

ART. V – *Excavation and watching briefs at Borrans Road, Ambleside 1990-93*

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THE Roman fort at Ambleside was first recorded in the sixteenth century by William Camden, but remarkably little detailed work has been undertaken on the site. The fort was subject to four seasons of excavation by R. G. Collingwood (Haverfield and Collingwood, 1914; Collingwood, 1915; 1916; 1921), who also firmly established the existence of extramural activity, placing in context previous finds, such as a corduroy road found in 1900 (Cowper, 1902). Subsequent small-scale work as a result of the development of the area to the east of the fort (Burkett, 1965; 1977; Leech, 1993) has enhanced this picture to some extent, but the evidence remains very limited.

The fort survives as a low earthwork at the head of Windermere (NY 372 033) on the outskirts of present-day Ambleside (Fig. 1), occupying a low-lying area which contains a number of rock outcrops. It is a Scheduled Monument (SM13567). The overlying drift comprises fluvial clays, sands and silts, above a solid geology of Ordovician tuffs, with small areas of extrusive rhyolite and andesite lavas (British Geological Survey, 1982).

The confluence of the rivers Brathay and Rothay lies some 120 m to the north-west of the fort, and their combined waters flow close to its south-west corner, entering Windermere a short distance away. However, the course of the Rothay once lay closer to the western edge of the fort (Haverfield and Collingwood, 1914), forming an effective barrier to the west. In such a low-lying position there are obvious problems associated with marshy ground and Collingwood recorded a deposit of sand which would appear to have resulted from flooding, whilst the fort was protected to the south by a gravel bank (Collingwood, 1921, 12). The marshy ground to the east and west would have offered protection to its approaches, but this topography presented problems for construction in the extramural settlement.

The fort

Whilst the fort at Ambleside has been identified as the *Gallava* of the *Antonine Itinerary* and the *Ravenna Cosmography* (Rivet and Smith, 1979, 365), this is not confirmed by independent testimony from the site; indeed the whole issue of allocating Roman names to sites in the North West is problematic (Shotter, 1998). Its history is largely summarised by Collingwood in these *Transactions* (1915; 1916; 1921; Haverfield and Collingwood, 1914). He inferred the presence of two forts from his excavations, of which the earlier was a turf and timber structure, probably of mid to late Flavian construction (Hartley, 1966; Shotter, 1997), since it is now widely accepted that the full military occupation of the Lake District did not occur until c.A.D. 90 after the withdrawal of Roman forces from much of Scotland following the Agricolan advance (Austen, 1991, 225; Shotter, 1994). The early fort may have been abandoned prior to the reign of Trajan (Potter, 1979a, 177), but it is

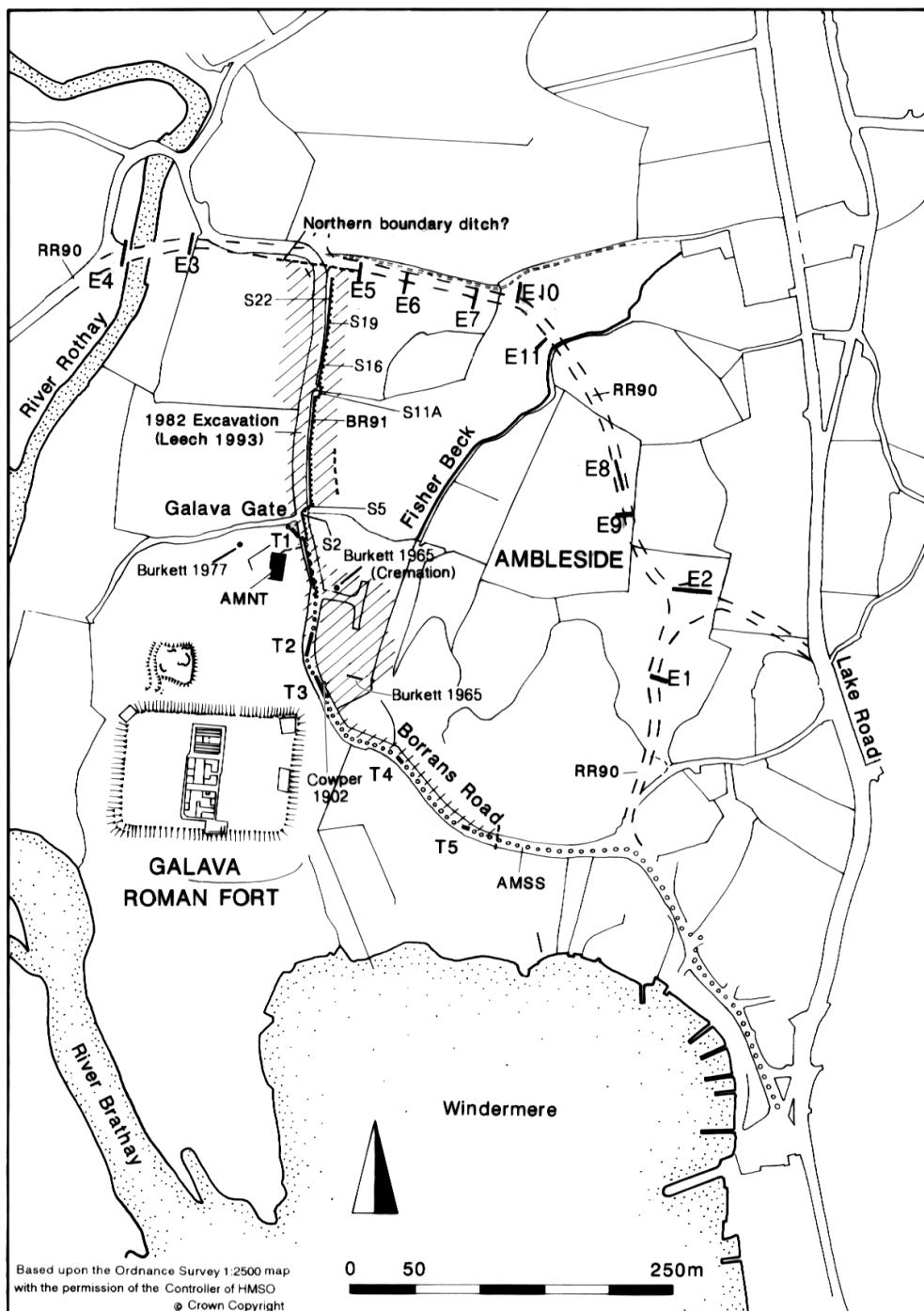


FIG. 1. Location Plan.

clear that a substantial reorganisation of the military occupation of Cumbria occurred in the reigns of Trajan and Hadrian (Potter, 1979b, 197) and it is likely that most stone forts date from this time, forming part of the network of the military hinterland of Hadrian's Wall.

Despite the work of Collingwood, there is little information on the later occupation of the fort, including the garrison, although substantial occupation deposits and evidence for refurbishment exist. A late fourth century coin is the latest evidence of Roman activity within the fort, but this need not indicate a formal military presence, since stray coins of this late date are quite common on North Western military sites and may indicate only a casual presence (D. C. A. Shotter, *pers. comm.*).

The extramural settlement

The majority of the archaeological work undertaken has been published in these *Transactions* (see, for instance, Cowper, 1902; Burkett, 1965; 1977; Leech, 1993). To date, the extramural settlement has been identified to the east and north of the fort, where numerous find-spots and some limited excavation have indicated the extent of the settlement there (summarised in Leech, 1993). The construction of sewage works in 1900 revealed a "corduroy" road 500 yards to the north of the fort and traces of another outside its north-eastern corner (Cowper, 1902), whilst excavations in 1920, to the west of Borrans Road, identified a further road flanked by an extensive area of "floor levels" associated with second to third century pottery (Collingwood, 1921). More recently, buildings and occupation debris associated with first and second century samian pottery were excavated east of Borrans Road; also, in this area, a cremation jar dating to c.A.D. 80-130 was found (Burkett, 1965). In 1976 a water-main trench uncovered a road of packed stones on brushwood, sealing Roman finds and, elsewhere in the same trench, human burials (Burkett, 1977). Further occupation and evidence of industrial activity along the length of Borrans Road, apparently bounded to the north by a substantial ditch, were identified in 1982 (Leech, 1993). These finds and small-scale excavations have begun to define the chronology, status and function of the settlement, which seems to focus on the Roman roads leading north (underlying Borrans Road) and east from the fort, but the nature and full extent of extramural activity has yet to be established.

Recent work

In recent years several small projects have been undertaken in the vicinity of the fort, in and around the extramural settlement, although these (assessments, evaluations, and watching briefs) have been linear in nature (service trenches and proposed road schemes). In this report, the results of five such projects, undertaken by the then Lancaster University Archaeological Unit (LUAU) and the then Centre for Field Archaeology, University of Edinburgh (CFA), have been assessed collectively in an attempt to provide a more accurate perspective on the archaeology of the extramural settlement (Fig. 1). Fieldwork was funded by a number of different organisations, and the assessment and publication has been funded by English Heritage.

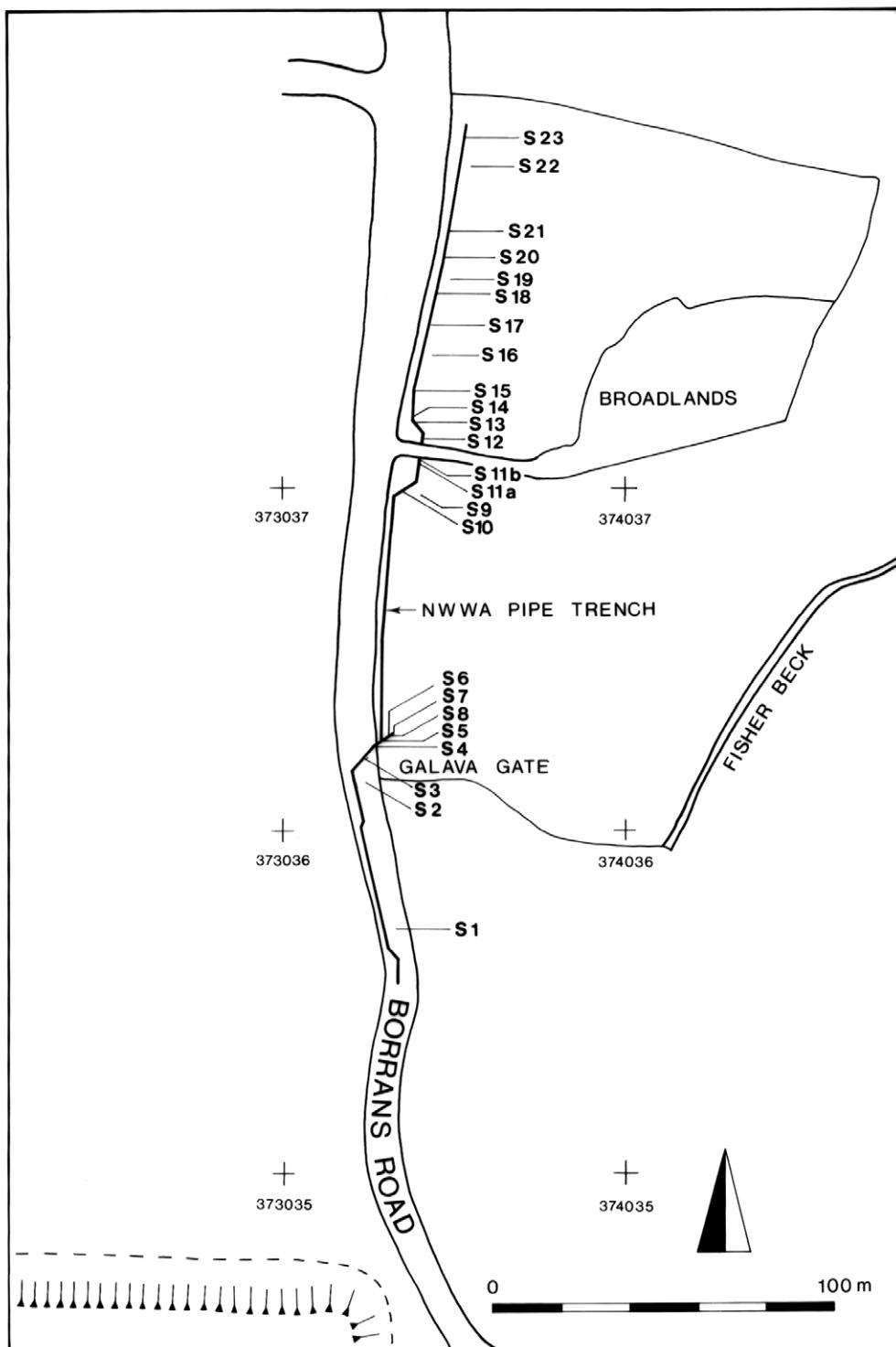


FIG. 2. Location of sections in Borrans Road watching brief.

