

A Roman fort at Inveresk, Midlothian

the late I A Richmond

Edited and prepared for publication by W S Hanson* with reports
by J P Gillam, Grace Simpson and R J A Eckford

INTRODUCTION

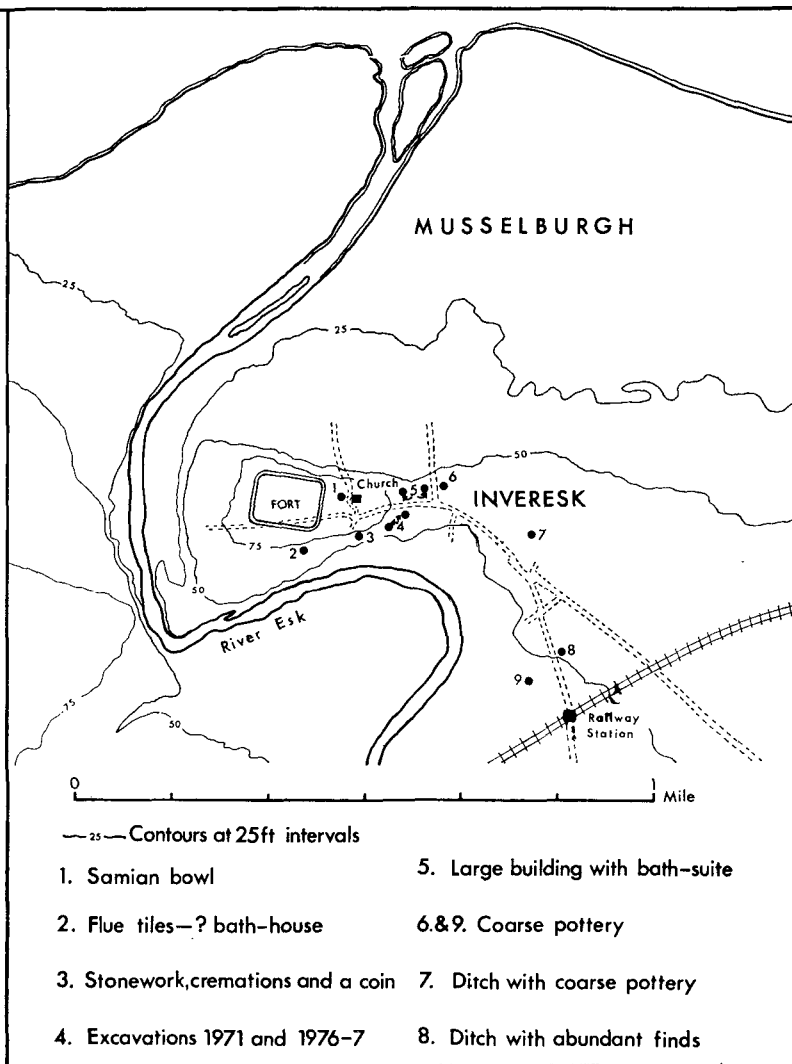
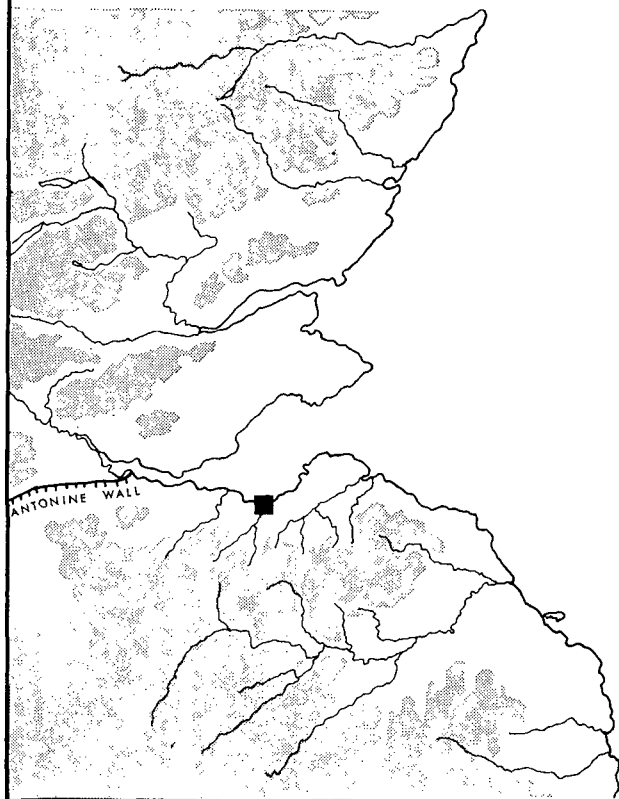
The editor was invited by the Scottish Development Department to consider the possibility of excavation at the western end of the fort at Inveresk ahead of the redevelopment of the Inveresk Paper Mills site and the proposed extension of the cemetery, which already covers most of the site (fig 1). The former proved not to encroach upon the site of the fort, while the latter is a long-term threat, so that no excavation has yet been undertaken. However, in the course of examining the evidence from previous work on the site, it was noted that the published plan in the *Journal of Roman Studies* for 1948 (38, pl 12) acknowledges this society for the block. Mr Gordon Maxwell recalled plans of the excavation being presented to the Society on the death of Sir Ian Richmond. With the assistance of the librarian these were located in the library of the Society and are now held in the National Monuments Record in Edinburgh. It was clear on examination that these plans were annotated for publication. It seemed logical to assume, therefore, that a text might also exist. An examination of the Richmond Papers in the Ashmolean Library, made possible by the kind offices of Professor S S Frere, Mr B McGregor, the Librarian, and with the particular help of Mr P Bartholomew, rapidly revealed a typescript. Since it was Richmond's stated intention to publish the excavation report in this journal (*J Roman Stud*, 37, 1947, 165), and the Scottish Development Department wished to see the publication of an excavation which they had helped to fund, the editor applied to the Committee for the Ashmolean Library who kindly agreed to the publication of the typescript in their care.

The body of the text stands as written by Richmond some 30 years ago. The editor has updated some references and added comments in additional notes where more recent work has shed further light on a particular hypothesis. All such notes have been initialled for the sake of clarity. Mr Gillam and Dr Simpson have been kind enough to undertake the updating of their reports on the pottery. Mr Gillam was able to relocate the coarse pottery, but the samian has not come to light. Figures 2 to 5 are as originally prepared with one minor addition to figure 2. Figure 1 was drawn for the editor by Miss Amanda Clydesdale. The photographs are from negatives housed in the National Monuments Record in Edinburgh. These have been selected and captioned by the editor after close scrutiny of the text, plans and other unpublished photographs.

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INVERESK

LOCATION MAP



—25— Contours at 25ft intervals

- | | |
|-------------------------------------|-----------------------------------|
| 1. Samian bowl | 5. Large building with bath-suite |
| 2. Flue tiles—? bath-house | 6.&9. Coarse pottery |
| 3. Stonework, cremations and a coin | 7. Ditch with coarse pottery |
| 4. Excavations 1971 and 1976-7 | 8. Ditch with abundant finds |

FIG 1 Inveresk: site location

THE EXCAVATION

The Roman site at Inveresk, 6 miles E of Edinburgh, stands on the high eastern terrace of the River Esk, at the point where this terrace, on reaching the sea coast at Musselburgh, narrows down to a thin tongue of high ground overlooking harbour and river-crossing (fig 1). Earlier discoveries, noted since 1565 and charted since 1783, will be discussed later. The excavations about to be described are due to a chance event in the autumn of 1945, when gravedigging in the new western extension of Inveresk churchyard disinterred a broken sandstone pilaster (for the location of the discovery see fig 2)¹. This object was reported to Dr James Richardson, at that time Inspector of Ancient Monuments for Scotland in the Ministry of Works and an Honorary Curator of the National Museum of Antiquities, who wisely suggested that an excavation might be undertaken to determine the associations of this obviously Roman architectural fragment. The suggestion was welcomed by the Inveresk Churchyard Committee² without whose ready consent and public-spirited collaboration our work would have been impossible: for the first investigation, proceeding from the known to the unknown, necessarily lay in the graveyard, even though work could, of course, there be undertaken only in unoccupied grave-plots or in such minor paths as were surfaced with ash as opposed to asphalt. When the way thus lay clear, the Council of this Society generously voted sums of money for three spells of work, in the spring and autumn of 1946 and the spring of 1947.

