

III

Excavations in the Roman Fort at Chester-le-Street (Concangis), Church Chare 1990–91

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with contributions by

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PLANS to extend the Parish Centre building in Church Chare, Chester-le-Street, led to excavations being undertaken by the author for the Archaeological Practice at the University of Newcastle upon Tyne, on behalf of the Bowes Museum (fig. 1). Funding was provided by English Heritage, with a contribution towards accommodation by the Parochial Church Council, Chester-le-Street. It was anticipated that the new structure would only damage the archaeological levels to a depth of 800 mm below the present floor surface of the Parish Centre, and priority was given to the excavation of these areas.

Excavation, in the north-west corner of the Roman fort, was carried out between November 1990 and February 1991 and consisted of one open-area trench covering most of the plot of land upon which the extension was to be built (but extending beyond the limits of the structure), with one machine trench at the southern end, parallel to the north wall of the Parish Centre. The close proximity of the water table to the ground surface posed persistent problems during the course of the excavation.

Location

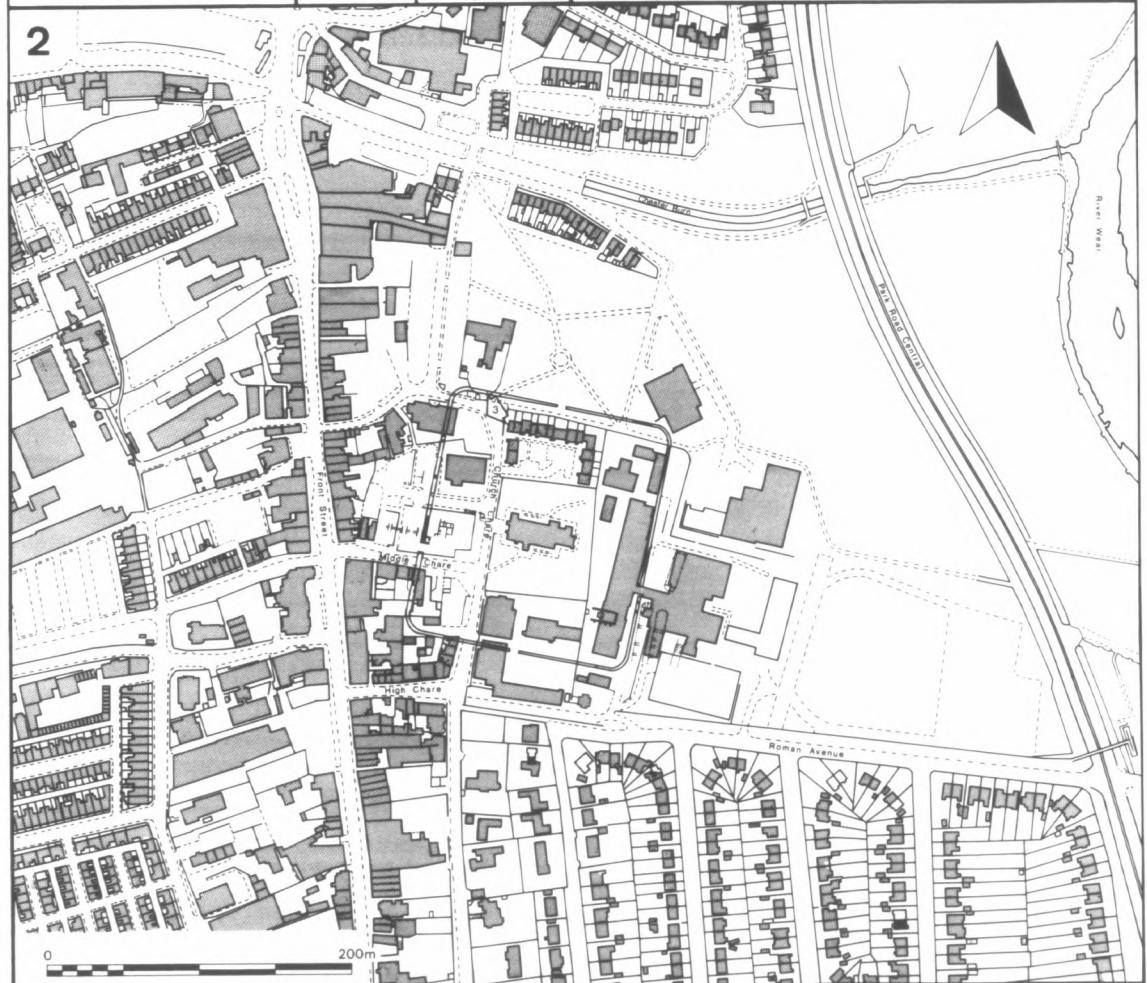
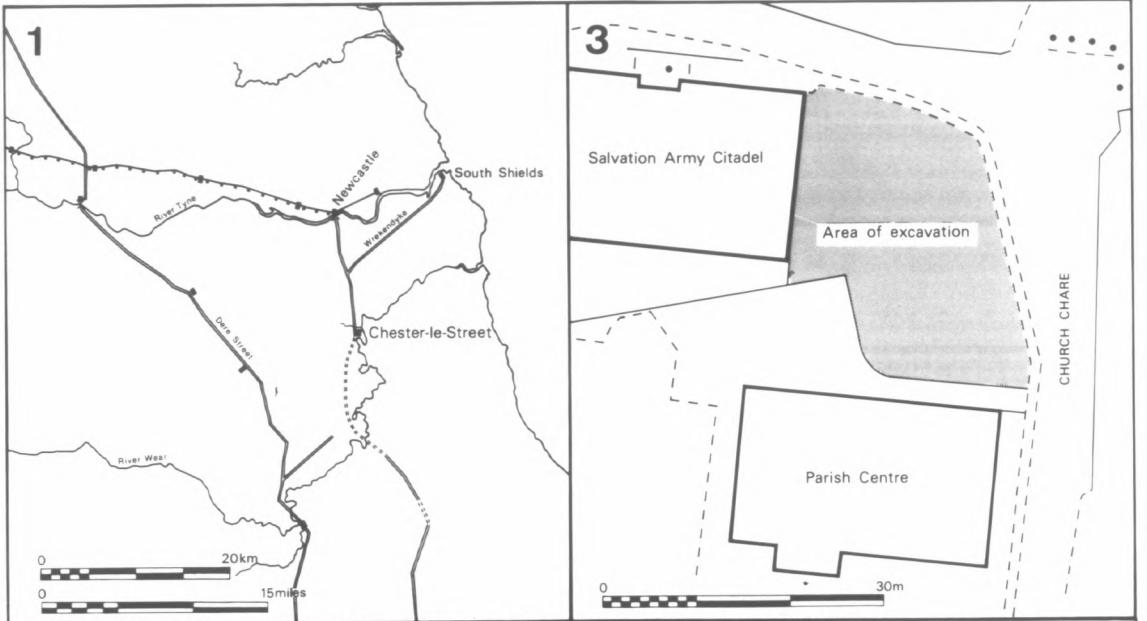
The fort platform at Chester-le-Street is situated on a high bluff (around 70 m O.D.) overlooking the valleys of the Wear to the east and Cong Burn to the north, the classic position for a Roman military base (fig. 1). The road from Brough-on-Humber (Petuaria) to Newcastle

upon Tyne (Pons Aelius) passes immediately to the west of the fort, the Roman name of which is now believed to be Concangis (Rivet and Smith 1979, 314–5).

Previous Work

Previous excavations in Chester-le-Street have been summarized usefully by Rainbird (1971) and have succeeded in delineating the extent of the defences of the stone fort, as well as locating internal structures. Subsequent work in Middle Chare car park (Evans *et al.* 1991) not only provided the first open-area excavation of any part of the fort, but also outlined a phasing model for the archaeological material against which later work could be compared. The Middle Chare site located the rampart, wall, and ditches of the stone fort, as well as successive phases of a building that is probably to be identified as the *praetorium*.

Rainbird's various trenches around the fort included two placed on the site of the present investigation, his trenches 5 and IV (Rainbird 1971, fig. 3). Trench 5 was opened by machine and ran north to south, but it "failed to find any structures". Trench IV, on the other hand, placed close to the north wall of the old school building (the present Parish Centre) apparently "picked up a T-junction of two stone walls, with pottery of the later second to third century below" (*ibid.* 105). On the plot of land now covered by the Salvation Army building, his trench VI revealed the west wall of the fort and the edge of the *intervallum* road. A trial



trench was placed across the Church Chare site as part of a site evaluation survey for the proposed extension (O'Brien 1990).

STRUCTURAL REPORT

There were six main phases of activity on the site, and these can be outlined as follows:

<i>Phase</i>	<i>Activity</i>
1	Primary (turf and timber) fort
2	Secondary (stone) fort
3	Modifications to the secondary fort
4	Late Roman period
5	Medieval occupation
6	Post-medieval and modern structures.

Note: The numbers cited in the text after each feature may be found in the relevant plan or section.

Phase 1: The Primary Fort (fig. 2)

Where the natural material was identified, it comprised a yellow boulder clay (080, 160, 354) with lenses of sandier material (079, 186). The original Roman ground surface appears to have sloped upwards from east to west. No trace was found of the pre-fort plough-marks noted in Middle Chare (Evans *et al.* 1991, 15, fig. 5), the earliest occupation of the Church Chare site being the western defences of a turf-and-timber Roman fortification.

The north-south line of a ditch was evident where the foundations of the later stone building had been reinforced to cross it (fig. 3, Sections 2 and 3), and it was examined by machine-dug section at the extreme southern end of the site, next to the existing Parish Centre building. The ditch was U-shaped in profile and 3.00 m wide by 0.85 m deep, although it is by no means certain that this represents the full, original depth.

Some 3.40 m to the east of the presumed eastern lip of the ditch, the westernmost extremities of a turf rampart (342) were found in the north-eastern quadrant of the site. Immediately beneath the later *via vicinaria*, it survived to a height of 0.13 m, its upper part consisting of

compressed sandy turves with characteristic dark streaks formed by the decayed vegetation, on top of clay blocks. A sherd of BB2 came from amongst the laminated turves (see Dore below). In the machine-cut trench, however, the rampart appeared to have been constructed of clay blocks with no trace of turves being recorded. Elsewhere on the eastern side of the site, deposits of sandy clay (351) and yellow clay with sandy inclusions (014) were identified as belonging to the rampart. Between the rampart and the ditch, sandstone pebbles (343) rested on the natural clay.

The western extremity of the rampart coincided with three north-south series of post pits on a more or less parallel course. The first series (363, 365, 367, 369, 373, and 375) were generally sub-rounded, c. 0.20 m in diameter and between 0.13 and 0.36 m deep, and usually 1.40 m apart (although 369 was inserted half way between 367 and 373). These pits were generally filled with rounded packing stones and dark-coloured gritty silt/clay (366, 368, 374). Post pit 365 retained the impression of a pointed oval post (0.10 by 0.06 m) driven into its base.

There were two pits in the second series, the northern one (357) being 0.50 by 0.46 m and 0.26 m deep, and sub-circular in shape. Its partner (359), 0.70 m to the south-west, was almost square (0.48 by 0.44 m), and it was 0.22 m deep. Both were filled with silty (but not identical) material and packing stones and, in both cases, these fills were partially overlain by rampart material (342). The alignment of these two pits differed from that of the first series.

The third series comprised three pits of varying shapes. The northernmost (371), 1.00 by 0.50 m and 0.42 m deep, was sub-rectangular in form, filled with light brown clay, sandstone, and sandstone fragments (370). 0.80 m to the south lay 361, 0.50 m long, 0.38 m wide, and 0.38 m deep, the fill being a dark brown gritty silt/clay similar to that found in the first series of pits. One of the packing stones in this bore a striking resemblance to the faced stone initially used in the Phase 2 stone structure (see below). A third pit (377) was

Fig. 1 Chester-le-Street: location map.

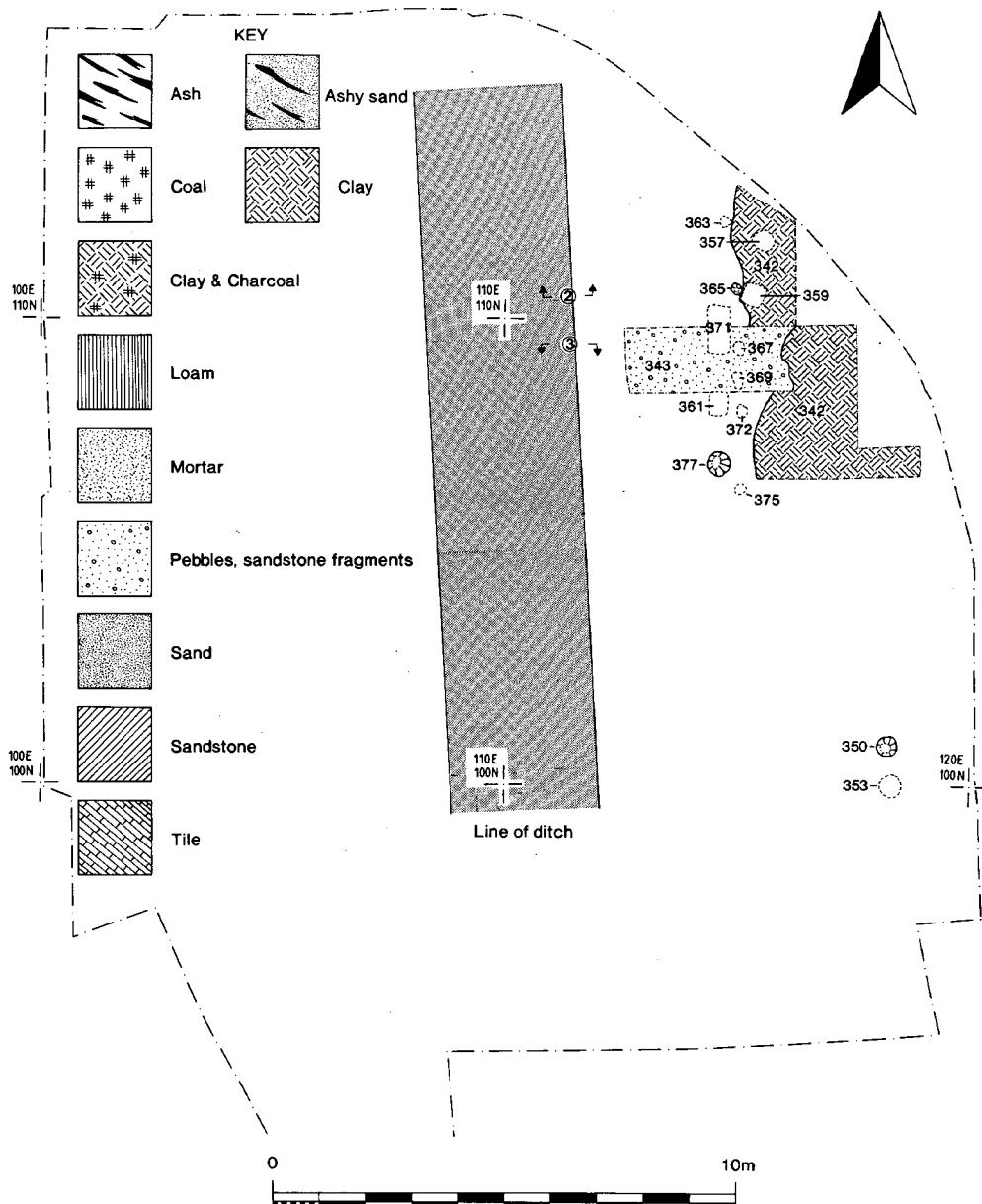


Fig. 2 *Chester-le-Street: Phase I plan.*

situated 0.80 m further south from 361; it was sub-rounded, 0.50 by 0.48 m, 0.65 m deep and filled with sandy material and sandstone packing (378).

Two possible further post-holes (350, 353) were noted to the south and east of the three main series, the fill of 353 (0.46 m in diameter and 0.23 m deep) included packing stones,

although the fill of 350 contained pottery casting doubt on its primary nature (see Dore below, no. 66).

Discussion

The first series of post pits associated with the rampart could represent a line of palisade posts (Jones 1975, 86), perhaps intended to support the breastwork, although the pits were positioned at the front of the surviving rampart material. They would not make for a practical structure, given the necessity for an angle of batter of around 65–75° for a turf-

cheeked rampart (*ibid.* 70), nor do they seem likely to have been a frontal timber revetment like that at Verulamium (*ibid.* 83) or part of a box rampart, for the post diameters seem too slight. The most likely explanation may be that, since the land rises gently from the east to west, the westernmost extremity of the rampart (i.e. that part beyond the line of post pits) may have been removed by levelling prior to the construction of the secondary fort.

Of the remaining two series of post pits, the second may represent a structure associated with the rampart, although they do not seem large enough to have belonged to an interval tower (cf. Jones 1975, 92). The third may not

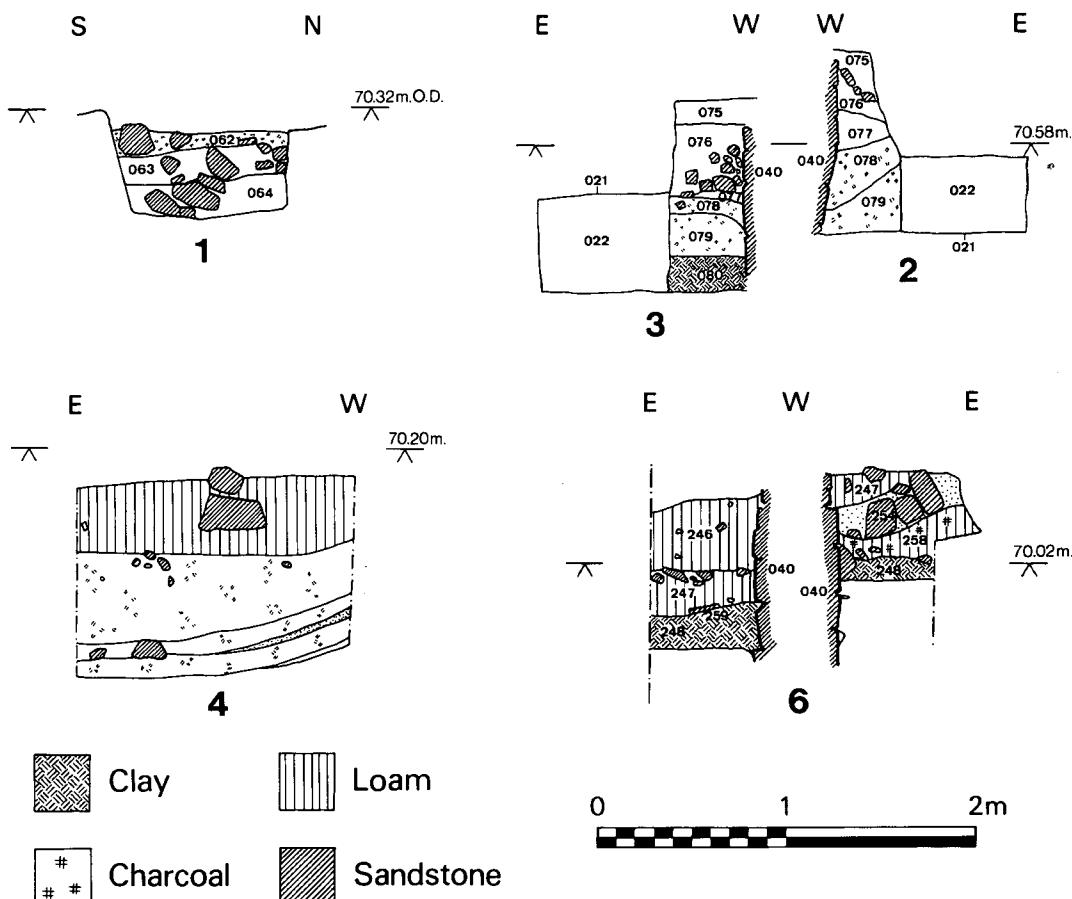


Fig. 3 Chester-le-Street: sections.

even have belonged to the first phase (a deduction hinted at by the presence of a dressed stone in the fill of one of them), even though its intrusion from higher levels was not noted during excavation.

The profile of the ditch located on the Church Chare site was U-shaped—unusual, but not completely without parallel (e.g. Deschler-Erb *et al.* 1991, Abb. 55).

Phase 2: The Secondary Fort (fig. 4)

Preparations for the construction of the secondary fort included backfilling the open ditch of the primary fort with compact, light brown clay (078, 248; fig. 3, Sections 2 and 3). The machine section demonstrated that there was little, if any, natural sedimentation present in the ditch beneath this fill. There may also have been some levelling of the site, accounting for the possible absence of the front of the primary rampart. Similarly, the absence of mixed rampart material from the ditch fill may indicate that it was backfilled before the rampart was levelled.

The main structure of this phase was a barrack block with a stone officer's quarters and timber accommodation for the men. To its north was part of the *via sagularis* and, to the east, the *via vicinaria*.

The Officer's Quarters

This structure comprised clay-bonded dressed stone walls with external dimensions of 10·90 m (north–south) by 10·08 m (east–west), the eastern wall more-or-less corresponding with the line of the ditch of the primary defences. The siting of the building evidently necessitated some unusual preliminaries to the standard construction process, for the eastern foundations were strengthened. First, a rectangular pit (sloping upwards from east to west) was dug into the backfilled ditch and neighbouring ground surface. The foundations of the building were then built up to ground level against the edge of this pit, and the interior backfilled with mixed material.

The eastern wall had three levels of faced

foundation below a levelling course approximating to the Roman ground surface and up to two courses survived above this (fig. 5). Both the north and south walls had foundations which sloped upwards from their respective eastern corners, but both of these used undressed sub-rounded boulders in their lowest courses below dressed masonry.

The main fabric of the walls was the customary wedge-shaped dressed facing stones with a clay and rubble core and clay interstices. The eastern wall (0·52 m) was narrower than its northern (0·60 m) or southern (0·56–0·60 m) neighbours. No sign of locating holes or slots for a timber framework were noted, nor were any doorways identified. In the case of the eastern wall, this was sufficiently well-preserved for any doorways present to have been evident. In the north wall, damage by modern drains towards the centre, and later levelling across the western half (where only the foundation course was present), meant any entrances in this part would not have survived. Traces of burning at one point on the north wall were dated by archaeomagnetism to A.D. 230–70 (see Noel below). The burning of the wall fabric was of such a character as to indicate that it had not been standing to its full height at the time of the fire.

Two main internal clay-bonded stone partitions were located within the building. An east–west wall (140), 0·50 m broad, divided the building in two, although much of the western part was removed by the later levelling. In the central area, the lowest course of stones was only evident as a series of impressions in the pinkish-brown clay (180) used in the shallow foundation trench (177) for the partition. A further partition (145)—0·50 m broad, 2·80 m long, and terminating 1·20 m short of the inner face of the north wall—ran north from this, effectively dividing the building into one large room to the south and two smaller ones to the north. Above the fill of the east–west partition wall construction trench, but apparently contemporary with the north–south partition wall, was a hard, dark clay deposit (155) containing much of a BB1 bowl (see Dore below, No. 25), sealed by the subsequent floor makeup.