In 1990 LUAU undertook an evaluation of the route of a proposed link road from Waterhead to Rothay Road (on behalf of Cumbria County Council), east of the known limit of the extramural settlement, and in 1991 a desk-top study and rapid field survey were also undertaken of the various proposed routes of the Ambleside bypass (on behalf of Halcrow Fox). Three excavations/watching briefs were conducted in 1991 and 1993 by LUAU and CFA along Borrans Road, north and south of Galava Gate, effectively producing an archaeological transect through the extramural settlement (funded by North West Water Limited and the National Trust). Interim statements have already been published in these *Transactions* (Godbert, 1993; Mann and Dunwell, 1995).

The evidence for occupation of the extramural settlement from each individual project is disparate and, in some areas, slight. Bringing together the results of these projects, in combination with evidence from previous work, has allowed some elucidation of the size, limits, and nature of the settlement, the date and continuity of occupation, and the relationship of its chronology with that of the fort.

The archaeological assessment of the four routes considered for the *A591 Ambleside Bypass Traffic and Environmental Study 1991*, which passed close to the area of Roman settlement, did not produce any clear evidence of Roman features. Field inspection of the areas in question identified a series of banks, artificial platforms, possible former field boundaries, and a circular mound, all of uncertain but probably post-Roman origin (Ely, 1991).

Borrans Road watching brief, 1991 (BR91)

A permanent watching brief was conducted over 250 m of machine-excavated trench (measuring c.0.60 m wide and up to a depth of 1.20 m, to accommodate a water main) along a section of Borrans Road, north of the fort, then entering the fields to the north of Galava Gate. The nature of the work meant that natural deposits were not always clearly established and machine excavation dictated that the main record was in section rather than plan. The method of excavation also influenced the recovery of artefactual evidence and consequently much of the material was unstratified. Twenty-four separate sections were recorded (Fig. 2, S1-10; 11a/b; 12-23), in some cases involving complex stratigraphy, with up to six phases of activity identifiable. However, the areas recorded in detail were spatially separate and therefore the relative stratigraphy and phasing between them must remain tentative. Reference has been made to individual sections (e.g. S8); the location of each is shown on Figure 2.

Phase 1

Deposits of natural gravels were established along much of the trench; these in places appeared to have been disturbed, occasionally containing sherds of Roman coarseware. To the north, the gravels were overlain by dark, organic-rich deposits (218; containing a piece of probable furnace lining), which were sealed by layers of grey, white, or yellowish clay (217, 235; Fig. 3), observed over a distance of some 80 m (S13-S23), and perhaps represent some form of site preparation, possibly sealing the gravels in areas prone to waterlogging.

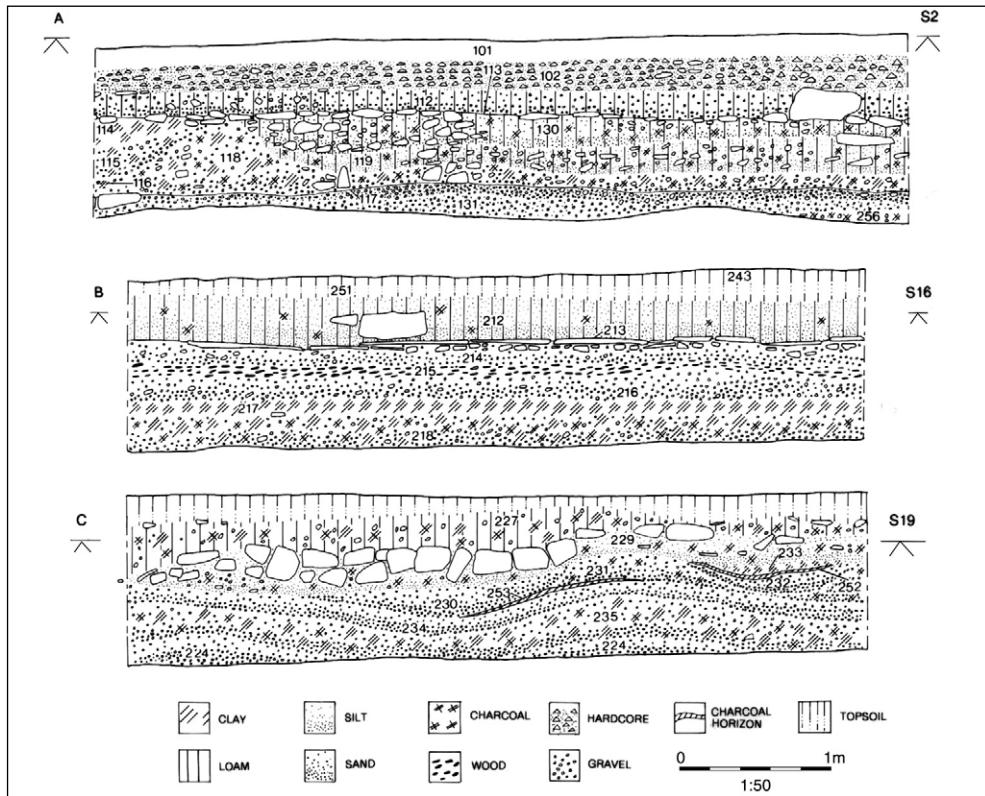


FIG. 3. Borrans Road watching brief: Sections 2, 16, and 19.

Phase 2

Silts or loams (between 0.10 m and 0.20 m deep), containing charcoal and ash, partially overlay the Phase 1 clays and also the gravels to the south. The pottery retrieved from these layers was varied in date but included some of the earliest material from the assemblage. This material, if it does indeed reflect an horizon, may relate to the occupation (or possibly destruction) of either the earlier, timber fort or extramural settlement. It is interesting that these silts were not recorded in the vicinity of the roads (Phase 3), perhaps suggesting that some of the infrastructure associated with the settlement was in existence there when this material was deposited. These silts tended to pre-date much of the evidence of industrial activity and some structural elements, although there were no clear stratigraphic relationships to demonstrate this was a single horizon; therefore the origins and interpretation of these deposits remain unclear.

Phase 3

Much of what is perceived as the infrastructure for this part of the extramural settlement, the roads and some of the building activity, has been assigned to this phase. However, in the absence of relative stratigraphy between the recorded

sections, the precise development of this activity remains unclear. Therefore in some instances there is no distinction between Phases 3 and 4.

A north-south road was identified at Galava Gate, continuing northward along the line of the modern road for a distance of some 40 m to the northern field boundary, where the pipe trench dog-legged into the field. This road was well-constructed, comprising a series of alternate layers of grey clay and metalled gravel and stone surfaces (147; Fig. 4), up to a depth of 0.80 m, bedded on a deposit of red-brown coarse gravel. Large timber piles were noted in places, driven into the underlying waterlogged deposits, forming foundations for the road, together with some evidence for substantial beams measuring 0.25 m by 0.10 m (a similar form of timber construction was recorded by Burkett (1965, 89-91), to the north-east of the fort, and by Cowper (1902)). A ditch bounded the eastern edge of the road, but this appeared to be a late recutting, possibly after a period of abandonment or disuse.

Large slate slabs were noted to the east, possibly forming some sort of foundation. These may be similar to a slate slab surface (213) recorded further north, where it was observed lying over a series of silty gravel layers (216, 214), including a layer of decayed wood (215), which may have represented a timber raft incorporated in the levelling for the surface; this had been constructed over the Phase 1 clay and Phase 2 silt deposits (Fig. 3). A further surface, possibly a road, at Galava Gate comprised a gravel and silt make-up (131), up to 0.20 m deep, with small rounded stones (117) forming the surface. This overlay lenses of red and grey ash mixed with burnt clay, and sand and charcoal overlying a few large stones, observed at the base of the trench (Fig. 3).

At the northern end of the trench, an east-west ditch (249) was recorded, measuring 4.20 m across and up to 0.70 m deep, which had subsequently been recut. This may have formed a northern boundary to the extramural settlement, perhaps a continuation of that recognised by Leech (1993). There was little evidence of activity in the immediate vicinity of the ditch either to north or south (Fig. 4).

Phase 4

There was evidence for two areas of industrial activity to the east of road 147. The surface (117) identified near Galava Gate was covered by a dump of industrial waste (118), including metal slag and charcoal, which appeared to respect the apparent southern edge of the surface, with differing deposits built up on either side of the dump (Fig. 3). This coincidence may reflect a boundary not apparent in the section. To the north a concentration of layers of charcoal was associated with patches of burnt clay and stones as well as lenses of burnt bone. Material seems to have accumulated over these industrial deposits to both the north and south of the earlier surface, including a possible make-up layer (130; Fig. 3) for a stone surface (which produced central Gaulish samian in the style of Paternus (c.A.D. 160-195)). It was not clear to what extent the industrial material had been intentionally dumped to create a level for the second surface.

