

ART. IV. – *The Trajanic Fort at Kirkbride; the terminus of the Stanegate Frontier.*

By R. L. BELLHOUSE, F.S.A. and G. G. S. RICHARDSON, B.Sc.

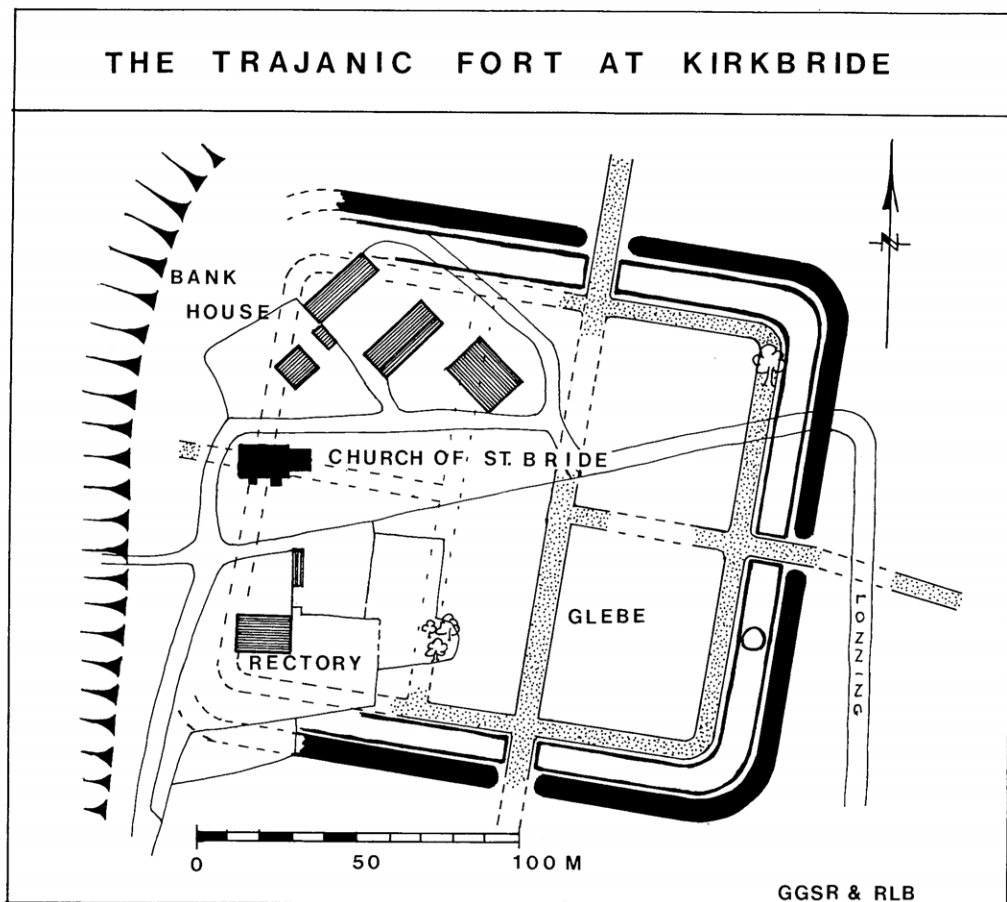
Introduction By R. L. BELLHOUSE.

DURING the great drought of 1975 Professor G. D. B. Jones flew over the Solway Plain and photographed a number of crop-marks. On one of the photographs he kindly sent me of the area of the presumed Roman fort at Kirkbride I noted signs of a road approaching the site from the north. Its presence suggested that the large ditch I had been unable to trace eastward by augering in 1972 had been interrupted by the undug causeway over which the road had entered the fort. Another fainter line parallel to the line of the ditch might have been a road behind the north rampart. I worked out the probable position of the east gate from the slight change in direction along the course of what I surmised must have been an internal road of a very large fort; this slight turn would be beyond the east gate of a much smaller fort. I made an outline plan of the probable limits of the fort as a working hypothesis and sent it to Mr Richardson with the air photographs and my comments so that excavation could be planned. Then I received a letter from Mr Brian Robinson of the Department of Environmental Sciences at the University of Lancaster who was looking for suitable archaeological sites for geophysical surveys to be carried out by students. I passed the letter to Mr Richardson who met Mr Robinson on site and co-ordinated all the surveys that were made during the following three seasons. The first survey accurately delineated the gravel of the north and east *intervallum* roads and provided a sound basis for the substantive trenches of 1976 and 1977.

The Geophysical Surveys By G. G. S. RICHARDSON.

The results of the excavations in the Glebe at Kirkbride in 1971 and 1972, together with the earlier trenching on the site had made it obvious that a substantial Roman fort had existed there, but had left us with no clear idea of its plan or extent, nor any lead as to the most useful lines for further investigation.^{1,2} Professor Jones' air photographs which Mr Bellhouse passed on to me provided a new basis on which we were able to develop the surveys offered by Lancaster University. In particular the parched strip extending eastwards from Bank House suggesting the line of the north *intervallum* road was an obvious starting point for a soil resistivity survey. Preliminary traverses with Brian Robinson confirmed that the road gave a well-defined positive anomaly in the resistivity readings, but that there was no clear negative anomaly on the presumed line of the ditch. This proved to be the characteristic pattern throughout the surveys which were carried out in 1976, 1977, and 1978, under Mr Robinson's general direction by students studying for the degree of B.Sc. in Environmental Sciences.

The plan (Fig. 1) shows the overall results of the three surveys and the location of our excavation trenches from 1970 to 1978. They established conclusively the course of the *intervallum* road from the north gate to the east gate, and thence to somewhat beyond



The cost of printing this plan has been borne by R. L. Bellhouse, F.S.A., in memory of his friend and collaborator George Richardson.

the south gate, west of which an area of somewhat deeper post-Roman build-up resulted in less positive resistance readings. The internal road from the east gate, and the north-south internal road were also clearly defined; there were additional indications of other internal roads or paths but these were not definite enough to warrant inclusion in the plan. The western half of the perimeter has been almost entirely obliterated by the building of the Church, the Rectory, and Bank House Farm.

