting cases of 'penning elbow'. One metatarsal has a swelling on the shaft, possibly a well healed fracture; another fragment, possibly a sheep metatarsal, is swollen and curved, suggesting a healed fracture. A rib fragment, also probably from a sheep, has a swelling on the lateral surface, probably the result of a blow.

One horse metacarpal has a swelling on the lateral splint bone, towards the distal end, probably a healing fracture following a blow. One metatarsal shows an early case of spavin; another from an animal of less than two years has new bone growing just above the distal end, representing a local periostitis probably following a skin wound.

The dog from the well (BPM) has one rib fused to the thoracic vertebra, probably resulting from either a fracture of the head of the rib very close to the vertebral body, or a crush injury to the chest producing tearing of the ligaments of the rib articulation.

The young cat found in EXC shows a midshaft fracture of the right femur, which has united in a very misaligned position so that there is a bend of approximately 50° in the shaft.

A few bird bones, all from fowls, showed evidence of disease. A tibiotarsus from phase 2-3 has a very bowed shaft, probably the result of a dietary deficiency when the bird was very young. Two other tibiotarsi from phase 3 contexts were from birds suffering from osteopetrosis, an unusual and sporadic disease of chickens. One of the bones has a very swollen shaft with a maximum diameter of 22mm. From phase 4 contexts there is a humerus with new periosteal bone around the distal end of the diaphysis, probably a response to a periostitis, and a tarsometatarsus with a swelling at the lower end of the diaphysis, probably representing a healed fracture.

Osteopetrosis is uncommon in archaeological material, though a case has recently been reported from York (O'Connor, T pers comm).

Phase	Minimum number of animals			Total number of bones (excluding loose teeth, vertebrae, and rib fragments)			
	Cattle	Sheep	Pig	Cattle	Sheep	Pig	Other
1	6 46%	3 23%	4 31%	82 71%	23 20%	11 9%	Horse: 1 Dog: 1
1-2	6 55%	3 27%	2 18%	71 70%	23 23%	7 7%	Horse: 3 Hare: 1
2	15 37%	21 51%	5 12%	221 64%	92 27%	33 9%	Horse: 3 Dog: 1 Goat: 1 Red Deer: 1
2-3	8 35%	12 52%	3 13%	119 49%	96 40%	26 11%	Horse: 2 Dog: 1
3	33 52%	24 37%	7 11%	467 61%	224 30%	70 9%	Horse: 7 Dog: 7 Hare: 1 Roe Deer: 1
3-4	13 38%	16 47%	5 15%	169 55%	128 42%	38 13%	Horse: 3 Dog: 2
4	40 37%	54 49%	15 14%	783 52%	566 38%	147 10%	Horse: 13 Hare: 1 Dog: 13 + skeleton Red Deer: 6 Roe Deer: 1
4-5	5 38%	5 38%	3 24%	70 60%	37 32%	9 8%	Dog: 1
5	20 37%	27 50%	7 13%	300 48%	278 44%	50 8%	Horse: 4 Dog: 6 Cat: 1 Roe Deer: 1 Sheep: 1 skeleton
5-6	10 66%	4 27%	1 7%	79 71%	28 25%	5 4%	Horse: 1 Red Deer: 1
6	22 37%	26 44%	11 19%	467 54%	314 37%	81 9%	Horse: 8 Dog: 8 Hare: 1 Red Deer: 4
6 or later	11 35%	16 52%	4 13%	157 53%	123 41%	18 6%	Horse: 7 Dog: 5 Red Deer: 3 Roe Deer: 1

Table 15 Derby North-West Sector: summary of total number of bones and minimum number of animals of different species identified from various phases.

THE BIRD BONES

By D. BRAMWELL and M. HARMAN

The bird bones were identified initially by Mary Harman and the identifications checked by D. Bramwell, who identified the more unusual species. Nearly all of the bones were identifiable, and almost all of them were limb bones or parts of the shoulder or pelvic girdles: there were scarcely any fragments of skull, vertebra or rib, or toes. Table 16 shows the number of bones from each species identified in the various phases. The duck and goose bones are probably from domestic birds though it is possible that they are derived from wild duck of mallard size and wild geese. The great majority of the bones are from domestic fowl, of varying sizes, some being bantam size. Four tarsometatarsi had spurs and were thus from cocks, and several of the bones had cuts on them. The relative numbers of poultry are similar to those found in Green's excavations at Little Chester (Bramwell and Harman unpublished), mostly fowl with a few duck and goose bones. The range of wild species from Green's excavations is greater. Raven are now rare in Derbyshire but they were apparently common in the eighteenth century (Frost, 1978, 118).

Phase	Fowl	Duck	Goose	Other
1 — 2	2			
2	8			Raven: 1
2 — 3	13	3		Dove sp.: 1
3	44	2	3	Raven: 1
3 — 4	5			
4	42	3	2	Raven: 2
4 — 5	1	1		
5	11	1	1	
6	16	1		Rook/Crow: 1
6 or later	5	1	1	? cf. Grey Plover: 1
Late	2			Teal: 1
3 — 4 — 6		3		

Table 16 Derby North-West Sector: numbers of bones from different species of birds found in different phases.

THE FISH BONES

By A.K.G. JONES

Two fish bones were collected by hand from the excavated deposits. The first was a right cleithrum fragment of a pike, *Esox lucius* L., from pit EK, phase 4, and the other a caudal vertebral centrum of a large salmonid, probably salmon, *Salmo salar* L., from slot QB, phase 1. The pike bone was from a fish approximately 50cm total length while the ?salmon bone was from a fish in the region of 1 metre long. Both may have been taken from the river Trent.

Several fish bone reports (e.g. Wheeler and Jones, 1976) have demonstrated that hand collected assemblages of fish bones are only of limited interpretative value because small fish remains are over-looked. It is not possible to reconstruct the pattern of fish exploitation at Roman Little Chester from such a small group of bones.

MOLLUSCS

A number of oyster shells was found, tabulated in the finds summary tables.