To the east of the road several deposits overlay a cobbled surface which may have been associated with the earliest use of the area. The cobbles were overlain by a grey silt associated with a burnt clay layer and overlying shallow deposits of burnt clay with charcoal. A series of large stones may represent remains of a structure perhaps

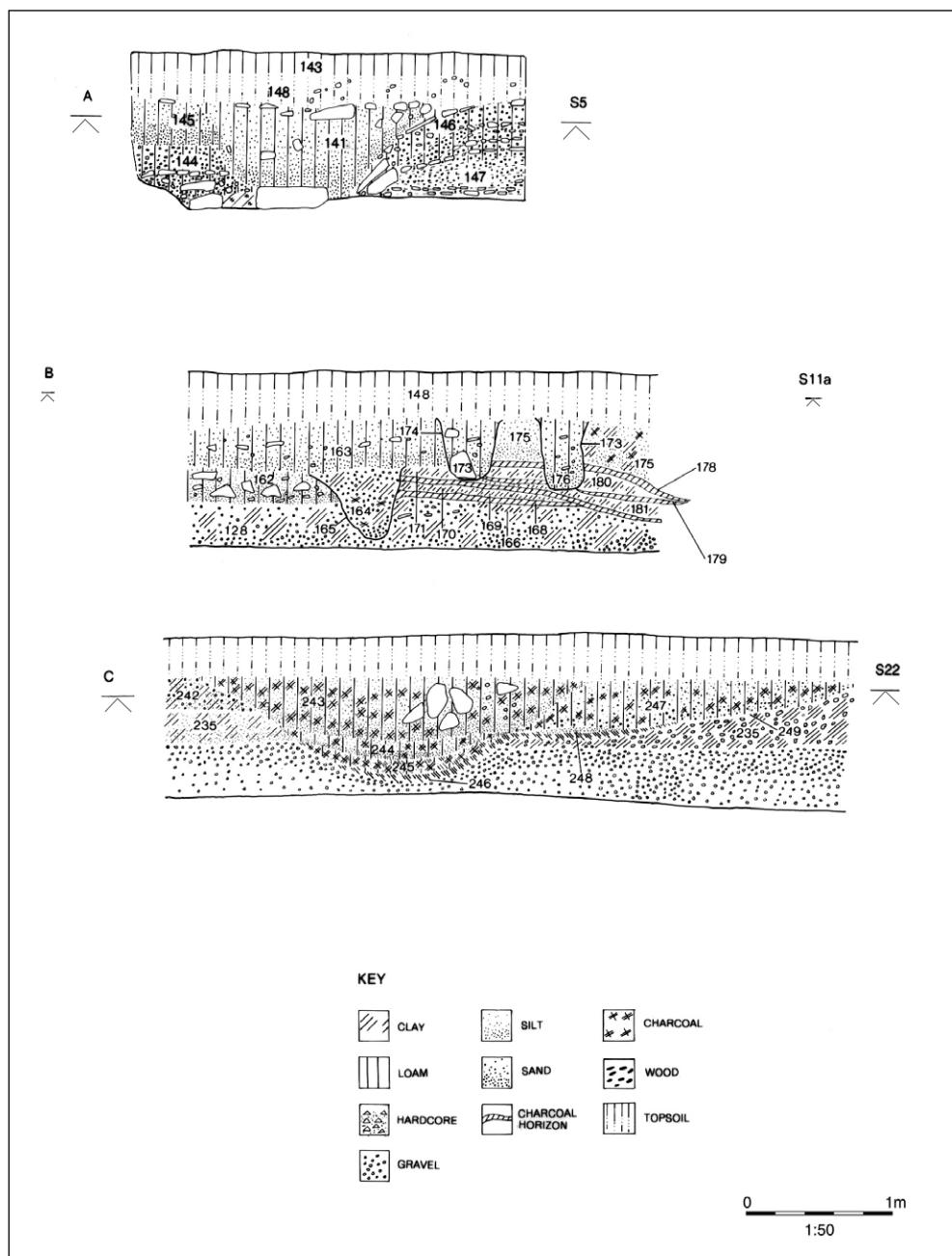


FIG. 4. Borrans Road watching brief: Sections 5, 11a, and 22.

associated with a hearth or metalworking. The relationship between road 147 and the industrial deposits had been truncated by the later cutting of a ditch at its eastern edge. To the north again the road was recorded in association with deposits lying to its east, the footings and tumble from a stone wall, served by a shallow ?drainage ditch, surviving close by, although their relationship was unclear. An area of complex industrial activity also lay to the east at this point, the concentrations of burnt deposits and charcoal perhaps representing individual plots leading back from the road, although there was little evidence for boundaries or structures. However, one of a series of deposits may have been associated with a boundary. A distinct contrast in deposition associated with a small ditch or slot (165; Fig. 4) suggested a southern limit for a series of charcoal and clay deposits and the absence of a similar sequence in the opposite side of the pipe trench may suggest that the eastern limit of a plot may have lain within the confines of the trench. It would appear that this boundary was reused over a period of time as later postholes also coincided with distinct deposits on almost the same alignment. On the opposite side of the trench a simpler sequence revealed a lens of charcoal overlain by a 0.20 m deep layer of dark brown clay loam containing angular stones.

Some 10-15 m to the north, shallow deposits (0.05-0.10 m in depth), comprising silt, burnt clay, and loam, and lenses of charcoal, were overlain by a dark brown loam with charcoal, reflecting either a continuation of the same industrial activity or another discrete area of concentrated activity. A cut to the north of these may have indicated the limit of an area of industrial activity, but this had been obscured by modern disturbance. To the north again, where the pipe trench once more returned to the west edge of the modern road, a simpler sequence was revealed which continued for some distance. This may reflect either a cessation of the industrial activity or suggest that the area of industrial activity was slightly set back from the Roman road.

Further evidence of industrial activity was recorded further north, where shallow deposits of gravel and thin alternating layers of burnt clay, charcoal, and gravel were present, including some large angular stones (up to 0.25 m). This sequence continued northward for some 10m, where the deposits appeared to peter out to give a simpler sequence once again, which included lenses of charcoal and burnt clay, but not on the same scale as the industrial activity to the south, together with some evidence of surfaces or foundations. A sequence of gravels with charcoal lenses was recorded further north still, apparently forming make-up deposits (partially compensating for undulations in the underlying deposits) for a large cobble surface (228), which in turn was overlain by a dark brown friable loam containing charcoal and burnt clay, in appearance like a damaged floor (227, Fig. 3; the latter may represent a separate phase of use).

At the northern extent of the trench there appeared to be little activity, suggesting that this area was not utilised for industrial or domestic purposes. Few features were observed apart from a pit containing unidentifiable burnt bone. The possible boundary ditch (249, Fig. 4; Phase 3) contained a primary fill of industrial debris, and had been recut, and a second ditch also contained industrial debris, although there was no evidence of such activity in the immediate vicinity.

Phase 5

An accumulation of material had formed above the evidence of Roman activity, including some deposition associated with the continued use of the Roman roads. These deposits were cut by features; in the case of the north-south road, a ditch at its eastern edge had been cut after deposits had accumulated adjacent to, and to some extent over the surface of, the road. This may suggest abandonment of the settlement, but with the infrastructure maintained. In one instance a boundary, associated with the edge of an area of industrial activity, may have been re-established at a later date. The northern boundary ditch was also recut, which may reinforce the suggestion of the maintenance of certain elements of the settlement. There was no clear dating associated with the reuse/recutting of these features, although in one instance the fill of a late ditch at the edge of the north-south road produced a quantity of post-medieval material.

It seems that the settlement was largely abandoned in the mid-second century, given the artefactual assemblage associated, although a military presence continued. The lack of evidence for occupation of the extramural settlement during the third to fourth centuries, however, may be an artefact of truncation by later activity.

Phase 6

This final phase includes all post-Roman and modern disturbance, including drains and service trenches. In places modern activity had caused a great degree of disturbance, so that in the southern section of the trench, along Borrans Road, there was little undisturbed Roman stratigraphy, whilst alongside the modern road (in pastureland) stratified deposits survived.

Conclusions

This watching brief confirmed the observations made in previous work (for instance Leech, 1993) of the position and techniques of construction of the road to the north of the fort. It again demonstrated the degree of organisation required to build in such wet and difficult conditions, even though the precise nature of the site preparation suggested by the spreads of clay over the gravels and organic-rich deposits could not be established, or clearly dated. The infrastructure of the settlement seems to have been established at the same time as the main industrial activity, which probably fronted on to the north-south road and appeared to have had planned, or at least defined, limits. The finds from this area included furnace lining and vitreous waste, indicating that smithing was taking place. Certain elements, such as the roads and boundaries, appear to have been maintained following abandonment of most of the settlement or at least the cessation of industrial activity.

The apparent boundary ditch at the northern extremity (Phase 3) lay on a similar alignment and in approximately the same position as two ditches identified by Leech (1993, 55-56, fig. 4). One, identified on both sides of Borrans Road, was 7 m in width with a second narrower ditch (2 m wide) to its north (to the west of Borrans Road), although neither was recorded in detail, given the circumstances of that project. The ditch recorded in 1991 was 4.2 m in width, thus not closely equating

with either, although it remains conceivable that it may represent the continuation of either to the east. This is, to date, an unusual feature in extramural settlements in the military hinterland, although this may be simply a result of excavations having concentrated on core areas, rather than the peripheries of such settlements. A possible parallel was, however, excavated at Ribchester, where an insubstantial rampart and ditch had been constructed in the mid-second century, c.200 m north of the fort, being refurbished at intervals until the fourth century (Olivier and Turner, 1988).

Rothay Road evaluation (RR90)

The evaluation of the proposed link road, from c.300 m east of the south-east corner of the Roman fort, continuing northwards c.250-300 m east of Borrans Road and Galava Gate, and then turning westwards to the junction of Borrans Road and Rothay Road just north of the area of known Roman remains, comprised the excavation of 11 trial trenches (Fig. 1; E1-11). All but Trenches E5 and E11 were devoid of archaeological features, with only subsoils disturbed by recent land-drains, a necessity on this marshy ground, probably the result of a comprehensive farm drainage programme that took place as part of nineteenth-century expansion onto the low-lying lands (Tostevin and Neil, 1990).

Trench E5 was close to the line of the large northern boundary ditch of the extramural settlement (Leech, 1993), but archaeological evidence there was slight and inconclusive. At the southern end of the trench were two east-west linear features, approximately 2 m apart, the northern c.1.40 m wide and 0.40 m deep and the southern 0.70 m wide and 0.30 m deep. These were on approximately the same alignment as the ditches identified by Leech (1993) but both were smaller and relatively shallow, and, in the absence of dating evidence, their function must remain unclear. In Trench E11, at the north-eastern extremity of the proposed route, the stratigraphic sequence was more complex. It included a series of clay and gravel layers containing decayed twigs and branches and one substantial length of oak. No pottery or artefact of certain Roman date was recovered. The largely negative evidence suggests that Roman activity did not extend this far eastwards and northwards and that the limits of identified Roman deposits established in previous work accurately reflects the extent of the extramural settlement.

Ambleside Sewerage Scheme, 1992-3

Five small trenches were excavated in 1992-3 (Fig. 1: T1-5), in conjunction with a watching brief conducted elsewhere on the pipeline, along Borrans Road south of Galava Gate, to Waterhead. Trench T1 (10 m by 1.2 m) was situated in the north-eastern corner of Borrans Field, c.115 m north of the fort, and contained archaeological deposits to a depth of 1.8 m. It was extended c.4 m to the north-west and 1.5 m to the south-east, revealing that archaeological deposits had been entirely removed to the north-west by the construction of a pumping station. A complex sequence of remains was recorded there, with five stratigraphic phases of Roman activity, their uppermost level truncated by modern disturbance. The deepest

archaeological horizons were semi-waterlogged (Phases 1-3), and leather and timber as well as other organic material had been preserved in good condition. Several structural events were identified within the sequence, separated by thin layers of material, including inorganic deposits and occupation waste.

Trench T2, measuring c.19.6 m by 1.2 m, was cut through Borrans Road c.65 m south of Trench T1; archaeological deposits 0.3-0.4 m deep were preserved, sealed beneath 0.6-0.8 m of modern material, but of an entirely different character from those recorded in Trench T1. Trench T3 again cut Borrans Road, c.15 m south of Trench T2, crossing the north-east corner of the timber fort as inferred by Collingwood (1916, fig. 1). The trench measured c.20 m by 1.2 m, with a sequence of archaeological features and deposits up to 0.5 m deep, sealed beneath modern material 0.7-1.0 m deep. An isolated sequence of remains c.0.9 m deep was recorded during the watching brief c.25 m south of Trench T3. Trench T4 lay c.65m south-east of Trench T3 and measured 5.2 m by 1.2 m, excavation being undertaken to a depth of c.1.6 m. Approximately 5 m south-east of Trench T4, two clayey silt layers were directly above the subsoil; small, heavily abraded fragments of Roman coarseware from the upper layer were insufficient to confirm the deposits as certainly of Roman origin. Trench T5 (6 m by 1.2 m) was c.65 m south-east of Trench T4; no deposits of archaeological significance were present.