The best results were obtained using a "Megger" earth resistivity meter with a Werner electrode array at 1.5 m spacing. In addition to being plotted manually the resistance readings were fed into a computer, and print-outs obtained of the resistance contours. By applying an arbitrary cut-off to eliminate the contours below a suitable selected level a clear picture of the roads could be obtained. Fig. 2 shows this technique applied to the south-east corner of the intervallum road. Some traverses were also made with a proton magnetometer; they showed good evidence for at least two more furnaces near those which were excavated in 1971, but were otherwise unhelpful.

The 1976 survey, by Clive Melville, was started on the line indicated by the aerial



PLATE I. – Kirkbride: Aerial view of the site of the Roman fort taken by Professor G. D. B. Jones in the summer of 1976. Roads approaching the east and north gates can be seen as well as the trace of the intervallum road behind the north rampart. Top left is the outline of the large depression in the ancient raised beach gravels exploited by the Romans for making the fort roads and paths.

photograph in the field east of the farm. It confirmed the location of the north gate, but the plot of the actual crossing of the northern approach road and the intervallum road was somewhat confused. It appeared to be skewed, but only excavation can tell whether this apparent anomaly is genuine, or is due to disturbance of the road metalling by ploughing. The north-east corner of the intervallum road showed up clearly and it was traced southwards as far as the east gate in the Glebe, where very high resistances were recorded, suggesting substantial and undisturbed road metalling or masonry. The evidence of the survey was confirmed by a trial trench 30 metres east of the north gate, which sectioned the inter-vallum road, the base of the turf rampart, and the fort ditch. The ditch had not shown up as a low resistance area in the survey as would be expected and this may partly be explained by unusually low soil moisture levels in the fill; the excavation revealed that the ditch had been filled with rampart material (most likely after Enclosures of the last century), which may be too like the undisturbed subsoil to give a significant variation in resistance within the effective depth of penetration of the survey, which was about 1.5 m. None of the surveys provided clear evidence for the ditch, but it and the road were sectioned again 6 m south of the east gate. At this point the ditch was found to be double and this helped us to explain some strange features of the first ditch section.

The 1977 survey by Neil Fowler established that the north-south internal road is continuous from north gate to south gate, although it failed to show the exact position of the latter, owing to the uncertainties created by the area of increased depth of soil around the intersection of the internal and intervallum roads. In 1978 it was decided that Phil Jackson should follow the intervallum road from the east gate. This proved much more successful; both the south-east corner and the south gate showed up clearly. West of the south gate the readings were less conclusive, but the intervallum road was traceable to the Rectory garden hedge and there was a slight hint, also noticed in 1977, of another internal road running north – south about 30 m west of and parallel to the principal one.

In the hope of finding the south-west corner of the fort a few trial traverses were carried out in 1977 in the Rectory garden, to the south of the Rectory itself, but the resistance readings were inconclusive. This is consistent with the earlier finding² that the Rectory is built on made up ground. The only evidence for the western side of the fort is the reference in Whellan³ to three “roads” found when some earth was removed from the churchyard: if we are correct in interpreting these as traces of rampart base and intervallum, St Bridget’s church must lie over the west gate of the fort.

Trial trenching undertaken in 1976 in the field immediately west of the church revealed a spread of cobbles 3.5 m wide directly opposite the west end of the church; they rested directly on the natural boulder clay, which had been cut away to a depth of 0.25 m to form a level platform in the southward slope of the field. A wall sherd of figured samian ware and a base sherd of a red coarse ware vessel were found on the cobbled surface.

If the assumptions in the foregoing paragraphs are correct the fort would have had an area of 3 hectares (7.5 acres), and faced east. The solid road exposed in 1971 would be the *via praetoria*, and the north-south road which showed up so well in the 1977 survey would be the *via principalis*. The uncertain trace of a second north-south road would fit with the likely position of the *via decumana*. There is clearly a substantial area in the south-east quarter of the fort which appears to have escaped disturbance, and would repay full-scale excavation when opportunity offers. The 1978 survey also revealed a