To begin the inquiry, on 15 April 1946, three contiguous lairs, or plots, of undisturbed ground were examined (fig 2), in the SE corner of the new extension to the cemetery. The first excavation, alongside the S wall, revealed a clay-and-cobble wall-foundation, two feet wide, with a flag footing in position towards the west, running roughly from ESE to WNW and flanked by floors of lime concrete. The floor to S of the wall was broken at right-angles to the wall-foundation, by a slot for a beam 1 ft wide and 4 in deep, and by a well-cut post-hole, 2 ft square, for the upright of a stout wooden partition. The floor to N was broken by an irregular post-hole, 18 in wide and 32 in long, with which no slot was connected. The remains thus revealed themselves as an internal wall in a concrete-floored building. A second excavation was then made alongside the S end of the E wall of the cemetery extension. This produced another clay-and-cobble foundation, 2 ft 2 in wide and exactly similar in orientation and construction to that already described. It also was bordered on the S by traces of a lime-concrete floor, but to N lay a gravelled street, underpinned in the sandy subsoil by a substantial bottoming of large stones, mostly re-used building stones, as if the street were not a primary feature. The road-metalling was traced northwards for over 8 ft, and was picked up again in a third series of vacant plots, a little further N, so that its total width could be determined as 23 ft. Here, too, the corner of a building was found on the edge of the street: it was orientated as before and exhibited two courses of masonry, the upper 8 in high, the lower 10 in high, in local creamy sandstone³, perhaps from Carberry Hill (see below p 303), bedded upon clay and cobbles (pl 15a). Much food refuse occurred at this point, chiefly the shells of large oysters and mussels.

The shape of things to come was now appearing. The three trial excavations had revealed two parallel rows of buildings, separated by a street 23 ft wide. Their regular and uniformly laid floors of lime-concrete suggested standardised work and, therefore, official military buildings, belonging presumably to a fort. If so, they would be either barracks or stables, or both, and a meaning could be assigned to the angle comprised within the length of the northernmost building. This would fit best as the angle forming the L-shaped centurion's or decurion's quarters in a barrack-block. It was not possible to prove this by excavation further northwards; but confirmation of another kind was supplied by Messrs David Robertson and Alexander Proudfoot, of

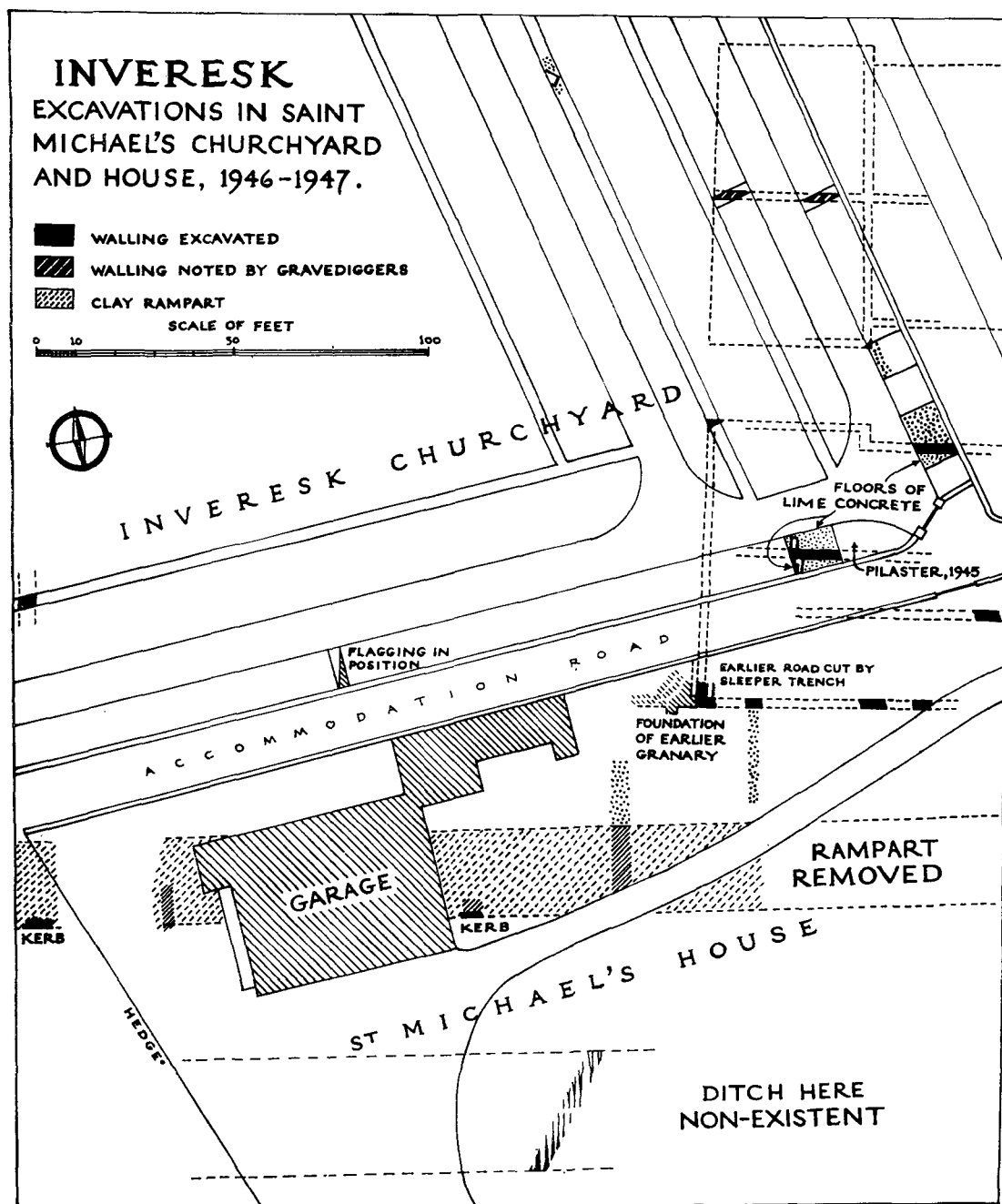


FIG 2 Inveresk: excavations in St Michael's churchyard and house

the cemetery staff, who pointed out two graves⁴ in which they had encountered walling running in the same direction as the walls now being discovered (fig 2). This occurred at 36 ft northwards, exactly the position where, in a single barrack, the outside wall or, in a double barrack, the medial wall of the officers' wing would lie. Westwards, however, they reported nothing except deep made ground.⁵

A working hypothesis as to the significance of the remains discovered could now be formed. The deep made ground to westward might represent the buried ditches of a fort. The buildings occupied roughly the southern half of the narrow hog-back forming the site. Suppose, then, that they represented the W end of a fort lying E and W along the hill, how and where could this hypothesis be put to the test? For propriety and economy alike precluded random digging in the graveyard.

A good friend had in fact for some while been at hand. The most constant and indefatigable spectator of our labours had been Mr Charles Cowan, the owner of the adjacent estate of St Michael's. In these grounds, despite difficulties presented by the existence of a garage, carriage-drive and shrubberies, operations could be conducted on a scale impracticable in the cemetery: and it was with the ready consent of Mr Cowan and his family that work was now transferred southwards, in order to test whether the buildings continued in this direction and whether they were still uniformly planned.