Only those areas containing archaeological deposits are described below, although in each trench the stratigraphic sequences were individually phased and cannot be equated. The following descriptions summarise these separate sequences.

Trench T1

Immediately above the orange clay subsoil, and c.1.8 m below the current ground surface, a continuous layer of organic silty clay, up to 0.2 m deep, probably represented the original ground surface prior to Roman settlement (Fig. 5, A). Directly above was a layer of woodchips, small roundwood, and bark fragments, laid flat and compressed to form a solid and compact layer 0.04 m deep; six pieces were the by-products of woodworking (R. Sands, *pers comm*). Above this lay a mat of bracken stalks 20 mm thick, through which five wooden stakes, 0.2-0.4 m long, had been driven, and a second spread of twigs overlay the bracken; a layer of organic, silty clay up to 0.1 m deep sealed these plant remains (Fig. 5, C). Although their shape and extent could not be determined, their south-eastern extent appeared to run on approximately the same alignment as that defining the north-west edge of the roads in subsequent phases (Fig. 6).

A continuous layer of orange/pink silty clay, c.0.1 m deep, was the lowest deposit of Phase 2, the upper surface of which had been baked or scorched to the north (D; Fig. 5); this may have been a levelling or foundation deposit. An isolated rounded pit (E), containing a piece of timber and pottery, was cut through this layer in the centre of the trench. A pebble-rich layer containing larger stones, with a sand and silt matrix (F), was subsequently laid down, possibly to form a road, being somewhat deeper to the south-east. A layer of charcoal-rich sandy silt, containing crushed mortar and ceramic debris (possibly brick or tile), lay directly above it to the north-west. This material was interpreted as waste or demolished building debris.

Phase 3 was defined by the cutting of a cluster of features (a shallow, partly

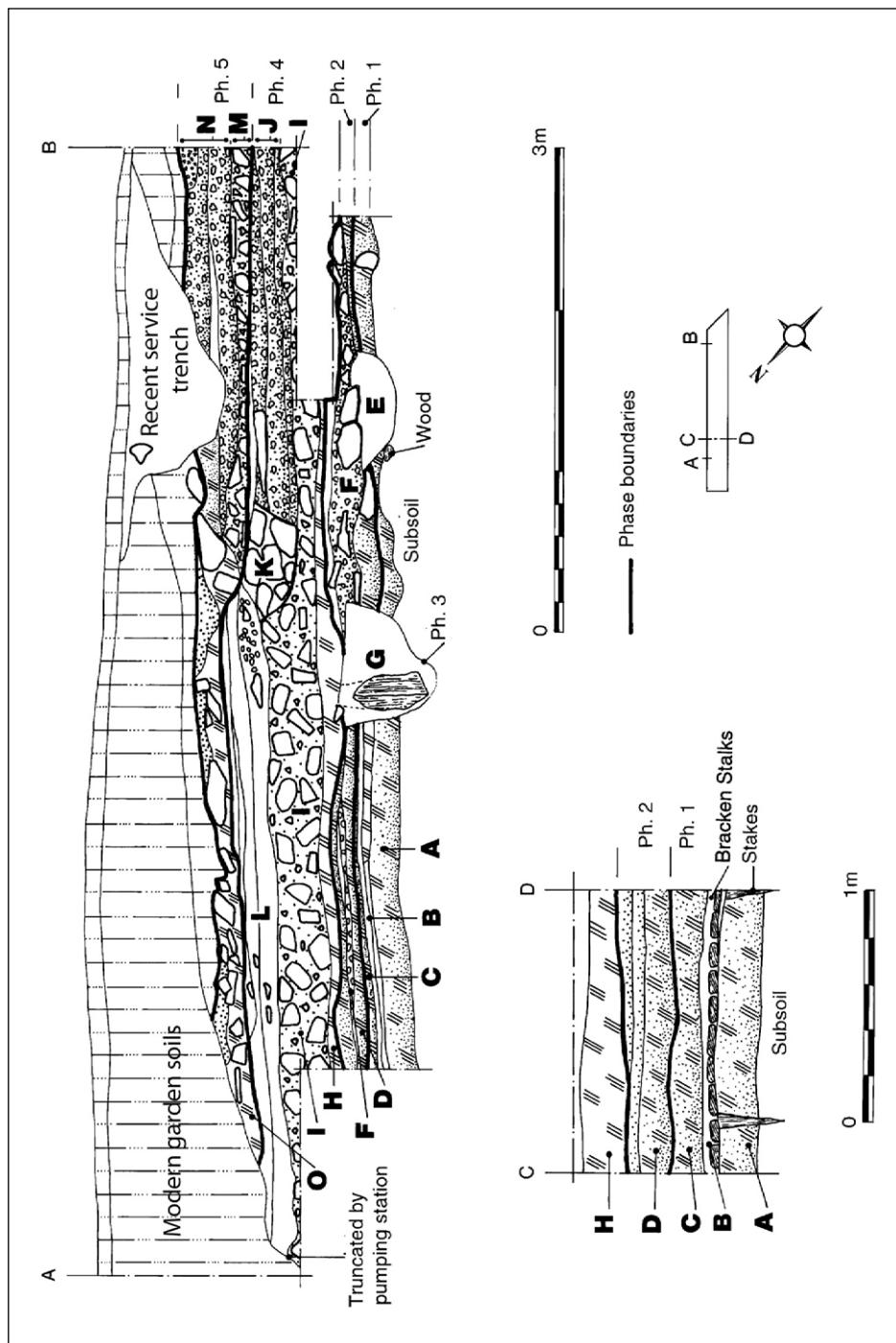


FIG. 5. Sewerage Scheme: Sections of Trench T1.

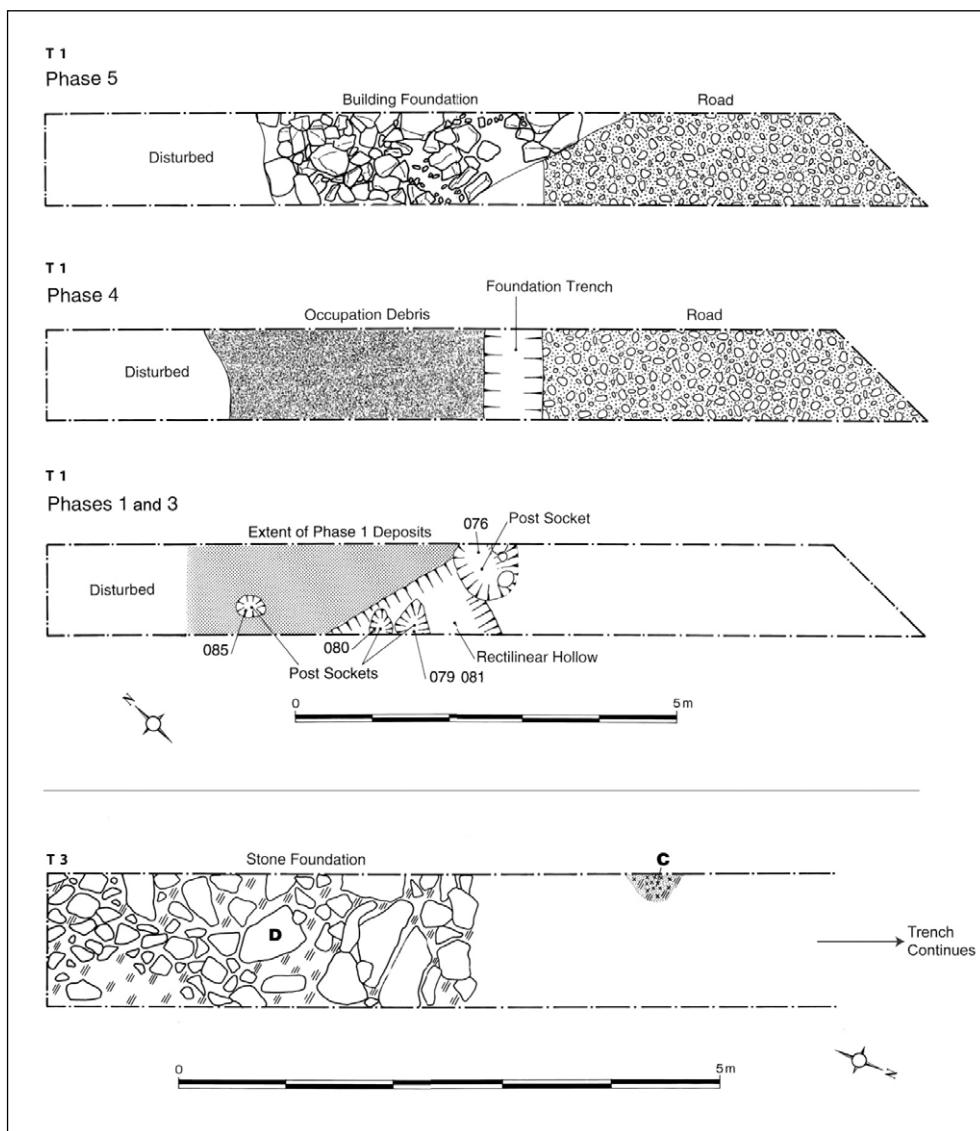


FIG. 6. Sewerage Scheme: Plans of Trenches T1 and T3.

exposed but possibly rectilinear, hollow, and four postholes) through deposits in the centre of Trench T1 (Fig. 6). Their distribution indicates that they formed part of more extensive activity. The primary fill of the rectilinear hollow, a distinctive mixture of sand, silt and clay, and including a timber, was also found in the post sockets, suggesting that these should be regarded as broadly contemporary; above this the hollow had been infilled with sub-angular stones. Two of the post sockets lay within the hollow, and a third truncated its eastern angle. The largest posthole (Fig. 6, 076; Fig. 5, G) was 0.7 m across at the surface and 0.6 m deep, while the smallest (085) measured 0.4 m by 0.25 m at the surface by 0.2 m deep. All four postholes contained timber, which in at least three cases (076, 079, 085) appeared to be the stumps of oak or alder piles packed in place by stones. In one socket two timbers were present (079, 081), an oak pile and a smaller ash piece inclined at 45°, the latter possibly acting as packing (Sands *infra*). These formed part of a structure of unknown extent and function, but were inserted approximately along the north-west edge of the Phase 2 road.

The deposition of a layer of pink clay, up to 0.4 m deep (H), marked a separate phase (4) of activity. A foundation of large angular stones (I) was laid on this, and extended for c.9.2 m, truncated to the north-west by the pumping station and to the south-east by Borrans Road (Fig. 6). The southern half was used as the base for a road on a broadly north-east to south-west alignment (Fig. 6), with traces of metalling and successive pockets of pebbling indicating re-surfacing (J). Thin layers of occupation waste were present between each of the surfaces. The road was bounded to the north by a stone-packed linear channel (1 m wide by 0.3 m deep; K; Fig. 5), possibly representing the construction trench for a timber wall or fence, or alternatively a roadside drain. The absence of features within the slot suggests that, if it was a foundation, it must have been dismantled rather than burnt or left to decay. Two artefact-rich layers and a series of lenses of occupation debris lay on the foundation to the north-west (L), and appear to represent demolition spreads.