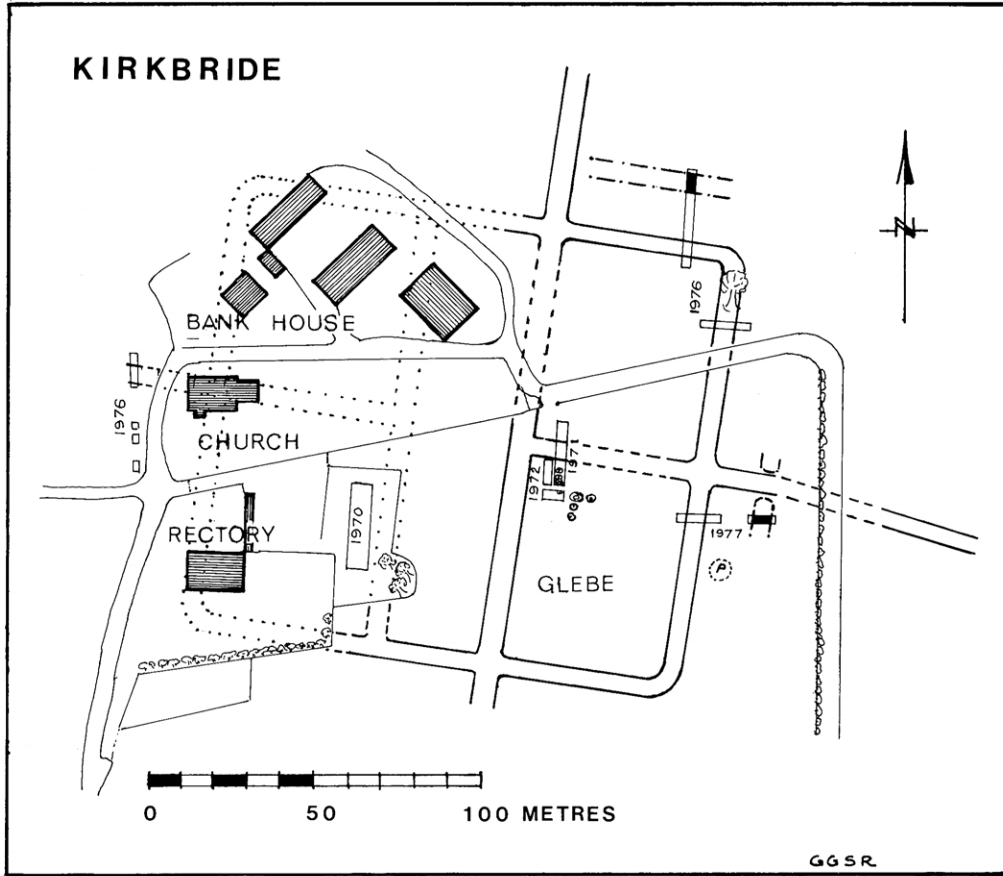


FIG. 1. – Kirkbride Roman Fort.

Key:	Roman Road	Confirmed	=====
		Probable	== - - - -
		Hypothetical	: : : : : :
	Fort Ditch	Confirmed	== : : : :
	Furnace		⊙
	Trench Excavated in (Year)		— 1970 —

high resistance area some 6 m in diameter, 22 m south of the east gate on the line of the rampart (Fig. 1 “P”). This suggests a stony foundation, possibly for a tower, and should be investigated in detail whenever further excavation is undertaken.

The Substantive Trenches By R. L. BELLHOUSE.

In August 1976 we opened a short trench to confirm the position of the intervallum road behind the east defences in Mr Irving’s field close to his boundary with the Glebe. The ground was rock hard after a second drought year and digging was very difficult; the

first result was to confirm the accuracy of the resistivity survey in locating and defining the limits of the gravel of the intervallum road. The drought brought some benefit in that when we had extended the trench and located the fort ditch we were able to reach bottom and study the silting in completely dry conditions. The ditch was 2.5 m deep measured from the present surface of the ground. The inner lip and the slope of the side were easily defined by the contrast between undisturbed red subsoil and grey ditch fill; slope was 27°. The outer lip was not so easily defined but a top width of about 7 m. is acceptable under the circumstances. The outer ditch slope could not be so closely defined because of what appeared to be a series of ancient bank slips. We had expected to find a single large ditch when, as we were to discover later, the fort had, in fact, two small ditches, the inner one being the deeper. Ditch fill, measuring from the surface of the ground, comprised 0.4 m of the ubiquitous pebbly loam resulting from modern ploughing, 0.8 m grey loamy fine sand with some pebbles, possibly the last remains of a rampart of marsh turf still surviving up to the time of the Enclosure Awards and thrown into the traces of the ditch when the land was levelled and fenced, then 0.8 m heavier greyer material with lenses of reddish clay and a few broken cobbles. None of this material was humose, but the last 0.5 m was peaty; in this at ditch bottom we found a bone, 335 mm long, from the foreleg of a horse, identified for us by a visiting bone specialist, Mr Charles A. Schwartz, as the left radius of a horse. With the bone was an almost complete carinated bowl in red fabric with a lightly reeded rim, and a peg of birch wood 200 mm long and 20 mm in diameter roughly pointed at one end by knife cuts and splayed by mallet blows at the other end. Sherds from the fill included mortaria, rustic ware cooking pots and plain and figured samian.

The front of the rampart lay 1 m from the inner lip of the ditch; little of the material from which it had been built, turf from the nearby river alluvium, remained beyond a thin layer of fine sandy loam lying on the leached grey clay horizon of the normal soil profile, the thin peaty top soil having been removed before the laying of turf. No evidence of internal timbers or strapping was seen. Rampart width was 9 m; at the inner toe pottery, charcoal, broken sandstone and tile, and horse teeth indicated a cooking area between the rampart and the somewhat scattered small gravel of the outer edge of the intervallum road. The road was 5 m wide, clearly defined at its inner edge by a sleeper trench, and the fine gravel from which it had been made was 0.4 m thick near its centre. The gravel contained flakes and cores of flint. It lay on the same natural leached horizon as the rampart: there was no sign of any repair or resurfacing.

A second, shorter, trench was designed to define the limits of the intervallum road behind the east rampart as a check on the accuracy of the resistivity survey. The metalling was 5 m wide, limited at its inner edge by a sleeper trench and at its outer edge by a cooking area and traces of rampart.

In April 1977 we returned to the Glebe where Mr Richardson laid out a trench 1 m wide and 15 m long offset 6 m from our 1962 base line to expose the intervallum road near the east gate and locate the toes of the rampart and the lips of the ditch (or ditches). The full line was 32 m long, of which 5 m was left undug across the position of the rampart. The road proved to be 5 m wide as before, with a cooking area at its outer edge with calcined bird bones, broken pot, charcoal, slag, and the remains of a complex of used and rebuilt clay ovens. Here, within the gravel of the road was part of the rim of a mortarium with the stamp of DOINVS. At the inner edge the road became a gravel path