The first trench, just inside the back gate of St Michael's, struck a fragment of clay-and-cobble foundation, over 2 ft wide, of which only the S face survived. It was orientated as before and presumably bounded a continuation of the southernmost floored area already encountered inside the cemetery, though the floor no longer existed. Next, a still more southerly and parallel wall, 2 ft 5 in wide, was found and traced westwards. It was bordered by a street to S, at least 24 ft wide, but the carriage-drive prevented a full examination. An attempt was then made to reach the SW corner of the building. It was necessary here to invade a hen-run, and deep trenching was demanded. At the first point of contact further E the Roman walling had lain just below the modern surface; but it rapidly dipped, following a slope much disguised by the modern surface, and at the point now examined it was five feet deep. Still further W there was located well-built walling two courses high and 2 ft 2 in wide, still running westwards. It was bordered on the N by a flagged floor, laid against a sleeper-trench, 18 in deep, for a wooden beam or wainscot. This trench contained Roman pottery, but it seemed to suggest that internal divisions carried the building at least another compartment westwards, out of reach of excavation. But it also became clear that the building now discovered was not the first structure on the site. The masonry of the wall was laid without the normal foundation, directly on top of a road surface of fine gravel bedded upon tightly-packed blue river-cobbles. This roadway continued below the flag flooring and was actually cut through by the sleeper-trench. Evidence had thus been obtained from structures in position for the existence of two periods of construction, as already deduced from the use of building-stones for road-bottoming. The contrast in structure between the earlier and later roads will also be noted, the one of clean fresh cobbles, the other of re-used builder's rubbish.

At this point the excavations, which had lasted from 15 April to 27 April, were suspended until 9 September. When they were resumed, work was again commenced in the cemetery, in an attempt to determine the westward limit of the buildings discovered there. Taking into account the walling reported by Messrs Robertson and Proudfoot, a short trial trench was cut in the second narrow ash-path to W of the E wall of the cemetery. This struck the NW corner of the southward building, with street to W and N, in a position so related to its N wall as to show that this building also had an L-shaped W end. But the discovery further indicated that trenching in

April must have missed the SW corner of the building almost by inches, and a note was made to return to this point in due course. The more immediate requirement was information as to defences. Accordingly, a trench was first cut S of the carriage-drive, opposite the easternmost fragment of the S wall of the southernmost building. This revealed, immediately below the garden soil, undisturbed sand in hard laminated beds. Neither a cap of artificially placed material nor an excavation for a ditch was visible, an archaeological blank of the clearest kind, unhesitatingly confirmed by Mr R J A Eckford, of H M Geological Survey, who examined the section with the writer. Trial pits sunk further eastward were equally devoid of rampart material or of buildings, thus revealing that all upstanding remains of the Roman occupation had here been totally removed and that no ditch existed. It was then determined to try further W, where the Roman remains were already known to lie so deep that removal seemed precluded. Now Mrs Cowan generously sacrificed her well-kept washing-green in the cause of knowledge.

The new trenches were as fruitful as the previous ones had been barren. The first, cutting along the E edge of the green, very soon yielded the southern boundary of the road already discovered further E, and the surfacing was found to terminate against the back of a beaten clay rampart, still standing vertical to a height of three feet, very much as at Caerleon (Nash-Williams 1952, 18 & pl Va)⁶. A move was then made to the SW corner of the green, next to the garage, where a short trench disclosed the front of the rampart, still 2 ft high and edged by a neat kerb of fresh hammer-dressed sandstone blocks, of which five were traced in a straight line. The width of the rampart was thus ascertained as 22 ft. The little copse S of the drive was then tested for a ditch, by a trench cut obliquely among the trees. There was just enough room to recover the outer scarp and bottom of a V-shaped ditch, some 30 ft wide, dug in the yellow sand. Its outline was well defined by a filling of chocolate-coloured silt and by a coating of red clay almost three inches thick, plastered on the side of the ditch to prevent wash and weathering of the soft soil (cf Clarke 1933, 31). Trial holes also showed that there was no second ditch and that the ditch now found had ceased to run within 10 yds to the E, trees preventing a more detailed search for a butt-end or turn. If the lips of this ditch were symmetrical the berm between it and the rampart was a broad one, not less than 35 ft wide, a wise precaution against slip in sandy soil. Later, it was discovered that the berm was in fact paved with an apron of heavy cobbling to prevent surface erosion (cf Dodd & Woodward 1922, fig 7a, 6).

Once the defences had been identified, it seemed right to return to the building adjacent to the rampart. Its SW corner and W wall were quickly found, standing two courses high. Like the S wall discovered four months before, the W wall also covered earlier structural remains. These comprised a massive platform of sandstone pitching, with clearly defined edges on E and S and an eastward projection, over which the later wall passed. When the wall was removed, the projection was clearly revealed as a buttress, and the E side of a second buttress was in due course found at the W end of the trench (pl 15b). The meaning of this earlier structure was not in doubt. Buttressed buildings carried upon massive foundations are among the most distinctive of Roman military erections and have long been recognised as the granaries in which the food-supply of garrisons was stored. But the granaries normally form part of the central range of buildings in a fort, and so the new discovery shed altogether new light upon the plan of the fort now being recovered. It implied that the buildings hitherto discovered, far from marking the W end of the fort, in fact belonged to its E end, so that the earlier central area might be expected to lie W of any point yet explored, while the W end of the fort would extend well beyond the cemetery, well into the market-gardens at the W end of the ridge.

It so happened that, just when this fresh hypothesis was taking shape, a new grave⁷ was dug next to the S wall of the cemetery, some 90 ft W of the newly-discovered early building. It

could be seen that the bottom of the excavation, at 8 ft deep, was still in made ground, and the grave-digger obligingly dug a further small trial-hole, in which, at a depth of eleven feet, the spade struck laid flagging. The characteristic orientation of the westward end of this flagging suggested that it belonged to an internal building of the fort and went far to confirm the supposition that much of the fort still lay further W. A westward extension of the rampart was therefore sought beyond the garage. Here, however, numerous manholes indicated a concentration of drains, aiming for a main outfall, and a site for the trial trench was selected only after a study of the drainage-plan of the estate. Digging at an appropriate position then revealed the clay rampart standing 3 ft high.

The work at St Michael's could now be regarded as complete and was brought to a close on 28 September. As events fell out there was a fitness in the closure. Our good friend and benefactor, Mr Cowan, who had followed with such unflagging interest every stage in our work, did not live through the memorably hard winter of 1946-47; and it was in retrospect a great satisfaction to think that he had in fact seen all that was to be done in his beloved grounds. Among the many kindnesses by which our work at Inveresk was attended none outshone the sincere welcome and interest of Charles Cowan and his wife and daughter.

The friendliest reception had also been given by the owner of the westward market-garden, Mr W S Lowes, of Kirk Park, Musselburgh, to the proposition that some trenching might be done there. 'If it's to aid historical research, we'll do our best to help ye' was his immediate comment upon hearing the proposal: and he remained throughout generously true to his word. On 12 May 1947, work was again commenced in the field to W of St Michael's, and the kerbed rampart-front was found, 6 ft deep, just S of the accommodation road. It happened to be aligned directly upon a pole, carrying electric cables, now occupying the crown of the hill, and some of the distinctive kerbing stones had in fact been thrown up while setting the pole in position. When, however, a trench was cut immediately W of the pole it revealed that the kerbing began to curve northwards, so much less deep that it actually rode out to the surface of the plough-land a few feet after the curve had begun (pl 15c). It was thus indeed a fortunate chance which had disclosed the NW angle of the fort. But extensive further exploration in the field now reached was prevented by the presence of a young root crop, and, in the absence of the rampart-kerbing, much disturbance would inevitably have attended a search for the fort ditch. It was therefore decided to run a line of trenches along the E margin of the field, close to the cemetery wall, to recover information about internal buildings and streets. The project, however, proved fruitless, except at the S margin, where two superimposed *intervallum* roads, the lower 12 ft wide, the upper 32 ft wide, were still preserved, together with the base of a massive platform of puddled clay and stones behind the rampart. In the make-up of the upper road was an early Antonine mortarium, while later pieces strewed its surface. Elsewhere, masonry, floors and road-metalling had been completely removed by the systematic deep digging to which the terrain had long been subjected⁸. Only an insignificant scatter of debris and pottery remained, and not until the NE corner of the field was reached did the remains of a roadway in position recur. At this point it was possible to run a trench along the N edge of the field, in search of the W rampart. This trench was productive. The road already discovered fell into place as the *intervallum* road. Then came fourteen feet of lightly gravelled *intervallum*, standing upon an artificial terrace of clay, nineteen inches thick and covered with an ash layer from three to seven inches thick, as if an oven were near at hand. This was followed by the rampart, still standing up to three feet high and extending for about 25 ft westward, though deep digging had much damaged the front. At the front, however, the trench, cut obliquely across the Roman alignment, came into contact with the ruined mouth of a culvert, orientated at the same angle as all the