The final Roman phase comprised the laying of a road at least 5.5 m wide directly above the Phase 4 road. This had a cobble and boulder foundation (M), supporting a cobbled surface exhibiting evidence of re-surfacing and repair (N). It was flanked to the north-west by the remains of a surface of closely packed angular and sub-angular boulders at least 4 m wide (O; Fig. 5), perhaps a small building foundation. The edge of this (O) slightly overlapped the road, suggesting that it was of secondary origin (Fig. 6). The boundary between these two features ran on approximately the same alignment as that of the Phase 4 wall (K), although this was no longer in use. Stone foundations have been found in the past at several locations in the vicinity, and appear to have been building platforms.

Trench T2

Two stratified, mottled sandy silt layers (Fig. 7, A, B), both flecked with charcoal and containing pebbles and gravel, lay directly above the sand and gravel subsoil. Further south, discontinuous patches of charcoal-rich, fine grey silt (C; Fig. 7) lay within slight depressions up to 0.1 m deep in the surface of the upper soil layer (B), and may represent the residual remains of occupation deposits vertically truncated by the construction of the modern road. The absence of Roman material in this

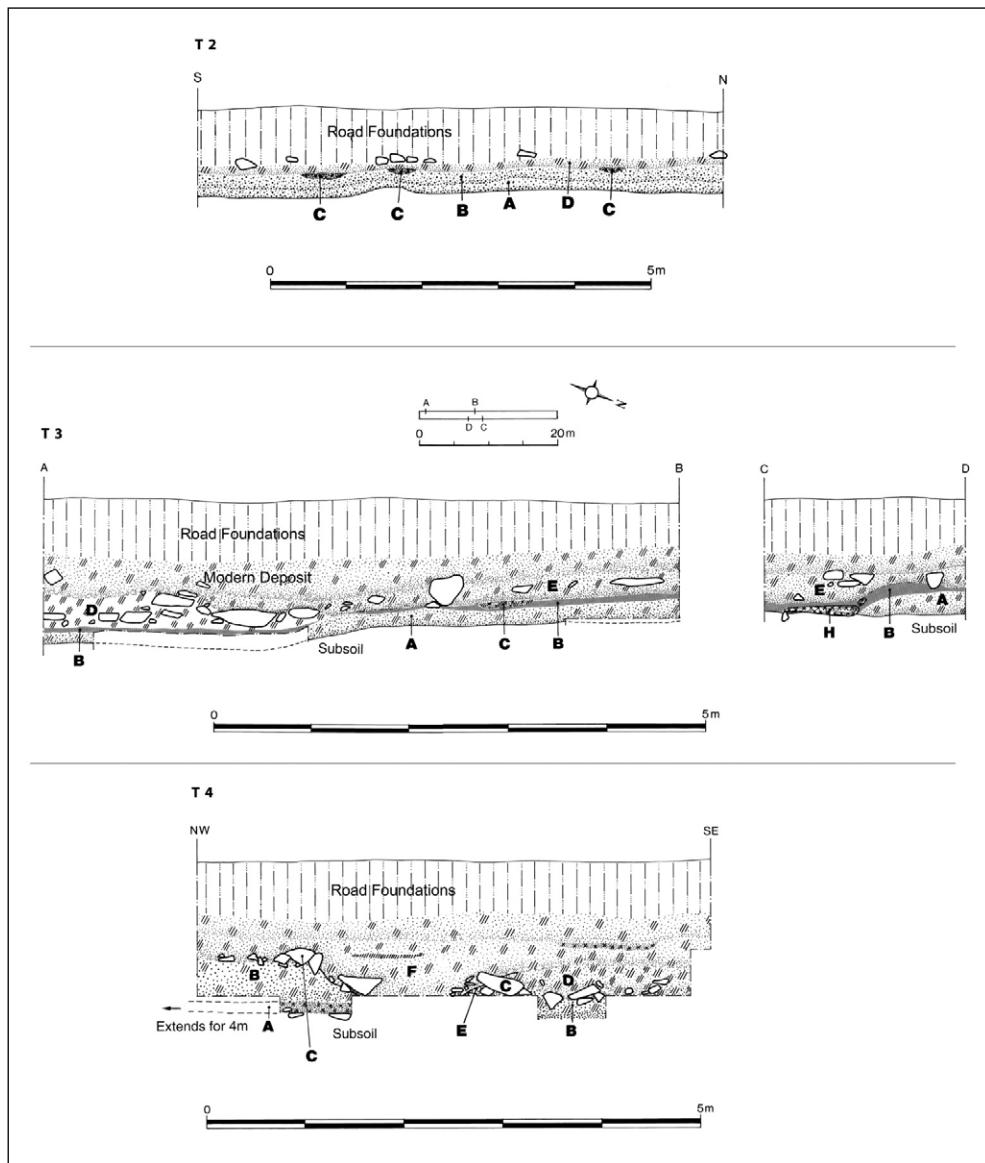


FIG. 7. Sewerage Scheme: Sections of Trenches T2, T3 and T4.

trench suggests that this area was never occupied, and that it remained open ground within the extramural settlement. The preservation of an apparently undisturbed buried soil containing prehistoric artefacts (Finlayson, *infra*) tends to support this explanation.

Trench T3

The basal layer above the subsoil, a pink/brown silty clay soil up to 0.2 m deep and containing decayed roots, was sealed beneath a grey/brown sandy silt soil c.0.05 m deep. These can be interpreted as buried ground, comprising a turf line and underlying soil (Fig. 7, A-B). A substantial stone foundation was constructed above this, c.8 m wide and c.0.35 m thick, which had depressed the buried soil layer by up to 0.15 m, and this also appeared blacker and more clayey. Only the northernmost 2.6 m projected into the trench (Fig. 6), with the rest recorded under watching brief conditions. The foundation, of angular stones bonded by a stiff, orange clay, was sharply bounded to the north, but not kerbed, whereas to the south its limit was less clearly definable, most probably due to the mechanical methods of excavation. The clay bonding also extended south of the trench for almost 15 m, with an average depth of 0.05 m. This platform may have provided a base for a building, although no traces of any superstructure survived, since its form was very similar to those identified to the east by Burkett (1965), but these latter were kerbed. A patch of charcoal-rich silt, c.0.5 m across, lay in a slight hollow within the surface of the Phase 1 turf layer c.1.5 m north of the foundation (Fig. 7; C), and a further c.3 m to the north, a section of a charred plank projected from the eastern baulk (Fig. 7; H); a piece of burnt timber with a circular cross-section 80 mm in diameter was visible immediately above, and lay on an alignment perpendicular to it, in a shallow pit cut through the buried soil. The absence of built remains there may indicate open ground beside the stone foundation. A layer of silty clay and cobbles, perhaps a ploughsoil, c.0.2 m deep, overlay the buried turf line and the northernmost c.1.2 m of the stone foundation (Fig. 7, E).

Watching Brief A

A 3.8 m length of substantial stone foundation aligned north-west to south-east was identified c.25 m south of Trench T3. Its north-east face comprised three courses of roughly squared stones, each measuring approximately 0.5 m by 0.4 m, bonded by coarse sand, which retained a core of small to medium-sized angular stones and cannot have been less than 1.7 m wide. It rested on a 0.2 m deep compact, level stone surface set within a sandy matrix. The surface varied between rounded boulders (c.0.2 m across) and flat slabs resembling paving, apparently a road surface, which was traced for a distance of 6.8 m; a ragged north-east edge suggested that it also ran on a north-west to south-east alignment. An Antonine sherd appears to provide a good *terminus post quem* for both its construction and the stone foundation. The function of the foundation is unclear, but it may have been either a building platform or a substantial wall. Beneath these deposits, two layers of compacted sand were found, the upper grey and the lower orange and grey, each c.0.15-0.2 m deep and containing pebbles and charcoal flecks.

Trench T4

A primary grey silt layer with charcoal flecking, c.0.1 m deep, was similar to that identified in Trench T3 and may also be interpreted as a buried turf horizon (Fig. 7, A). Above this lay a fine, cream sandy layer up to 0.4 m deep, its surface dipping gently to the south (B). A spread of sub-angular stones, possibly representing disturbed paving, lay above this (C), and was sealed in the southern part of the trench by a deposit of yellow/brown clayey silt (D). The Phase 1 deposits were truncated in the centre of Trench T4 by the cutting of a shallow, rounded ditch c.2 m wide and at least 0.35 m deep (E). Its size did not suggest a major boundary, and it may have been little more than for drainage.

Roman levels in all areas were sealed directly beneath modern deposits, including garden soils and the foundations of Borrans Road, which had often disturbed the upper Roman surfaces.

Borrans Barn Electrical Supply, 1993 (Trench 6)

Following the unauthorised cutting of an electricity cable trench between Borrans Road and Borrans Barn, the trench was re-excavated to record any remains of the extramural settlement disturbed. The cable trench was c.16 m east to west, and was no more than 0.6 m wide and 0.55 m deep (NY 3732 0359; Fig 1, AMNT), except where it was widened at a point c.9 m from its east end, and a 1 m by 1 m pit excavated in order to test the surviving depth of archaeological deposits. At no point was the base of archaeological deposits reached.

The base of the trench was marked by an undisturbed rough stone surface measuring c.3.9 m east-west, and truncated to the west by modern services. A disturbed pebble deposit, 0.3 m deep and probably comprising road metalling, had also been intersected in the easternmost c.1.5 m of the trench. The character of these features tallied with the Phase 5 road surface identified in Trench T1 a short distance to the north. To the west, a layer of mixed occupation debris, c.3.5 m wide, had been partly truncated. This abutted a drystone revetment or terrace wall to the west, constructed of laminar pieces of slate and founded upon a bedrock outcrop. Immediately to the east, a pit at least 1 m across was sealed beneath the occupation material, from which no artefacts were recovered. These features may be Roman, but could alternatively be associated with the considerably more recent presence of Borrans Barn. All other deposits were of modern origin.

The finds

Samian ware by Brenda Dickinson

Borrans Road produced 66 sherds, representing a maximum of 53 vessels, and the 81 sherds from the Sewerage Scheme comprise a maximum of 69 vessels. Sherds of three different vessels were found on the Borrans Barn site. This collection resembles previous material from Ambleside in being badly eroded by acid soil, so that many sherds are unassignable to vessel types, and dating relies mainly on the

decorated ware and the potter's stamp. The main point of interest in the assemblage is its significance in the wider context of samian from this part of north-west Britain.

The earliest material is first century, mostly Flavian-Trajanic, but one decorated bowl in the style of Germanus i (D5) might belong to the early-Flavian period. The proportion of first- and early second-century samian is relatively low, but the southern areas produced more Trajanic Central Gaulish ware from Les Martres-de-Veyre, 8.5%, than is normal for Hadrianic foundations in the hinterland of Hadrian's Wall, and, while some vessels may have been brought by the incoming garrison, it is not impossible that others were discards from any extramural settlement associated with the timber fort.