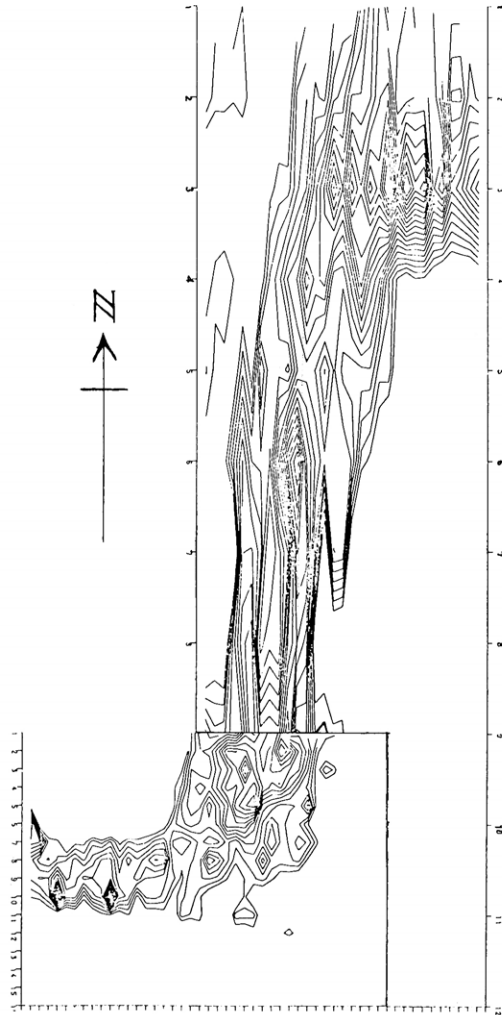


FIG. 2. – Resistivity contours of inter-vallum road at south-east corner of Kirkbride fort. (Computer print-out, with “cut-off” applied to low values).

between wood-framed buildings; we found the robbed sleeper trench of one wall running at a slight angle to the line of the trench. In the slot was a pot lid in hard grey fabric, Gillam’s 340, A.D. 100-140, indicating that demolition cannot have been before A.D. 100.

The investigation of the ditches took much work. We had to leave a column of earth to support a field drain running at an angle to the line of the trench above the inner slope of the ditch; however we were able to expose the slope and measure its angle, 27° , the same as the first example. We established a top width of 7 m and a depth of 2.75 m, but it was soon very clear that there were two ditches, the inner, and larger, being

KIRKBRIDE

DITCH SECTION NORTH SIDE

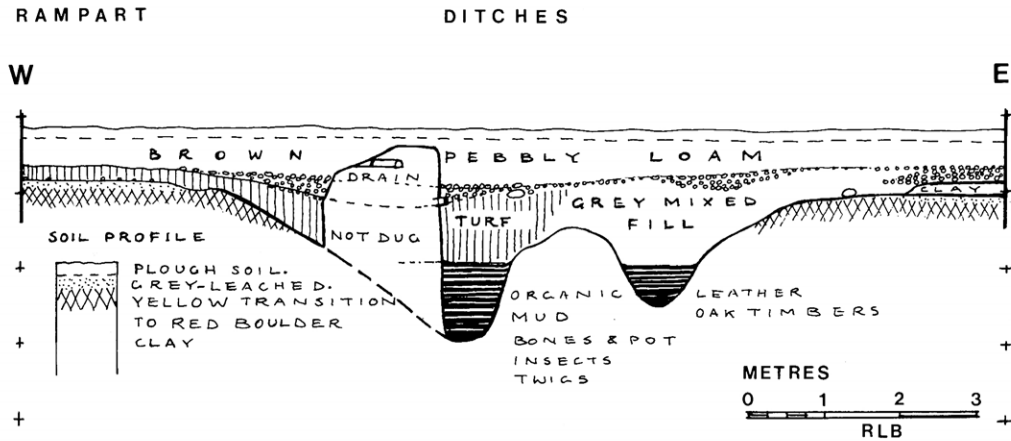


FIG. 3. – Part of the 1977 substantive trench in the Glebe. The part not dug was left undisturbed in order to support a modern field drain crossing the trench obliquely. The gravel and clay overlying the leached horizon at the right-hand side are evidence of the first extra-mural buildings outside the east gate.

asymmetrical, with a smaller symmetrical ditch parallel to it. The higher levels of ditch fill resembled those of the first trench and the lowest deposits were peaty. In this waterlogged material of the inner ditch we found a deposit of animal bones, sherds, twigs of birch and hazel and hazel nuts. At the bottom of the outer ditch we recovered charred worked oak timbers and a bundle of leather offcuts. Two metres beyond the outer ditch a spread of red clay on the old land surface and a thickness of gravel as for a path indicated the presence of the first extra-mural building outside the east gate of the fort. The rampart was not examined; the front toe appeared to allow a berm of 1 m, the rear toe had been so disturbed by the construction of a succession of clay ovens that it was difficult to find the true edge, however, a width of 9 m seems certain.

The Finds

Coarse wares: the finds are numbered; those marked with an asterisk have been drawn and are shown on Fig. 4.

Mortaria

1. Eight rim fragments from the same vessel, 6 conjoining, buff coloured porous fabric with pink core, opaque white grit. Shape of rim and internal bead closest to Gillam's 237, A.D. 60-90.
2. Rim sherd, flattish with small internal bead, soft pale buff fabric, no grit visible. Nearest to Gillam's 238, A.D. 70-110.
3. Very small rim section similar to no. 2.
4. Part rim fragment similar to no. 3: no grit.
5. Rim sherd, reddish-brown gritty fabric, cream slip, white opaque grit, break at spout and beginning of maker's stamp. Gillam's 241, A.D. 90-120.