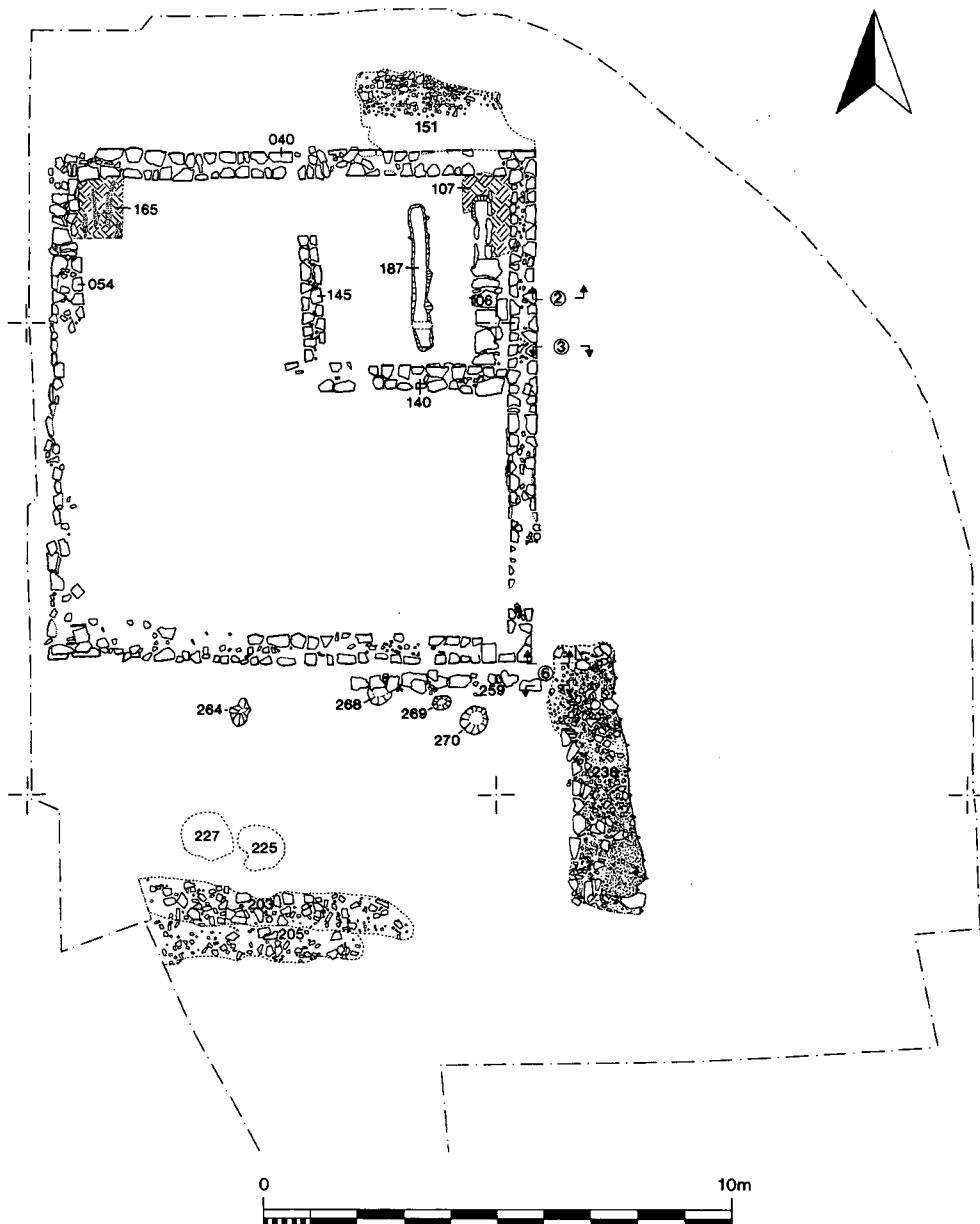


Fig. 4 Chester-le-Street: Phase 2 plan.

Within the north-eastern room thus created, there was a slab-lined and covered drain against the inside face of the eastern wall. This flowed southwards, beneath partition 140, and

then turned south-westwards, diagonally across the southern room. It had been removed by later disturbance in the western half of the building. The drain had been cut (109) into the

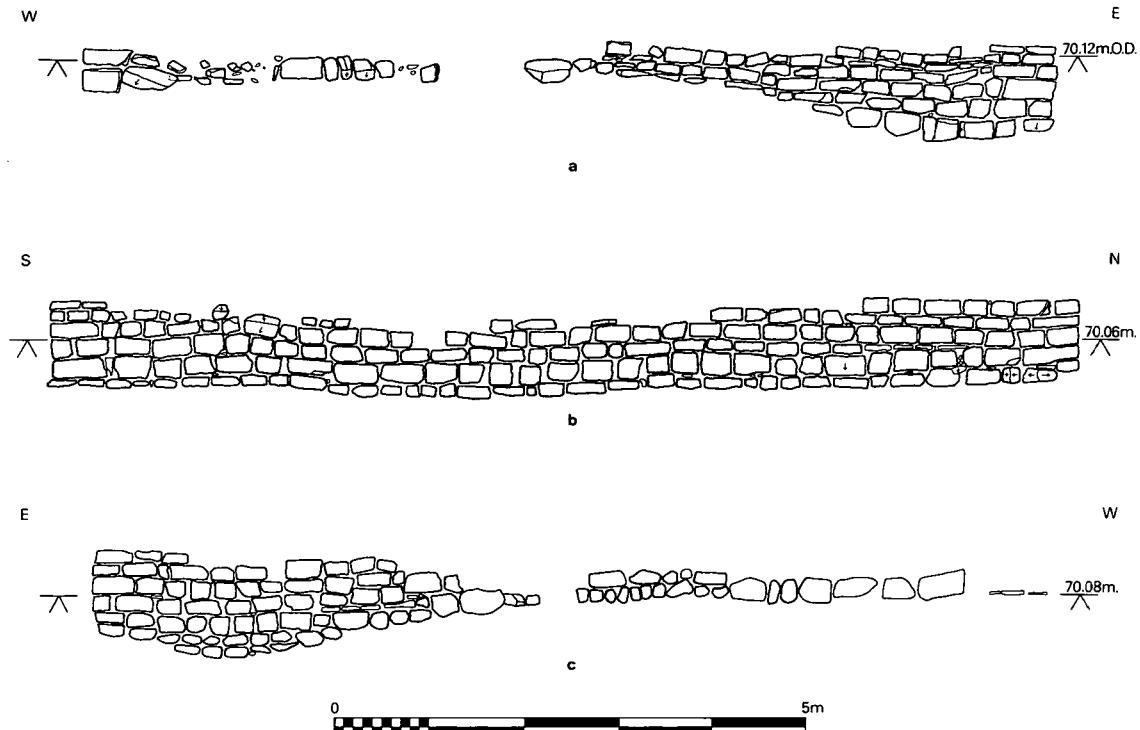


Fig. 5 *Chester-le-Street: elevations of officer's quarters.*

makeup material (111), lining slabs placed vertically within it (the bottom was not lined) and cover slabs (106) placed over the top. However, the slabs then stood proud of the surface of the room, so a floor of yellowish clay (107) was laid at least to the same level as the tops of these slabs. There was a slight enlargement of this drain at its northern terminal, but no sign of any associated structures. Within the north-eastern room, a series of extremely thin, yellowy sandy clay layers with decayed sandstone chips were found, interleaved with darker sandy layers.

The surfaces within the north-western room had largely been removed by later disturbance, but an east-west section across the room revealed a dark, purplish layer with extensive traces of burning (159), beneath a hard-packed, yellowy clay with sand and charcoal inclusions (165). The latter closely resembled the floor surfaces in the north-eastern room.

Excavation of the lowest levels of the southern room, which lay below the depth threatened by the foundations of the proposed building, was not attempted, although the course of the drain was identified in O'Brien's trial trench and this was re-examined during the 1990–91 excavations, identifying a series of slab-paved floors (174–6) contemporary with, and immediately above, the drain cover-slabs.

At a number of places around the inner face of the main external wall, and also around the partition walls, fairly small flat slabs (usually less than 200 mm square) were noted resting vertically against the wall face, embedded within flooring material.

The contubernium area

The *contubernium* area of the first barracks was not fully excavated, but it was clearly of posthole construction and separated from the officer's quarters by a narrow alleyway floored

with a single line of stone slabs (259). Reflecting the original Roman ground surface, these slabs sloped upwards from east to west (a slope of around 9%) and were removed by subsequent levelling in the western half. At least four postholes (264, 268–70) that belonged to the north wall of the *contubernium* area were identified.

Two hearths of this phase were also identified. Hearth 225 was associated with a spread of black ashy loam (226) and a fragmentary floor of slabs (202) which covered an area of 4·80 by 1·20 m.

A partition between the first and second *contubernia* may have been indicated by a marked linearity of rubble running east–west (203, 205), including a pivot stone (see Coulston below) within it, and with a parallel band of yellow clay (206).

The roads

Immediately to the north of the officer's quarters, and at the extreme northern end of the site, a small portion of the earliest surface of the *via sagularis* was discovered and found to slope upwards from east to west, with an incline of around 9%. It too had been truncated by later levelling. The surface (151), composed of small cobbles, butted directly against the north face of the north wall of the barrack.

The *via vicinaria* was more adequately explored. The primary surface (151, 267, 337) had a marked camber and appeared to rest directly on the underlying material (partly rampart, partly natural) with no foundation. It was apparently bordered on its western side by a kerb of rounded river boulders sunk into the ground.

The fill of Rainbird's Trench 5 produced two stone gutter blocks (see Coulston below) which presumably came from the eavesdrip of the officer's quarters.

Discussion

Before construction of the secondary fort, careful attention was paid to backfilling the ditch of its predecessor, packing it with clay. Moreover, the foundations of the officer's quarters show that the possibility of subsidence had been anticipated and the minimal amount of slumping visible in the walls even now attests to the success of this operation.

If correct, the archaeomagnetic date for the burning of part of the north wall of the officer's quarters might be indicative of a bonfire lit during the construction process, since it could not have burned both sides of the wall (and its core) after it was built, and we would be much too early for any later activity on the wall once demolished. Lack of wear on any of the burned stones, together with the extent of the burning, makes it unlikely that this was a fire lit in a doorway.

The combination of a stone officer's quarters and timber *contubernia* is unusual, but not without parallel. Likewise, other examples of barracks with separate officer's quarters are known (Davison 1989, 82 notes examples from Strageath, Maryport, Watercrook, Caernarvon, and Hod Hill). In the case of Chester-le-Street, the alleyway may have afforded access to an entrance in the south wall.

It has become common to speak of clay-bonded stone walls as footings for timber-framed superstructures, but there are a number of reasons why this may not have been the case for the Church Chare building. Since the east wall appears to survive for at least three courses above Roman ground level and no evidence of locating holes for a timber framework could be found within its fabric, the means of attaching the superstructure is lacking. The whole question of clay-bonded Roman military architecture is poorly served in the literature and its capabilities generally under-estimated. Parallels in more recent vernacular architecture suggest that full-height, load-bearing walls would present no insurmountable structural problems (cf. Fenton and Walker 1981, 57) and that, providing the integrity of the fabric was maintained by effec-

tive rendering, a serviceable and durable building could be produced. Indeed, a collapsed, 14-course-high, clay-bonded stone barrack wall, recently found at South Shields (and of similar width to the Church Chare officer's quarters), would seem to support this interpretation (P. T. Bidwell, pers. comm.). The widespread use of clay-bonded walling in military buildings in Britain indicates that the Romans seem to have thought it as valid a constructional technique as "conventional" mortared walls.

The small, flat, upended slabs noted against the walls may have been connected with the required rendering (perhaps as a guide to the preferred thickness?). Similar uprights have been noted in recent excavations in the north-west corner tower at Birdoswald (T. Wilmott, pers. comm.).

With regard to the men's quarters, it is possible that the positioning of the hearths may offer some indication of the size of the *contubernia*, although a suggested width of 4.60 m (15.5 Rft) seems on the large side by comparison with other barracks (cf. Niederbieber at 4.60 × 5.40 m and 4.60 × 6.25 m; Heidenheim at 4.50 × 4.50 m; Aalen at 4.50 × 4.38—ibid. Table XIX—the first a *numerus* fort, the other two for *alae*).

The unusual width of the *via vicinaria* can either be interpreted as being due to the absence of a twin building for the excavated barrack block, or simply the fact that the barracks within the secondary fort were widely separated.

Phase 3: Modifications to the Secondary Fort (fig. 6)

It is convenient to consider a range of modifications to the secondary fort within this notional third phase, although it should be stressed that there is no guarantee of contemporaneity.

The Officer's Quarters

The main outer walls of the structure showed evidence of reconstruction at the main south-east corner, where a different type of sand-

stone had been used, cut into slabs, rather than the blocks found elsewhere. Where the south wall crossed the line of the backfilled ditch, some slumping was evident in the replacement walling. The same stone had also been used to provide a new north-south partition (191) in the southern half of the building, although only the lowest course survived and the western face appeared to have been disturbed. This was 4.70 m long and 0.80–1.00 m wide and terminated at the point where it would have joined the east-west partition (140). Angular fragments of the same stone, perhaps debris from dressing, were found in the makeup (173) of the floor surface in the newly-created south-east room, and in the fill of a north-south slot (156) in the northern half of the building.

Within the north-east room of the previous phase, the drain and parallel slot had filled with sewage matter and bone, the east-west slope in the room causing ponding immediately inside the east wall. As part of the preparations for Phase 3, dressed and undressed stone in a clay/loam matrix (188) was dumped in this low-lying area as make-up for a new floor (192). This floor was made of re-used paving slabs and faced stone rubble (128) and it seems to have incorporated the lowest course of the now levelled north-south partition wall (145). The flooring material included a pivot stone (see Coulston below).

The fact that both the new north-south partition and the new flooring in the northern half respect the line of the east-west partition (140) strongly suggest that it continued in use. In the southern half of the building, the makeup containing the angular debris (171) lay beneath a mixed dark loam with stone inclusions (157, 172), which was in turn covered by a cobbled floor surface (143). These cobbles lay beneath the north-south partition (191) and butted against the east-west wall (140).

The Contubernia

At least one of the postholes identified (260) belonged to a likely rebuild of the *contubernium* area of the barrack and floor levels and hearths above those of Phase 2 were noted. A

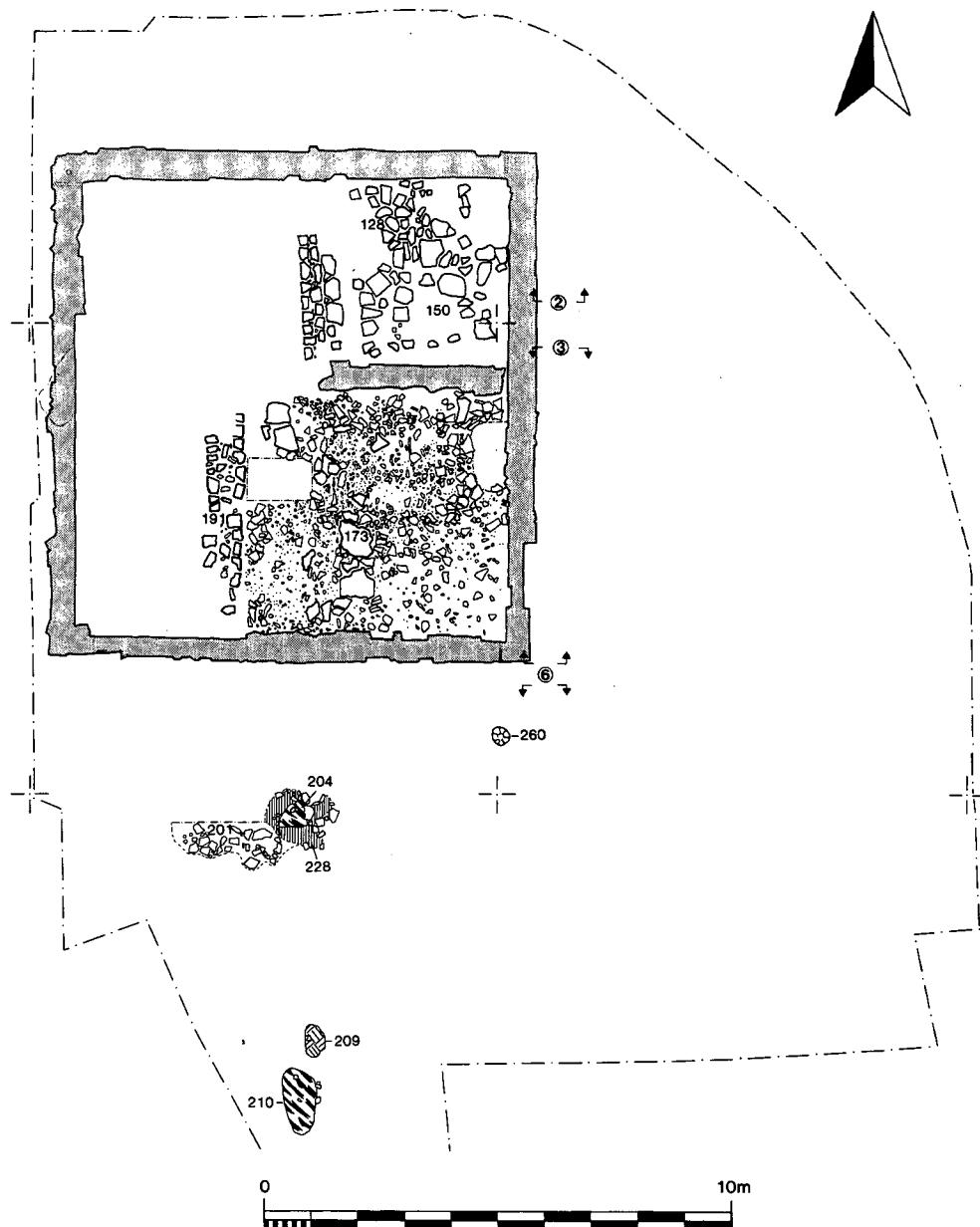


Fig. 6 Chester-le-Street: Phase 3 plan.

fragmentary flagged floor (201) was associated with hearth 204, 0.50 m in diameter, and a dark brown, ashy loam (228), which presumably derived from the use of the hearth. These

probably belonged to *Contubernium* 1, but 3.90 m to the south of 204 (measuring 0.70 by 0.44 m), another hearth with its associated patch of ash.

The Roads

The *via vicinaria* was given a new surface (236, 312, 331) similar to that of Phase 2, cobbled with large round boulders as kerbs, although these were now to the west of the line of the old street, suggesting a slight widening of the surface. The new surface was bedded in a shallow (0.03 m) deposit of dark brown/black clay/loam (336).

Discussion

The partial rebuilding of Phase 3 seems to be indicative of neglect of the fabric of the officer's quarters towards the end of Phase 2: the drain in the north-eastern corner having overflowed to leave an area of organic waste; the evident damage to the southern end of the stone building; and the presence of dressed stone of the type used in Phase 2 in contexts associated with Phase 3, such as the rubble raft placed over the drain deposit.

The interior arrangements of the building were changed, although the central east-west partition was retained. The removal of the Phase 2 north-south partition in the northern half led to a larger, flagged room being formed, a new partition being inserted instead in the southern half.

Phase 4: The Late Roman Period (fig. 7)

The Officer's Quarters

The east-west (140) partition wall was eventually demolished and the surviving, lowest course covered by the next floor surface, which seems to have extended over the whole interior of the building. The north-south partition (191) may also have been taken out of use and covered by it, but disturbance made it impossible to ascertain. The new floor was a yellow sandy clay (102, 116/153) with charcoal inclusions.

In the north-east corner, part of floor 192 was raised, and a length of the old east-west partition (140) rebuilt (with the second course

set back from the original line), to form a feature 1.40 by 1.00 m that, when excavated, contained a deposit of coal. This was associated with a dark brown layer with much burnt clay (130) and mixed ash, clay, and charcoal (136).

There was plentiful evidence for the demolition of the building. Tumble was found along the entire eastern side of the building (076, 254; see fig. 3, Sections 2, 3, and 6), parts of which (254) showed signs of quite deliberate toppling. Apart from dressed stone blocks, there was also an associated organic matrix which included amounts of animal bone and pottery. On the southern side, a line of friable tile fragments lay parallel to the south wall and 0.20 m to the south of it. The constituency of this material was quite unlike other fragments of tile from the site, including the stamped piece (see below). Taken together with the association of iron nails with the tumble on this side of the building, this appears to be indicative of collapsed roofing material, although the amount of material was very small.

Two pits (059, 148) were dug in the *via sagularis* immediately outside the north wall of the building. 059 was located slightly to the west of the central axis of the building and was 1.00 m square and 0.57 m deep (fig. 3, Section 1). Outside the north-east corner of the building, pit 148 measured 2.00 m north-south by 1.40 m across; it was 0.46 m deep over most of its bottom. Both contained animal bone, 059 with a greenish organic matrix (063) which was black (062) where it was permanently waterlogged. 059 also produced fragmentary pieces of decayed wood from its lowest fill (062).

A third pit (141) was dug against the inside face of the east wall of the building and this too contained rubble and animal bone.

The Contubernium Area

The men's quarters of the old barrack were not retained and the only Phase 4 features noted in this area were an east-west slab-lined drain (207) and a small area of cobbles. Although V-shaped and slab covered, the drain may

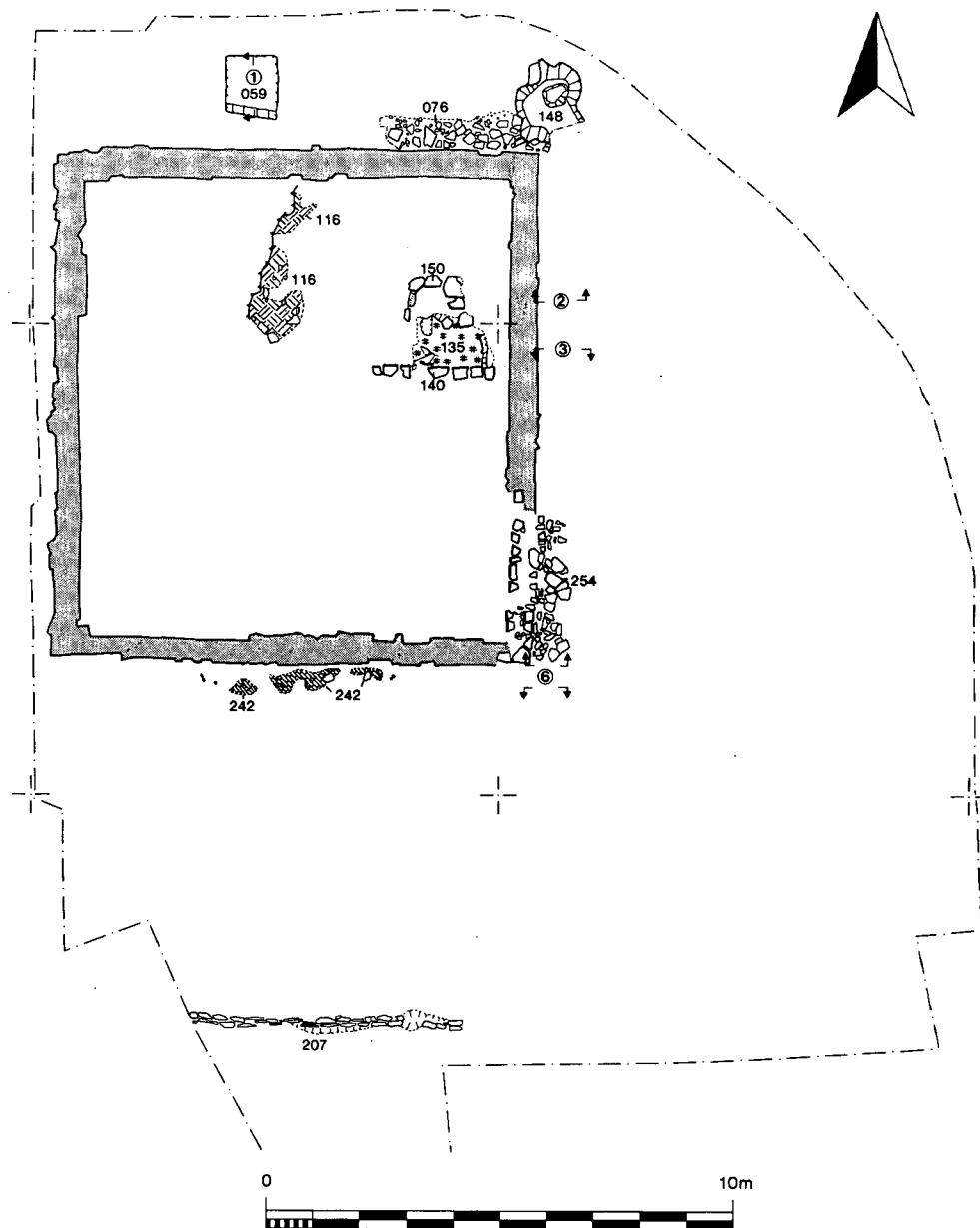


Fig. 7 *Chester-le-Street: Phase 4 plan.*

originally have had straight sides which were subsequently distorted, but as found it was 0.16 m wide and 0.20 m deep. It was filled with a blackish, ashy loam (235) which did not

appear to be the result of sedimentation, but rather deliberate dumping into the drain. The small, elongated oval patch of cobbles measured 2.00 by 0.70 m and was not further

investigated. Over the whole of the former *contubernium* area, there was a deposit of dark, "garden"-type soil (041) which was rich in late Roman pottery, but contaminated by later reworking and so not securely stratified.