Roman structures so far discovered and thus useful as giving the true direction of the rampart. The culvert was at least 1 ft 5 in high and 1 ft 2 in wide, with a flagged bottom and three courses of masonry still in position (pl 16b). It yielded several fragments of pottery, including a chamfered dish and a black-coated beaker. To N of the culvert, and some 5 ft behind the toe of the rampart, occurred a tapering post-hole, 15 in square at the top, which may well have formed part of a frontal revetment⁹, since it lay sufficiently far back to allow for a batter at the front.

It was now clear that the newer hypothesis as to the extent of the fort was approximately correct. Much of the S side had been traced and the westward limit had been fixed. It was also evident that the northward limit, controlled by the very steep hillside overlooking Musselburgh, could not be far away. But the ploughing down of this sandy slope offered little hope that the rampart front, with its tell-tale kerb, would be left, and it seemed wiser here to concentrate upon a search for the ditch, which, being further out, would also carry us further along the N front. The N field was bearing a crop of old seeding rhubarb and permission to cut short trenches was freely granted by Mr Lowes. The ditch was soon found on the edge of the slope and its existing width was ascertained as 20 ft. Cross-trenching then rapidly traced the ditch eastwards to the point where it passed under the cart-track at the foot of the cemetery wall, and westwards to the curve of the NW angle, where the position of the outer lip of the ditch on the W side of the fort was also fixed.

The width of the fort could now be determined as 480 ft over the ramparts. It remained to ascertain its length. The fact that both rampart and ditch ceased to exist as they approached the SE angle made a search for this feature impossible. The NE angle, covered by a much-used older portion of the graveyard, was also inaccessible, while a search for the S side was debarred by a yet more ancient graveyard. Only an approximation is therefore possible, and this must be based upon the character of the buildings found in the cemetery, from which the exploration started. The southernmost of these, with its L-shaped end, triple subdivision, concrete floors and heavy wooden bratticing, could not be a barrack, in which the subdivision is always double. It must, then, represent a stable, and is to be compared with triply-divided stables at Chesters (with L-shaped end) (Bruce 1947, 83) and Newstead (buildings xxi–xxv) (Curle 1911, fig 4)¹⁰. The parallel building must, then, be one of a pair of barracks, either semi-detached or immediately adjacent to one another. The whole arrangement closely resembles that of Carzield (Birley & Richmond 1939), where two double barracks and two sets of stabling lie parallel to one another in a width of 515 ft, the increase upon 480 ft being explained by the considerably greater thickness of the Carzield ramparts (38 ft at Carzield as against 22 ft at Inveresk). If, then, the maximum length of 160 ft be accorded to the buildings, and further space be allowed for an *intervallum* and rampart on the scale already ascertained in St Michael's, the position of the E rampart can be computed, with a probable error of not more than 20 ft. The approximate length of the fort at Inveresk will be between 595 and 615 ft (fig 3).

Once the overall dimensions of the fort are thus determined, the question arises which way the fort faced. Did it look eastwards, into a district where Roman military occupation is as yet unknown, or westwards, into intensively occupied territory? The general question was already to be answered from the trench in the washing green of St Michael's, which by great good fortune happened to have produced unbroken rampart at the very point where the *porta principalis dextra* of a fort facing eastwards must have lain. The fort thus faced W. Its E and W gates must lie in the middle of their respective sides, but the N and S gates had yet to be located. The N gate presumably lay within the cemetery and had therefore to be regarded as inaccessible. But even at the S gate, within St Michael's, a direct approach was out of the question, since the single trench already cut in the probable position, W of the garage, occupied the sole available space

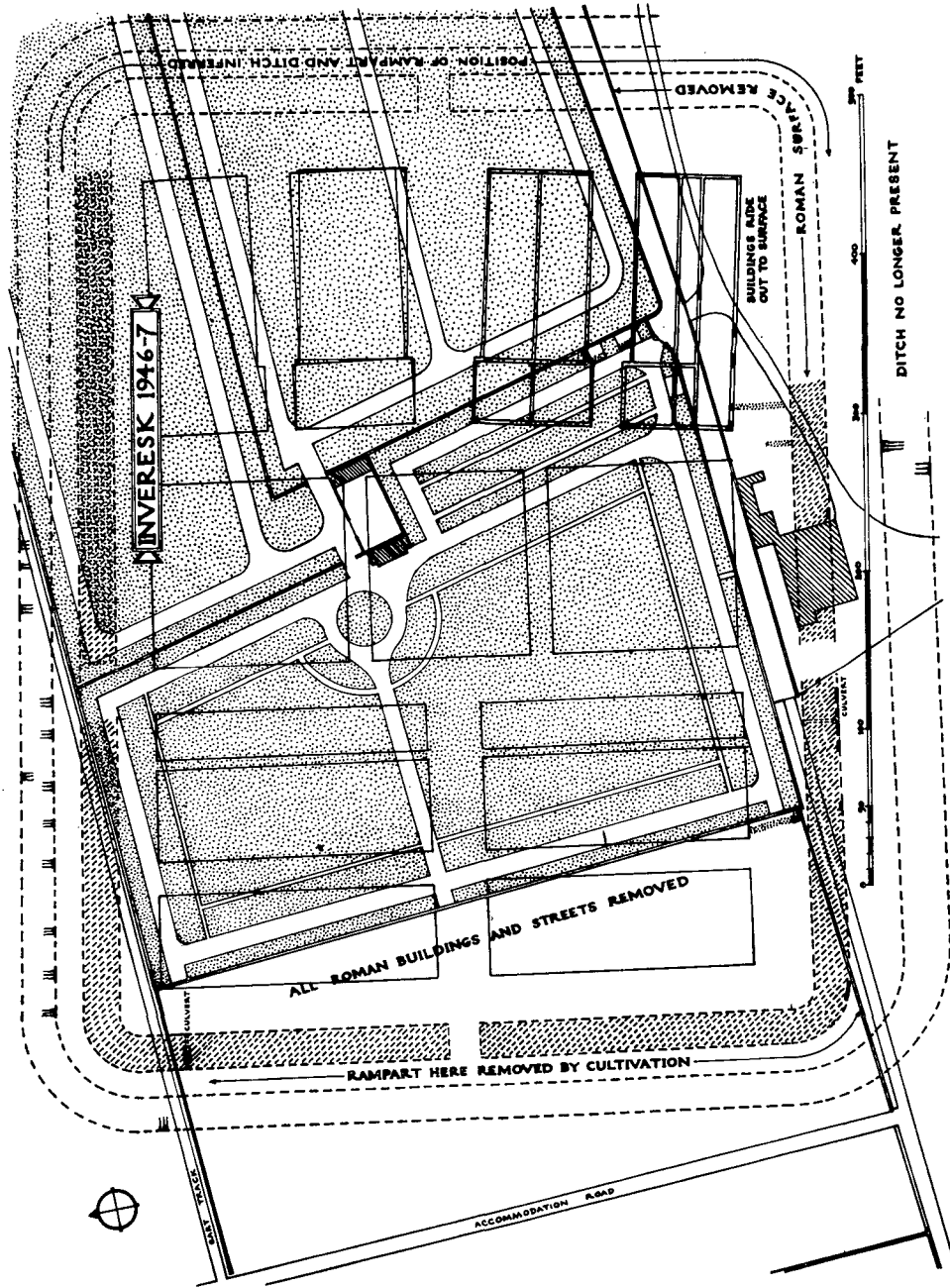


Fig 3 Inveresk: suggested fort plan

between waterpipes and drains. The trench, however, had yielded a significant piece of information, unappreciated at the time of discovery. Although the trench ran right across the line of the rampart front and produced beaten clay in position too hard for the spade to cut, the stone kerbing was absent. This would suggest that the normal rampart ceased and that the beaten clay was material which had either collapsed or had been packed into the basement of a timber gateway tower. But this would have to be the E side of the gateway rather than the W: otherwise the space available in depth for the principal buildings would be well below a hundred feet, an excessively narrow allowance on a fort-site which tends to have room to spare in this very direction.