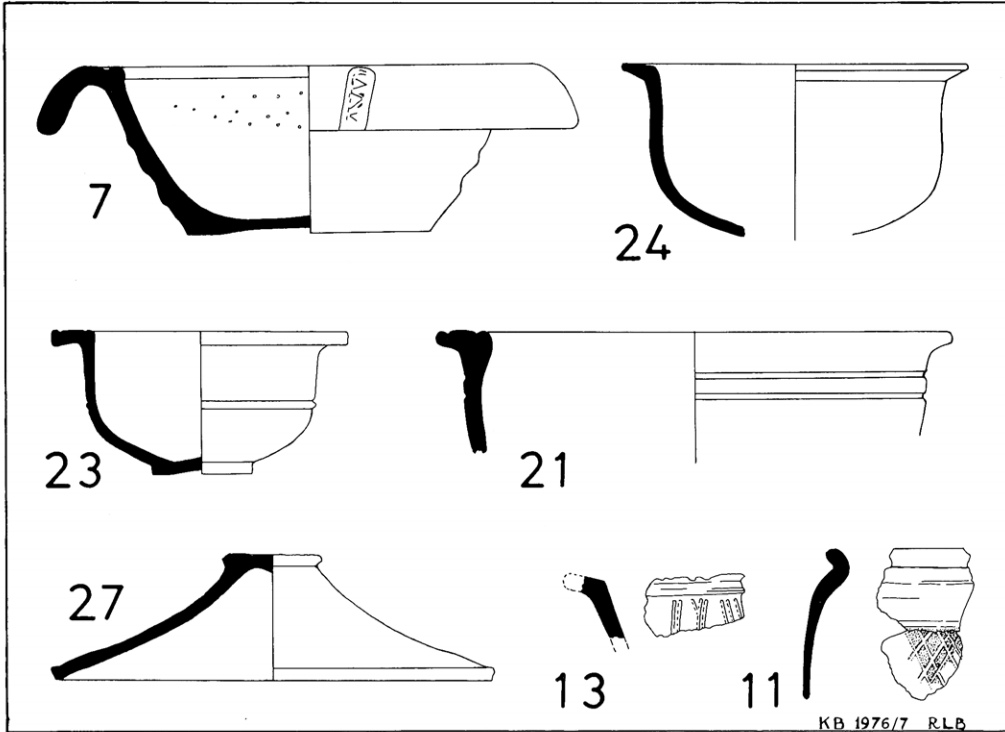


FIG. 4. – Kirkbride. Finds from the 1976-77 substantive trenches. The numbers refer to pottery types marked with an asterisk in the text.

6. Rim sherd, pale red gritty fabric, no grit visible, closest to Gillam's 240, A.D. 80-110.
- 7.* From within the gravel at the outer edge of the intervallum road in Trench II. About $\frac{1}{3}$ of a vessel in hard reddish gritty fabric with darker core. Small white opaque and darker grit. Maker's stamp to right of spout. Mrs K. F. Hartley commented as follows:
It is a stamp of DOINUS from one of the four dies he used. He worked at Brockley Hill, Middlesex (Stephen A. Carter, A kiln of Doinus, *Arch. J.*, 129 (1972)). The dating evidence available and the rim profiles used indicate activity within the period A.D. 70-110; it is unlikely to be later than A.D. 100.

Flagons

8. Part base and 12 wall sherds, none conjoining, in white fabric, probably all from the same vessel. The foot suggests Gillam's 4, A.D. 90-130.
9. Part base, two conjoining pieces of a loop handle and part of lip of spout in red soft fabric. Foot suggests Gillam's 1, A.D. 70-100.

Rough-Cast Beakers

10. Two wall sherds not conjoining, cream fabric, purple-brown slip inside and outside. No rim.

Black-Burnished Ware

Eight sherds of this distinctive ware were found in the cooking areas behind the ramparts.

- 11.* Four pieces conjoining to form part of a cooking pot rim with burnished band below and the beginnings of latticing. Nearest to Gillam's 116, A.D. 120-150.
12. Three small wall sherds with burnishing and acute latticing.
- 13.* Part wall sherd of dish with incomplete rim, almost vertical latticing on pared surface.

Grey Jars

14. Three rim sherds, 2 conjoining, in soft grey fabric, and a similar sherd in rather darker fabric, probably representing 4 different vessels of the same type. Closest to Gillam's 96, A.D. 80-130.
15. Two pieces of rim, conjoining, hard grey gritty fabric. Nearest to Gillam's 101, A.D. 70-80.
16. Rim fragment, grey fabric, no decoration visible, Gillam's 98, A.D. 80-130.
17. Part of rim, hard pale grey fabric, probably Gillam's 97, A.D. 80-130.
A number of wall sherds match the colours and fabrics of the rims: a few show traces of rustication.

Jars in Red Fabrics

18. Three rim fragments from different vessels like Gillam's 103, A.D. 80-120.
19. Thin rim in soft red fabric: shallow incised decoration below.
20. One wall sherd in similar fabric with incised pattern. No parallels in Gillam.

Bowls

- 21*. Part reeded rim of large bowl, 250 mm in diameter, in red slightly gritty fabric: from the gravel of the intervallum road behind the north rampart.
22. Complete base, 70 mm in diameter, slightly concave underneath, in red fabric. Like Gillam's 27 with a similar curve to the pot wall above the base, but nothing to indicate type of vessel.
- 23.* Carinated bowl with reeded rim in soft red gritty fabric. From bottom deposit in the north inner ditch. No examples in Gillam. The reeding is simple, two small grooves, one near each edge of the rim. The reeding on the rim of the large bowl no. 21 is the same.
- 24.* Carinated bowl in hard brownish fabric, plain rim: no comparable example in Gillam.
25. Rim sherd, reeded, lead grey fabric: probably Gillam's 214, A.D. 80-125.
26. Rim sherd, hard grey fabric, no reeding: warped during firing.

Pot Lids

- 27.* Lid in hard dark grey fabric, almost complete, from a timber slot in Trench III: Gillam's 340, A.D. 100-140. To have been found in this position the lid must have fallen in the open trench during or shortly after the digging out of the sleeper, therefore demolition was not before A.D. 100.

Samian Ware Plain and Figured

Fifty-three sherds were recovered from the substantive trenches; of these 28 were too small or too badly worn to be significant. Professor Eric Birley examined the pieces and commented that they were all South Gaulish and represented at least 2 examples of Dr 29, and that the base bearing a maker's stamp was form Dr 18 by MERCATO c. A.D. 89-95.