The Area of the Via Vicinaria

There was considerable disturbance of the road surface in the south-eastern quadrant of the site, some of which belonged to the later Roman period. A hearth (016) in this area produced an archaeomagnetic date of A.D. 295–420 (see below). It consisted of a square of sandstone blocks, burnt red, and associated with a deposit of ash and coal (017) which lay directly on top of it. There were lenses of coal and ash (018) nearby and a narrow gully (355), 2·20 m long, 1·10 m wide, and 0·17 m deep, also showed signs of reddening. The gully was filled with ashy silt (344) and coal fragments. Over this was a group of flags and smaller stones (339) which dipped from north to south into the middle of 335/344.

Adjacent to these features was another area of stones (338), which included worked stone; it was from here that the tile stamped NV was recovered.

Discussion

Phase 4 saw the officer's quarters retained, although the area of the *contubernia* was, it seems, no longer covered by a structure, with just an east-west stone drain crossing it. Although certainty is impossible, given the amount of damage in the western half, the whole interior was apparently converted to one large room, with some sort of industrial activity requiring coal taking place on the eastern side.

The roadway was now also the scene of occupation, most of it incomprehensible in terms of the surviving archaeology.

Deliberate demolition may be indicated by the tumbled walls noted around the officer's quarters, although these could perhaps have resulted from natural collapse brought about

by the deterioration of the rendering and subsequent decay of the clay-bonded walls. In this context, the pottery and animal bone associated with this destruction horizon may perhaps signal the onset of desolation.

Phase 5: Medieval Occupation (fig. 8)

The traces of medieval activity on the site were apparently truncated by later disturbance, so that all that normally remained were pits or gullies, datable by the few pieces of pottery they contained.

Pit 244, 0·90 m square and cut by Rainbird's trench, contained six large burnt stones (237) beneath a loose, black, ashy fill (238). There were lenses of sand and silt (245) to the north of 244, apparently cut into the Roman road surface, and these overlay a sandy silt (249) containing charcoal, gravel, mortar, large stones, and medieval pottery.

Various other pits produced medieval pottery, such as a shallow cut (219) in the south-western quadrant.

Discussion

There is a noticeable absence of any indication of the presence of the early ecclesiastical community in Chester-le-Street, but this could be almost wholly due to the removal of relevant contexts during subsequent levelling activities, so the Church Chare excavations can neither prove nor disprove re-use of the Roman fort.

Phase 6: Post-Medieval and Modern Structures (fig. 8)

A circular, stone-lined pit (252) on the western side of the site was associated with a rubble spread (055). It is likely that the site was levelled, removing much of the Roman material on this western portion, in preparation for the laying of this surface. The pit was 1·26 m in diameter and 0·94 m deep, and lined with nine stone slabs (at least one of which had a nail hole, suggesting that it was re-used roofing material) around the sides, held in place by wooden pegs. It also had a paved floor. A crude flight of eight stone steps led down to

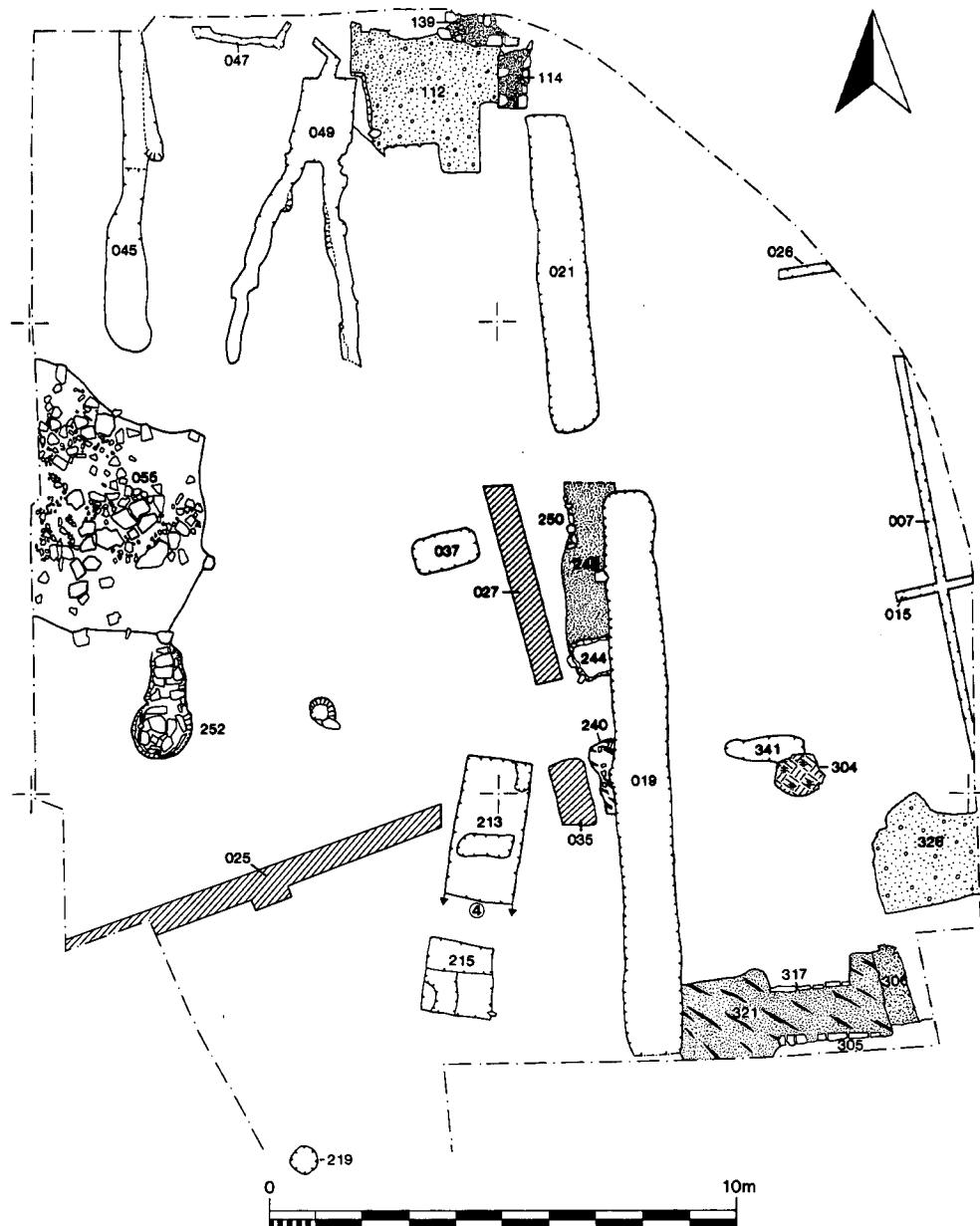


Fig. 8 Chester-le-Street: Phases 5 and 6 plan.

the pit from the north. The fill of the pit included 16th and 17th century, as well as Roman, pottery.

Mortared east-west (139) and north-south

(114) walls represent the remains of the first of two modern structures on the site. 139 rested almost directly on the surface of the disused *via sagularis*, presumably as a result of levelling.

This structure was associated with a pebbly floor surface (112) and two lines of kerbstones (305, 317) of an east-west cobbled lane, largely removed during initial machine stripping. The kerbstones rested on an ashy spread (321) and included within their confines a mixture of sandstone fragments, mortar, and gravel.

A later structure, readily identifiable as the terrace of cottages demolished within living memory, was set at an angle (aligned north-north-west to south-south-east) to the previous building. The front wall (009, 306?) facing Church Chare itself was mortared and associated with a cobbled surface (011), whilst the back wall (027) met the rear wall of the old school yard (025, 035), the continued line of which now forms the southern boundary of the Salvation Army property. The remains of a dog (037) were found buried in the garden of one cottage, whilst the services to these cottages (007–008, 015, 026, 045, 047–050, 053) caused much of the modern disturbance to the area of the officer's quarters, particularly in the western half and in the centre of the north wall.

THE ROMAN POTTERY

by J. N. Dore

*with contributions by Brenda Dickinson and
K. F. Hartley*

1) The Potter's Stamps

by Brenda Dickinson

i) [CELSIA]NIF on form 31R: Celsianus of Lezoux, Die 8a. This stamp has already been noted from Chester-le-Street and it is also known from South Shields. It was used in some of the later plain forms, such as 31R, 79 and 80. c. A.D. 160–200. Context 345.

ii) [COB]NERTIANI (NE and TIANI ligatured) on form 18/31R or, more probably, 31R. Cobnertianus worked in Central Gaul; three examples of this stamp in the Oswald-Plicque Collection at Nottingham University Museum almost certainly come from Lezoux.

Only one die has so far been recorded for him, with very few stamps noted. His only known forms are 31R and 80, but these are sufficient to suggest a mid- to late-Antonine range. Context 55.

iii) QVINTIM on form 33: Quintus v of Lezoux, Die 5a. This is one of the commonest stamps of the later Lezoux Quintus. It occurs at forts in northern Britain reoccupied c. A.D. 160 and there are many examples in the group of late-Antonine samian recovered off Pudding Pan Rock. c. A.D. 160–200. Context 143.

2) Totals of Samian

Table 1 shows the totals of samian from the excavation. Fabric groups have been divided into Certain and Probable attributions, which reflects the difficulties of judging the fabric of small abraded sherds. Unbracketed figures are sherd numbers. Bracketed figures are Rim Percentages.

3) Totals of Coarseware

A total of 2706 sherds of coarseware was recovered from the excavations. Table 2 shows the identifiable vessels which this total represents. Unbracketed figures are vessels; bracketed figures are rim percentages.

4) Catalogue of stratified pottery

Samian

The following abbreviations are used:

r.sh: rim sherd

w.sh: wall sherd

b.sh: base sherd

CG: Central Gaulish

EG: East Gaulish

Coarseware

Fabrics

The fabric of each vessel was examined in the hand and under a binocular microscope ($\times 20$ magnification) equipped with an eyepiece graticule graduated in mm. The following details were recorded:

Table 1

	Central Gaulish		East Gaulish		Unidentified	Total
	Cert.	Prob.	Cert.	Prob.		
FORM 18/31R	4 (8)					4 (8)
31	3 (16)					3 (16)
31R	8 (50)	21	9 (71)	10		48 (121)
31 or		35 (24)	2 (4)	13 (7)	22	73 (35)
31R						
30	1 (2)					1 (2)
32 (?)		1				1
33	14 (60)		5	1		20 (60)
36	1 (11)			1		2 (11)
37	17	10 (18)		6 (4)		33 (22)
38	1 (2)		5 (2)			6 (4)
79	3					3
Closed Form			2 (Wall sherds)			2
Painted Closed Form			1 (Wall sherd)			1
Paint						
Cup			1 (Wall sherd)			1
? 33/46						
Mortarium	6		1			7
Unidentified		1	1		72	74
TOTAL	58 (149)	67 (42)	27 (77)	32 (11)	94	278 (279)

Colour: body colour across the vessel-wall supplemented where necessary with core, margin and surface colours; precise Munsell values were not recorded but a set of Munsell Soil Colour Charts (1975 ed.), removed from its binder and mounted on a neutral grey card, was always within sight during pottery processing, in order to provide some degree of visual calibration and ensure some standardization of descriptive terms throughout the report. The following list gives an approximate correspondence between the descriptive terms used here and Munsell codes:

Orange/brown and dark brown: Hue 5YR; orange/brown: 5/6 & 5/8–6/6 & 6/8; dark brown: Value <5,

Chroma >2

Orange/red: 2·5YR 5/8–10R 5/8

Red/brown: Hue 2·5YR–10R, Value <5, Chroma >4

Pink: 10R 6/4–6/6

Orange: around 5YR 7/8

Orange/yellow: around 7·5YR 7/8

Yellow: Hues 10YR and 2·5 Y, Value >6, Chroma >4

Inclusion type: without recourse to thin-sectioning and the petrological microscope inclusions were only recorded under general headings: e.g.: quartz, iron, volcanically derived, limestone, mica etc.

Inclusion size: two estimates of the texture of each

Table 2

	Amphora	Flagon	Beaker	Jar	Bowl/dish	Mortaria	Lid	Total
BB1				9 (114)	Bowls Flat rim 1 (8) Incip Flan 14 (122) Flan 1 (23) Dishes Plain rim + int arc 14 (112) Groove rim 1 (13)			40 (392)
BB2				1 (8)	Bowls Gillam 222, 223, 310, 311 7 (48) Gillam 225, 312, 313 11 (80) Dish Plain rim + groove 5 (25)			24 (161)
Essex Area (Mucking?)				Gillam 151 4 (39) Mucking "J" 9 (147)				13 (186)
Rhenish			1		Cup 1 (26)			2 (26)
Rhineland						1 (18)		1 (18)
Dales				Ware 2 (27) Type 1 (10)				3 (37)
Swanpool (?)				Lid seated 12 (177) Other (as No. 30) 4 (60)		Swanpool tradition 4 (42)		20 (279)
Nene Valley			11 (142)			2 (15)		15 (179)
Hartshill Mancetter						11 (128)		11 (128)
East Yorks Crambeck		1 (17)	1 (8)		Bowls Flanged 14 (134) Flan (Dr 38) 2 (23) Painted 2 (21) Dishes Plain rim + groove 5 (58)	Painted 2 (22) Other 1 (5)		42 (534)
Calcite Grit				Huncliff 3 (47) Other 6 (116)	Dish 1 (24) Flan bowl 4 (59)			
Other	1 (25)	2 (35)	1 (7)	14 (238)	Bowls 6 (70)		2 (25)	26 (400)
TOTAL	1 (25)	3 (52)	14 (157)	65 (983)		91 (868)	21 (230)	197 (2340)

type were recorded: the first relates to the size of the major fraction, the second is the maximum grain size. In cases where the grains were well sorted the two estimates have the same value. Seven categories were used:

- Texture 1 (T1): not >0.1 mm
- Texture 2 (T2): not >0.2 mm
- Texture 3 (T3): not >0.5 mm
- Texture 4 (T4): not >1 mm
- Texture 5 (T5): not >2 mm
- Texture 6 (T6): not >4 mm
- Texture 7 (T7): not >8 mm

The density of inclusions was categorized as sparse, common or abundant. It was judged to be sparse when the area of vessel fabric falling under one or more of the eyepiece graticule cells did not appear to contain any grains. It was judged to be abundant when there was little or no area of clay matrix visible between grains.

The Arrangement of the Catalogue

The catalogue of pottery is arranged by excavated context, with samian preceding coarseware in each context entry.

The information for each coarseware vessel is arranged as follows:

Vessel class; post-excavation processing catalogue number(s) (These Featured Vessel numbers are marked on the sherds in waterproof ink); diameter in centimetres; rim percentage; fabric description (see above); discussion (if any).

THE CATALOGUE

CONTEXT 62 (Phase 4)

The TPQ for the group can probably be taken from no. 1 whose date is not likely to be before the middle of the 3rd century A.D.

1) Large Beaker; FVN 36; Pale orange with orange to dark maroon colour coat; Inclusions: common, quartz (T2, max T4), red iron oxide (T2). Base sherd only. Probably Nene Valley. Not illustrated.

2) Bowl; FVN 37, Dia 15, 15%; Pale grey with well defined black core and dark grey surface; Inclusions: abundant, quartz (T3, max T4). Similar examples occur in primary levels in milecastles, e.g.: Milecastle 9 (Birley 1930, no. 34), milecastle 48 (Gibson and Simpson 1911, pl. III no. 2) and mile-

castle 50 TW (Richmond and Gillam 1952, no. 39) but the type could well have appeared in the north earlier; examples occur at Corbridge (unpublished) where associations, particularly of fabric, suggest that they are first century in date. The fabric of the Chester-le-Street example is close to Early Ware 5 at Corbridge (Bishop and Dore 1989, 249).

CONTEXT 76 (Phase 4)

The latest vessels in the group are the coarseware vessels 6, 7 and 8. As with Crambeck products (Evans 1989, 79) the date of the first appearance of types such as no. 8 should probably be placed somewhere in the last third of the 3rd century A.D. No. 6 is probably of the same date. Fragment no. 7 is quite heavily abraded but sufficient survives to show that it is not the classic Huntcliff type; a date more in keeping with the general appearance of this type of fabric in the north, i.e. late 3rd C, would therefore seem appropriate.

Samian:

1 r.sh. Dr 31R EG (Dia. 23 8%)

Coarseware:

3) Jar; FVN 48, Dia 14, 26%; Dark grey brown with black surface; Inclusions: common, quartz (T3, max T5), occasional red iron oxide and black vitreous grains (T2).

4) Jar; FVN 49, Dia 15, 20%; Mid blue grey with smoothed surface; Inclusions: common, quartz (T2, max T3), black iron oxide (T2, max T5).

5) Jar; FVN 50, Dia 12, 17%; Mid blue grey; Inclusions: sparse, quartz (T3, max T5), occasional black iron oxide (T2).

6) Jar; FVN 51, Dia 15, 12%; Very pale grey with dark grey surface; Inclusions: abundant, quartz (T2, max T5). Possibly a Swanpool product (see Webster and Booth 1947, fig. 5 type H). There are similar vessels known at Housesteads (Dore 1988, nos 27 and 28; the earliest example is no. 28 from context 29 where associated pottery suggests a TPQ of at least A.D. 250 and possibly in the last 3rd of 3rd C) and Vindolanda (Bidwell 1985, no. 129; associated pottery suggests a TPQ of c. A.D. 250).

7) Jar; FVN 47, Dia ?, 20%; Black; Inclusions: abundant, voids (T6), limestone (T6), quartz (T5, max T6). "Calcite gritted" fabric. Small, abraded rim sherd of an everted rim jar; not the classic Huntcliff type. Not illustrated.

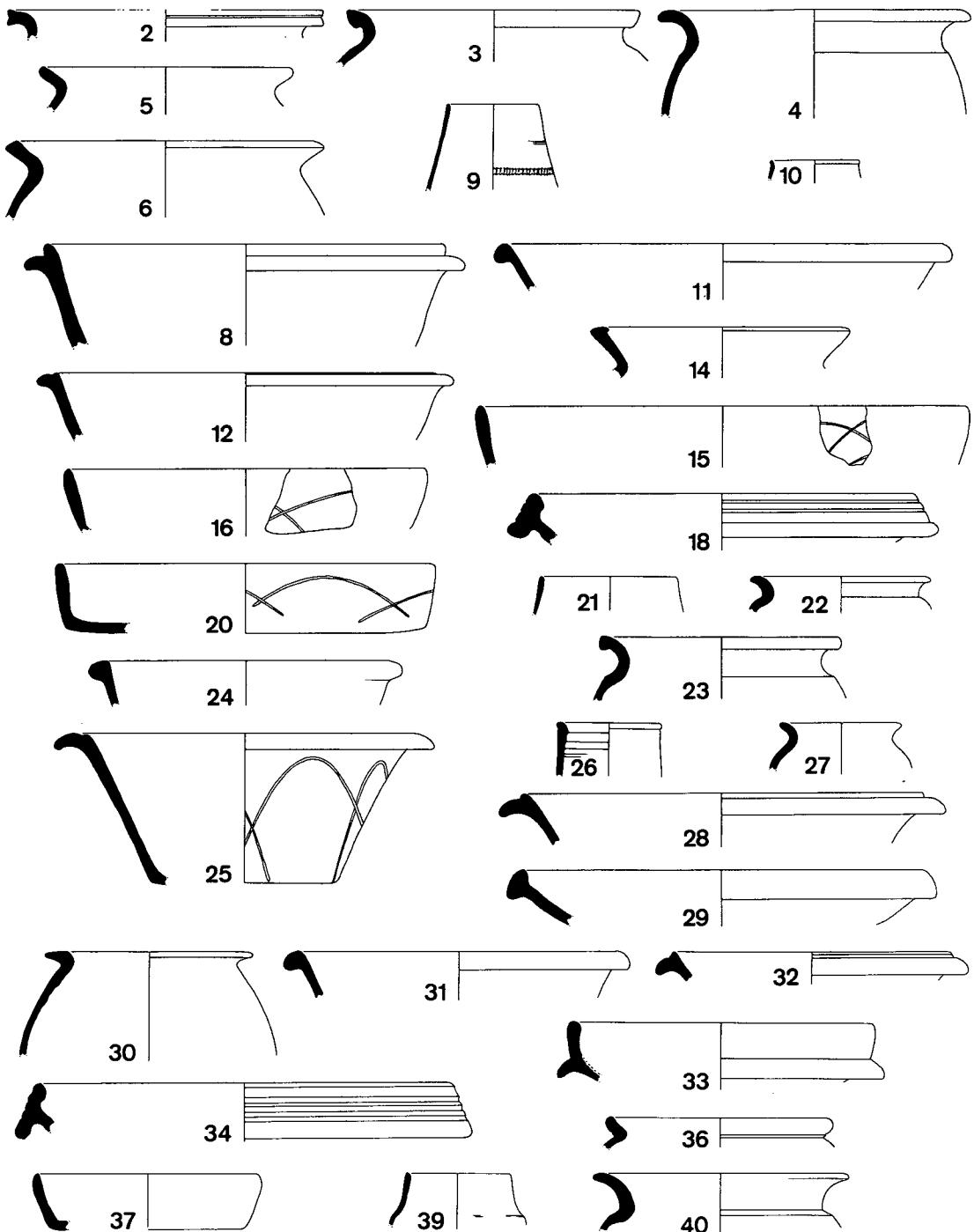


Fig. 9 *Chester-le-Street: Roman pottery. Scale 1:4.*

8) Bowl; FVN 46, Dia 21, 5%; Dark grey core with pale grey margins and dark grey surface; Inclusions: common, quartz (T4). This is probably from East Yorkshire though the dark grey core suggests that it is not a Crambeck product (Evans 1989, 55) and the fabric does not seem very similar to known Norton and Throlam products.