From the Hadrianic period onwards Lezoux accounts for nearly all the samian. The only exceptions are a decorated bowl of Cettus from Les Martres-de-Veyre, a second-century decorated bowl from Montans (dated c.A.D. 110-145) and a dish which may be from the same source. Late Montans ware is particularly common on the Antonine Wall and on Lowland Scottish sites and, although thinly distributed through most of the rest of Britain, there is a noticeable tendency for it to occur on the western side of the province. It has been noted on several sites in the North West, such as Chester, Manchester, Ribchester, Stanwix, Carlisle and Watercrook, and a few sherds were found at Ambleside in 1982 (Leech, 1993). This strongly suggests that some of the cargoes carrying Montans ware were offloaded at a west-coast port instead of in London, where many other examples have been found.

The Lezoux ware falls largely within the period A.D. 125-160, though a decorated bowl in the style of Paternus v (D4) is after A.D. 160. However, the complete absence of decorated ware of any of his contemporaries and of plainware forms which were introduced into the Central Gaulish repertoire at that time, such as 31R, 79, 80, or the gritted samian mortarium, Form 45, suggests that samian was not reaching the site in the later second century. In this respect the material resembles that found in 1982 (Leech, 1993). There is evidence in the potters' stamps recorded in the Armit Library of late-Antonine and possibly third-century samian at Ambleside, but the precise find-spots are not known, except for one, which seems to be Collingwood's Saturninus stamp from the extramural settlement (1921, 13); this is after c.A.D. 160. The decorated samian from the fort published by Collingwood (*op. cit.*, fig. 4) includes four bowls which he assigned to East Gaul. Two are certainly second-century, one before c.A.D. 160 (*op. cit.*, fig. 4, 10), the other (*op. cit.*, 1) not necessarily much later than that date, if at all. The others (*op. cit.*, 4, 6) are late first- or early second-century South Gaulish ware. This removes the evidence for any samian necessarily later than c.A.D. 160 from the fort and, given the rarity of any later than that from the extramural settlement, it is not impossible that both were abandoned for some decades from the mid-Antonine period.

The proportions of decorated ware in this assemblage, 70.5% from Borrans Road, 56.3% from the Sewerage Scheme, and the 44.0% from the 1982 excavations (Leech, 1993) are astonishingly high. The statistics are no doubt somewhat distorted by the difficulties of joining badly eroded sherds, and allowances must be made for the fact that some of the material may be rubbish dumped from the fort, but, even so, the results are remarkable. No convincing explanation suggests itself for this.

The samian offers evidence for continuity of occupation at a time when the

garrisons of many of the forts of Hadrian's Wall and its hinterland had been withdrawn to serve in Scotland. This evidence rests mainly on the decorated ware, which is nearly all by potters more strongly represented in Antonine Scotland than on Hadrian's Wall, such as Albucius ii, Butrio, Cettus, Secundus v, the Cerialis ii-Cinnamus ii group, the Large S Potter and Pugnus ii, or an associate (Hartley, 1972, 33). Therefore, although this is a comparatively small assemblage, it appears to be representative of a trend observed at several sites in the North West, such as Maryport, Ravenglass and Ribchester, for occupation, whether military or civil, to be continuous in the Hadrianic and early-Antonine periods.

Decorated Ware

Abbreviations: LG South Gaulish (La Graufesenque); MN South Gaulish (Montans); MV Central Gaulish (Les Martres-de-Veyre); LZ Central Gaulish (Lezoux). D = Dechelette, 1904; O = Oswald, 1936-7; Rogers = Rogers, 1974.

Borrans Road

- D1 1019: Form 37, South Gaulish (Fig. 8). A second-century Montans bowl, perhaps by Felicio iii. The motif on the left is perhaps an altar, as on a bowl from London with a mould-stamp and also one from Camelon with an internal stamp. The robed figure is similar, but perhaps not identical, to one on a Felicio bowl (with a mould-stamp) from Wroxeter. A bowl in his style, from Binchester, has the roundel and another, from Alfoldean, has the same saltire, roundels and basal wreath. c.A.D. 110-145.
- D2 208: three sherds from an eroded bowl of Form 37, Central Gaulish (Fig. 8). The freestyle scene includes a standing, nude figure and a bird to the left (neither illustrated by Oswald, 1936-7) and a leopard to the left (D.971 = O.1533/4). The ovolo might be one used by Priscinus (Rogers B229), which occurs with the leopard on a stamped mould from Lezoux (Musée de Roanne). The basal wreath of ram's-horn motifs (Rogers G361?) is on a stamped bowl of Sissus i from Lezoux (Bémont, 1977, 138, P611). On balance, this is more likely to be by Priscinus than Sissus, but the potters were contemporaries, and both were associated with Quintilianus i. c.A.D. 130-150.
- D3 156: Form 37, Central Gaulish, probably by Docilis i (not illustrated). The sherd shows a slave (D.374 = O.647) and a small, double medallion in an adjacent panel. The slave is on a signed bowl from Poitiers and the medallion is on one in his style from Little Chester (Hartley and Dickinson, 1985, 184, 26). c.A.D. 135-155.
- D4 113 + 115: five sherds of Form 37, Central Gaulish (not illustrated). The ring-tongued ovolo (Rogers B105), horizontal and vertical borders (Rogers A2, A12, respectively), bird (D.1011 = O.2324), double medallion and small rings were all used at Lezoux by Paternus v. See Stanfield and Simpson, 1958, pls. 104-5. c.A.D. 160-195.

Sewerage Scheme

- D5 T1, B, 060: Form 37, South Gaulish (Fig. 8). The freestyle scene includes a

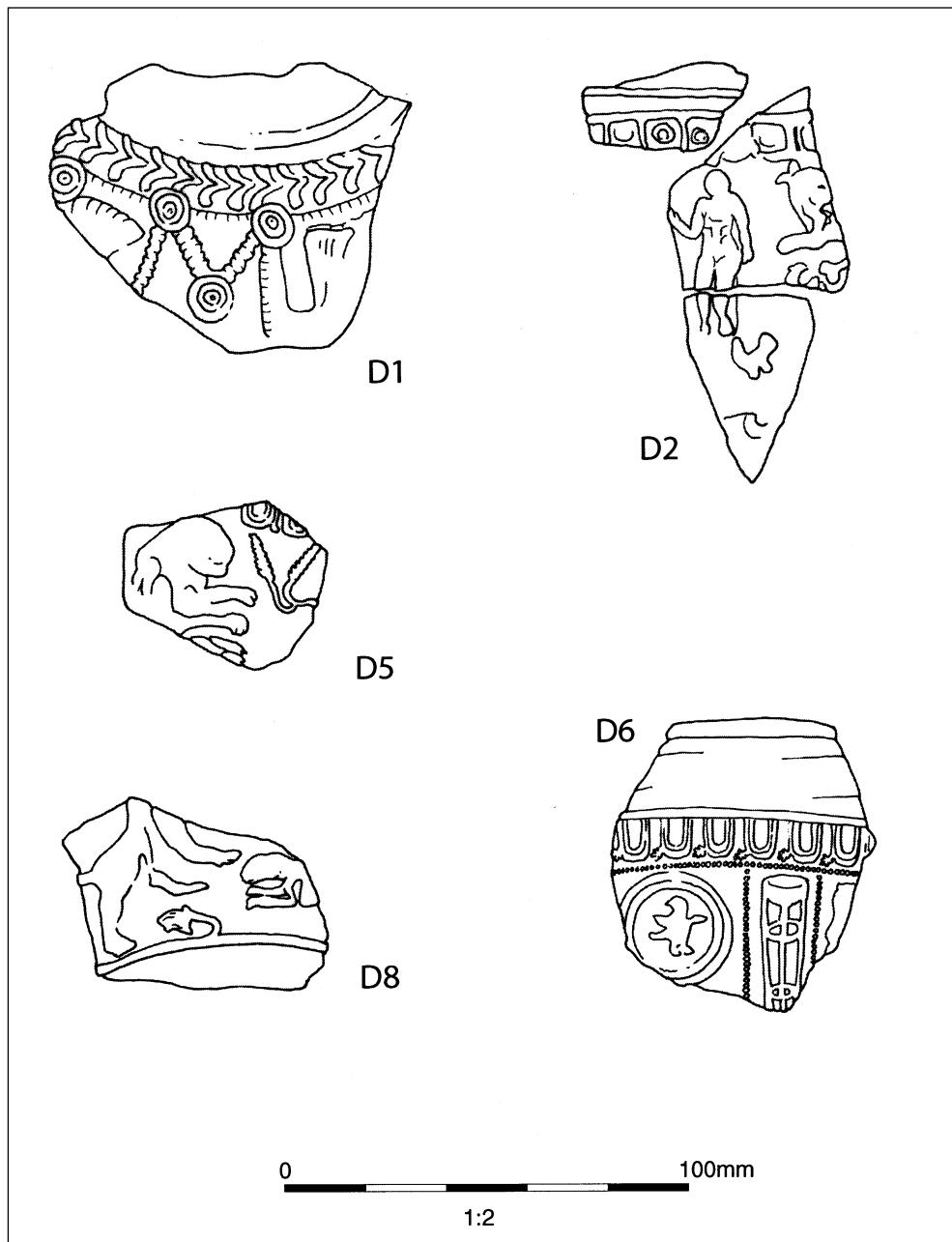


FIG. 8. The samian.

lion to the right over conventional rocks and a tree with spindles. The ovolو with four-pronged tongue is one commonly used by Germanus i (see Mees, 1995, Taf 71, 4, from York). It occurs with the tree on a bowl from Rottweil with the GERMANIF stamp + SER (*op. cit.*, Taf 89, 1). These two separate stamps, which usually appear on Germanus's later bowls, were used together at both La Graufesenque, where this was made, and Banassac. The rocks are on Form 30 stamped GERMANI(F) from Salzburg (*op. cit.*, Taf. 75, 4). The lion is not illustrated by Oswald, 1936-7. *c.A.D. 70-90.*

- D6 T1, J, 044: four fragments of Form 37, Central Gaulish (Fig. 8). A bowl in the style of the Large S Potter, with his rosette-tongued ovolو (Rogers B24). A panel with a double medallion containing a bird to the right (D.1038 = O.2315) is on a bowl by this potter from East Studdale, Kent. The tripod in the adjacent panel (Rogers Q21) occurs with the ovolо on a bowl from Castleford (Rush *et al.*, forthcoming). Another panel includes a pair of gladiators (D.582 = O.1001) as on a bowl from London (at Corbridge), with the S-motif (Stanfield and Simpson, 1958, pl 76, 31). *c.A.D. 125-140.*
- D7 T4, F, 405: Form 37, Central Gaulish (not illustrated). The ovolо (Rogers B114) and wavy line (Rogers A23) were both used at Lezoux by Austrus and Butrio. *c.A.D. 125-145.*
- D8 T4, F, 405: Form 37, Central Gaulish (Fig. 8). A bowl in the style of Cettus of Les Martres-de-Veyre, with his distinctive leaf (Rogers J144), as on a signed bowl from Colchester (Stanfield and Simpson, 1958, pl 141, 4). The lion (a smaller version of D.782 = O.1498) and bear (D.820= O.1627) are on a bowl from London (*op. cit.*, 16). *c.A.D. 135-160.*
- D9 T1, I, 048: Form 37, Central Gaulish (not illustrated). The ring-tongued ovolо (Rogers B107), used in conjunction with an astragaloid border (Rogers A9), is typical of the work of Albucius ii. *c.A.D. 150-180.*
- D10 T1, modern, 009: Form 37, Central Gaulish (not illustrated). The ovolо (Rogers B52) occurs with a straight line below, as here, on bowls in the style of Secundus v, but has not yet been noted on a stamped example. *c.A.D. 145-175.*
- D11 T1, M, 021: Form 37, Central Gaulish (not illustrated). The ovolо (Rogers B223), in conjunction with a straight line, as on D10, above, suggests the work of Secundus v but, similarly, has yet to be found on a stamped bowl. *c.A.D. 150-180.*
- D12 T1, M, 021: Form 37, Central Gaulish, showing Venus at an altar (D.184 = O.322; not illustrated). Probably by either Cinnamus ii, on whose stamped bowls it appears, or Secundus v, as on a bowl in his style from Newstead. *c.A.D. 150-180.*

Potter's Stamp

- S1 BR 91 9030: Form 18/31R, Central Gaulish, stamped PATE[RNI.]M. Almost certainly a stamp of Paternus iii of Lezoux, to judge by the style of the

lettering. This potter's output all seems to be Antonine, with emphasis on the earlier half of the period, as shown by a high percentage of Forms 18/31 and 27 and the occurrence of his stamps in the Rhineland. However, one is recorded in the Danube area, where trade with Lezoux continued until the outbreak of the Marcomannic Wars. c.A.D. 140-170.