Glass

Twenty-one pieces of glass were recorded; 4 pieces were window glass, most of the rest represented several round flagons and square bottles with reeded handles. Colour varied

from clear blue to a pale green. Taking colour variation as a guide the pieces represent at least 8 vessels.

Objects of Iron

Sixteen heavily corroded pieces were found: on closer examination 12 were found to be recognizable nails of various sizes, one piece had a core of rectangular section rather like a chisel-iron, slightly magnetic. The rest was vesicular slag or clinker.

In timber slot of trench III with pot lid, iron bar 380 mm long, bent in a shallow curve towards one end as if used as a lever during dismantling of the building and then discarded.

Object of Lead

Steelyard weight or plumb bob weighing 440 gm with corroded loop or hook of iron. From surface of gravel path between buildings in Trench III.

Miscellaneous

Broken quern? Six pieces conjoining, vesicular lava, grey matrix: put together they form a piece 140 by 80 mm with a thickness varying from 50 to 90 mm. From oven débris behind rampart in trench III.

Beads. Half of a ribbed bead in clear deep blue glass, and part of a melon bead, greenish-blue glaze on a grey core.

Leather From the Bottom of the Outer Fort Ditch By P. S. BIRLEY

The leather consists of three main pieces plus ten small scraps. All the pieces are probably tanned calf hide.

Piece 1

Corner of a once regular shaped piece of soft calf hide. The inner section has been neatly cut away, suggesting that the original item was being carefully cut for patches. Side 1 shows a row of stitching holes to take a normal edging strip (which would strengthen and "finish" the edge). The holes of a semicircular patch are also visible. This patch covered a small tear in the hide, possibly caused by inexpert fleshing during the preparation of the hide before tanning. Side 2 shows a double line of stitch holes to take a welt seam or reinforcing band.

Piece 2

Fragment of soft calf hide showing a ridged edge with pulled stitch holes. This gathered together the two raw edges of a tear. A regular rectangular patch was then sewn over the strengthened tear. The stitch holes associated with these features are all visible.

Piece 3

Two pieces of welt strip showing the usual three lines of stitch holes. The centre line of holes on each piece shows where the thread was pulled tightly leaving a distinct line.

Ten Miscellaneous Scraps (Not illustrated)

Two scraps show a straight "rolled" edge with stitch holes. One scrap has been cut on the curve and has the stitch holes which accompany a welt seam. This suggests that the piece

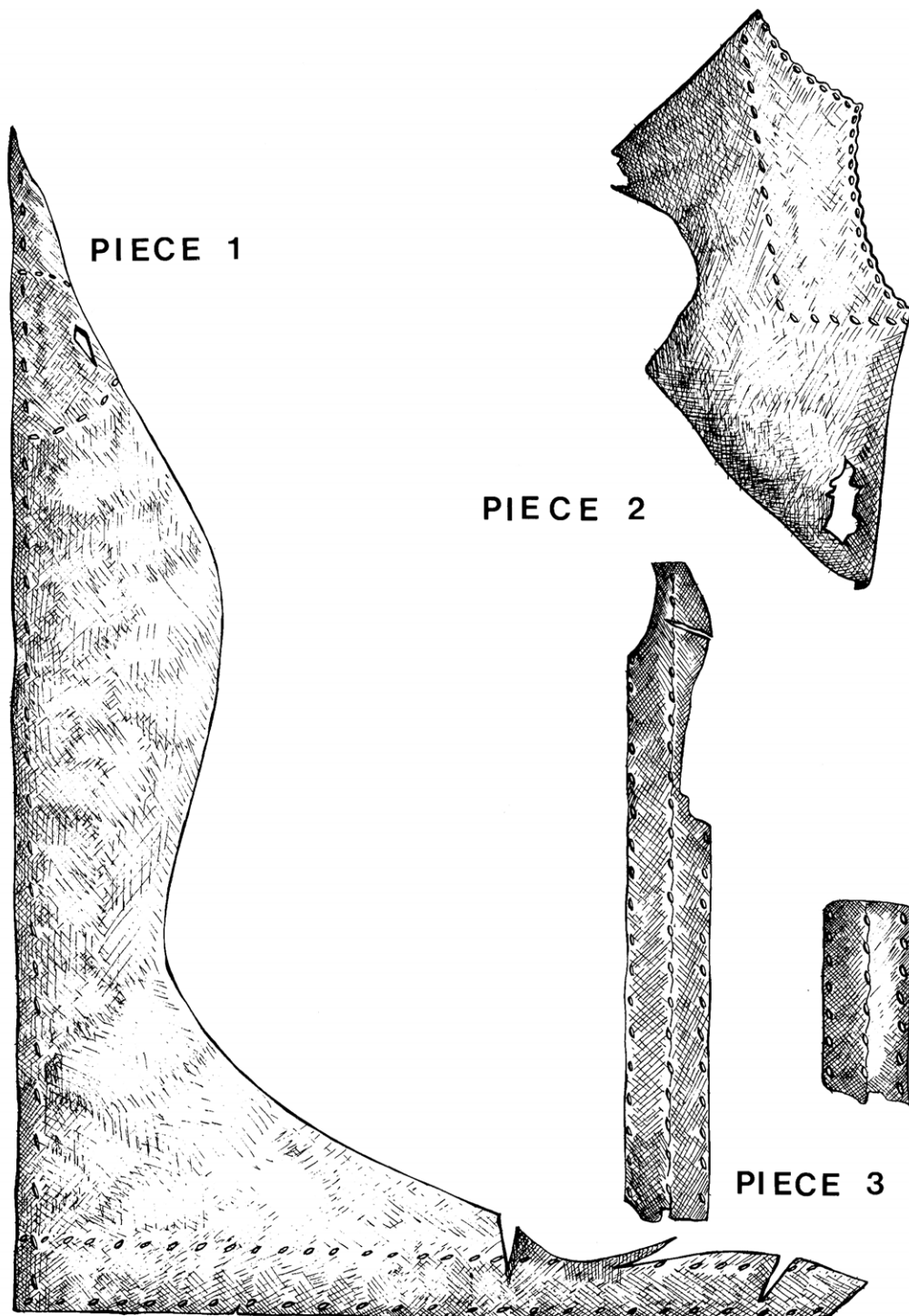


FIG. 5. - Leather scraps from the outer ditch in Trench III. Drawn by P. S. Birley.

came from a garment rather than a tent or similar. The remaining seven scraps are without any interesting features.