CONTEXT 82 (Phase 1)

Samian:

1 fragment, form and fabric unidentifiable.

CONTEXT 101 (Phase 4)

TPQ somewhere in the second half of the 2nd century A.D.

Samian:

1 r.sh. Dr 31 or 31R CG (?) (Dia ? 2%) 1 flange sh. Dr 38 EG 2 fragments, form and fabric unidentifiable.

CONTEXT 104 (Phase 3)

Samian:

1 w.sh. Dr 31 or 31R CG (?)

CONTEXT 104/154 (Phase 3)

TPQ somewhere in the later 2nd century, on the basis of no. 9.

9) Beaker; FVN 75, Dia c. 6, 2%; Dull orange with iridescent black colour coat; Inclusions: abundant, red iron oxide and black vitreous grains (T1). Probably a Nene Valley product, but not closely datable. There is sufficient of the sherd surviving to suggest that the form of the original was unindented. The quality and thickness of the slip suggest a date not much before the mid 3rd C.

10) Beaker; FVN 76, Dia 6.5, 9%; Orange brown with iridescent black colour coat; Inclusions: sparse, black vitreous grains and limestone (T1).

CONTEXT 115 (Phase 4)

Gillam (1976, 70) suggested that bowls such as no. 12 appeared before the end of the 2nd century and evidence from the south-west supports this (Bidwell and Holbrook 1991, 98). The south-western evidence also suggests that the simple linear typological relationship which Gillam envisaged be-

tween these bowls (which he termed "incipient flanged rim") and the conical flanged bowls of the later 3rd and 4th centuries can no longer be sustained (I am grateful to Paul Bidwell for appraising me of the south-western evidence).

Samian:

1 w.sh. Dr 31 or 31R 2 w.sh. Dr 33 EG 1 w.sh. 1 b.sh. Dr 33 CG

Coarseware:

11) Bowl; FVN 56, Dia 22, 6%; Black core with red brown margins and dark grey burnished surface; Inclusions: common, quartz (T2, max T3). (BB2). Mid 2nd-early 3rd C.

12) Bowl; FVN 57, Dia c. 25, 6%; Black with black burnished surface; Inclusions: abundant, sub rounded quartz (T3). (BB1). Late 2nd C.

CONTEXT 116/153 (Phase 4)

No featured coarseware but there is a small rim sherd of a BB2 round rim bowl which should date to the second half of the 2nd century or the very beginning of the 3rd.

CONTEXT 129 (Phase 4)

Apart from no. 17, the mortarium stamped by Caritas, the vessels in this group could all date to around the same time, i.e. mid-3rd century. The plain rim bowls in BB1 with intersecting arc decoration (15 and 16) could be survivals from the later 2nd century (they appear in the "destruction deposit" at Corbridge—Richmond and Gillam 1950, no. 90) but, on the other hand, they do not appear at Vindolanda until the construction phase of period IVA c. A.D. 235 (Bidwell 1985, no. 78).

Samian:

1 r.sh. Dr 31R EG (Dia ? 5%) 1 w.sh. Dr 31R EG (?) 1 r.sh. 2 w.sh. Dr 31 or 31 R CG (?) (Dia ? 2%) 4 fragments, form and fabric unidentifiable

Coarseware

13) Jar; FVN 61, Dia ?, 5%; Black with black burnished surface; Inclusions: common, sub-round quartz (T3). (BB1). Wall sherd of a jar with a very small part of the rim surviving but not a full profile. Unillustrated. There is decoration of obtuse angle lattice on the sherd and some indication of a scored line above this, which should date the piece to not earlier than the mid-3rd century (see Bidwell 1985, 174).

14) JAR; FVN 62, Dia 15, 5%; Very pale grey with dark grey surface; Inclusions: common, quartz (T4), red iron oxide (T2). Dales type. Mid-3rd century on the basis of Vindolanda (See Bidwell 1985, 177).

15) Dish; FVN 60, Dia c. 30, 5%; Black with black burnished surface; Inclusions: abundant, sub round quartz (T3). (BB1).

16) Dish; FVN 63, c. 22, 4%; Dark grey with black burnished surface; Inclusions: abundant, sub round quartz (T3, max T4). (BB1).

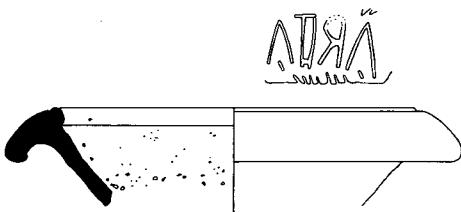


Fig. 10 Chester-le-Street: mortarium with stamp (No. 17). Scale mortarium 1.4, stamp 1.2.

17) Mortarium (fig. 10); FVN 210, Dia 24.5, 15%. Mrs Hartley comments: Somewhat overfired, extremely hard, buff-brown fabric with pale brown core almost to the surface, probably near the spout. Inclusions: moderate, ill-sorted, black material with fewer quartz. Trituration grit: hard, blackish material sometimes with red centre (as inclusions). This fabric can be attributed to the Mancetter-Hartshill potteries; it differs from the fabrics normally associated with them, this version being produced c. A.D. 165–200+.

The incompletely impressed, retrograde stamp (which reads from the outside of the rim) is from one of three dies which give Carita, perhaps for Caritanus. His stamps have now been noted from Binchester; Carrawburgh; Chester-le-Street; High Cross; Ilkley; Lancaster; Piercebridge; and Wroxeter (?). He produced mortaria with indisputably late features which can be closely matched in mortaria made after the practice of stamping ceased in these potteries. He is also one of a number of important Warwickshire potters whose work is widely distributed in northern England but is virtually absent in Scotland. His activity was certainly within the period A.D. 155/160–185.

18) Mortarium; FVN 64, Dia 26, 16%; Very hard white, very pale yellow surface; Inclusions: sparse,

red iron oxide (T3), quartz (T3). A.D. 190–240 (information from K. F. Hartley).

CONTEXT 130 (Phase 4)

TPQ somewhere in the mid-3rd century on the basis of the samian.

Samian:

1 r.sh. Dr 31 or 31R CG (?) (Dia ? 2%) 2 w.sh. Dr 37 CG: One small fragment comes from the bottom of the decorative zone. Visible are the hooves of an animal, probably a horse, to right. The fabric and gloss suggest a Hadrianic or early Antonine date. Not illustrated.

CONTEXT 135 (Phase 4)

No. 19 provides a TPQ in the mid-3rd century.

Samian:

1 b.sh. Dr 31R CG (?)

Coarseware

19) Bowl; FVN 215, Dia ?, 5%; Black with black burnished surface; Inclusions: common, quartz (T3). (BB1). Very small rim sherd of an "incipient flange rim bowl". Not illustrated. Mid-3rd century (see context 115, no. 12).

CONTEXT 136 (Phase 4)

TPQ towards the end of the 2nd century.

20) Dish; FVN 65, Dia 23, 30%; Black core with dull red margins and black burnished surface; Inclusions: common, quartz (T2, max T4). This should probably be classed as BB1. The colour and the feel are acceptable but the texture of the inclusion suite is not particularly characteristic of BB1. There is some kind of burnished motif on the bottom, both inside and out. For remarks on date see above under context 129.

CONTEXT 142 (Phase 4)

TPQ c. A.D. 160 (if not later, on the basis of the East Gaulish mortarium).

Samian:

1 r.sh. Dr 31R CG (Dia ? 5%) 1 w.sh. mortarium EG 2 fragments form and fabric unidentified

CONTEXT 155 (Phase 2)

No. 23 gives a TPQ around the middle of the 3rd century; it is almost certainly a product of kilns in Essex such as those at Mucking (Jones and Rodwell 1973 Type J). A well dated example of the same form occurs at Vindolanda in the Period 4A/B dumps over the demolished buildings on the east rampart (mid-3rd C—see Bidwell 1985, no. 120).

Samian:

1 flange sherd Dr 38 EG

Coarseware:

21) Beaker; FVN 78, Dia 8.5, 20%; White with black colour coat; Inclusions: common, quartz, red iron oxide and limestone (all T2). Nene Valley. Late 2nd–mid 3rd C.

22) Jar; FVN 80, Dia 11, 20%; Mid blue grey with burnished surface; Inclusions: common, black iron oxide (T1), and occasional quartz (T3).

23) Jar; FVN 81, Dia 15, 15%; Dark grey with pale grey core and dull orange surface covered with sparkling grits; Inclusions: abundant, sub round quartz (T3). Mid-3rd C.

24) Bowl; FVN 77, Dia 19, 5%; Black with dark grey surface and silvery slip extending over the outer surface and the inside of the rim; Inclusions: abundant, quartz (T3) and occasional limestone (T3). (BB2). Late 2nd–mid 3rd C.

25) Bowl; FVN 79, Dia 23, 18%; Dull grey core with dull red margins and black burnished surface; Inclusions: abundant, quartz (T3, max T4). (BB1). Late 2nd C. (See context 115 no. 12.)

CONTEXT 211 (Phase 2)

A TPQ of at least the late 3rd C can be derived from nos. 26 and 28. This can be extended to the mid 4th C if no. 29 is accepted as Crambeck Painted ware.

26) Beaker; FVN 95, Dia 6.5, 8%; White with mid grey surface; Inclusions: abundant, quartz (T1). Probably Crambeck ware (see Corder 1928 pl. IV no. 93).

27) Jar; FVN 94, Dia 7.5, 13%; Mid blue grey with burnished surface; Inclusions: abundant, quartz (T1 max T3) and black iron oxide (T1).

28) Bowl; FVN 93, Dia 27, 9%; Very pale grey with dark grey surface; Inclusions: abundant, quartz (T3) and occasional black vitreous grains (T1). Probably a Crambeck product (see Evans 1989, 54).

29) Dish; FVN 92, Dia 26, 11%; Pale orange with paler core; Inclusions: abundant, quartz, red and black iron oxide (All T2). The sherd is quite abraded, but the form and fabric suggest that it is an example of Crambeck painted Parchment ware (as, for example, Corder 1928 pl. III no. 73).

CONTEXT 224 (Phase 2)

A TPQ somewhere in the last third of the 3rd C can be derived from nos. 32 and 33 both of which are probably Crambeck products.

Samian:

1 r.sh. Dr 31 CG (Dia 18 6%) 2 r.sh. Dr 31R CG (Dia 26 15%) 1. r.sh. Dr 31R EG (Dia 27 7%) 1 b.sh. 1 w.sh. Dr 31R CG (?) 1 b.sh. Dr 31R EG (?) 1 r.sh. 5 w.sh. Dr 31 or 31R CG (?) (Dia ? 2%) 1 w.sh. Dr 31 or 31R EG (?) 3 w.sh. Dr 31 or 31R fabric not identified 1 w.sh. Closed form with white painted decoration EG 7 frags form and fabric not identified 1 r.sh. Dr 37 CG (?) (Dia ? 2%) 1 w.sh. Dr 37 CG: Parts of two panels are visible divided by a fine beaded border. In the RH panel is a double bordered medallion containing part of a draped male. In the LH panel is a fragment of a cantharus. The general style of the decoration is fully Antonine and the fabric and gloss support this. The fine beaded borders might occur in the work of a potter like Advocisus.

Coarseware:

30) Jar; FVN 102, Dia 12.5, 13%; Mid grey, rough surface; Inclusions: common, quartz (T3 max T5) and occasional black vitreous grains (T3). Similar to fabric of no. 6 (Context 76). No evidence of occurrence at Swanpool (a suggested origin for no. 6).

31) Bowl; FVN 107, Dia 21, 6%; Black with black burnished surface; Inclusions: abundant, quartz (T2 max T3). (BB2).

32) Bowl; FVN 105, Dia 19, 8%; Very pale grey with mid grey surface; Inclusions: common, quartz (T1). Probably a Crambeck product (see Evans 1989, 54).

33) Bowl; FVN 104, Dia 19, 10%; Dull orange brown with dull brown core and dark grey surface; Inclusions: abundant, quartz (T1) and red iron oxide (T2 max T4). Possibly a Crambeck product.

34) Mortarium; FVN 103, Dia 27, 12%; Very pale pinkish white with pale yellow surface; Inclusions: common, quartz (T1 max T2) and red iron oxide

(T1). A Hartshill–Mancetter product. A.D. 230–300. Information from K. F. Hartley.

35) Mortarium; FVN 106; Dia ?, 10%; Very pale yellow with pale yellow surface; Inclusions: sparse, black iron oxide (T3) and occasional quartz (T3). This is a very small rim sherd of a Nene Valley mortarium. Not illustrated. 3rd–4th C. Information from K. F. Hartley.

CONTEXT 226 (Phase 2)

The samian provides a TPQ somewhere in the second half of the 2nd C.

Samian:

2 r.sh. Dr 31 or 31R CG (?) (Dia ? 2%) 2 fragments form and fabric not identified

CONTEXT 228 (Phase 3)

Coarseware:

1 w.sh. Dressel 20 amphora.

CONTEXT 235 (Phase 4)

A TPQ somewhere in the last third of the 3rd C can be derived from no. 37.

36) Jar; FVN 125, Dia 14, 9%; Mid grey core with dull orange brown margins and dark grey surface; Inclusions: abundant, quartz (T2) and black iron oxide (T2). Probably a product of Essex kilns such as those at Mucking (Jones and Rodwell 1973, Type F).

37) Dish; FVN 126, Dia 14, 27%; Very pale grey with dark greyish brown surface; Inclusions: abundant, quartz, red and black iron oxide and limestone (all T1). Crambeck fabric.

CONTEXT 246 (Phase 4)

Nos 39, 40 and 41 provide the TPQ for the group. Nos 40 and 41 are typologically the latest examples of BB1 cooking pots stratified in the assemblage. At the time of his “Coarse Fumed Ware” paper (1976) J. P. Gillam would probably have dated these vessels to the end of the 3rd C. Evidence from Vindolanda (Bidwell 1985, 174–6) now indicates that the development of certain attributes of this type of vessel (the angle of the cross-hatching and the presence above this of a scored line) may have occurred earlier than Gillam suggested. A necessary consequence of this may well be that the dating of

these later BB1 jar types should be moved slightly earlier. A date around the middle of the 3rd C would seem reasonable.

Samian:

1 r.sh. Dr 31R EG (Dia 25 18%) 1 r.sh. Dr 31 or 31R EG (Dia ? 2%) 1 r.sh. Dr 33 CG (Dia 13 15%) 2 r.sh. Dr 37 CG (?) (Dia ? 4%) 1 w.sh. mortarium CG 3 sherds form and fabric not identified.

Coarseware:

38) Bowl?; FVN 133, Dia ?, 5%; Very pale orange with orange slip; Inclusions: common, quartz, red iron oxide and limestone (all T1). A very small sherd of a rim, or possibly a flange. Not illustrated.

39) Beaker; FVN 128, Dia 6·5, 3%; White with dark brown colour coat; Inclusions: common, quartz (T1) and occasional red iron oxide (T2). Probably a Nene Valley product. Mid 3rd C.

40) Jar; FVN 129, Dia 15·5, 20%; Black with black burnished surface; Inclusions: common, sub round quartz (T3 max T4). (BB1). Mid 3rd C.

41) Jar; FVN 130, Dia 16, 4%; Black with black burnished surface; Inclusions: common, sub round quartz (T3 max T4). (BB1). Mid 3rd C.

42) Bowl; FVN 134, Dia 18, 4%; Black core with pale brownish grey margins and black burnished surface; Inclusions: abundant, quartz (T2 max T3). (BB2).

43) Bowl; FVN 132, Dia 22, 5%; Dark grey core with dull red margins and black burnished surface; Inclusions: common, quartz (T2 max T3). (BB1). Mid 3rd C (see Context 115 no. 12 for remarks on date).

44) Dish; FVN 135, Dia 20, 3%; Dark grey with black burnished surface; Inclusions: common, quartz (T3). (BB1). There are faint indications of some kind of decoration on the outer surface.

45) Mortarium; FVN 131, Dia 34, 12%; Very pale yellow with pale yellow surface; Inclusions: common, quartz (T2 max T4). Rhineland origin. A.D. 140–300. Information from K. F. Hartley.

CONTEXT 246/247 (Phase 4)

TPQ in the mid-3rd C, on the basis of no. 48.

Samian:

1 r.sh. Dr 31 CG (Dia 18 10%)

Coarseware:

- 46) Flagon; FVN 138, Dia 10·5, 17%; Pale brown; Inclusions: common, quartz (T1 max T3) and black vitreous grains (T1).
- 47) Beaker; FVN 136, Dia 5·5, 15%; Very pale yellow with dark brown colour coat; Inclusions: common, quartz (T1) and red iron oxide (T1). Late 2nd-early 3rd C.
- 48) Bowl; FVN 137, Dia 20, 10%; Dark grey with dark grey brown burnished surface; Inclusions: common, sub round quartz (T3). (BB1). Mid 3rd C. (See context 115 no. 12 for discussion of date.)
- 49) Dish; FVN 129, Dia 21, 10%; Black with black burnished surface; Inclusions: common, sub round quartz (T3). (BB1).
- (BB1). Very faint cross hatching is evident on the outer surface. Mid 2nd C.
- 54) Dish; FVN 142, Dia 19, 10%; Pale grey with black core and black burnished surface; Inclusions: abundant, quartz (T2 max T4). (BB1). Late 2nd C+.
- 55) Bowl; FVN 143, Dia 18, 7%; Dark grey brown with black burnished surface; Inclusions: abundant, rounded quartz (T3). (BB2). Mid-late 2nd C.
- 56) Bowl; FVN 144, Dia 21·5, 23%; Dark grey core with pale grey margins and dark grey surface; Inclusions: common, quartz (T3). (BB1). Late 3rd C. (See Gillam 1976, nos 45-9 and Bidwell 1985, 177.)

CONTEXT 247 (Phase 2)

TPQ somewhere in the mid 2nd C, derived from no. 51.

Samian:

1 b.sh. Dr 18/31R CG 1 sherd form and fabric not identified

Coarseware:

50) Amphora; FVN 141, Dia 16, 25%; Orange brown with grey brown core; Inclusions: common, quartz (T2 max T3), black iron oxide (T1), black vitreous grains (T1) and mica (T2). Dressel type 20 globular amphora.

51) Jar; FVN 140, Dia 11·5, 15%; Black core with pale grey margins and black burnished surface; Inclusions: common, quartz (T3). (BB1). Mid-late 2nd C.

CONTEXT 248 (Phase 2)

No. 56 gives a TPQ for the group somewhere in the late 3rd C.

Samian:

1 sherd form and fabric not identified.

Coarseware:

52) Beaker; FVN 145, Dia 7·5, 13%; Orange with black colour coat; Inclusions: common, quartz (T2 max T3), occasional black iron oxide (T3), limestone (T4) and fine grained rock fragments (T3). Nene Valley? 3rd C.

53) Dish; FVN 146, Dia 23, 6%; Dark grey; Inclusions: abundant, sub round quartz (T3).

CONTEXT 254 (Phase 4)

Samian:

1 r.sh. Dr 37 CG (?) (Dia ? 2%)

CONTEXT 263 (Phase 2)

TPQ in the mid 3rd C. on the basis of no. 58.

Samian:

1 b.sh. Dr 31R EG (?) 1 w.sh. Dr 31 or 31R fabric not identified.

Coarseware:

57) Jar; FVN 147, Dia 10, 30%; Mid blue grey; Inclusions: common, quartz (T3 max T4) and black iron oxide (T3).

58) Jar; FVN 148, Dia 14·5, 20%; Mid grey with dark grey surface; Inclusions: common, quartz (T4) and rock fragments (T4). Probably a product of Essex kilns such as those at Mucking (see Jones and Rodwell 1973 type J). Mid 3rd C.

CONTEXT 266 (Phase ?)

59) Bowl; FVN 149, Dia 22, 10%; Black core with red brown margins and black burnished surface; Inclusions: common, quartz (T1 and T3); the inclusion suite is markedly bi-modal suggesting the admixture of quartz temper to a clay matrix already containing fine quartz. (? BB2). Mid 2nd-early 3rd C.

CONTEXT 338A (Phase 4)

60) Jar; FVN 169, Dia 15, 10%; Black core with

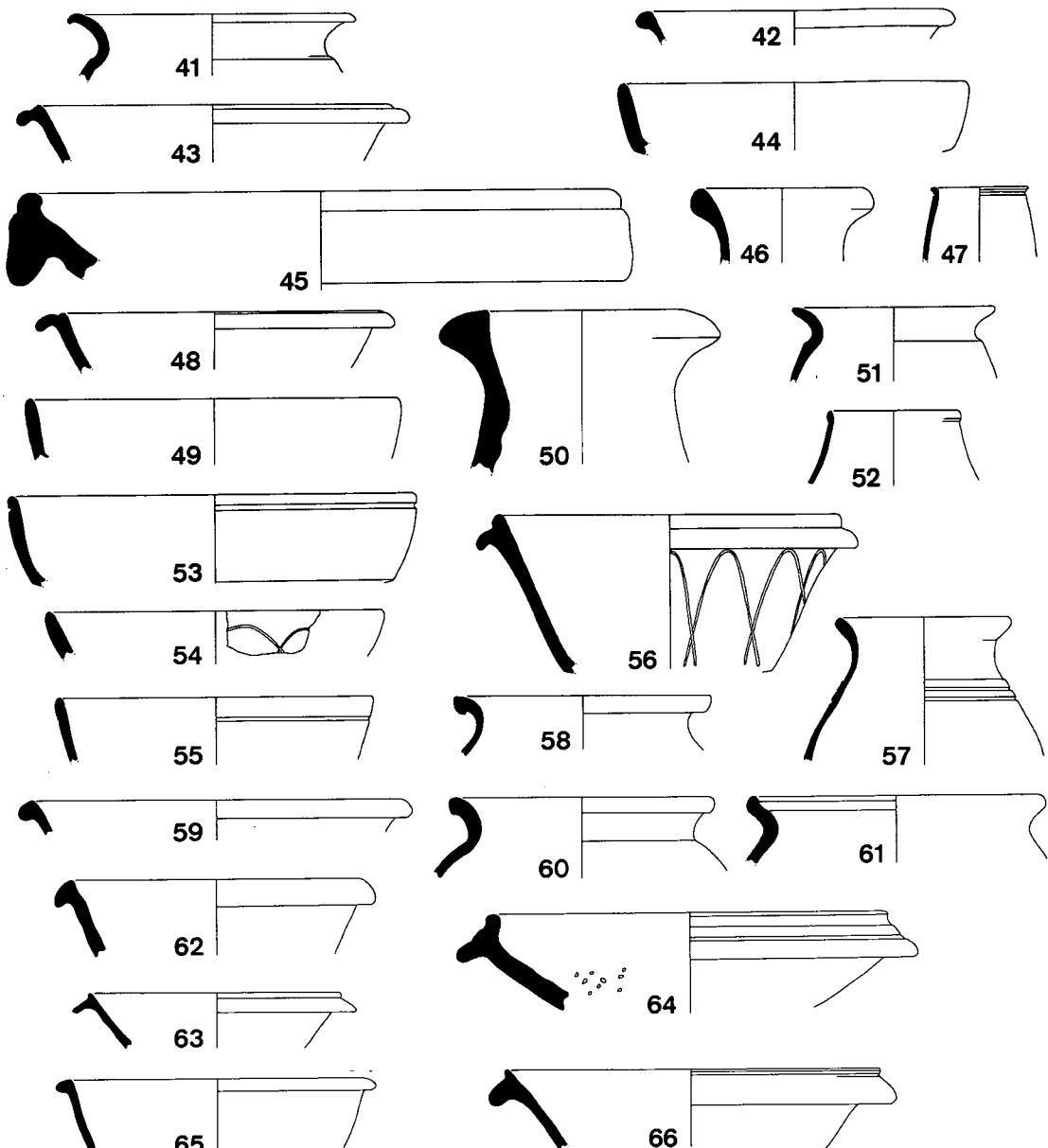


Fig. 11 Chester-le-Street: Roman pottery. Scale 1:4.

pale grey margins and mid grey surface; Inclusions: common, quartz (T3 max T4). Probably a product of Essex kilns such as those at Mucking (see Jones and Rodwell 1973, type J). Mid 3rd C.