The hint of location thus afforded could be exploited in two ways. An attempt could be made to locate the *via principalis* in the cemetery and the rampart kerb could be traced eastwards in the adjacent market-garden. In the cemetery, trenching in an ash path soon showed the Roman remains, deep though they now lie,¹¹ to have been no less thoroughly robbed than in the market-gardens to W. Nor was this surprising, since the land had been used for market-gardening before the cemetery absorbed it in 1930. Two walls, however, were revealed, running N and S on the now familiar orientation (fig 3). The westernmost wall was 2 ft thick, with remains of flagging on its W side. The easternmost was 4 ft 4 in thick, too massive for any military building except a granary. It was situated so far E that it could hardly be anything but the E wall of such a building, presumably running lengthwise across the fort and comparable in position with the granary at Birrens (Christison *et al* 1906, pl I, building IV). One more trench was then cut in an attempt to learn whether the buildings of the *praetentura* ran from N to S, or from E to W, but it again disclosed only a total removal of all structural remains, as in the market garden, and a subsoil rising rapidly to the surface. Work could now be commenced on the rampart kerb. This was traced for some forty feet towards the boundary of St Michael's without interruption. The most interesting feature was a culvert, with a front of very massive blockwork (pl 16a), strikingly similar to that in the W wall at Newstead (Curle 1911, 42 & pl VI 2)¹², and also indicative of the kind of masonry that was presumably robbed from the front of the culvert at the NW angle. No positive result in locating the gateway was obtained, but the process of elimination had been carried sufficiently far to show that the *porta principalis sinistra* must in fact lie immediately within the St Michael's precinct.

It was now clear that the fort had yielded most of the information that could be expected from it in the condition to which it had been reduced. A consideration of the results may now be undertaken. The arrangement of the *retentura* may be deduced with certainty from the available evidence. Double barracks and a great stable occupied the southern half of the area, and, on the analogy of Carzield¹³, may be taken to have been repeated in the northern half. Then came the principal buildings. Here, apart from the assumption that the headquarters building occupied its usual position, there is no clue as to the disposition contemporary with the barracks and stabling examined. But in the earlier arrangement of the fort, when the *via quintana* lay some twenty feet further E, the S end of the row of main buildings was occupied by a granary. This would imply a commandant's house at the N end, perhaps enjoying the noble prospect of the Firth. The arrangement of the *praetentura* is less certain. The evidence hints at a granary W of the *via principalis*, in the same relative position as at Birrens, for it must have run N and S to avoid disrupting a regular arrangement of barracks or stables in the *praetentura*. An extra granary is not in itself demanded by the size of garrison, discussed below: but Inveresk, as the first haven in the Forth for ships approaching from the S, would be a very likely storage-base for commissariat brought by sea and this is therefore a possibility to be borne in mind. It may well be this need that explains the greater length of the fort as compared with Carzield. Enough

room then still remains to dispose barracks and stables in parallel rows running E to W: but such an arrangement would break across the building-plots W of the *via principalis* and a N-S alignment would commend itself as more logical, though certainty is unattainable.

The ratio of barracks to stabling and of both to the area of the fort depends upon the size of garrison. On the basis of the ascertained arrangement of the *retentura* only an *ala quingenaria*, as at Carzield, is, however, possible. The *retentura* holds, in addition to stables, two double barrack-blocks. If these were for the mounted infantry of a military cohort, six more single blocks would be required in the *praetentura*, which is then too big for them by two blocks. It is obvious that the space is much too small for an *ala milliaria*, and altogether too large for a *cohors quingenaria equitata*. The Carzield analogy shows that an *ala quingenaria* will very well suit the space, with some extra accommodation for sea-borne stores.

The period of occupation must next be discussed. The small amount of stratified pottery yielded by the site came from the SE stabling, the S *intervallum* and the NW culvert. This is uniformly Antonine, and the earliest pieces, from the first phase of the occupation, are certainly early Antonine. But it is no less significant that among the very considerable volume of pottery, found scattered at random on the site and yielded by its area at other times, no Flavian piece is to be recognised. It is not that Inveresk has failed to yield Flavian pottery, but the known pieces come from quite another area (but see notes 18 and 19). This matter will presently be considered further. The fact of immediate importance is that the fort now discovered is a purely Antonine fort, in which have been discerned two periods, distinct enough to involve the total demolition of a granary and the construction of a new system of streets.

Outside the fort the best-known discovery is the bath-house, still partly visible in the garden of Inveresk House¹⁴. When first discovered, in 1783, this building was estimated to cover an area of some 60 ft E-W by 23 ft N-S, with a furnace at the E end. The distinctive features observed were a large heated room, over 15 ft square, served by the furnace, and a cold bath, 10 ft by 4½ ft in size, though the relationship between the two is not clear. But the furnace and a large part of the heated room still exist and are here planned (fig 4) by Mr C S T Calder, perhaps for the first time, through the kindness of Dr Gould, their present owner. Whether the lime-concrete flooring to SE of the heated room represents part of the cold bath remains uncertain. The excavations of 1783 produced an *aureus* of Trajan and a bronze coin of Faustina (de Cardonnel 1822, 161). Since then a *denarius* and a *sestertius* of Vespasian, both in excellent condition, have come from Inveresk House¹⁵; but the whereabouts of these finds is not precisely recorded, and it must not be forgotten that in these grounds other Roman buildings were found before 1783 below the 'bowling green', now the lawn with garden-beds situated immediately W of the house, as appears from Adam de Cardonnel's plan (1822, opposite p 159).

It would seem however, that this is not the only bath-building at Inveresk. Flue-tiles have been dug up in some abundance in the walled kitchen garden of St Michael's. The writer was shown by Mr Cowan several freshly broken examples and a spot was pointed out to him by Mr Campbell, the gardener, where they had been found (see fig 1). Such tiles, used for *caldaria* with heated walls, are sure indicators of a bath-house. It is particularly interesting that they occur opposite the point where it was found that the ditch-system of the newly discovered fort had either ceased to run or had turned southwards into an annexe which could well include the site under discussion. There is thus a strong suggestion of two bath-houses, as at Inchthuil, where the duplication was convincingly explained by Sir George Macdonald (1919, 121), as corresponding to different phases in the history of the site.¹⁶

If the same explanation of the apparent duplication be applicable to Inveresk, it would suggest that the eastern bath-house, at Inveresk House, over 200 yds away from the Antonine

ROMAN HYPOCAUST, INVERESK HOUSE.