One feels that these pieces all originally came from the same item. The quality of the leather and the evidence of several types of seams and finishing suggests that these pieces once belonged to a garment. The owner probably cut apart the garment, saving good pieces of leather as future patches and removing any welt and edging strips which were worth keeping. The rest (including these pieces) were then thrown away.

The Animal Bones from the Inner Ditch

On my return home after the excavation I discussed the bones with our member Dr Alan Richardson who had returned from Australia to a post at the Veterinary Investigation Centre at Worcester. He selected the significant material from the collection and sent it to his colleague Mr Ralph Harcourt. In a letter to Dr Richardson Mr Harcourt commented as follows:

All the bone fragments that I can identify are bovine. Large deer and small cattle can be difficult to separate, but, generally speaking, cervid bones are more elegant and cleaner cut than those of the bovidae. All except the metatarsus could be from the same animal because the third molar has erupted and all three cusps are in wear, but only just, and the distal epiphysis of the femur is fully fused. The size of the scapula and vertebrae is such that they could belong as well. The tooth eruption and femur fusion indicate a fully mature animal. The metatarsus, in my opinion, is too small and slender to be from the same beast; it is from a younger one.

Mr Harcourt confirmed our observation that one of the bones had been cleaved:

“. . . the portion of distal humerus was certainly chopped, probably by a cleaver, chopping through the humerus at this point is commonly encountered.”

Flint from the Gravel of the Intervallum Road

A few flakes and cores of flint have been noticed during earlier excavations within the area of the fort: this time the find spot was certainly the gravel of the intervallum road in the first substantive trench. The flint must have already been present when the gravel was dug for the roads and paths. The source of the gravel lay close at hand in the ancient strand-line along the 25 ft. contour downslope from the fort, and clearly to be seen in the air photographs. The strand-line was visible on the ground during the August excavation as drought parched areas of grass. An ancient very large shallow pit in field 80 must have been the place from which the Roman engineers won the gravel for the fort roads, and the gravel, as dug, must have contained flakes and cores from a neolithic working site. I gave the flints to Mr James Cherry.

The case for the Roman road to Carlisle By R. L. Bellhouse

Having completed my outline plan of the probable position and extent of the fort as a working basis for renewed excavation I turned my attention to the question of a more than probable road link with Roman Carlisle, looking for the possible alignments the Roman engineers could have used for their survey and construction of the road. In this exercise it was a very great advantage to know the ground so well that I could visualize

the outlook from each of the relatively high points the Romans must have used as sighting points. Using the six-inch maps I established the following alignments:

- First From the highest point of the hill at the church of St Bride 229573 to Fingland 256571 1½ miles, $\frac{3}{4}$ coinciding with the modern road between Greenspot and Fingland, 15 degree turn north.
- Second From Fingland along the spine of the drumlin (Fingland Rigg) to a high point at 273574, 1 mile on the modern road, 25 degree turn south.
- Third From 273574 by Finglandrigg (farm) to a high point 307564, 106 ft, at Kirkbampton 2½ miles, nearly 1 mile of modern road on this line, 20 degree turn to north.
- Fourth From Kirkbampton to hill at 337567, 131 ft, just east of Moorhouse, 15 degree turn south.
- Fifth From Moorhouse to Coalfell Hill at 374561, 140 ft, 5 degree turn to north.
- Sixth From Coalfell Hill to Carlisle, probably very close to, if not under, Moorhouse Road and Newtown Road.

At the Kirkbride end the east-west axis of the fort appears to lie on the first alignment but the length of solid road in Mr Irving's fields, which comes to a sudden end where the ground slopes down to the marine alluvium, turns a little to the south. This made me wonder whether this piece was part of an approach road, a branch off the main highway coming from the east, and changing direction slightly at the crossing of the Wampool to bring it to a point somewhere south of the fort, rather like the road complex at Old Carlisle.⁴

Along the line of this highway there is some circumstantial evidence which is worth mentioning as it supports the case for its Roman character, for built into the south wall of Kirkbampton church is an inscribed stone: VEX LEG VI PF FEC. The Sixth Legion probably came to Britain from Germany in July 122 with the new governor Aulus Platorius Nepos to assist in Wall building. This is a reasonable inference but there is nothing against the idea that the Sixth could have arrived even earlier. Recent work by Professor G. D. B. Jones towards Burgh-by Sands may in due course throw new light on this question.

Further east at 352564 very close to the fifth alignment a "vase" containing coins of Diocletian and Constantine was found in 1855. Three hundred yards further east, again close to the road and on the same alignment, is a site known as Kirksteads near which a Roman altar was found in 1803. L Junius Victorinus, an officer of the Sixth Legion dedicated the altar to commemorate success beyond the Wall – *ob res trans vallum prospere gestas*. Its immediate significance lies in the possibility of its surviving from a roadside shrine. Of Kirksteads itself we have a description by the Rev. John Maughan, Rector of Bewcastle, in an article in CWI I.⁵ From this we learn that "numerous fragments of red freestone, with which the station had been built, are scattered in great abundance on the ground and in the three adjacent fields, denoting its position accurately enough to show the fort has been about one hundred yards in length and sixty yards in breadth" Kirksteads means a place where there is, or was, a church and the scattered stone may have come from a precinct wall rather than from a Roman fort.