CONTEXT 338B (Phase 4)

Vessels 61 and 63 provide a TPQ for the group somewhere in the last third of the 3rd C.

Samian:

1 w.sh. Dr 31 or 31R EG (?) 1 w.sh. Dr 32 (?) EG (?) 1 w.sh. Dr 33 CG 1 w.sh. closed form EG

Coarseware:

61) Jar; FVN 171, Dia 17, 15%; Pale brown with dark brownish grey surface; Inclusions: common, quartz (T4). Last 3rd of 3rd C. (See Context 76 no. 6 for discussion.)

62) Bowl; FVN 172, Dia 18, 13%; Pale brown with pale grey core and mid grey surface; Inclusions, abundant, quartz (T3).

63) Bowl; FVN 173, Dia 16, 15%; Mid grey brown with smooth black surface; Inclusions: abundant, quartz (T3). Not likely to be a Crambeck product. Late 3rd–4th C.

64) Mortarium; FVN 170, Dia 26, 12%; Orange pink with pale yellowish pink surface; Inclusions: abundant, quartz (T2) and red iron oxide (T2). Trituration grits: T6, black fine grained rock fragments. In the Swanpool tradition. 3rd–4th C. Information from K. F. Hartley.

CONTEXT 342 (Phase 1)

Samian:

1 w.sh. Dr 37 CG (?): Animal to L in double bordered festoon/medallion. Not illustrated.

Coarseware:

65) Bowl; FVN 174, Dia 18, 8%; Black with dark grey brown surface; Inclusions: common, quartz (T2 max T4). (BB2). Mid-late 2nd C.

CONTEXT 344 (Phase 4)

The only datable sherd is a base fragment from a bowl in BB2 which provides a TPQ in the mid-2nd C.

CONTEXT 345 (Phase 4)

TPQ of A.D. 160 from the samian stamp.

Samian:

1 b.sh. Dr 31R CG stamped—JN F (see section on stamps) 1 w.sh. Dr 31 or 31R CG (?) 1 r.sh. Dr 36 CG (Dia 18 11%)

Coarseware:

1 small rim sherd of a BB2 jar. Not illustrated.

CONTEXT 349 (Phase 4?)

Vessel no. 66 provides a TPQ in the last third of the 3rd C.

Samian:

1 w.sh. Dr 31 or 31R CG (?) 1 w.sh. Dr 37 CG: Very small fragment. The fabric and gloss suggest a Hadrianic or early Antonine date.

Coarseware:

66) Bowl; FVN 175, Dia 23, 13%; Pale grey with dark grey surface; Inclusions: abundant, quartz (T2). Probably a Crambeck product (see Evans 1989, 54). Last third of 3rd C.

THE MEDIEVAL AND POST-MEDIEVAL POTTERY

by M. Chard

LOCAL WARES

These show marked similarity to well-known local traditions on Tyneside and in Durham, but, with occasional exceptions, the fabrics cannot be identified with specific fabric types from those areas. Presumably, therefore, they have a more local provenance.

Buff Wares, 13th/Early 14th Century

Similar to Tyneside buff/white wares (Ellison 1981) and buff fabrics from Durham City, with abundant or moderate quartz temper. Both glazed and unglazed wares are present and oxidized and reduced, or part-reduced wares.

Vessel forms: square-section cooking pot rim (Context 068).

Distribution:

Context	Maximum vessels
068	4
217	5
253	3
236	1

Iron-rich Oxidized Wares, 13th/Early 14th Century

Abundantly quartz-tempered orange/buff fabrics. Glazed and unglazed wares.

Distribution:

Context	Maximum vessels
068	1
081	1
340	1

Early (Late 13th/Early 14th Century) Reduced Greenwares

Moderate fine and medium quartz-tempered mid-grey fabrics; splash glazed.

Distribution:

Context	Maximum vessels
074	1
185	1

Late (14th/15th Century) Reduced Greenwares

Often superficially similar to RG4 (see below) but all contain fine and occasional medium quartz temper. The majority are probably made from local clays with little iron content. Oxidized margins are buff and the reduced fabric generally mid to light grey, though some have dark grey/black surfaces. Most fragments are covered externally with a greenish brown lead slip glaze.

Vessel forms: Lid-seated jug rim similar to Castle Ditch no. 23 (Ellison 1981) and the rim neck and strap handle of a cistern with a projecting cordon (Context 217).

Distribution:

Context	Maximum vessels
068	1
185	1
217	11
240	1
249	1
253	5
326	5
330	1

Reduced Greenware Type 4 (RG4)

The common Tyneside late reduced greenware. A hard, smooth, dark grey fabric without visible inclusions (see Ellison 1981).

Distribution:

Context	Maximum vessels
068	2
088	1
253	1

Late 15th/Early 16th Century Reduced Greenwares

These are characterized by a full internal and external cover of slip glaze and a dark grey fabric softer than RG4, with occasional quartz inclusions and light grey margins. Very similar to Tyneside type RG5 (Ellison 1981).

Distribution:

Context	Maximum vessels
185	1
245	2
304	1

Late Medieval or Early Post-Medieval Oxidized Wares

One example in Context 330. A rim fragment in pink/buff moderate medium quartz tempered fabric, with internal and external yellow/green glaze.

Cistercian Ware

There seems to have been some production in this area (kiln wasters were found during work at St. Mary's College in Durham) though some of the earlier examples may come from Yorkshire. The few fragments from this site are probably not later than mid-16th century and include fragments decorated with white clay rouletted strips.

Vessel forms: a rim fragment (Context 340) is probably a type 14 cup (Brears 1971).

IMPORTED EARLY POST-MEDIEVAL WARES

Low Countries Redwares

Rim and shoulder fragments of two identical vessels (Contexts 043 and 238), similar in form to Castle Ditch no. 239 (Ellison 1981) a chamber pot form dated to the second half of the 16th century. The fabric of both vessels is the same: a soft orange/buff typical of Low Countries redwares but, uncharacteristically, with a moderate medium quartz temper. The full internal and external yellow/orange glaze is typical of post-medieval Low Countries wares. Fragments with the same glazing in untempered fabric occurred in Contexts 245 and 253.

Cologne/Frechen Stoneware

Fragments of a drinking mug in Context 238. Second half of 16th century.

17TH CENTURY ENGLISH WARES

Redwares

Similar to metropolitan wares from Essex. One example of a slipware plate and fragments of plain glazed hollow wares.

Distribution:

Context	Maximum vessels
090	6
253	2

Tin-Glazed Ware

One fragment in Context 090.

Whiteware

Fragment of the base and foot of a tripod cooking pot with internal yellow glaze and a patch of olive green glaze externally (Context 253). The form is similar to a vessel (no. 100) from the Blackfriars in Newcastle (Fraser 1987) and Surrey wares recovered in Norwich (Jennings 1981, nos. 880–2).

COIN REPORT

R. J. Brickstock

The Church Chare excavations yielded 20 objects preliminarily identified as coins. Of these, one (no. 18) is an extremely corroded silver halfpenny of the reign of Edward III, and a second (no. 19) is a worn Scottish turner (2d) of the reign of Charles I. A third object (no. 20), although illegible to the naked eye, is

shown by X-ray to be not a coin but a modern button.

The remaining 17 coins are Roman imperial, one an illegible 3rd or 4th century issue, the rest a fairly unremarkable series ranging in date from a very worn *dupondius* of Vespasian (no. 1, A.D. 69–79) to an unworn *VRBS ROMA* of Constantine I, issued in 330–31 at Trier. There are two worn 2nd century *denarii* (no. 2, Hadrian, and no. 4, Marcus Aurelius, Caesar) and an extremely worn *sestertius* from the reign of Antoninus Pius (no. 3, Faustina I, posthumous issue). All four early coins are very likely residual. There is then a gap in the series, followed by nine *antoniniani* of Victorinus and the Tetrici (268–73), or copies of the same (nos. 5–13), all showing only slight wear. An *aurelianrus* of Carausius (no. 14), a coin of Constantine II, Caesar (no. 15, issued 327–8), plus the coin of Constantine, all similarly little worn, complete the list.

There are thus no coins of the second half of

CHESTER-LE-STREET

1990 + 1978/9 + VICARAGE

Total 136

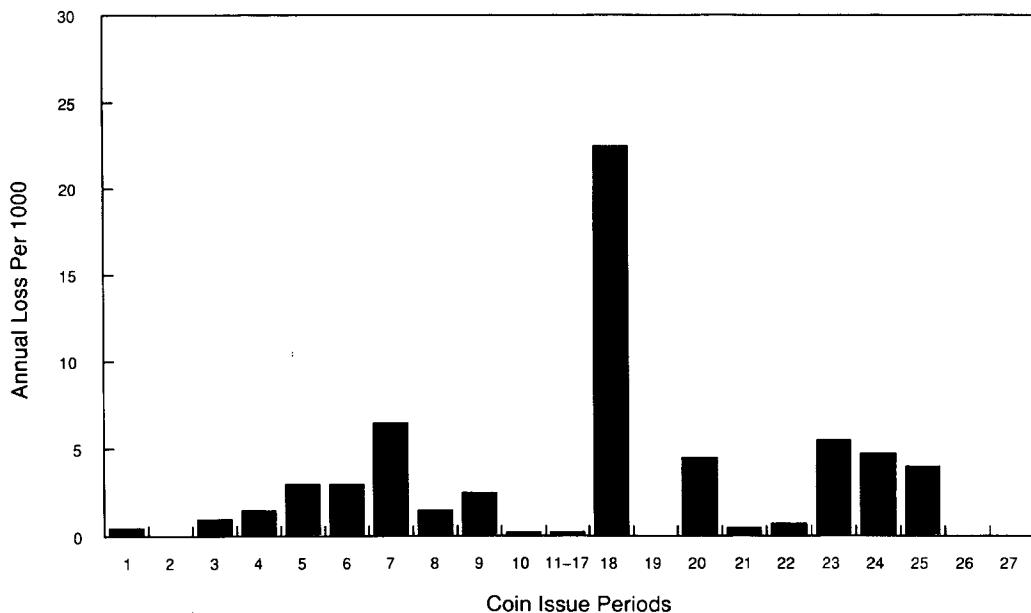


Fig. 12 Histogram of coin loss at Chester-le-Street.

the 4th century, but the present sample is too small for this absence to carry any particular significance. However, the combination of these finds with earlier discoveries from Chester-le-Street produces a sufficient total for a statistical comparison with other sites in the region to be more viable. Various small assemblages of coins, mostly from the bed or banks of the Cong Burn, but a few from close to the deanery, were exhibited to the Society of Antiquaries of Newcastle, and are recorded in that body's *Proceedings* (IX³, 1921, 30, 273; X³, 1923, 41, 112; I⁴, 1925, 11). Another body of coins, found in the deanery garden, was published by the Rev. Walker Featherstonhaugh at the end of the last century (1885).

However, for the purpose of the histogram (fig. 12), I have included only two lists in addition to the present finds: the finds from the 1978–9 excavations (32 coins, of which 25 are

legible Roman imperial—McKay 1991), and John Casey's unpublished catalogue of coins from the Chester-le-Street vicarage (104 coins, 95 of them Roman imperial—P. J. Casey, unpublished card catalogue). The earlier published finds, numbering some 55 in total, are omitted on several grounds: firstly, there is the possibility, even likelihood, of overlap with Casey's listing; secondly, the earliest finds are not published in sufficient detail for the fourth century coins to be assigned to individual date periods; and thirdly, the last published group (*PSAN* I⁴, 1925), although allegedly found on the banks of the Cong, is made up of eastern issues (the legible mint-marks are of Cyzicus and Nicomedia), suggesting that this group is either a small hoard, or is not a local find. In either instance, its inclusion in a list of site-finds could only be misleading.

This leaves 136 coins, which sub-divide into periods⁶ as follows:

Period	Years	1990	1978–9	PJC	Total
1	A.D. 43–54	—	—	1	1
2	54–68	—	—	—	—
3	68–81	1	½	½	2
4	81–96	—	½	2½	3
5	96–117	—	—	8	8
6	117–38	1	2	5	8
7	138–61	2	—	17	19
8	161–80	—	—	4	4
9	180–92	—	—	4	4
10	193–217	—	1	—	1
11–17	217–60	—	—	2	2
18	260–73+	9	8	23	40
19	273–86	—	—	—	—
20	286–96	1	3	2	6
21	296–317	—	—	1	1
22	317–30	1	—	—	1
23	330–48	1	6	12	19
24	348–64	—	1	9	10
25	364–78	—	3	4	7
26	378–88	—	—	—	—
27	388–402	—	—	—	—
Total		16	25	95	136

The periods are those used by P. J. Casey (1980, 23), and the histogram is constructed in the now usual way, using the formula

$$\frac{\text{Coins per period}}{\text{length of period}} \times \frac{1000}{\text{total for site}}$$

The histogram (fig. 12) reveals a pattern that is strikingly similar, in periods 8–24, to various sites in the region, including Corbridge, South Shields, Wallsend and Piercebridge. However, differences are apparent in the earlier and later periods, allowing observations about both the date of foundation of the fort, and the date to which occupation continued. Nevertheless, the tentative nature of such observations should perhaps be re-emphasized: given the relatively low site total of 136 coins, the presence or absence of a single coin can make a significant difference to the shape of the histogram. For example, the value for period 1 (A.D. 43–54) is provided by a single coin which, being a Claudian copy, might well have been produced during period 2 (A.D. 54–68), and therefore should perhaps be transferred to that period.

Having noted the possibility of statistical distortion, however, it is possible to observe that Chester-le-Street is slightly weaker than either Corbridge or Housesteads (founded c. A.D. 125) in periods 1–3 (A.D. 43–81), but shows a considerable peak for period 7 (A.D. 138–61). This would be not inconsistent with a foundation date in the latter part of the third quarter of the 2nd century: much of the earlier coinage, and particularly the base-metal coinage, shows very considerable wear, and the presence of coinage of period 2 onwards on Antonine Wall sites demonstrates that it is reasonable to regard much of such coinage as residual. Equally, the peak for period 7 at Chester-le-Street can reasonably be seen as an indication of the common base-metal types in everyday circulation at the time of foundation: given the relative disregard shown by the imperial authorities towards the base-metal coinage relative to the silver (in which the armies were paid), one would perhaps expect the base-metal circulation pool to lag a little behind the times.

In the 4th century, sites such as Corbridge, South Shields and Piercebridge demonstrate occupation throughout, with the presence of coins of A.D. 388–402, some of the latest to reach Britain. At Chester-le-Street, however, the peak for period 25 (A.D. 364–78) is some-

what lower than that of Corbridge, and coinage of the following periods is absent. In this it mirrors Housesteads, although there the fall-off arguably begins earlier still, in period 24 (A.D. 348–64), and also Wallsend, where the fall-off in period 25 is even more marked. On face evidence, this suggests the cessation of, or at least a marked fall-off in, occupation at Chester-le-Street during period 25, and this remains the probability.

The 1978–9 finds, including two issues of 364–7 out of three Valentinianic coins, arguably point to the earlier part of the period 25 for the decline in level of occupation. However, the small size of the sample (25 coins) makes such an argument no more reliable than would be the theory of an end to occupation soon after A.D. 330, postulated on the basis of the 1990/91 sample (16 coins, end-date A.D. 330–31). The fuller list used here adds a further four Valentinianic coins, one not closely datable, the other three issues of 367–75 or 367–78, and thus makes a conclusion about the date of decline in coin use within the period 364–78 much more tentative, as it is based on the size of the period 25 peak alone.

In addition, a note of caution should perhaps be sounded: both South Shields and Piercebridge yield peaks for period 25 almost identical to that of Chester-le-Street. Both are considerably larger site lists than Chester-le-Street (Piercebridge yielded 2496 legible imperial coins), and both show relatively “normal” peaks for periods 26 and 27. Coins of period 26 (A.D. 378–88) are almost always rare as British site-finds, and it would be surprising for them to appear in a site-list of only 136 coins. Theodosian coinage of period 27 (A.D. 388–402), however, is rather less rare, but even so the presence of only two such coins at Chester-le-Street would match the value produced by Piercebridge, and three that of South Shields—and Theodosian bronzes are small and easily missed.

The following abbreviations are used throughout this catalogue:

Mints.

RM Rome; TR Trier

Table 3: Chester-le-Street 1990 Coin List

No.	Ruler		cat: –	denom: DP	wear: VW/C	Obv –	Rev –
1	VESPASIAN						
	date: 69–79	mint: --					
	diam: 26.0 mm	wt: 7.6 g					
2	HADRIAN		cat: 181, HUNT.143			Obv [HADRIANVS AVGSTVS]	
	date: 125–28	mint: RM –	denom: DEN		wear: ?W/W	Rev [COS III] Spes adv. 1.	
	diam: 18.0 mm	wt: 1.0 g					
3	FAUSTINA I, DIVO		cat: 1180, HUNT.135			Obv [DIVA FAVSTINA]	
	date: 141+	mint: RM –	denom: SEST		wear: EW/EW	Rev [AVGUSTA SC] Vesta	
	diam: 32.5 mm	wt: 20.5 g					
4	M. AURELIUS, CAESAR		cat: A.Pius 446			Obv AVRELIVS CAE-SAR AVG	
	date: 148–49	mint: RM –	denom: DEN		wear: W/W	PII F	
	diam: 18.0 mm	wt: 1.8 g				Rev TR POT III COS II Providentia	
5	VICTORINUS		cat: 61, E743			Obv [IMPC VICTORINVS	
	date: 268–70	mint: --	denom: ANT		wear: SW/SW	PFAVG]	
	diam: 19.0 mm	wt: 1.0 g				Rev [PROVIDENTIA AVG]	
6	VICTORINUS/TETRICUS I		cat: as Tet. 100, E775			Obv –	
	date: 268–73	mint: --	denom: ANT		wear: C/C	Rev [PAX AVG]	
	diam: 19.0 mm	wt: 0.8 g					
7	VICTORINUS/TETRICUS I		cat: as Tet. 100, E775			Obv –	
	date: 268–73	mint: --	denom: ANT		wear: C/C	Rev –	
	diam: 19.0 mm	wt: 1.4 g					
8	“VICTORINUS/TETRICUS I”		cat: c.as –			Obv]V..XO... (sic)	
	date: 273+	mint: --	denom: ANT		wear: SW/SW	Rev –	
	diam: 16.0 mm	wt: 1.2 g					
9	“TETRICUS I”		cat: c.as 100, E775			Obv [..TETR]IC[VS..] AVG	
	date: 273+	mint: --	denom: ANT		wear: SW/SW	Rev ?[PAX AVG]	
	diam: 17.0 mm	wt: 1.0 g					
10	“TETRICUS II”		cat: c.as 270, E791			Obv [...TETRIC]VS III (sic)	
	date: 273+	mint: --	denom: ANT		wear: SW/SW	Rev [SPES...]	
	diam: 16.0 mm	wt: 0.9 g					
No.	SF No.	Context	Grid Ref.				
1	14	112/113		–			
2	100	248		–			
3	7	022		–			
4	12	041		107.57/99.70			
5	19	223		–			
6	48	190		–			
7	42	325		119.33/100.63			
8	56	352/349		–			
9	38	085		118.75/101.10			
10	5	022		–			

No. Ruler

11	'TETRICUS II'	cat: c.as – date: 273+ mint: -- diam: 16·0 mm wt: 1·9 g	denom: ANT	wear: SW/SW	Obv [...TETRI]CVS ACVS (sic) Rev –
12	RADIATE COPY	cat: c.as Tet.121, E772 date: 273+ mint: -- diam: 15·0 mm wt: 0·9 g	denom: ANT	wear: SW/SW	Obv – Rev ?[SALVS...]
13	RADIATE COPY	cat: c.as – date: 273+ mint: -- diam: 10·0 mm wt: 0·3 g	denom: ANT	wear: SW/C	Obv – Rev ?[SALVS...]
14	CARAUSIUS	cat: as 880 date: 287–93 mint: -- diam: 19·0 mm wt: 1·3 g	denom: AUREL	wear: SW/SW	Obv [IMP..CAR]AV[SIVS PFAVG] Rev [PAX AV]G
15	CONSTANTINE II, CAESAR	cat: 7TR505 date: 327–28 mint: TR S diam: 19·0 mm wt: 1·5 g	denom: –	wear: UW/UW	Obv CONSTANTINVS IVN NOBC Rev PROVIDEN-TIAE CAESS
16	CONSTANTINE I	cat: 7TR522 date: 330–31 mint: TR P diam: 16·0 mm wt: 1·0 g	denom: –	wear: UW/UW	Obv [VRBS RO]MA Rev Wolf and Twins
17	ILLEGIBLE C3RD/4TH	cat: – date: C3/4th mint: -- diam: 17·0 mm wt: 1·5 g	denom: –	wear: C/C	Obv – Rev –
18	EDWARD III	cat: North – date: 1327–77 mint: -- diam: 14·0 mm wt: 0·2 g	denom: ½d	wear: C/C	Obv – Rev –
19	CHARLES I	cat: Stewart 239 date: 1642–50 mint: -- diam: 19·0 mm wt: 2·0 g	denom: 2d	wear: W/W	Obv CAR. D. G. SCOT. ANG. FRA. ET. HIB. R Rev NEMO ME IMPUNE LACESSIT
20	NOT A COIN (BUTTON)	cat: – date: – mint: -- diam: 19·0 mm wt: 2·1 g	denom: –	wear: C/C	Obv .H.J.E.Ltd. Made in England Rev –
No.	SF No.	Context	Grid Ref.		
12	1	041	–		
13	53	344	119·70/99·68		
14	8	038	–		
15	10	041	105·10/92·50		
16	6	041	104·85/92·85		
17	15	041	105·10/92·80		
18	2	025	–		
19	30	096	112·50/114·50		
20	4	022			

Denominations.

ANT Antoninianus; DP Dupondius; AS As;
AUREL Aurelian; DEN Denarius; SEST
Sestertius

Catalogue. [cat:] [Numbers refer to RIC unless otherwise stated.]

RIC	<i>The Roman Imperial Coinage</i> , volumes 1–9, ed. H. Mattingly, E. A. Sydenham, C. H. V. Sutherland, R. A. G. Carson (1926–1981).
E	<i>Die Münzprägung der Gallischen Kaiser in Köln, Trier und Mailand</i> , by G. Elmer, 1941.
HUNT	<i>Roman Imperial Coins in the Hunter Coin Cabinet, Vol. II, Trajan to Commodus</i> , by A. S. Robertson, OUP, 1971.
North	<i>English Hammered Coinage</i> , by J. J. North, Spinks, London, 1960.
Stewart	<i>The Scottish Coinage</i> , by I. H. Stewart, Spinks, London, 1955.