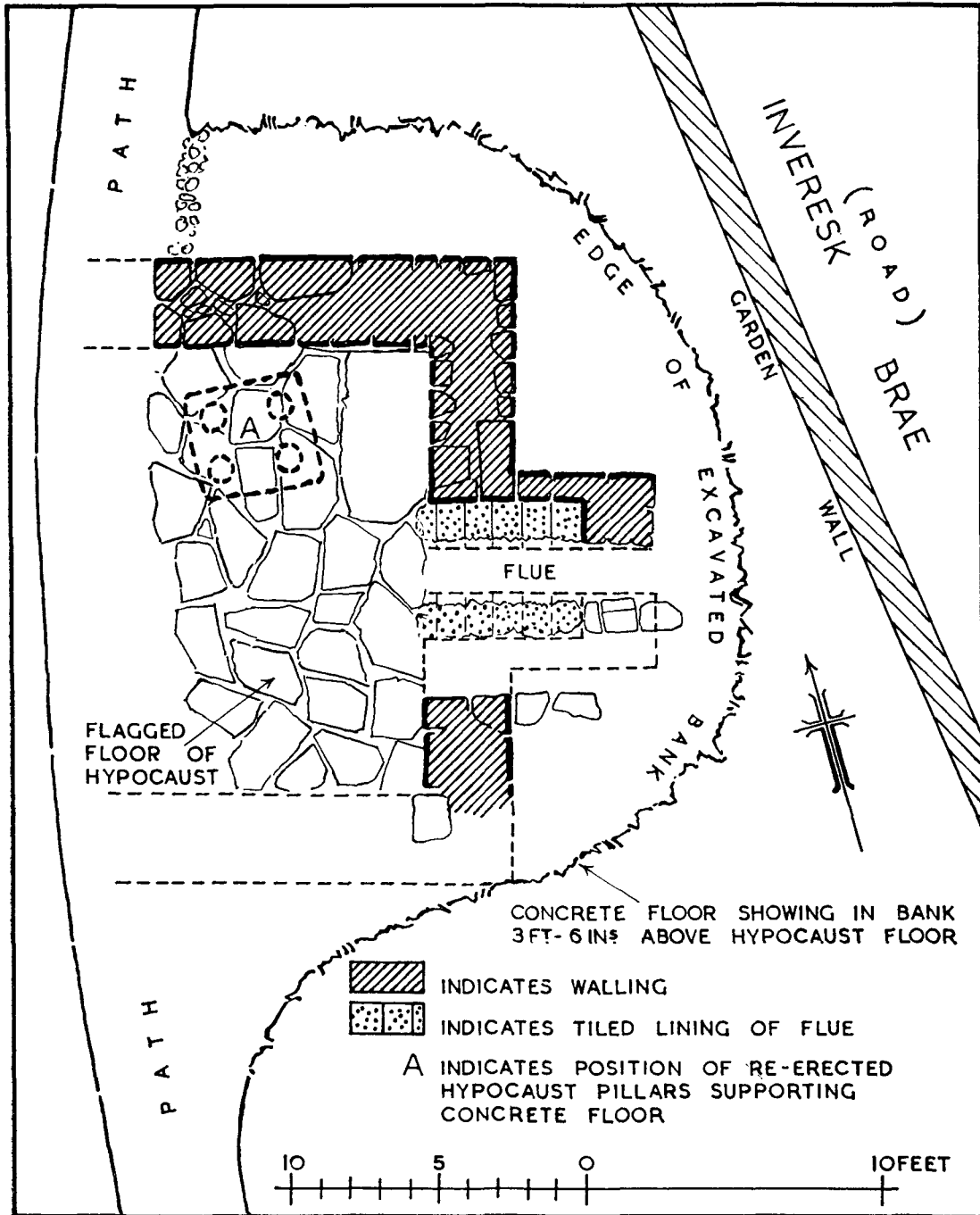


FIG 4 Hypocaust in the grounds of Inveresk House

fort, was in fact the Flavian bath-house. The fort with which it could then have been connected could not lie anywhere between it and the Antonine fort, because the ridge here becomes so narrow that there is only just room for Inveresk Church and insufficient space for even the smallest of Roman forts. But almost immediately E of the bath-house, beyond Eskgrove, the ridge merges into a broad plateau, where a lively tradition of ancient buildings which hindered both ploughing and the growth of corn was still current in 1783 (de Cardonnel 1822, 161). Interesting traces of Roman occupation were recovered at this Society's expense on the south-eastern fringe of this plateau in 1878. Following the discovery of a large pine-cone finial of red sandstone, associated with Roman pottery and a second brass of Trajan, four days' excavation was undertaken (Stevenson 1879).¹⁷ A Roman ditch from 4 ft to 5½ ft deep, running 'by the nearest course to the river', was traced for 'about 30 to 40 yds'. It was full of building stones and rubbish, among which occurred a *denarius* of Hadrian and some recognisably Antonine pottery, which is figured in the contemporary report. But there was also a stamped mortarium, later identified by the late Dr James Curle as Flavian, and a second mortarium, again figured in the report, which is also of Flavian type.¹⁸ There may be added, too, a little early beaker from Delta Place.¹⁹ In the light of the total absence of pre-Antonine pottery from the western plateau these pieces are significant. Not only do they supply the Flavian pottery which might be expected to accompany the fresh coins of Vespasian, but they also associate Flavian pottery specifically with the eastern plateau. It is, indeed, clear that in addition this plateau was also the site of an Antonine civil settlement and cemetery, large though the area may be: for the discoveries of 1878 included coins of Trajan and Hadrian and Antonine pottery.²⁰ But the Flavian pieces from the same area cannot be discounted. They may well turn out in future to have been the first clue to a Flavian fort connected with the eastern bath-house.²¹

It now remains to estimate in general terms the place of Inveresk in the Roman military system. The immediate environment has been cultivated since at least early medieval times, and there is no tradition of Roman roads in this age-old ploughland. But Dere Street, the main road from the S by way of Newstead, changed direction at Soutra Aisle to aim straight for Inveresk.²² Similarly, the main road from the S, by way of Biggar and Carlups, is directed for long miles upon the same objective (St Joseph 1952, 42). It seems evident that both arterial roads from the S were heading for the port at the mouth of the Esk, the first river-port N of the Tweed and the natural terminus for a road-system which beyond the Forth was no longer to be based upon twin northward routes. The importance of the place as a point of concentration and a stores-base is well emphasised by the large civil settlement of Antonine date. It may also account for the presence of an Imperial *procurator*, who dedicated the altar found in 1565 (RIB 2132), the sole record of the presence of such an official N of the Cheviot.²³

There is no hint, however, of any use of the site after the second century. Unlike the sister site of Cramond, ten miles further west, Inveresk has failed to yield Severan coins. This may at first sight seem surprising, but it cannot be considered apart from the dearth of evidence for Severan permanent garrisoning of the Lowland land-routes. If those land-routes had been held or used by other than marching armies, Inveresk would call aloud for a Severan occupation. Even if a sea-base only were in question, Inveresk would obviously have a pre-eminent claim to serve in the Severan period the purpose it had fulfilled in previous ages. But Cramond has the additional advantage of being the head of a Forth ferry; and the late Sir Charles Oman may well have been right when he connected the *Traiectus* coin-issue of Caracalla and its bridge of boats with a Roman war-time bridging of the Forth (1931)²⁴. For Cramond, the ferry site, would then be the superlatively right position both for the S end of the bridge and for the supply-base and advanced headquarters connected with it. But this question concerns an age which

is at Inveresk precisely excluded by the archaeological evidence. When the Severan campaigning in Scotland is discussed it will be in connexion with other sites.