The Site and its significance

The fort at Kirkbride occupies a low but commanding position at the head of one arm of the sea inlet called Moricambe which deeply indents the curve of the Solway shore. Its

shape, size, and datable finds suggest a Trajanic foundation and the recovery of a small amount of stratified black-burnished ware suggests it was dismantled very soon after the appearance of this type of ware in the North, that is to say, soon after 120. At one time I wanted to believe the fort was founded during Agricola's drive north and Moricambe was the starting place for the sea crossing of the fifth season, but in fact the true starting point must have been much farther north. However, if one stands back from the map, the O.S. map of Roman Britain for example, and draws in the fort at Kirkbride and the road to it from Carlisle, one sees at once that it is legitimate to talk of an extension, not to the road itself as an extension of the Stanegate, but to an extension of the Stanegate Frontier. This so-called frontier was in effect a narrow military zone comprising a cross-country military highway, provided with forts, fortlets, and signalling towers, linking the important military bases at Carlisle and Corbridge. Westward from Carlisle the emerging picture is of a similar arrangement comparing very well with the rest, for,

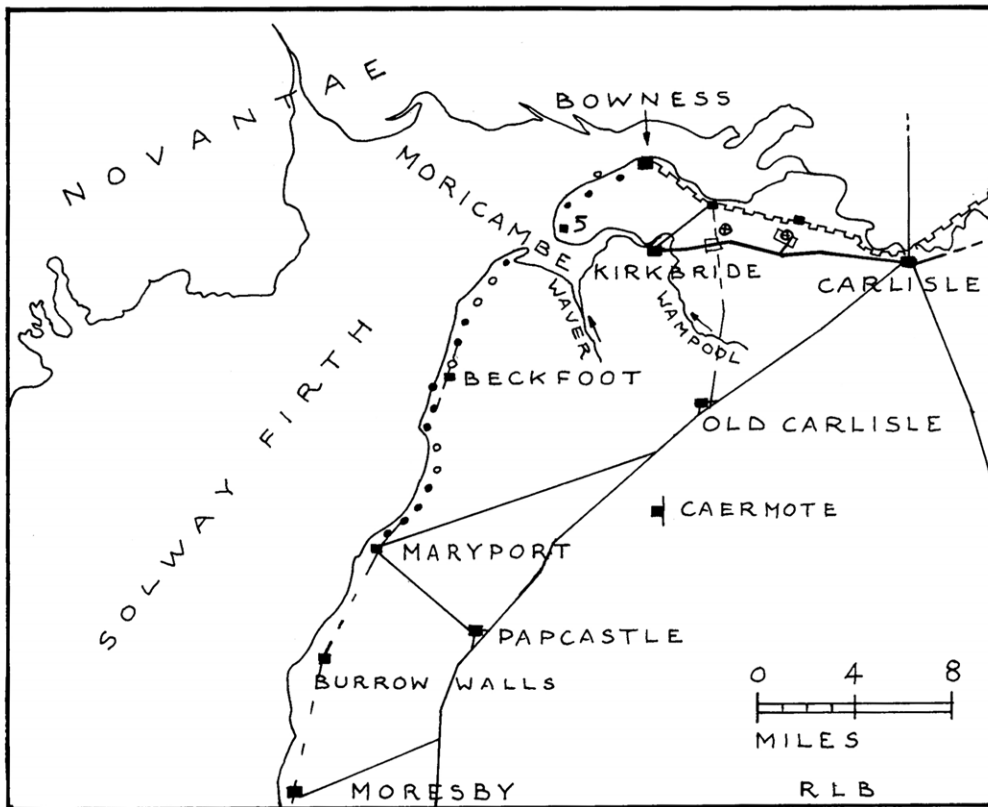


FIG. 6. – Sketch map of the Solway showing the position of the fort at Kirkbride and the alignments of the highway to Carlisle in relation to the line of Hadrian's Wall. The crossed circles and rectangles indicate the approximate positions of recently discovered watch towers and forts respectively. Milefortlets on the coast are shown as circles, filled in where proved, open where their positions are estimated. The terminal large fortlet of the system in the Cardurnock Peninsula is shown as number 5. The stone towers between the milefortlets cannot be shown clearly at this scale and therefore have not been put on the plan.

in recent years, Professor Jones has discovered from the air a Hadrianic fort and signalling post north of Kirkbampton and farther west another post near Easton and, perhaps, overlapping forts on Fingland Rigg. This extension had the same function: it controlled a strip of country inland of the Solway but with a good view over it; it ran to the head of Moricambe thus containing the Cardurnock Peninsula and all the shorter crossings of the Solway, and the position of the fort allowed the garrison to move to left or to right of the inlet as danger threatened either sector of the coast. Professor Jones has made a case for a comparable fort on the other arm of Moricambe where the Waver runs by Abbey Town, but the case is weak as it must suggest planning to counter enemy penetration inland up the rivers, when the relatively narrow entrance to Moricambe could be easily watched and the Kirkbride garrison alerted. The map (Fig. 6) accentuates the importance of the western end of the Cardurnock Peninsula as the ultimate terminus of the Stanegate Frontier and there must surely have been a "distant warning" system on the curve of the shoreline from Drumburgh round to Cardurnock with the fort at Kirkbride at its focus. The map also accentuates the fact that Moricambe divides the coast into two sectors which, from the available information, seem to show stages in the evolution of the Wall as the ultimate frontier. I have discussed some aspects of this process of development in an article in *Britannia*⁶ and reported the results of renewed excavation at Milefortlet 20 Low Mire, which throws new light on the whole concept of the so-called Cumberland Coast Defences, in *Transactions*.⁷

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