A copy or counterfeit of a particular ruler/issuer is denoted by single quotation marks, e.g. "TETRICUS II", and by the use of a lower case "c" in the catalogue reference, e.g. c.of 270 = a copy of RIC 270. The use of the word "of" indicates that a precise catalogue reference has been obtained; "as" is used, for both official issues and copies, to denote an incompletely catalogued coin.

The *condition* (wear:) of both the obverse and reverse is denoted by the following abbreviations:

UW Unworn; SW Slightly worn; W Worn; VW Very worn; EW Extremely worn; C Corroded; NSU Not struck up.

The flan diameter (diam:) is given in millimetres (mm) and the weight (wt:) in grams (g).

SMALL FINDS REPORT

M. C. Bishop

Copper Alloy

1. Disc-headed stud with circular-sectioned shank. The shank, which seems to have had its end cut off, has been bent at an angle to the head and curves over until it is nearly parallel with it. Cf. South Shields (Allason-Jones and Miket 1984, 3.977).

Head D: 20 mm; Head Th: 1 mm; Shank D: 2 mm; Shank L: 24 mm. *Context 88 SF 37 (Phase 3)*.

2. Ring with a semi-elliptical section and a flat back which shows possible signs of wear around one side.

D: 45 mm; Int D: 33 mm; Th: 3.5 mm. *Context 149 SF 25. Grid ref. 109.98/109.52*.

3. Strap-mounted terret or rein-guide from cart harness. This consists of a large, oval upper loop of near-circular section, with a dependent, sub-rectangular-sectioned rectangular loop. The object would have been secured to the harness by means of the smaller loop, the rein passing freely through the larger. Cf. a crude example from Colchester (Crummy 1983, No. 2543).

W: 43 mm; H: 47 mm; Int W: 30 mm; Int H: 24.5 mm; Th: 7 mm; Dduced strap W: 18 mm; Dduced strap Th: 5 mm. *Context 143 SF 32. Grid ref. 104.40/104.42*.

4. Oval-sectioned loop with butt-jointed ends, slightly oval in appearance. Cf. Colchester (Crummy 1983, No. 4443).

D: 12 × 10 mm; Int D: 7 × 6 mm; Th: 3.5 mm. *Context 155 SF 50 (Phase 2)*.

5. Colander handle with a central swelling and a flared end. It has evidently broken off near the bowl of the vessel, for the beginning of the swelling to form the rim is detectable. Cf. South Shields (Allason-Jones and Miket 1984, 3.373 with further refs.).

L: 138 mm; Max W: 49 mm; Th: 3 mm. *Context 235 SF 21 (Phase 4)*. Grid ref. 104.90/95.05.

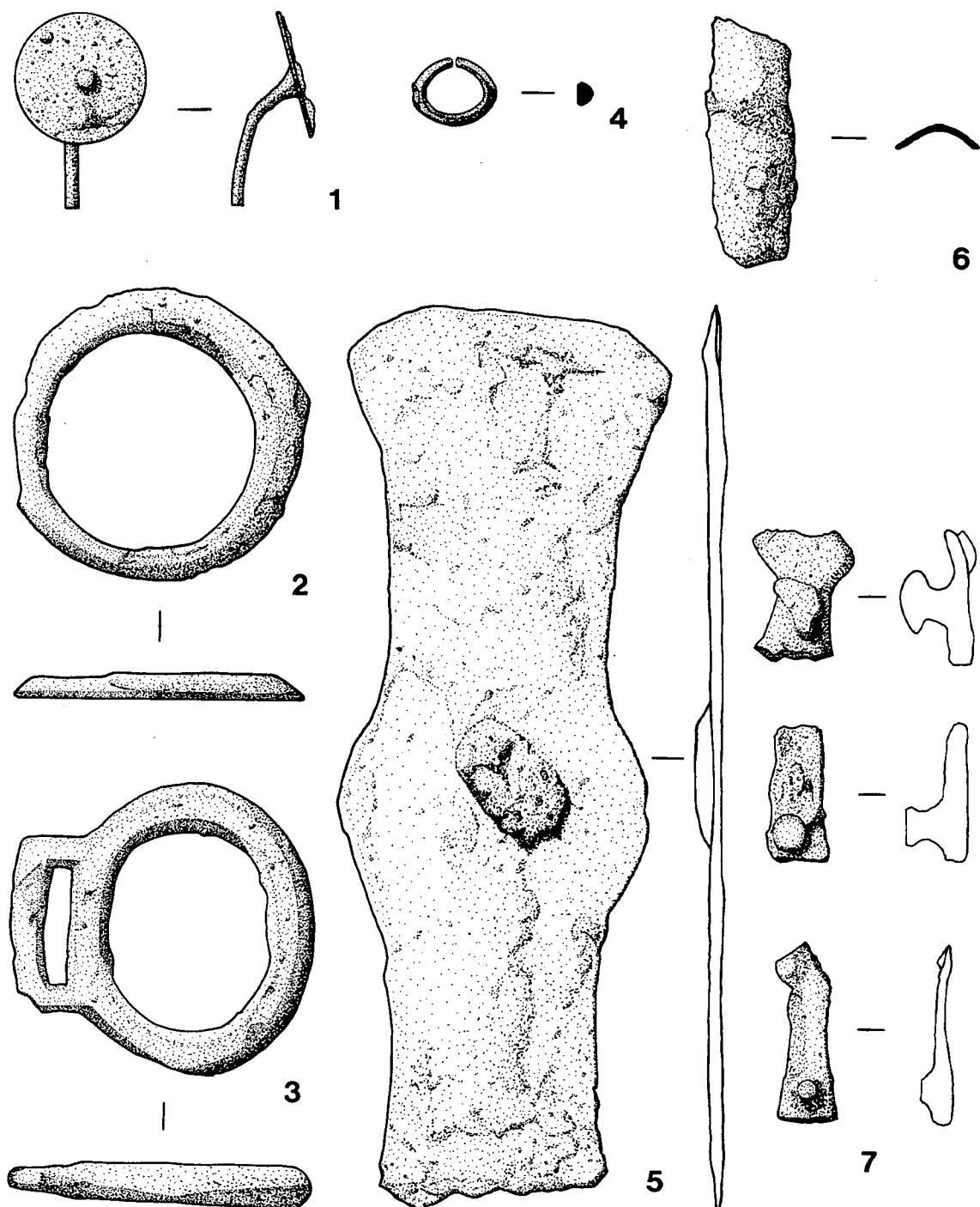


Fig. 13 Chester-le-Street: small finds. Scale 1:1.

6. Fragment of U-sectioned binding, possibly a piece of shield-edging. Cf. Colchester (Crummy 1983, No. 4191).

L: 37 mm; W: 12 mm. *Context 352 SF 55. Grid ref. 118-12/101-18.*

7. Cruciform mount with disc-headed shanks for securing it (presumably) to leather. Two arms have evidently been removed prior to deposition. Rather unusually, the object appears to have had shanks on both faces, those on the ends of the surviving arms on the opposite face to the larger, central shank.

Max L: c. 60 mm; Max W: 33 mm; Th: 3 mm; Dduced strap Th (large shank): 5 mm. *Context 11 SF 9 (Phase 6).*

Iron

All iron objects were X-rayed by the Conservation Laboratory at the Department of Archaeology, University of Durham. Those which were obviously not nails were selected for further examination and conserved accordingly. Thanks are due to Jennifer Jones for this conservation work.

8. Rectangular-sectioned bar with circular expansion at one end through which a flat-headed, square-sectioned nail or rivet has been passed. In dimensions and form the object bears a close resemblance to an iron reinforcing bar from a shield, although such objects are usually, but not exclusively, semi-circular in section. Cf. Newstead (Buckland 1978, fig. 8); Rheingönheim (Ulbert 1969, Taf.47, 1) for rectangular-sectioned parallels.

L: 125 mm; W: 13 mm; Th: 5 mm; W of expansion: 18 mm; W of nail head: 14 mm; Max L of nail: 15 mm; L of nail between head and bar: 7 mm. *Context 228 (Phase 3). XR2541.*

9. Curved tapering, rectangular-sectioned rod. Both ends appear to be broken.

L: 74 mm; MW: 6 mm; MTh: 4 mm. *Context 41. XR2541.*

10. Round-sectioned rod with traces of tinning on its surface. Both ends are broken. Part

of a ring or piece of wire is still adhering to the surface near one end.

L: 87.5 mm; D: 3 mm; Th of ring: 1.5 mm. *Context 41. XR2541.*

11. Circular-sectioned rod which is turned abruptly through 90° and flattened at one end with a lozenge-shaped expansion to which is similarly-shaped plate has been riveted, possibly hinged. Fragment of pincers? Cf. Manning 1985, Pls. 2-4, A9-16.

L: 94 mm; D of rod: 8.5 mm; H of expansion: 39 mm; W of expansion: 11.5 mm; Th of expansion: 3 mm; L of rivet: 12 mm; L of plate: 25 mm; W of plate: 12.5 mm; Th of plate: 4 mm. *Context 41. XR2538.*

12. Socketed object with rectangular (near-square) sectioned end (now broken). Possibly a catapult bolt lacking most of its head? Cf. Manning 1985, V141-250.

L: 65 mm; W of head: 12 mm; Th of head: 9 mm; surviving L of head: 11 mm; Socket D: 12.5 mm. *Unstratified. XR2531.*

13. Circular-sectioned rod with rectangular-sectioned expansion at one end which leads to a rectangular-sectioned hook. Part of a lift-key? Cf. Borough Hill (Manning 1985, Pl. 39, 014-16).

L: 91 mm; D of rod: 7 mm; W of expansion: 15 mm; Th of expansion: 5 mm; L of expansion: 37 mm; W of hook: 6 mm; Th of hook: 3 mm; W of opening: 11 mm. *Context 41. XR2538.*

14. Two entwined loops, one slightly larger than the other. The smaller is rectangular-sectioned, whilst the larger is near-square in section and appears to have been spirally twisted.

Overall L: 46.5 mm; *Larger loop* L: 41.5 mm; Th of rod: 8 mm; D of loop: 21.5 mm; *Smaller* L: 32 mm; W of rod: 4.5 mm; D of loop: 18 mm. *Context 41. XR2539.*

15. Tapering, cruciform-sectioned conical object with a circular socket at its broader end. The remains of a tubular object, into which it

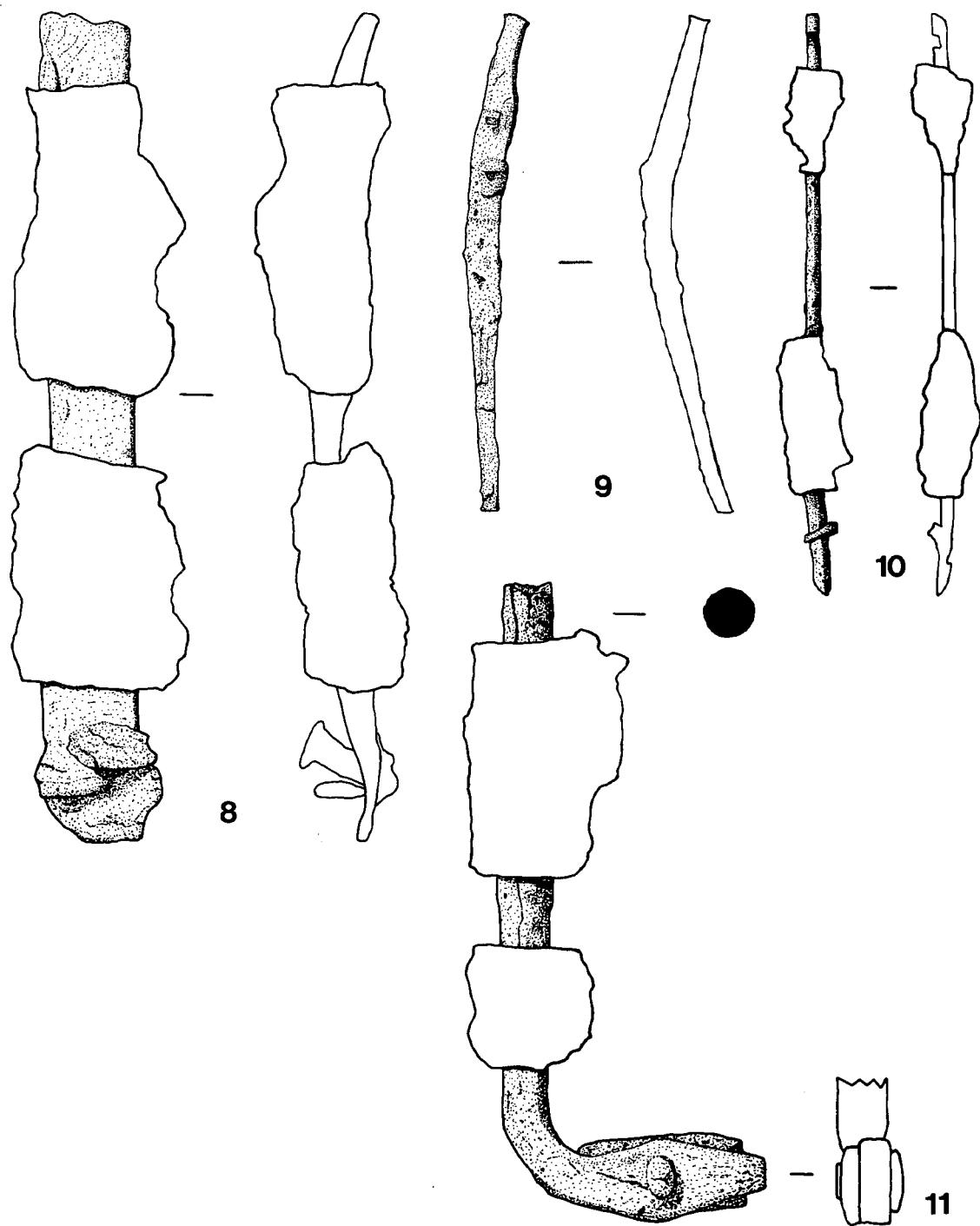


Fig. 14 *Chester-le-Street: small finds. Scale 1:1.*

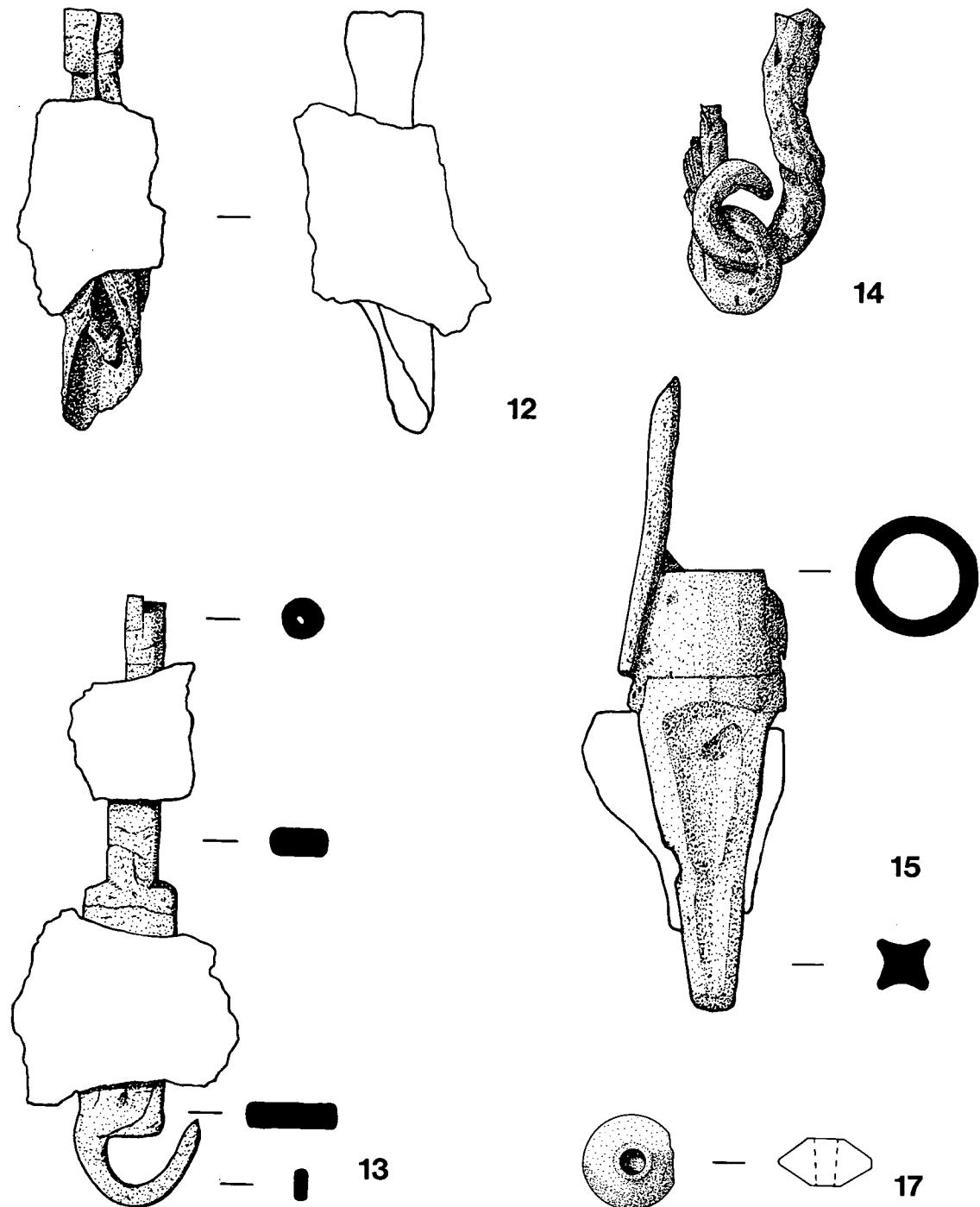


Fig. 15 *Chester-le-Street: small finds. Scale 1:1 except No. 17, 2:1.*

evidently fitted, still adhere to the socket.
Modern gas or water pipe fitting?

L: 98 mm; Max D: 23.5 mm; D of socket: 20 mm; D of pipe: 25 mm. *Context 11 (Phase 6). XR2532.*

16. (Not illustrated) Irregularly-shaped, but roughly circular sheet, thicker in the centre than at the edges. A small fragment of copper alloy either adheres or is attached near one edge. Possibly part of the blade of an implement?

L: 138 mm; W: 135 mm; Th at centre: 6 mm; Th at edge: 2 mm. *Context 224. XR2537.*

Iron objects (almost exclusively nails) were also recovered from contexts: 10, 38, 41, 46, 64, 70, 73, 76, 101, 112, 115, 133, 136, 143, 168, 201, 202, 220, 224, 229, 231, 235, 246, 246/7, 253, 265, 266, 325.

Glass

17. Biconical bead of translucent dark blue glass. Cf. Colchester (Crummy 1983, Nos. 656 and 666).

D: 7 mm; L: 4 mm. *Context 222 SF 13. Grid ref. 107.17/95.78.*

Ceramic

18. (Not illustrated) Circular disc of samian centrally perforated. Perhaps a spindle whorl or gaming counter.

D: 38 mm; Wt: 14 g. *Context 226 SF20. Grid ref. 106.40/98.68.*

19. (Not illustrated) Circular disc, centrally perforated, cut from samian vessel.

D: 35 mm; Wt: 8 g. *Context 234 (42) SF34. Grid ref. 109.81/102.73.*

Building Materials

20. (Not illustrated) Fragment of *opus signum* flooring with the upper and lower surface apparently preserved.

L: 210 mm; W: 98 mm; Th: 40 mm. *Context 246.*

21. A fragment of the tile (fig. 16) which bears an impressed inscription, apparently applied with a die. Two letters are visible before the break and these can be interpreted as NV[. Although Tomlin (1991, 302, n. 48) suggested that this might be a reference to a presumed *numerus Vinoviensium*, by analogy with the NCON stamps from Binchester, supposed to refer to a hypothetical *numerus Concangiensium* (for which now see Bowman 1991, where distinct differences are noted between the fabrics of tiles from Binchester and Chester-le-Street, making discrete production likely), a similar explanation is supplied by identifying the unit responsible with the *numerus vigilum* attested for Concangis in the *Notitia Dignitatum* (Occ.XL,24). If this identification is correct, then it supplies the first stratified epigraphic attestation of any of the *numeri* listed for Britain in the *Notitia*.

Nothing is known of this unit beyond its name. The *Notitia* (Oc.XXXIII,48) records an *auxilia vigilum* at Contra Aquincum in the province of Valeria and Hoffmann (1970, 154, n. 358) speculates that units such as these, with functional titles, may have their origins in units of the mobile army that performed the duties named. Indeed, the task of guarding the bridgehead at Aquincum would seem to accord quite well with such a notion. However, it is always possible (although not very likely) that our *numerus vigilum* was formed from a draft from the *vigiles* of the city of Rome, or even members of similar organizations of watchmen/firemen from provincial (perhaps British) towns.

Max W: 90 mm; Max H: 56 mm; Th: 27 mm. *Context 338B.*

22. (Not illustrated) Fragment from the face of a box-tile, with the surface scored for plastering (of which there is no trace) by means of a four-toothed comb with slightly rounded ends to the teeth. One edge of the tile survives with the stump of a side wall. The combing consists of two vertical strokes and two diagonal, crossing.

Max W: 140 mm; Max H: 90 mm; Th: 20 mm;



Fig. 16 Chester-le-Street: tile stamp (photo: M. C. Bishop).

Th of side wall: 20 mm; W of comb: 26 mm.
Context 41.

23. (Not illustrated) Fragment of roofing tile (*tegula*) with slight dog's paw print (possibly impressed when tile was nearly dry?). On the reverse surface, a pronounced furrowing of the surface may have been formed by being allowed to dry on a bed of rushes or twigs, or more likely by crude finishing using the fingers. One original (unflanged) edge appears to survive.

L: 125 mm; W: 99 mm; Th: 20 mm. *Unstratified.*

WORKED STONE REPORT

J. C. N. Coulston

Quernstones

1. Upper stone. Mayen Lava. Broken on all

edges except the outer side, with the loss of the central eye. Otherwise in fair condition.

The top face has a raised skirt with two alignments of diagonal striae. The breast has one alignment, and the side has shallow vertical chiselling. A 30 mm diameter perforation, perhaps for a handle, was cut through the skirt near the side edge. The bottom surface is ground smooth and has some pocking.

Thickness 55 mm. Original diameter c. 350 mm. Approximately 12% surviving.
Context 224, ST No. 24.

2. Upper Stone. Millstone Grit. Broken on two edges and there is chipping on the lower edge of the side. The stone itself is in good condition and not very friable.

The top surface is roughly dressed with a prominent collar. The bottom face is ground smooth. A central, truncated double-conical eye had a maximum diameter of 100 mm, and a minimum of 40 mm.

Thickness 70 mm. Original diameter c. 450 mm. Approximately 23% surviving. Context 338B, SF No. 57.

3. Gutter Block. Local buff sandstone. The stone is worn overall. The lips of the channel are chipped away at opposite ends with the loss of c. 50% of one lip and c. 40% of the other. The remaining top lip surfaces are worn smooth. Otherwise the stone is complete.

A channel with maximum depth of 95 mm, and 100–130 mm wide, has been cut into the top surface leaving two upstanding lips. The channel has concave sides.