NOTES

- 1 Dr J Close-Brooks has kindly confirmed that these fragments, which appear to represent two pilasters, are in the National Museum of Antiquities of Scotland (cat nos FR 782-4 cf *Proc Soc Antiq Scot*, 101, 1968-9, 293-4). Two fragments of two further pilasters have come to light more recently in the same manner (cat nos L 1977 14 and 15). The continuing discovery of large architectural fragments (cf note 23) would suggest that the site still has much information to reveal (WSH).
- 2 It is particularly desired to thank Mr G M Colville, Clerk to the Committee, and Mr John Lambert, superintendent, who not only arranged for workmen but took the liveliest interest in the proceedings throughout. The work would have been impracticable without the ready interest and kind help of these men and their staff.
- 3 The identification is due to Mr R J A Eckford, of H M Geological Survey, to whom warmest thanks are due for much useful help. His detailed report is included below p 303.
- 4 The graves are those of Lieutenant Duncan and Margaret King.
- 5 On one of the early drafts of the plans in the Richmond Papers (Roll 80) a patch of cobbling and a rectangular pit or cistern are marked, although no reference to them is made in the text. They have been transferred onto the published plan here reproduced (fig 2). The pit is not aligned with the other buildings found and lies within the postulated area of the *principia* (WSH).
- 6 The vertical rear face of the rampart at Caerleon is now seen as the result of the insertion of an oven (Boon 1972, 24 note 51) (WSH).
- 7 The grave of Samuel McFedries.
- 8 The ground level in the market garden is now noticeably higher than in the cemetery, which itself had originally been part of the market garden. It seems strange, therefore, that survival in the latter should have been so poor by comparison (WSH).
- 9 It is clear from the parallel quoted (Corder & Richmond 1942, 6) that Richmond refers here to the timbers of the parapet running through the body of the rampart, rather than to a frontal revetment as, for example, at Bowes (*J Roman Stud*, 58, 1968, 180). As such it is one of the few examples known (see also Hogg 1968, 113), although being close to the corner of the fort it may represent one of the posts of a corner tower (WSH).
- 10 Neither of the two parallels quoted would now be so confidently identified as stables. The most recently published plan of Chesters does not attempt to restore the full outline of the building concerned (Bruce 1979, 110). The whole question of stabling within forts is fraught with difficulties (Wells 1978) (WSH).
- 11 It became clear during excavation that much earth had been dumped here in order to level the cemetery area.
- 12 Masonry so massive would constitute a serious obstacle to the spade or the plough if near the surface and would invite removal.
- 13 It now seems a somewhat dangerous principle to base detailed restoration on the analogy of a site which was itself extensively restored (WSH).
- 14 The account by de Cardonnel (1822) is based upon a letter of James Wedderburne of 2 April 1783, later quoted by Gough in the second edition of Camden's *Britannia*, iv, 47-9.
- 15 For a full list of coin finds up to 1974, see Robertson 1975, 183-4 (WSH).
- 16 Richmond's own work at Inchtuthil makes Macdonald's interpretation untenable (WSH).
- 17 The field was associated with the Poor-house, and the discovery was made in digging a hole for a fence in the park, 200 yards from Inveresk railway-station.
- 18 The stamped mortarium identified by Curle as Flavian (1911, 265 & fig 35, no 14) is, in fact, of INVOMANDUS who is not closely datable, but thought to be Antonine (Hartley 1976, 84). Similarly, the mortarium illustrated in Stevenson's note of finds from the site (1879, 270) clearly shows a herringbone-stamp of Antonine type (WSH).
- 19 The jar referred to (Stevenson 1879, 276 and described in detail on page 74 of the same journal) is clearly black-burnished ware of Hadrianic-Antonine date (WSH).

- 20 Recent excavations conducted in the grounds of Inveresk Gate have indicated industrial activity within the *vicus* (Thomas 1979) (WSH).
- 21 The recent discovery of a Flavian fort at Elginhaugh less than 3.5 miles away makes the presence of a contemporaneous fort at Inveresk unlikely. The second bath-house need not imply another fort, but was probably associated with the civilian settlement which appears to have been important (note RIB 2132) and extensive (see fig 1). The discovery of 2nd-century coins during the 'excavation' of the bath-house in 1783 makes a 2nd-century date more likely. No great significance should be attached to a single bronze coin of Flavian date and none of the postulated early pottery is acceptable as such (WSH).
- 22 Personal observation by IAR.
- 23 The discovery of the altar in a hypocaust (RCAMS 1929, 91) suggests that it derives from the initial occupation. A second inscription of the same man came to light during grave digging in 1976 (Hassall & Tomlin 1977, 433). Since the new stone had been recut with a second dedicatory inscription, the association of Q Lusius Sabinianus with the first occupation of the site would seem to be confirmed (WSH).
- 24 The bridge of boats on the coin or medallion of Caracalla (AD 209) has come to be accepted as commemorating a crossing of the Tay from Carpow to the bridge-head fort at St Madoes (St Joseph 1969, 118). Reed has recently restated the view that the boat bridge crossed the Forth, dismissing Oman's objections to a siting at Queensferry (Reed 1976, 93-5). Furthermore he would see the permanent bridge recorded on a coin of Severus of AD 208 as spanning the Tay. Robertson has pointed out, however, that the relative dating of the coins will not allow such an interpretation, and that the permanent bridge is unlikely to have been related to Severus' Scottish campaigns (1980, 137) (WSH).

THE COARSE POTTERY

J P Gillam

The yield of pottery from the excavation was small, but it includes several pieces of vessels of datable type from stratified deposits. All the pottery found has been taken into account. Portions of seventeen coarse pottery vessels are illustrated (fig 5), the bulk of which have been re-examined in 1980. All other fragments are described, except a number of scraps from the topsoil which are Roman, and so far as could be judged, of Antonine date.

Stratified

- 1 Found in the body of the upper road on the *S intervallum*: mortarium in brick-red fabric with blue-grey core and white slip; medium-sized multi-coloured grit. A small portion of a stamp survives at a break; it seems to be the edge of a stamp of the potter DOCILIS, one of several with that name in various centres, who worked in north-western England. Even without the stamp the fabric together with the form, and in particular the depressed horizontal line in the interior below the bead, would have shown this to be a north-western English mortarium, probably in this instance from Brampton or Carlisle rather than from Wilderspool. North-western mortaria were commonly on the market between c AD 130 and 160.

Three fragments from the wall of a light grey cooking pot with bold acute-angled cross-hatching (35°) were found on the surface of the lower road. A fragment of a small samian ware cup (form 33) of good quality came from the surface of the *intervallum* road at the NW angle where the earlier level was found, while a scrap of a decorated vessel of form 37 (see below, number 1) was found just behind the rampart at the same point. A fragment from the rim and side of a samian ware vessel (Curle 23) was found in the south rampart.

- 2 Found on the surface of the upper road on the *S intervallum*; bowl in BB2; discussed under number 14 below.

From the same deposit came a fragment of the base of a samian ware vessel, possibly of form 18/31, and a fragment of a decorated vessel of form 37 (see below, number 2).