Roman coarseware by Chris Howard-Davis and Louise Hird

In total, 493 fragments of Roman coarse pottery were recovered (321 coarseware, 148 amphora, and 24 mortaria). The largest groups were recovered from Trench T1 (236 fragments) and from Borrans Road (198 fragments), although c.37% of the latter were unstratified. Much of the material was in poor condition, small sherds, often abraded, suggesting that some of the excavated areas had suffered considerable disturbance, with only material from the earlier phases securely stratified. As is common in the North West, some fabrics had been severely eroded by acid soils, especially the orange wares, thus exaggerating the battered appearance of the group. This was not a wide range of fabrics (six coarseware, three amphora, three mortaria). The coarsewares were dominated by Black Burnished Ware 1 (Fabric 1; Gillam, 1976) and locally produced oxidised and reduced wares (Fabrics 11 and 12). Black Burnished Ware 2 (Fabric 2) was present in small quantities, but its identification was hindered by its poor condition. Fabrics 3 and 4, both oxidised, were not provenanced.

Small but significant amounts of mortaria (Fabrics 31-3) were also noted, all apparently in locally produced orange fabrics, for the most part (Fabrics 31-2?) deriving from Carlisle. Amphora was present in reasonable quantities, especially those for South Spanish olive oil (Peacock and Williams (1986) Class 25; Fabrics 21-2). The range of fabrics and forms suggest a Hadrianic start date for activity near the fort, and a more general second century date for its continuance. There is, however, no evidence from the pottery to suggest occupation continued into the third century. Although imports are present, the assemblage suggests a reliance on local producers, presumably drawing on the trade and distribution network based on Carlisle. The group is sufficiently heterogeneous to imply no specialisation, and thus is best interpreted in a domestic context, being fairly typical of many extramural settlements in the region.

Fabric Series

- Fabric 1 Black Burnished Ware 1
- Fabric 2 Black Burnished Ware 2; poor preservation made recognition difficult
- Fabric 3 Oxidised orange fabric with cream slip
- Fabric 4 Fine-textured, white with small inclusions
- Fabric 11 Unidentified grey ware
- Fabric 12 Unidentified oxidised ware
- Fabric 21 Rough, sandy buff; usual fabric for Peacock and Williams (1986) Class 25, South Spanish olive oil amphorae

- Fabric 22 Sandy, orange amphora, with cream slip; Peacock and Williams (1986) Class 25
- Fabric 23 Fine-textured, buff amphora, slightly micaceous; Gaulish?
- Fabric 31 Hard, cream or creamy pink mortarium, with quartz sand and some red particle inclusions. Mixed quartz, red and grey tituration grit (Carlisle fabric 352); northern, probably Carlisle area
- Fabric 32 Rather soft, sandy orange mortarium, with cream slip; mixed tituration grit
- Fabric 33 Rather soft, pinkish-orange, fine-textured mortarium; mixed tituration grit of red and brown. Similar to Fabric 31 but without the slip

Brick and Tile by Andrew Dunwell

The Roman material comprised seven cuboid (floor) tiles; four small (tessera-sized) tiles; part of two roof tiles (*tegulae*); a small square tile of uncertain function; and 24 brick or tile fragments of uncertain form. The condition is generally abraded and fragmentary, the range of identifiable forms being narrow, most of the material a soft, light red or reddish yellow fabric with a fine, powdery consistency, although small numbers of harder fired pieces, with a deeper hue, are present. Several of the pieces have been scorched. None was found in a structural context, though most (17 fragments) were associated with occupation deposits of Trench T1, Phase 4, and the Trench T1 Phase 5 road foundation, supporting the theory that the Phase 4 layers represent redeposited demolition spreads associated with a building which formerly flanked the road.

The Metalwork by Chris Howard-Davis

A total of 238 fragments of ironwork, one of lead, and one of copper alloy was recovered, all in very poor condition. Nail and hobnail fragments accounted for approximately 75% of the ironwork, most being either hand-forged, square-sectioned shafts with flat round heads (Manning, 1986, type Ib), or the small hobnails characteristic of Romano-British footwear. A socketed object from a modern deposit in Trench T1 appears to be a *ballista* bolt of typical form.

The other metalwork comprises a single lead slingshot (T1, O), which is not unexpected in close proximity to a Roman fort, others having been found elsewhere in Ambleside (Leech, 1993). In addition, a copper alloy buckle, probably of eighteenth century date, was recovered.

The Glass by Chris Howard-Davis

Twenty-nine fragments were found, mostly deriving from a range of domestic vessels, notably wine and beer bottles in dark greens and amber/browns, dating to the late nineteenth and earlier twentieth centuries. Two very small fragments are probably of Roman date (both from T1): a body fragment, extremely thin (<1 mm), in a bubbly natural bluish metal, and a thin, very good quality colourless metal which appears to bear a narrow wheel-cut groove. Both fragments are in excellent condition; such good

preservation is characteristic of Roman glass in the North West.

A bead appears to be an incomplete large globule of poor quality opaque dark blue glass. Whilst its surfaces are abraded, it was broken in antiquity and the broken surfaces ground flat. The perforation appears to have been drilled, the use of such a technique being unusual during the Roman period and this, considered with its size and shape, implies that it is not Roman, even though it came from a layer that seemed securely stratified (T1, L). The use of glass cabochon as gemstones is common in both the Roman and early medieval periods, when it is thought that colour and appearance were perceived as of more importance than inherent value; numerous instances can be cited from Roman jewellery and, relatively locally, a small blue glass cabochon from Fremington, near Brougham (Howard-Davis, 1996) has been dated to the seventh or eighth century.

Chipped stone by Bill Finlayson

Six chipped stone artefacts from the Sewerage Scheme (T2) are slightly weathered or patinated, with the exception of one of the flint flakes, which appears very fresh. These are probably all prehistoric and, when combined with the absence of Roman artefacts in this area, may indicate the presence of prehistoric activity in the area, possibly a Mesolithic site on the lake margins.

The leather by Chris Howard-Davis

Of the four relatively small fragments of leather, three (T1, A) appear to represent two objects. A fragment of plain sheet leather is from a composite item, with a curving seam along one edge, the form of which suggests that it does not derive from a shield cover. The other two fragments do not join but they are likely to derive from the same object or were generated as waste in the same process. Although quite carefully made, there seems little rationale to their shape and they do not appear to have been stitched. Thus, unless they were intended to be glued in place as decorative appliqués, they may be waste offcuts from the production of shoe uppers.

Wood by Robert Sands

The material, all from Trench T1, can be split stratigraphically into two groups. Five pieces from Phase 1 are stakes, of alder, hazel and oak, apparently relating to a single structure. No complete pieces are included and, on some, radial splitting suggests periodic drying, possibly reflecting fluctuations in the water table (French and Taylor, 1985). The toolmarks indicate the use of a metal blade and in one case (stake 091) signatures survive. Associated with these were 14 unworked small roundwood fragments, ranging in diameter from 6 mm to 15 mm.

The key pieces from Phase 3 are two baulks (076, 079), timbers with cross-sectional measurements approximately equal and greater than 100 mm (Crone and Barber, 1981). Both may be piles for a reasonably substantial structure. Pile 076 is of alder (*Alnus*) and pile 079 is of oak (*Quercus*). Where toolmarks survive the preservation is good, and signatures are present, all indicating the use of a sharp broad-bladed iron tool, which, for pile 076, was at least 83 mm wide.

Pollen Analysis by Ciara Clarke

The section analysed (Trench T1) extended through Phases 1 and 2, with the upper limit defined by the construction of the Phase 4 foundation. The sample derives largely from deposits relating to the Roman occupation of the site, the evident exception being the basal level (Phase 1, A), which may represent an earlier ground surface. The extent to which the deposits represent natural accumulation is not clear, but it is likely that dumps of anthropogenic material are incorporated in the sampled section. Changes in the pollen profile could thus reflect discrete lenses of material, local vegetation change, or any combination of these.

Abundant and well-preserved pollen was recovered from all samples (Fig. 9). The sequence is dominated by pollen of alder (*Alnus*) and Coryloid pollen (probably hazel), but with other tree taxa present in varying amounts, including oak (*Quercus*) at levels up to c.25%. Alder is the dominant tree taxon, comprising up to 60% of the relative pollen sum. The predominant pollen source is likely to have been mixed woodland.

At c.450 mm, a rise in bracken (*Pteridium*), coupled with a decline in grass (*Poaceae*) values and a rise in charcoal, is suggestive of anthropogenic influence. Bracken spores may derive from a layer of apparently deliberate deposition which occurs in this section and has previously been located in the vicinity, sometimes in association with piles, stakes, twigs and stones (Burkett, 1965; 1977; Cowper, 1902).

An increase in grassland is signified by rising grass pollen and low tree pollen values towards the top of the sequence, associated with the pastoral indicator *Plantago lanceolata* (Behre, 1981). A rise in the amounts of Daisy family (Compositae Liguliflora-type) and Devil's-bit Scabious (*Succisa pratense*) suggest the grassland may have comprised areas of wet meadow or pastures. No evidence of arable agriculture was detected. At the top of the sequence there was a sharp decline in grass values and pastoral indicators, coupled with increasing tree pollen values, possibly reflecting deliberate deposition of anthropogenic material or perhaps a phase of woodland regeneration.

Discussion

The combined results of the five projects reported above provide further evidence regarding the nature and date of the extramural settlement at Ambleside, and add to the patchwork of previous discoveries considered most recently by Leech (1993).

Prehistoric activity

Despite the large area in which work was undertaken, only minimal evidence for prehistoric activity has been recovered, just seven chipped stone artefacts; remains of Neolithic to pre-Roman Iron Age date were notable by their absence. The most obvious explanation for such a lack is that the local environment was not conducive for either settlement or agricultural activity. The level of Windermere never seems to have been lower than at present (Pennington, 1947, 139), and thus any prehistoric settlement is likely to have been towards the present town, with hunting, wild-fowling, or foraging in a marshy lake margin environment (B. Finlayson *pers. comm.*).