The sides and bottom of the stone are undressed. Both ends have diagonal tooling, whilst one also exhibits medial vertical strokes, perhaps executed with a narrow-bladed chisel. The channel sides have diagonal strokes, in one alignment on one side, and in two on the other. The bed of the channel is unevenly

dressed and has axially aligned strokes, with diagonal tooling along the margins. Execution with a coarse point is clearly indicated by numerous vertical impact craters and by slightly angled blows with tails.

The block is largely in its quarry-state. A few diagonal blows flaking away stone from the outer edge of one lip, and vertical strokes on one side may be associated with roughing out of the block before transport from source. The concavity of the channel sides indicates work carried out on the individual stone before positioning, not on a line of blocks *in situ* with a channel joined up uniformly. Whilst the progression of blows in the channel is clear, it is difficult to determine whether the sculptor was left or right-handed because he could have moved around to work from different directions.

Most of the carving was done with a point, without further, progressive stages of smooth-

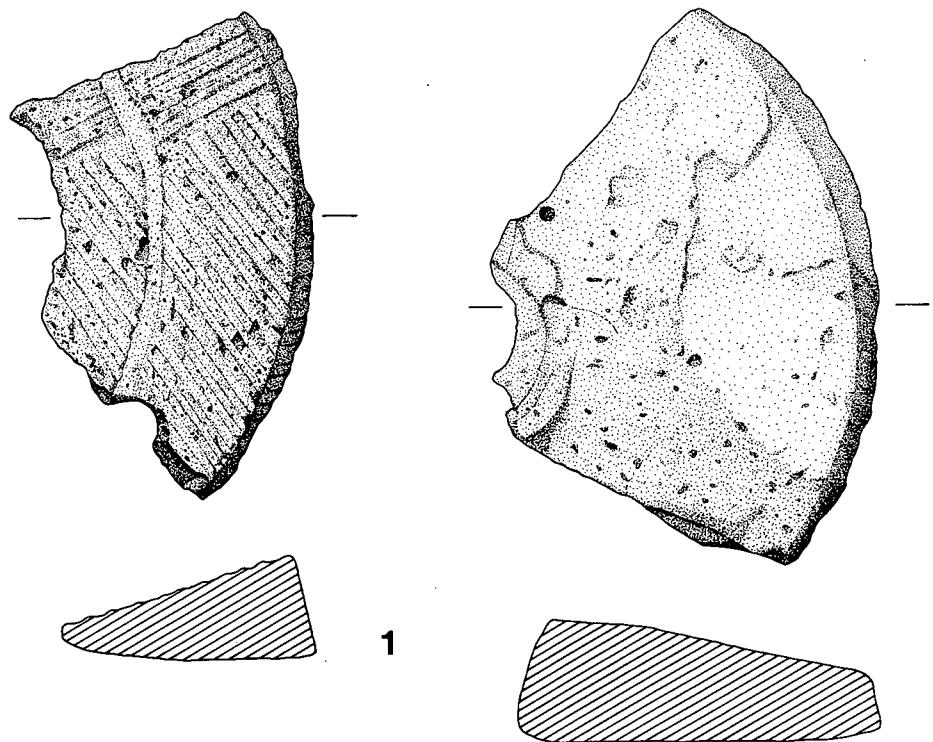


Fig. 17 Chester-le-Street: stone objects. Scale 1:4.

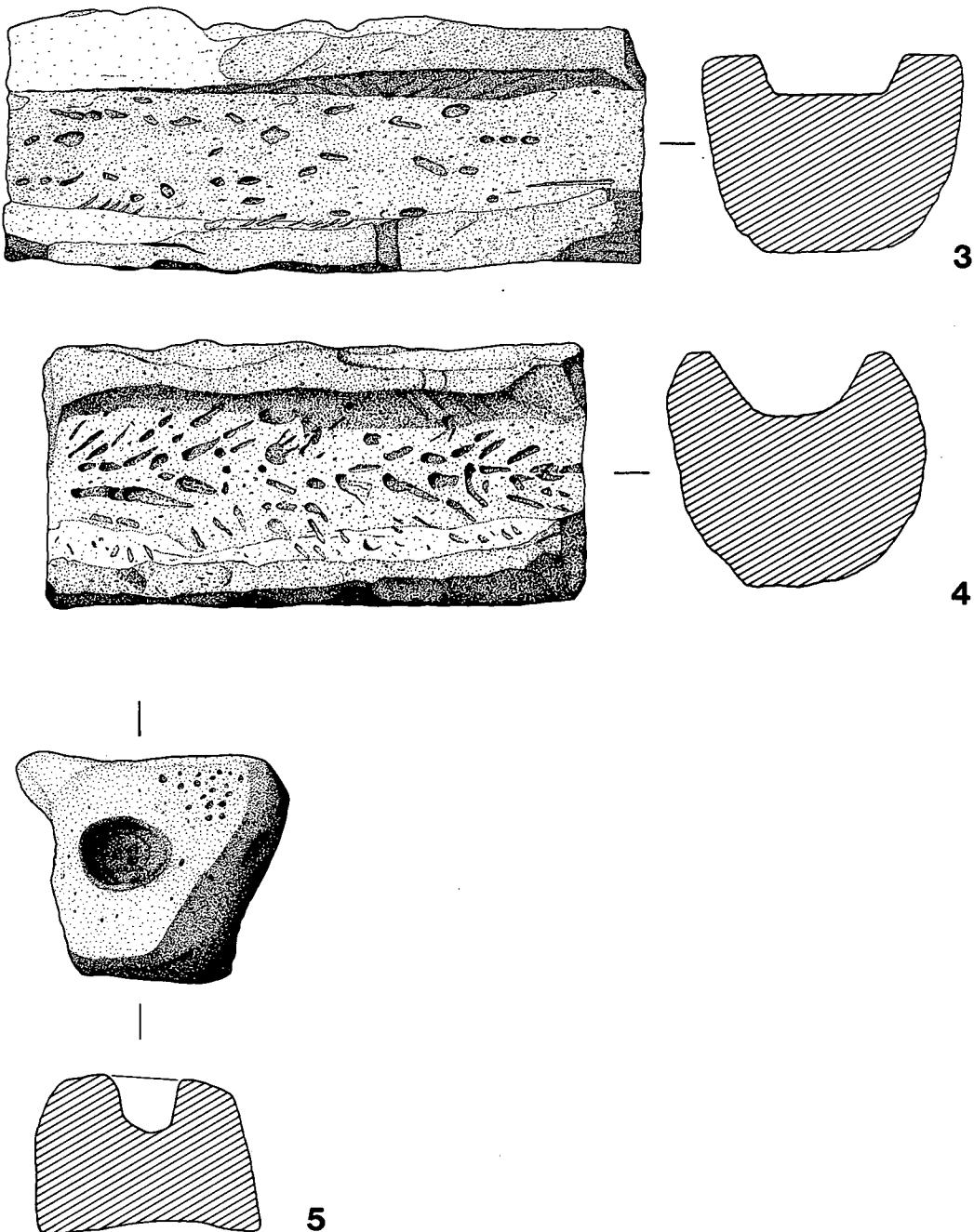


Fig. 18 *Chester-le-Street: stone objects. Scale 1:4.*

ing or uniform finishing with bladed chisels. The sides appear to be an exception in that more attention was paid to their completion. This is unsurprising on a block which was presumably designed to join up with others to form a gutter. The tops of the lips were presumably worn smooth by pedestrian activity.

H: 240 mm; L: 730 mm; W: 290 mm. *Context 020.*

4. Gutter Block. Local buff sandstone. The ends of the block are complete. The ends of the lips are chipped and a 160 mm long section of lip top surface is broken away. The block is worn overall, with the smoothest wear on the surviving lip top surfaces.

A channel with a maximum width of 185 mm has been cut in the top of the stone, leaving two 30–45 mm wide upstanding lips. One side of the channel is straight, the other is concave.

The sides and bottom of the block are irregular and undressed, with some flaking on the upper edges of the sides. The ends are roughly shaped, one is coarsely finished without exhibiting tool-marks, whilst the other has fine diagonal chiselling. The channel was shaped using a coarse point and diagonal tooling appears on its sides. Its bed has diagonal marginal chiselling, and axially aligned medial point impact-marks with 8 mm craters and c. 30 mm long tails.

The block is largely in its quarry-state. Work was carried out almost entirely with the use of a point. The sculptor worked the trough down from end to end, most probably standing astride the block as he did so. Further stages of chiselling were not attempted, perhaps with the exception of one end. The final product is coarsely executed without more than general dimensional regularity. The tops of the lips were presumably worn smooth by pedestrian activity.

H: 280 mm; L: 620 mm; W: 300 mm. *Context 020.*

5. Socket Stone. Local buff sandstone. The stone is broken across the bottom and down two opposing sides.

A cylindrical socket has been cut in the top

surface (Dia. 85 mm; D. 87 mm), and there is some chisel-pecking on the stone around it. Apart from these features and the breaks, the stone appears to be unshaped.

H: 180 mm; L: 310 mm; W: 280 mm. *Context 203.*

6. Socket Stone. Local buff sandstone. The sides are shaped by irregular breaks, except for one straight surface. The top is flat and the bottom is irregularly broken. A biconical perforation has been cut through from top to bottom with a maximum diameter of 80 mm, and a minimum of 45 mm.

H: 140 mm; L: 420 mm; W: 365 mm. *Context 128.*

ENVIRONMENTAL REPORT

Palaeobotanical Evidence

J. P. Huntley

Following the recommendations put forward prior to excavation (Huntley, June 1990) bulk samples were taken from occupation layers, pit and drain fills, and processed on-site. Fifteen 60-litre samples were processed with a further two from a drain fill left "whole" for parasite and insect work (these were sent to the Environmental Archaeology Unit at York for analysis). In addition further material was taken and kept "whole" from the bulk sampled contexts. As requested, the flots were processed to 500 µ and the residues to 1 mm. Together with two whole samples these were sent to the Durham Bio. Lab. for analysis. They were from well stratified contexts and can be dated to the late-3rd–early-4th centuries.

The flots were generally small, less than 100 ml, and still extremely dirty. They were consequently thoroughly rinsed over 500 µ, which often reduced their bulk by nearly a half, and dried. The residues were likewise extremely dirty due to the appalling weather conditions on-site and had to be further washed and dried before sorting. This had the lead-on question

as to float "quality"—what still remained in the residues but should have floated and more importantly, what had washed through the residue mesh and been lost?

The flots were sorted under a stereoscopic microscope at magnifications of up to 40X; seeds were identified by comparison with modern reference material held in the Durham Bio. Lab.; nomenclature follows Clapham, Tutin and Moore (1987).

The original evaluation for the site asked a wide variety of questions. Following excavation it became apparent that some of these were no longer valid and, given the processing problems and quality of material, the very basic questions of "What cereals were present"? and "What evidence is there for local vegetation"? are about all that should be asked.

Table 4 presents the botanical data with the samples arranged in phase order and the taxa within broad ecological category. So few remains were present that it is not possible to offer interpretations of any specific feature. The carbonized material was generally not well preserved which was particularly disappointing given the lack of intrusive material for the site as a whole. Other than pit 252 all of the samples contained only carbonized plant remains. These were mainly from cereal grains although many could not be identified. Of those that could, wheat (*Triticum* sp.) was most common with small amounts each of barley (*Hordeum* sp.) and oats (*Avena* sp.). Some of the wheat had the characteristic shape of the hexaploids and one was clearly from bread wheat. The barley grains were hulled and both twisted and straight embryos occurred thus indicating that at least some of the barley was 6-rowed *Hordeum vulgare*. One grain of rye (*Secale cereale*) was recovered. No chaff from any of the cereals was found.

Few other seeds were recovered. Those that were indicated ruderal communities and some grassland, with species such as ribwort plantain (*Plantago lanceolata*), docks (*Rumex obtusifolius*-type) and small vetches present. Burnt fragments of hazelnut shells (*Corylus avellana*) probably represent food and a few burnt sedge

(*Carex* sp. and *Eleocharis* sp.) nutlets suggest wet ground communities also in the area. The heather (*Calluna vulgaris*) flowers probably are remnants of bedding or roofing material.

The fill of pit 252 contained waterlogged material as well as the one carbonized rye grain found. Its assemblage was dominated by seeds of orache/goosefoot species (Chenopodiaceae undiff.) with considerable numbers of blackberry pips (*Rubus fruticosus*) too. Bran fragments were present and one fig pip (*Ficus carica*) was noted. Nettle (*Urtica dioica*) seeds were common. The indications are that some of this material was probably faecal in origin; the blackberries, fig and bran almost certainly have been eaten. The nettles indicate high levels of nutrient close by. Whether the vast numbers of Chenopodiaceae seeds represent food, since they do contain large amounts of starch, or a few plants growing opportunistically in an alleyway for example, is more difficult to determine. If they had been part of the diet they may be expected to have been broken or at least partially fragmented. They are, therefore, probably representative of the local vegetation. This would be in accord with the henbane (*Conium maculatum*) which, although a drug plant, also grows as a ruderal in "waste" ground. It is therefore suggested that this pit was probably a latrine although it also seems to have been in receipt of rubbish or it may have been in the open thus allowing seeds from adjacent plants to fall in.

Although some seeds were almost certainly lost through poor flotation due to the bad weather conditions on-site they are not considered likely to have made interpretation any clearer, particularly since so few seeds overall were recovered. There was only the occasional cereal grain in the re-washed residues.

Given such few remains in total little may be said of the differences between phases of activity with any certainty. However, there are no seeds from the early timber fort phase. This may reflect short-term use of such a fort with little burnt material ever being produced. Only two unidentifiable cereal grains were recovered from phase 2, the preliminary period of construction of the second fort. The majority of

Table 4: Botanical Data

Context number	359	362	357	110	110	189	188	64	62	63	76	129	207	142	253
sample number	31	35	32	34	3	36	37	2	4	5	12	22	13	24	26
Phase	1	1	1	2	2	2	3	4	4	4	4	4	4	6	6
ccAvena grain								1			4	1	2		
ccCerealia undiff.				1	1			1		3	3	4	6	1	1
ccHordeum hulled										3		1			1
ccHordeum indet.												2	1		
ccHordeum straight hulled									1						
ccHordeum twisted hulled										1					
ccSecale cereale grain															1
ccTriticum (hexaploid)								1			1		6		
ccTriticum aestivum grain															1
ccTriticum sp(p). grain								5	1	1	4	6	1	2	
cgPlantago lanceolata										3					
chCalluna vulgaris flowers									1	1					
chSieblingia decumbens												1			
crGalium aparine										1					
crRumex obtusifolius-type											1				
csCulm nodes											1				
ctCorylus avellana nut frag.								1	2		1	4	1		
cwCarex (trigonous)										2		1			
cwEleocharis sp(p).										1					
cxGramineae <2 mm								2			1				
cxLegume <4 mm											1				
cxLegume >4 mm										1		1			
wcbran fragments														*	
weFicus carica														1	
wgRumex acetosa														2	
wrConium maculatum														*	
wrUrtica dioica														*	
wtRubus fruticosus														**	
wtSambucus nigra														1	
wtStachys sylvatica														1	
wwCarex (trigonous)														2	
wxChenopodiaceae undiff.														***	

c/w carbonized/waterlogged: c—cereal, g—grassland, h—heathland, r—ruderal, t—wood/scrub, s—cereal chaff/straw, w—wet ground, x—unclassified, e—exotic

waterlogged taxa were scored on an abundance scale from * = occasional to *** = abundant.

seeds were from phase 4 samples and from pit fills. This was a period during which the officers' quarters were initially still occupied but with evidence for demolition towards the end of the phase. The waterlogged seeds came from the ?17th century pit which, although containing 16th and 17th century pottery close to its base also contained some Roman mate-

rial. The pit was clearly in receipt of faecal material.

In summary, this extremely small assemblage of plants shows that wheat and barley were being used by the Romans at Concangis with, perhaps, oats although they may have been weeds alone. There is no evidence for cereal chaff. The locally occurring vegetation seems

to have been a mix of ruderals and grassland with little wet ground. This is similar to the results of Donaldson (1979) whose data came from the inner fort ditch excavated at Middle Chare although she recorded large numbers of seeds from a variety of aquatic plants. These, she concluded, were extremely locally growing, probably within the ditch itself. It seems highly likely that the Church Chare material also represents very local vegetation—perhaps with weeds growing in less used areas behind buildings etc. The early modern pit was probably used in part as a cess pit although other rubbish was apparently deposited within it or it was in the open.

Acknowledgements

I would like to thank Mike Bishop, the site director, for the samples taken under such adverse weather conditions, and for promptly providing phasing, site matrix and structural report. I am also grateful to Shaun Doran, the laboratory technician, for wading through wet and muddy heaps of gravel and converting them into clean residues which he then sorted.

ANIMAL BONE EVIDENCE

S. Stallibrass

The material

A. The hand-recovered animal bones

Preservation

Most of the animal bones recovered by hand are in a poor state of preservation. Many of them have suffered breakage during excavation, due mainly to their brittle texture and to

the problems of excavating material from wet clayey deposits during cold weather.

Occasionally, the bones are in a very poor condition, where the surface has been totally eroded away and much of the bone structure is infilled with mineral deposits.

On many sites, the ratio of loose teeth to total numbers of fragments recovered indicates the degree of loss due to poor preservation (since the more mineralized teeth tend to preserve better than the more organic bone). However, it is noticeable that some of the loose teeth from Chester-le-Street are in a worse condition than the bones from the same contexts. In these instances, the laminae of the teeth are being pushed apart by minerals, often at the junction of the enamel and dentine layers. This leads to cracking and exfoliation, and many of the teeth have broken up into pieces that are difficult to recover and identify. In this collection, therefore, it is possible that loose teeth are, themselves, under-represented.

Table 5 summarizes the numbers of fragments, weights of bones and loose teeth by Phase.

Table 6 lists the material by context, and also names the identified species.

For the Roman levels (Phase 1, 4 and ?Phase 4), the preservation of the bones tends to be uniformly poor within each context. Only one ?medieval context produced animal bones (?Phase 5: context 88) totalling five whole or partial cattle teeth. For the more recent levels (Phase 6) the preservation varies considerably. Some of the contexts have material that is uniformly buff coloured, slightly brittle but otherwise robust (e.g.: context 37, which con-

Table 5: Quantities of Hand-Recovered Bones

Phase	Weight (in gm)	No. of Frags.	Loose teeth	% Loose teeth
1 (Primary fort)	348	5	0	0·0
4 (Late Roman)	4924	193	7	3·6
4? (Late Roman)	153	5	0	0·0
5? (Medieval)	56	5	5	100·0
6* (Post-medieval)	1311	57	12	21·1
6? (Post-medieval)	91	6	2	33·0

* does not include 223 bone and tooth fragments from a dog burial in Context 37.

Table 6: Distribution of Hand-Recovered Animal Bones by Context

Phase	Context	Weight in g.	No. of Frags.	Loose Teeth	Preservation	Species identified
1	248	348	5		poor, brittle	C
4	64(Y)	658	23		brittle	C,dog
4	76(Y)	893	23	(2)	poor, brittle	C
4	129(Y)	2360	97	(1)	poor, brittle	C,S/G,P,dog
4	136	72	2	(1)	brittle	C,S/G
4	325	218	11	(1)	poor, brittle	C,S/G
4	335	236	11	(2)	poor, brittle	C,S/G
4	344	127	5		very poor	C
4	345	218	10		poor, brittle	C,P
4	349	142	11		poor, brittle	C
4?	166	153	5		very poor	C
5?	88	56	5	(5)	teeth only	C
6	34/39	297	28	(3)	mixed, good	C,S/G,P,horse
6	3	748	8		good	C
6	37	193	225	n.a.*	good	dog, bird
6	41	73	19	(9)	very poor, calcined	
6?	10	77	5	(2)	very mixed	C,S/G,dog,horse
6?	67	14	1	0	poor, brittle	C
Totals		6883	494	(26)		

KEY

(Y) denotes a bulk sample taken from this context

n.a.* due to the presence of 223 bone and teeth fragments from one dog skeleton in this context, the loose teeth ratio is not comparable with those for the other contexts. Of the remaining 2 fragments, none are teeth.

Species Identified

C: cattle

S/G: sheep or goat

P: pig

tains a dog burial) whilst others contain mixtures that appear to include some residual Roman material (e.g.: context 34/39).

Material from the different phases

The bulk of the material derives from Roman levels, accounting for approximately 5 kg of the total of c. 7 kg bone weight.

No bones were recovered by hand from any contexts dating to Phase 2 or 3.

Material from the Primary fort (Phase 1)

Context 248 was a clay fill of the ditch (context 376) of the primary fort, and it produced five bone fragments including a substantial portion of a cattle skull with both horncores intact. The

size and morphology of the skull fragment is similar to that of the indigenous "Celtic short-horn" cattle that were ubiquitous throughout England during the Iron Age and which continued in use into the Roman period (Luff 1982; Thomas 1989). The measurements of the horncores are given in the archive report (Stalibrass 1991, Appendix 4). No other species was identified.

Material from later Roman levels (Phase 4)

The late Roman material is dominated by bones of cattle, with a few bones from sheep/goats, pigs and dogs. The material appears to be mainly the remains of food and/or butchery waste, with no indication of any craft working

activities. Some of the cattle, sheep/goat and pig bones bear butchery marks, but the eroded surfaces of many of the bones means that many more such marks may have been eradicated.

None of the dog bones show any signs of butchery or skinning.

The largest group of bones was recovered from context 129, the fill of a demolition pit (context 148), but this does not appear to differ from the material from the other contexts, either in preservation or element type.

The identified anatomical zones listed in Appendices 1, 2 and 3 show that cattle bones dominate the collection from Phase 4 deposits. The numbers of zones identified are: 39 Cattle, 3 sheep/goat, 2 Pig and 14 Dog.

All of the cattle epiphyses are fused and the few tooth rows present all have full adult dentition erupted and in wear. It is possible that the poor preservation conditions have led to the loss of less robust, juvenile bones and teeth, but the fact that occasional unfused bones of sheep/goat were recovered from the same contexts suggests that most, if not all, of the cattle represented had mature bones.

The archive report (Stallibrass 1991, Appendix 1) lists the anatomical zones that were recorded for the cattle bones. Most parts of the skeleton are represented, despite the small number of fragments.

The measurements for the cattle bones are presented in the archive report (Stallibrass 1991, Appendix 4). Generally, they are similar to those for cattle bones from successive Roman forts at Annetwell Street, Carlisle dating from c. A.D. 74–330 (Periods 3 and 5, c. A.D. 74–140: Stallibrass 1991; Period 9, c. A.D. 320–330: Stallibrass, unpublished data). These are, themselves, similar to those of the indigenous cattle of the preceding Iron Age: the so-called “Celtic shorthorns”. However, there is a slight difference between some of the element types i.e.: although the measurements for the four metatarsals from Chester-le-Street are very similar to the means for the Carlisle material, the measurements for the two Roman metacarpals from Chester-le-Street are all at the larger ends of the ranges of those for contemporaneous material from Carlisle. This

could simply reflect the extremely small sample size, but it might be significant, and indicate a difference in conformation of the cattle in the eastern and western sides of northern England. A third possibility is that the Chester-le-Street cattle happened to be entire males (since the sexual dimorphism between bulls and cows is more marked for the forequarters than for the hindquarters), but this is less likely to provide a full explanation, since a large hindlimb is also represented at Chester-le-Street by a large naviculocuboid. Unfortunately, none of the securely-dated Roman material from Chester-le-Street can be sexed. The larger measurements are towards or beyond the upper limits of the ranges given by Luff (1982) in her review of cattle bone measurements from several Romano-British or Roman sites in Britain.