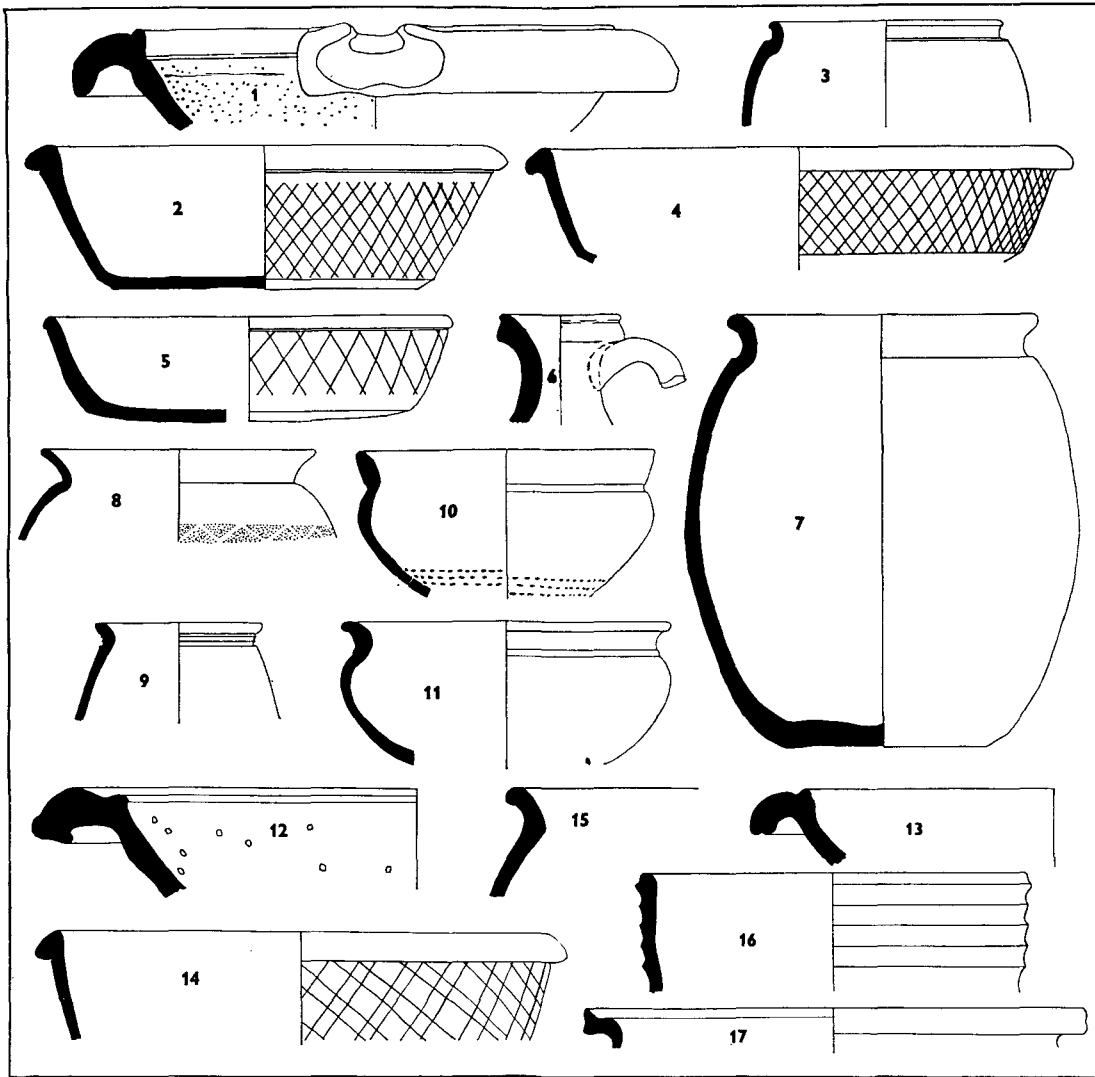


FIG 5 Coarse pottery

- 3 From the culvert which ran through the W rampart, close to the NW angle: cooking-pot in BB1; c AD 120–60.
- 4 From the same context as number 3: a bowl in BB2; discussed under number 14 below.
- 5 From the same context as numbers 3 and 4: dish in BB1; c AD 120–60.

Also from the same culvert came a body sherd of a BB1 cooking-pot with slightly obtuse-angled cross-hatching (100°), and a fragment of a grey vessel of indeterminate type.

Unstratified

- 6 Flagon neck in dirty fawn fabric; this type of flagon, itself a development of an earlier form, began to supersede the developed ring-neck flagon in the course of the Antonine period; c AD 150–80.
- 7 Cooking-pot or jar in light grey fabric, smooth but unburnished; wheel-thrown and thick-walled

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it has only its general shape in common with the BB1 cooking-pots which doubtless inspired it; very roughly AD 120-60.

- 8 Cavetto-rim cooking pot in BB2; discussed under number 14 below.
- 9 Cornice-rim beaker in smooth light orange, tinged with light grey as if a self-coloured slip had become altered in firing; the form owes something to fine wares from the continent, Colchester or the Nene Valley; discussed under number 11 below.
- 10 Colander in similar fabric to number 9; discussed under number 11 below.
- 11 Wide-mouthed jar or bowl in similar fabric to number 9. Mrs V G Swan has pointed out orally that numbers 9, 10 and 11 may be local products. Except that number 9 is influenced by an early Antonine form, the three vessels are undatable in themselves.
- 12 Mortarium in grey-white fabric, with white grit; possibly a Mancetter/Hartshill product of c AD 140-70.
- 13 Mortarium, no grit. Similar in fabric and date to number 12.
- 14 Bowl in BB2. Bowls of this type represented by numbers 2, 4 and 14 first came on to the market, in the region of the Thames estuary, before the end of the first century; they were not shipped to any part of northern Britain before c AD 140; by c AD 180 a new type of bowl was beginning to supersede the present type. The cooking-pot type represented by number 8 had a similar origin and history.

Other Roman pottery from the topsoil or from graves comprises a fragment from the side of an indented rough-cast beaker in orange fabric, fragments, including rims, from several grey jars and cooking pots, the rim of a white mortarium, the rims of several bowls or dishes of the same kind as numbers 2, 4 or 14, in one case burnt to an orange colour, part of a bowl or dish with the Hadrianic-Antonine type of flat rim, three fragments of samian ware form 18/31, one burnt black, part of the side of a vessel of form 38, and two conjoined decorated fragments of a vessel of form 37 (see below, number 3). All these pieces are of Antonine date.

- 15 Rim and shoulder of a jar or cooking-pot in hard self-coloured orange fabric, smoothed externally, but with a grit backing showing through the inner surface. The body of the vessel is slightly distorted, and the diameter is uncertain though very large. This piece is probably medieval.
- 16 & 17 Fragments in hard light-grey fabric with a darker blue-grey core; both are glazed; number 17 has a mottled light green glaze on the interior but not, apart from dribbles, on the exterior; both are medieval.

Conclusions

Taken as a whole the group is early Antonine. Numbers 10 and 11 are not closely datable except that the local industry would seem to be Antonine, while numbers 15-17 are medieval. None of the remaining vessels is of a type which had gone off the market before c AD 140; there are no Flavian pieces; no type is present which first came on to the market later than c AD 160.

When the pottery was first examined 34 years ago, it was believed that BB2 had not reached the Forth-Clyde region until several decades after BB1; there was a temptation to assign a long period of occupation to Inveresk. Both the belief and the inference are now known to have been in error. On the evidence of the pottery the occupation of Inveresk more or less coincides with the reign of Antoninus Pius.

THE DECORATED SAMIAN POTTERY

Grace Simpson

These notes were written shortly after the excavation at Inveresk, and they have been revised in 1980. All the sherds are of Form 37.

- 1 NW angle, just behind the rampart. Cinnamus used such a medallion c AD 138-65.
- 2 South intervallum, upper level. Within the arch of a winding scroll are a caduceus (Déch 1113a, Rogers Q43), and a small horse to left. Rogers Q43 is found in the style of Cinnamus at Gauting (Walke 1966, Taf 36, 1a & b, & 56, 11, stamped CIN (nami), which may have the same small horse to left, but incomplete). The horse is not in Oswald's *Index of Figure-Types*, but it appears

on two rubbings in the Birley Collection, Department of Archaeology, Durham in the style of Cinnamus, taken from sherds in the British and Rochester Museums. c AD 138–65.

- 3 From the churchyard, found in grave-digging. Two sherds joined, showing a winding vine scroll such as Sacer, Attianus and Cinnamus made (Stanfield & Simpson 1958, pls 83, 86–7 & 161–2). c AD 138–65.

Report upon dressed sandstones used in the Roman buildings at Inveresk

R J A Eckford

The dressed blocks of sandstone laid bare in the excavations for Roman remains at Inveresk Cemetery vary in texture from fine to medium grain, are moderately hard, and show a variation in colouring. White, brown and white speckled, brown speckled with a purplish tinge and yellowish with darkish partings is descriptive of the samples collected.

There is little doubt that these sandstones have been obtained from a local source, as they can be matched with posts of sandstone that occur in the Millstone Grit and Coal Measure strata exposed at different parts of the nearby coast.

The nearest old quarry to the Inveresk site is that of Pinkie, Levenhall, which was closed in 1906, but whether or not the Romans quarried stone there is impossible to say. It can be said that the stone could have come from there.

On the Langside–Carberry ridge about 2 miles S and SSE of Inveresk where the superficial drift is thin, sandstones are exposed at the surface. The stones found at Inveresk could also have come from this slope.

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SE corner of the centurion's quarters in the northern barrack block



Period I granary. Buttress overlain by period II wall in foreground



Outer kerb of rampart in SW corner





Mouth of culvert through the S rampart



Mouth of culvert through the rampart in the NW corner