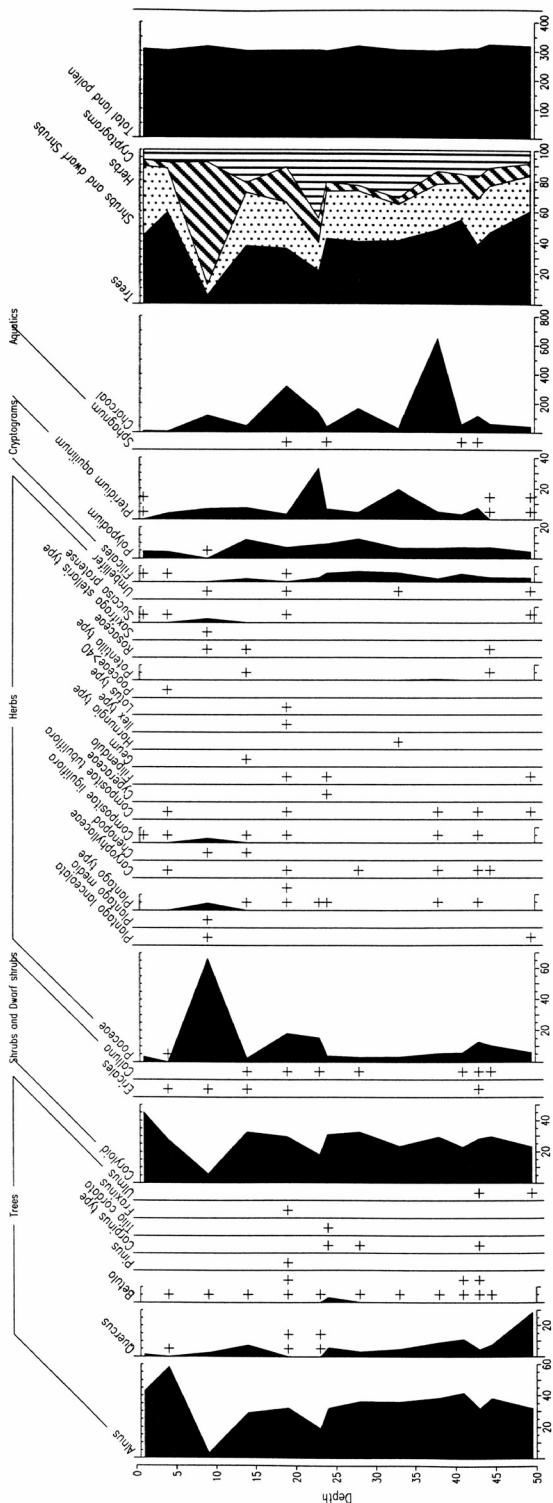


FIG. 9. Pollen diagram, Trench T1.

Environmental context of the Roman occupation

The extensive preservation of organic remains clearly demonstrates that the extramural settlement lay in an area of damp, if not marshy, land. The palynological data have also provided a general indication of a damp environment when the Romans arrived on the site. The arboreal species present are consistent with the wood recovered from the settlement, and the dip in oak pollen may be related to its widespread felling to provide timber for the fort and extramural settlement. The timber fort is likely to have been damp, although its defences would have assisted drainage, perhaps underlined by the decision to raise the ground level by dumping as much as 1 m of clay to provide a level foundation for the Hadrianic fort (Collingwood, 1916, 60-1).

Ambleside within the context of north-west Roman occupation

Although traditionally thought to have been founded during the Agricolan conquest of the North West in the late A.D. 70s, the foundation of the fort was placed by Potter within the later Flavian period (Potter, 1979a, 356, following Hartley, 1966), its construction apparently reflecting the subsequent conquest and consolidation of the Lake District, which had been ignored by earlier governors in their northward pushes along the Eden/Lune corridor (Higham, 1986, 153). The precision of this chronology is now being questioned (Shotter, 2000), since several sites are providing hints of earlier occupation. Although somewhat isolated at the head of Windermere, the timber fort at Ambleside would have been broadly contemporary with that at Watercrook (Potter, 1979a, 356), and presumably formed a focus and supply base for troops operating in difficult terrain. Its location implies that a partially water-borne supply route operated from the south, rather than overland from the east. As consolidation of the area progressed, a Trajanic fort was built to guard the Hardknott pass (Bidwell *et al.*, 1999), extending the military network westwards as far as the coast at Ravenglass (Shotter, 1984, 22), thus effectively bisecting the Lake District and facilitating the policing of an otherwise inaccessible area. Evidence suggests, however, that Ambleside was temporarily abandoned soon after (Potter, 1979a, 358).

The construction of Hadrian's Wall led to a consolidation of Roman control. Many forts were renewed or rebuilt in stone, including Ambleside, Hardknott and Low Borrowbridge (Shotter, 1997), and a fortlet (replaced later in Hadrian's reign by an auxiliary fort) was built at Ravenglass (Potter, 1979a), although there are earlier coins from this latter (Gerrard and Mills, 2002). The Antonine advance into Scotland in the A.D. 140s meant that many north-western forts were evacuated, or drastically reduced in garrison, as troops were sent north, but there is little evidence for this at Ambleside, suggesting that the fort remained important to the administration and policing of the area.

Character of the extramural settlement

The various investigations of the extramural settlement have revealed a limited range of recurring elements – principally organic layers, roads, boundaries, stone foundations, and industrial activity. Funerary remains have also been confirmed at

two locations (Burkett, 1965; 1977), but the recent work has not added to these.

Spreads of organic remains associated with Roman artefacts north of the fort included brushwood with worked twigs, layers of bracken, arrangements of stakes, and leather artefacts. These lay at the base of stratified sequences; at two points (Trench T1; Cowper, 1902, 33) they were sealed beneath a road. Their similarity might suggest a common purpose, such as trackways and working or building platforms on wet ground, where datable, potentially of the Flavian-Trajanic period. However, the discovery of clay and gravel layers containing twigs and branches in the Rothay Road evaluation, well to the east of the known extent of the Roman extramural settlement, warns against uncritical acceptance of such deposits as necessarily Roman, or even anthropogenic, without positive evidence from artefacts or structural remains.

Both timber and stone roads have been identified at various points to the north and north-east of the fort, many no doubt representing minor roads within the extramural settlement. Only one major road can be traced with any confidence, running northwards from Galava Gate, largely beneath Borrans Road (Cowper, 1902; Burkett, 1977; Leech, 1993), probably leading from the fort, although whether from its north or east gate is not certain. The road described above may well be part of this, and the work at Borrans Barn suggests that it turned south-south-west, heading for the north gate and skirting the eastern side of the rocky knoll. It must, however, be noted that Collingwood's plans (1916, fig. 1; 1921, fig. 1) appear to show roads leading towards the "plateau" occupied by extramural settlement, rather than towards Borrans Road.

Stone foundations have been located at several points within the settlement, but only in one case was the excavated area of sufficient size for their form to be determined. There the foundations were rectilinear and kerbed, the platforms being of small size, less than 8 m across: Burkett (1965, fig. 1) defined one example as c.4.5 m by 3 m, but it is unfortunate that Collingwood (1921, 13) provided no structural detail of the "floor levels" exposed to either side of a road over an area of 65 m by 20 m on this "plateau" north of the fort. The absence of any masonry superstructure associated with the platforms, combined with the common occurrence of timber strip-buildings (*cf* Salway, 1965, 167-70) in such settlements (e.g. Watercrook; Potter, 1979a), suggests that timber-framed structures might be expected. In the absence of any post settings, it can be argued that any structures rested on sleeper beams; certainly planked floors must have been present, since the stones were often uneven, and there is little evidence of occupation debris having accumulated directly upon them. Leech (1993, 53-5) observed wattle and daub wall foundations to the north of Galava Gate, and this evidence perhaps points to the character of the buildings. Ceramic evidence indicates that these foundations appear to be of Hadrianic-Antonine date, and thus are related to the stone fort. The fact that one of these platforms (Trench T3) coincided with the proposed line of the ditches of the timber fort (Collingwood, 1916, fig. 1), and that these were not encountered, suggests that the form of the north-east corner of the timber fort requires further investigation.

Industrial activity appears to have concentrated in the area north of Galava Gate, since extensive evidence of industrial material was identified there. Little *in situ* structural evidence was observed, the majority of the remains comprising

redeposited industrial waste, containing debris indicative of secondary iron-working. By contrast, little industrial debris has been identified south of Galava Gate.

Of necessity, the present fieldwork was concentrated in areas investigated by previous researchers, and thus only limited information regarding the extent and layout of the extramural settlement has been added. The limits of Roman settlement plotted by Leech (1993) have been largely confirmed, indicating a concentration on either side of the road leading north from the fort. To the north, probable traces of land or property boundaries running eastwards from the north-south road have been identified.

The pottery assemblage dates exclusively from the late first to late second century A.D. Only a small proportion of the material was of Flavian-Trajanic date, suggesting limited extramural activity contemporary with the occupation of the putative timber fort, and much of this was residual. Although no extramural buildings have been positively identified as Flavian, the organic remains in Borrans Field appear to be of this date. The majority of the building activity recorded appears to be Hadrianic and Antonine in date, and is paralleled by the earlier discoveries of Burkett (1965) and Leech (1993).

Evidence indicates that the extramural settlement, unlike the fort, was largely, if not completely, abandoned prior to the end of the second century A.D., although Leech (1993, 70) and Collingwood (1921, 13) recovered ceramic evidence suggesting that activity extended into the early third century. The most likely explanation for its decline would have been an abandonment of the fort by its garrison, upon whom the inhabitants of the settlement are likely to have been dependent for their livelihoods and security. Dickinson (*supra*) suggests that the dates of the samian from the fort are consistent with its abandonment for several decades from the mid-Antonine period onwards: this would provide a plausible context for a substantial abandonment of the extramural settlement.

Conclusions

These five projects have added detail relating to the character, chronology and environment of the extramural settlement. However, there are still many *lacunae* in our general understanding of the layout and development of the settlement. The Sewerage Scheme in particular has provided an indication of the value of controlled fieldwork at this site, even in the extensively disturbed ground beneath Borrans Road. The record of stratified remains and artefacts from this work has provided a much more detailed account than can commonly be gleaned from watching briefs during development and the widespread preservation of waterlogged organic deposits, combined with the demonstration of well-preserved pollen and plant macrofossil remains (Holden, 1994), bode well for better understanding the environmental context and economic basis of the settlement.

Acknowledgements

Advice and assistance on archaeological matters was provided by Bette Hopkins, then Cumbria Sites and Monuments Record Officer, Henry Owen-John, Gerry Friell, and particularly Tony Wilmott of English Heritage, who also acted as a

referee and was most generous with his time, interest and advice. The analysis element of these projects and this report have been grant aided by English Heritage.

For CFA, the assistance of Phil Turner and Dominic Scott of SLDC Technical Department, and Mark Carroll of The National Trust, is gratefully acknowledged. The co-operation of Ennis Ltd assured the smooth progression of the watching brief and excavation of Trenches T1-5. Thanks also go to Geraint Coles of the Department of Archaeology, University of Edinburgh and AOC (Scotland) Ltd, for assessing the potential for palaeoenvironmental study. Figures 5-7 were prepared by George Mudie. For Oxford Archaeology North, thanks go to the staff of the then North West Water Authority, particularly Chris Wood. The fieldwork was undertaken by John Godbert, Helen Quartermaine and Denise Drury co-ordinating the post-excavation processes, and Emma Carter acting as illustrator. Rachel Newman acted as editor. Technical reports for all this work have been produced, copies of which are lodged with the Cumbria Sites and Monuments Record and are listed below. The full archive, comprising paper and electronic records and reports, and the finds, will be deposited with the Armit Trust, Ambleside.

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tcwaas_003_2004_vol4_0007