O'Connor (1988) noted that people in Roman York used cattle that had two different types of horncores, one type having horncores almost twice the size of the others, which resemble those of the indigenous “Celtic shorthorns”. Although the collection from Concangis is small, both types of horncore are present. Whereas the horned cattle skull fragment from the Phase 1 ditch is similar to the “native” type of small cattle, there is a broken horncore from Phase 4 (context 129) which is considerably larger. Although it is broken, so that its original length cannot be estimated, its basal measurements are similar to the large type noted by O'Connor, fitting neatly into his group of ten large horncores in his Figure 11 (O'Connor 1988, 94). It seems possible, therefore, that cattle of two types are present in the Roman fort at Chester-le-Street: one similar to the indigenous “Celtic shorthorns” (represented by the metatarsal measurements from Phase 4, and by the skull fragment from Phase 1), and a larger type (represented by the metacarpal and naviculocuboid measurements and the large horncore, all from Phase 4). This aspect of the material is worth pursuing in future enquiries into the site of Concangis.

Sheep/goat bones are far fewer than those of cattle. None of the Roman sheep/goat bones could be identified to species, and none of the bones was complete enough for measurements

to be taken. No skull or horncore fragments were recovered, and so nothing can be said about the conformation, stature, sex or horn-structure of the sheep and/or goats represented at the site.

The archive report (Stallibrass 1991, Appendix 2) lists the anatomical zones identified for sheep/goat bones by context. It is noteworthy that at least one of the sheep/goat bones (a distal tibia) was unfused when the animal died (probably at less than 18–24 months of age: Silver 1969). Also, there is a mandible fragment with the first permanent molar (M1) only just coming into wear. Since the fourth deciduous premolar has fallen out of its socket since the animal's death, it is not possible to state whether the animal was a kid or a lamb, but it was probably only three or four months old when it died. This contrasts with the data described above for the cattle bones, all of which had fused epiphyses.

Pig bones were even more infrequent than those of sheep/goats in the Roman levels. The archive report (Stallibrass 1991, Appendix 2) lists the anatomical zones identified for pig bones. Only one bone could be measured: a scapula from context 129 with the proximal tuberosity fused: $LG = 31.9\text{ mm}$ and $SLC = 20.2\text{ mm}$ (measurements defined by von den Driesch 1976). Context 129 also produced a pig maxilla fragment that has the third permanent molar (M3) in the process of erupting, indicating that the animal was close to attaining dental maturity when it died. The sample is small and fragmentary, but there is no indication of any particularly large bones that might indicate the presence of wild pigs.

The only other mammal species represented in the Roman levels is dog. The bones appear to be the disturbed remains of buried individuals rather than food or butchery waste. The identified zones of dog bones from the site are listed in the archive report (Stallibrass 1991, Appendix 3). An adult innominate (pelvis) and a fragment of an ulna were found in context 129. Context 64 produced the remains of at least two individuals, both of them being very small. One of them was less than 8–9 months old when it died (the humerus is com-

pletely unfused) and had short bandy fore-limbs. It may have resembled a modern Jack Russell Terrier in size and shape. One pair plus another complete mandible were found in the same context. All three jaws have complete adult dentition with only light wear on the teeth. Silver (1969) gives the age by which all of the permanent teeth are fully erupted as 6–7 months. This might indicate that one of the individuals was between 6/7–8/9 months old when it died. The other individual represented by the mandibles was probably not much older, although the other long bones (radius, ulna and femur all have fused epiphyses, suggesting an age at death of over 12–18 months. All of the long bones, together with the metapodials and the atlas are small and gracile. It is difficult to tell whether two or three individuals are represented, but all (or both) of the animals were very small. One of the two ulnas may show a slight pathological alteration where the radius and ulna meet midshaft. The muscle attachment is particularly pronounced and the shaft of the ulna is slightly bent at this point. The bone does not appear to have been broken and it might be another indication of bandy forelimbs. Unfortunately, this ulna does not have its matching radius present for comparison. None of the dog bones are complete enough to measure.

Materials from Post-Roman levels (Phases 5, 6 and ?6)

Only five whole or fragmentary cattle teeth were recovered from the medieval levels (Phase 5).

Phase 6 contains a mixture of material, some of which appears to be residual ?Roman bones. In particular, context 3 (from a trial trench) appears to contain only material with "Roman-type" preservation, and the nature of the bones themselves fits in with the general pattern for the Roman levels i.e.: all of the bones are from cattle, and their sizes and the shapes of the horncores are all typical for Iron Age/Roman cattle in the north of England (see Stallibrass 1991, Appendix 4 for the measurements).

In contrast, most of the material from context 34/49 is buff coloured and relatively lightweight, although there are two sheep/goat humeri that may be residual. There is a wider range of species represented (including horse, which was not identified from any of the Roman contexts), and a greater proportion of pig and sheep/goat bones compared to those of cattle. A pig mandible has the permanent premolars P3 and P4, and the third molar (M3) all in their crypts or actually in the process of erupting, indicating an age at death close to dental maturity (currently c. 2–3 years; Silver, 1969). The distally fused radius could be identified specifically as sheep and is quite large ($Bd = 31.3$ mm). This is similar to modern "improved" hill sheep.

Horse is represented only by two loose teeth, one each from contexts 34/39 and 10.

Most of the bones recovered from Phase 6 derive from a dog burial found in the back garden of one of the recent cottages (in context 37). All of the bones are buff coloured and lightweight. Unfortunately, breakage during excavation has caused extensive damage, and none of the bones can be measured. The skull and scapulae are missing although a fragment of one maxilla and several loose maxillary teeth are present. Otherwise, most of the animal's body is present (see Stallibrass 1991, Appendix 3 for a list of identified zones). All of the permanent teeth have erupted, although they are not particularly worn. Some of the epiphyses are fused, others unfused. They are all consistent with an age at death of approximately one year (c. 12–13 months). Although the long bones are broken, and were not fully grown when the animal died, it is possible to state that it was slightly larger than the two (or more) individuals recovered from the Roman context 64.

The complete nature of this post-Medieval skeleton contrasts with the Roman dog remains. Although the dog bones themselves showed little damage in the Roman deposits, the fact that so few bones were recovered from any one individual suggests either that original burials had suffered considerable subsequent disturbance, or that dogs were not afforded

separate burial, but were simply discarded with other unwanted animal material.

The counts of identified anatomical zones given in Appendices 1, 2 and 3 show that the post-Medieval collection is dominated by the remains of this one dog skeleton. For the three major domesticates, the collection is extremely small. The rank order is the same as that in the Roman collection, but sheep/goat bones are relatively more common. The counts of identified zones are: 9 Cattle, 6 Sheep/goat, 1 Pig and 25 Dog.

The animal bones recovered from wet-sieving

Seventeen bulk samples each of 60 litres of soil were taken for flotation and wet sieving (see above for a report on the botanical remains). The flots were collected over 500 μ mesh and the residues over 1 mm. These were sorted for animal bones and the quantities are listed by context in Table 7. The bulk sample from context 253 (sample no. 26, Phase 6) did not produce any animal bones.

The total hand-recovered and wet-sieved collections are too small for quantifications of species ratios, although qualitative comments are made, below, when the sieved sample adds to or contrasts with the observations made on the hand-recovered collections.

In particular, it is notable that the quantities of material from Phases 1 and 2 are minuscule. No bones were recovered by hand, and only 42.3 grammes of bone were recovered from 420 litres of wet-sieved soil. Also, as expected (Payne 1975), bones from smaller species are better represented in the sieved collection than in the material recovered by hand in bad weather conditions.

Table 8 lists the identifications of bones from the bulk samples.

The burnt bone tends to consist of tiny fragments (c. 4–10 mm long) of calcined bone. The fragments appear to derive from sheep/goat-sized animals more commonly than from cattle-sized animals.

Context 129 produced mainly cattle or cattle-sized bones from the wet-sieved bulk sample (as in the hand-recovered collection), and

some of these bones bear tooth marks from canids, probably dogs (see Stallibrass 1986). In addition, there are a first and second phalange of a neonatal lamb or kid that articulate and which both appear to have passed through the gut of a carnivore, possibly a dog (see Payne and Munson 1985). It is interesting to speculate whether sheep/goats were being raised in the vicinity of the fort during the late Roman period (in which case, dogs may have been able to kill livestock, or to scavenge natural neonatal deaths), or whether dogs had access to butchery waste from suckling lamb/kid killed for human consumption within the fort.

Also dating to Phase 4, context 76 produced bones identified to sheep/goat and pig from the bulk samples, whereas only cattle bones were identified from the hand-recovered collection. With regard to the ageing of the species in Phase 4, the sieved material confirms that from the hand-recovered collection i.e.: the cattle bones and teeth are all mature, whilst those of sheep/goat and pig tend to be immature. The cattle ulna is proximally fused whereas the loose third molar (M3) of pig has not yet erupted, and the second molar (M2) in the sheep/goat mandible fragment is only slightly worn, indicating that the third molar would have been in the process of erupting when the animal died.

Most of the bones from context 64 consist of more loose teeth, plus small carpals and phalanges of the dog identified in the hand-recovered collection.

Context 189 (Phase 2) contained mainly bones of sheep/goat, including a neonatal phalange.

None of the burnt bones could be identified to species except for two unerupted pig teeth from context 110 (sample 3).

The bird bone and small mammal bones are few and very fragmentary. None of them have been identified to species.

The few fish bones have been identified by Mrs Alison Locker and the identifications are listed in the archive report (Stallibrass 1991, Appendix 5). They include small salmonids and some flat fish (including possible plaice or flounder). The site is located a few hundred

metres from the River Wear, 21 km upstream from the river mouth at Sunderland.

The shell fragments are minute (totalling less than 1 g in weight) and have not been identified.

Discussion and Conclusions

Previous excavations in Chester-le-Street have produced small quantities of animal bone from within the Roman fort of Concangis (Gidney in press). This collection, too, is very small and probably raises more questions than it answers, but it does show that the site has potential for further studies.

In particular, further studies might be addressed towards (1) the general question of how the fort inter-related with its hinterland, and (2) the specific question of whether or not "improved" types of livestock (particularly cattle, but also sheep) were introduced to the fort during the Roman occupation. The processing of bulk soil samples has shown that future excavations might also seek to investigate (3) the types of fish exploited in the Roman fort. Early excavations of Roman forts did not consider the role of fish in the Romano-British military diet and, due to the absence of sieved material, had no evidence for their use. The few fish bones recovered from Concangis in 1990–91 are, in fact, well preserved, and suggest that future sieving programmes might produce useful samples of material.

ARCHAEOmAGNETIC DATING REPORT

M. Noel

A summary of the full report (see Archive Reports below) is reproduced here

Part of the north wall of the barrack was found to contain blocks of burnt sandstone, reddened to a depth of about 30 cm, which were interpreted as a possible hearth (040). A second rectangular hearth of roughly dressed stone was also found on the road to the east of the barrack (016). A total of 21 oriented archaeomagnetic specimens were collected

Table 7: Distribution of Wet-Sieved Animal Bones by Context

Phase	Sample No.	Sub Code	Context	Large Mammal	Small Mammal	Burnt Mammal	Bird	Fish	Shell
1	32	B	357	7		0·6			Y
1	31	B	359	0·5		0·1			Y
1	35	B	362	0·7	0·1				
2	3	B	110	6	0·1	0·2			
2	34	B	110	1·4		1·3			Y
2	36	B	189	15		0·2		Y	Y
2?	20	B	253	8	1·1				Y
3	37	B	188	2		0·6			Y
4	4	B	62	3	1·6				
4	5	B	63	0·6		0·1			Y
4	2	B	64	74	0·3	1·6	0·5	Y	
4	12	B	76	122	0·1	5·5			Y
4	22	B	129	210	0·1	3·9	0·1	Y	Y
4	17		135	0·1		0·1		Y	
4	13	B	207	0·4		0·8			Y
6	24	B	142	0·1		0·2		Y	
TOTAL WEIGHTS				450.8	0·6	18	0·6	0·6	0·1 g

Y indicates presence in very small quantities

Table 8: Distribution of Identified Wet-Sieved Animal Bones by Context

Phase	Sample No.	Context	Species Identified	Hand-Recovered Identifications (for comparison)
1	32	357	S/G	
1	31	359		
1	35	362		
2	3	110	pig	
2	34	110	pig	
2	36	189	C, S/G	
2?	20	253	C	
3	37	188		
4	4	62	S/G	
4	5	63		
4	2	64	pig, dog	C, dog
4	12	76	C, S/G pig	C
4	22	129	C, S/G	C, S/G, pig, dog
4	17	135		
4	13	207		
6	24	142		

KEY

C: cattle

S/G: sheep and/or goat

from the two features (12 from 016, 9 from 040) for a study aimed at the following:

1. To investigate whether the fired stone in both features had acquired a stable thermoremanent magnetization as a result of being heated in the ancient geomagnetic field.
2. If this holds true, then compare mean archaeomagnetic directions from the hearths with the UK master curve to deduce relative and absolute magnetic dates for the last times of firing.

We can summarize the results of this study as follows:

1. The majority of specimens obtained from hearth 016 and wall feature 040 have acquired stable remanent magnetizations as a result of being heated in the ancient geomagnetic field.
2. Comparison of the mean archaeomagnetic direction with the UK master curve suggests that hearth 016 and feature 040 were last used A.D. 295–420 (CSE 1.3) and A.D. 230–70 (CSE 2.2) respectively.

CONCLUSIONS

Phase 1

The identification of the western rampart and one ditch of the primary fort serve to modify existing notions about the positioning of this base. The excavations in Middle Chare (Evans *et al.* 1991, 16, fig. 5) located timber buildings beneath those of the stone fort and sought to explain the stratigraphical sequence of the rampart as if its earliest phase belonged to a primary, timber fort. However, it now seems clear that the area examined in 1978 lay outside the defences of the primary fort, in which case the buildings located may have belonged to a *vicus* complex or annexe.

Both the coin and pottery evidence point to the primary fort at Chester-le-Street belonging to the second half of the 2nd century A.D. (King, using the samian, asserts after A.D. 175, in Evans *et al.* 1991, 45), presumably post-

dating the abandonment of the Antonine Wall, perhaps related to the construction of the fort at Newcastle, since it would help secure the lines of communication to the latter. It is, however, curious that the mid-Antonine forts at Newcastle and South Shields should be built in stone, but Chester-le-Street, their contemporary, in turf and timber.

Phase 2

The excavation at Church Chare has served to demonstrate that the retentural barracks in the north-west corner of the secondary fort were laid out *per strigas* (cf. Davison 1989, fig. 8, B, C and H).

The date of the construction of the secondary fort is not easily determined. The inscription referring to the construction work in A.D. 216 (RIB 1049) need not even have belonged to the secondary fort, as there are Antonine parallels in Britain for forts with turf-and-timber defences and stone internal buildings (cf. Johnson 1983, 274–9), so it could have been associated with additions to the primary fort. However, the archaeomagnetic date for the burning on the north wall of the officer's quarters, which has here been presumed to be related to the construction of this phase, falls within a range of A.D. 230–70. Pottery from the ditch fill (see Dore above, Nos. 52–6) indicates a construction date in the later part of this range. Likewise, the presence of a little-worn *antoninianus* of Victorinus/Tetricus on the floor surface of the officer's quarters would seem to accord with occupation during the second half of the 3rd century A.D.

The fact of the construction of a new fort probably betokens the arrival of a new garrison and it may even be indicative of a new type of unit occupying the site, since the old fort was demolished (apparently immediately before the secondary one was begun): garrison changes in the secondary fort at Corbridge were apparently marked by the replacement of old buildings but the retention of the former defences (Bishop and Dore 1989, 88), the implication being that the available area within the fort was thought adequate. The *per scamnum* alignment of the praetentural stone gran-

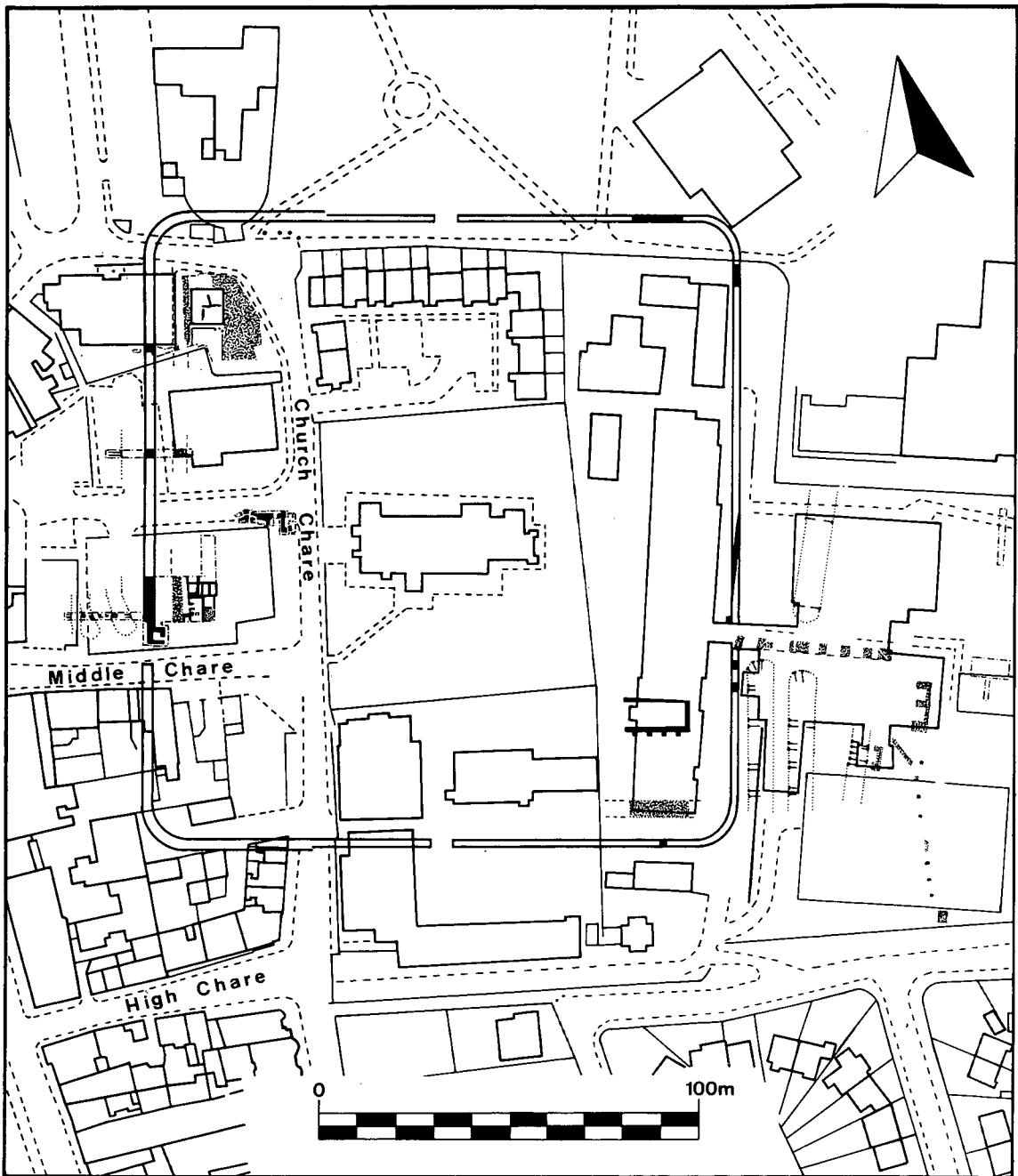


Fig. 19 *Chester-le-Street: plan of known features in the fort (after Rainbird 1971).*

ary in the secondary fort is unusual, however, and it is conceivable that it may have been retained from the primary fort (I am grateful to Mr. P. T. Bidwell for this suggestion).

Phase 3

If the barrack was allowed to decay at the end of Phase 2, this may have been because the whole fort was abandoned, although this seems unlikely, given the Roman practice of systematic demolition of abandoned military establishments. It would be more likely, as elsewhere (cf. Boon 1972, 56), that the *centuria* or *turma* that occupied it were removed, although the main body of the unit remained, leaving the building vacant. Its return, or perhaps a change of garrison, might have been the occasion for the rebuild that characterizes Phase 3. The fact that the timber *contubernia* were also rebuilt may be a hint that it was not a change of garrison, if constructional styles are in any way indicative of individual unit preferences.

Termini post quem for the beginning of this phase are provided by mid-3rd century pottery from beneath the flagged floor of the officer's quarters and by the coin from the Phase 2 floor surface. There is an interesting implication here: taking the archaeomagnetic date from Phase 2 together with the pottery from Phase 3, it might be argued that there could have been a fairly short initial occupation of the barrack before its being abandoned and allowed to decay. Moreover, Phase 3 need not necessarily correspond with changes elsewhere within the fort.

Phase 4

The function of the Church Chare barrack seems to have changed: with the *contubernia* defunct and only the officer's quarters retained, apparently unpartitioned, the building now served a different purpose. If Phases 2 and 3 belonged to occupation by the same unit, then it might be speculated that Phase 4 witnessed the arrival of the Notitia's *numerus vigilum*. Hodgson (1991, 90) argues that they could have been late arrivals and may not have been the first *numerus* at Chester-le-Street, but this interpretation is dependent upon a number

of assumptions, not least that the N CON on tile stamps at Binchester (Richmond and Crawford 1949, 29) really does represent an otherwise-unattested *n(umerus) Con(cangien-sium)*. It may even be that the *numerus vigilum* and *numerus Concangiensium* were one and the same unit, perhaps split between two bases.

The stamped tile, with its possible reference to that *numerus vigilum*, was associated with late 3rd century pottery. Late 3rd century material also came from at least one demolition pit and was associated with tumble from the walls of the officer's quarters. The coins, on the other hand, seem to suggest continued occupation to the middle of the 4th century, a conclusion supported by appropriate pottery from a few (unfortunately not very diagnostic) contexts.

Post-Roman occupation of the site

The complete absence of evidence relating to the early ecclesiastical occupation of Chester-le-Street was disappointing, but not surprising, given the amount of disturbance to the site in subsequent periods. A solitary medieval coin and a few sherds of pottery are the only evidence of activity between the Roman period and the 16th century.

Archive Reports

The archive of the 1990–91 Church Chare excavations, which has been deposited with the Bowes Museum, includes the following specialist reports:

- M. C. Bishop, "The Structural Report"
- M. C. Bishop, "Small finds from Chester-le-Street excavations at Church Chare, 1990–91 (CC90)"
- R. J. Brickstock, "Chester-le-Street 1990/91: the coins"
- M. Chard "Chester-le-Street: Medieval and Post-Medieval Pottery"
- J. C. N. Coulston "Church Chare 1990: worked stone report"
- J. N. Dore "Chester-le-Street 1990: the pottery"
- J. P. Huntley "Plant remains from Church

- Chare, Chester-le-Street, 1990–91 (CC90)", Ancient Monuments Laboratory Report 84/91
 M. Noel "Archaeomagnetic analysis of hearth 18 [sic] and feature 40, Church Chare, Chester-le-Street"
 S. Stallibrass "Animal bones from Church Chare, Chester-le-Street, Co. Durham 1990–91", Ancient Monuments Laboratory Report 134/91

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