

THE NEWSTEAD RESEARCH PROJECT

1993 Field Season

Preliminary Report

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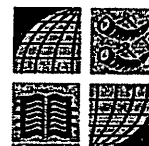
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The 1993 field season lasted for six weeks in August-September, with a team of about 35 working at any one time. The direction of the team was again shared. John Dent and Dave Lucy directed excavation at Cairneymount, Kate Clark directed the geophysical team, while Simon Clarke directed the excavation at Newstead itself. For the second year the project incorporated a formal Summer School training programme for Bradford undergraduates and North American students.

It is a pleasure to express our gratitude to all who have supported our work. This year's staff and trainees worked especially hard, helping to make this final season particularly productive and enjoyable. We are also indebted to the land owners and farmers who gave us access to their fields, particularly Col Younger and Mr Hogg who allowed us to excavate. The project was again sponsored by the National Museums of Scotland, Borders Regional Council and the University of Bradford.

Geophysical Survey

During March 1993, an area to the north of the Fort of Newstead was surveyed. The area lies on steeply sloping ground running down from the northern defences of the Fort to the banks of the River Tweed. Curle's work in this area located the outer defences, a number of pits and the suggestions of structures. It was hoped that the survey would locate and define the structural remains as well as provide information about the route out of the Fort from its northern gateways. The field which was surveyed has been under pasture for many years and aerial photographs have failed to reveal any suggestions of structures, road-lines or external ditch systems on this side of the Fort. The magnetometer survey located anomalous areas (within that defined by the known pits), the northern defences' outer ditches and, unexpectedly, a complex of ditches running down and across the hillside. The anomalous areas associated with the pits, parallel the survey results from the South Annexe. Excavation there has shown these to be associated with the remains of buildings flanking the Flavian roads running out from the Fort. These current survey results represent the first evidence for settlement on the north side of the Fort. A funnel arrangement of some of the ditches may define a route way out of the Fort. The results of this survey will be incorporated into the main survey of the Fort and Annexes. It is hoped that further work will be possible, to extend the survey to include all of the pasture area to the north of the Fort.

In the main season the project's usual policy of dividing survey time between regional sites and Newstead had to be abandoned this year because of the cold summer, which led to unusually late harvests. The whole six weeks were therefore devoted to regional work, with a bias towards pasture sites, some of which did not have the benefit of aerial photographs. Although the 1993 season comprised a large body of small sites, with more time taken up in travelling and setting up the surveys than would have normally been the case, the quantity of data recovered is comparable to the two preceding years. In all fifteen different sites were examined.

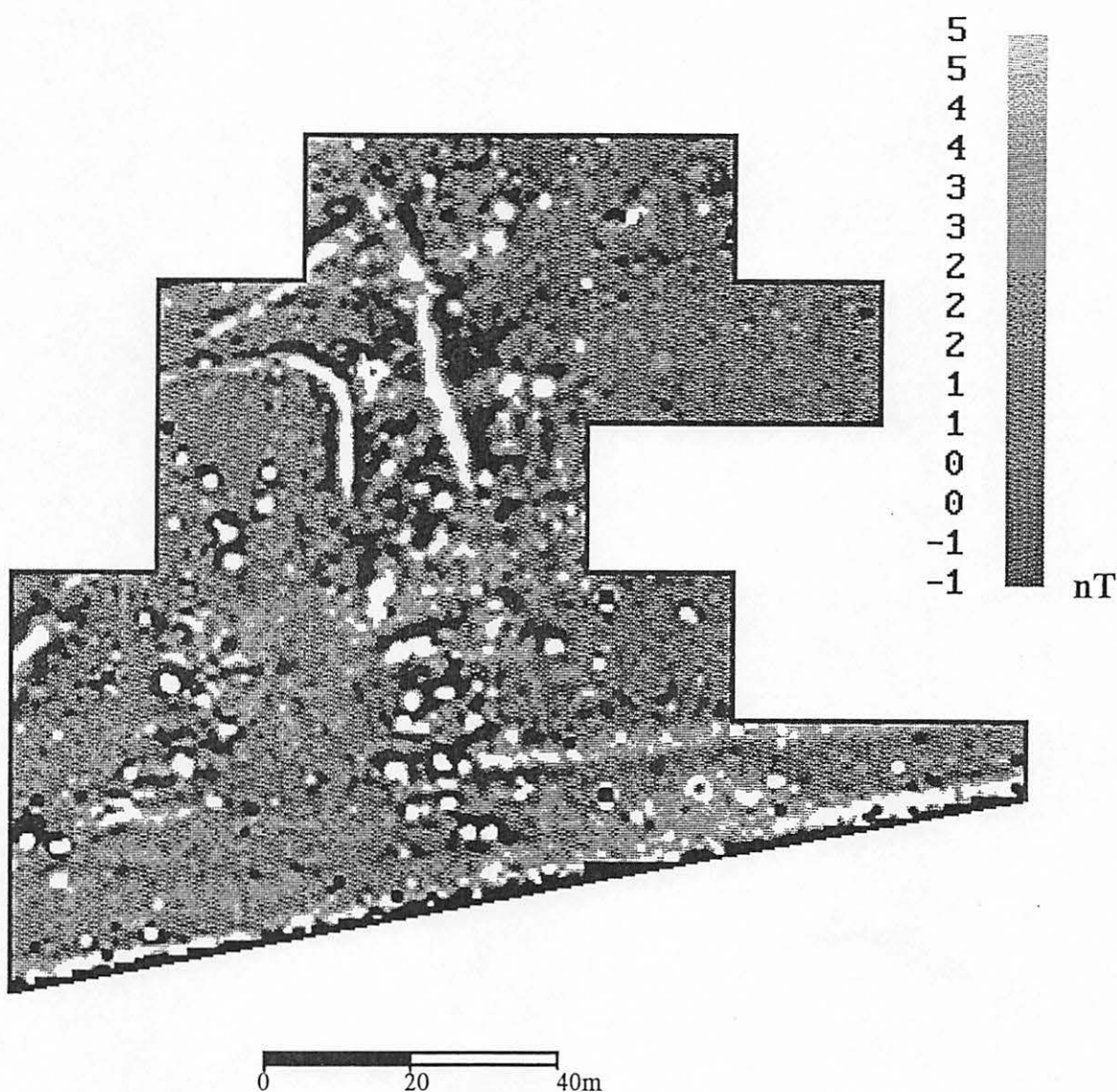
Fortunately the policy of Set Aside allowed access to some important sites normally under arable agriculture. Of three sites in close proximity at Heckside, two proved to be multi-ditched circular enclosures. Heckside 1 produced an internal feature which we now

recognise with some confidence as the remains of a circular structure of about 20 m in diameter, in this case with its entrance to the south east. The third site in the group, at Clint Hill, appears to be single-ditched and probably multi-phased with no visible internal features.

A new aerial photograph showing a possible series of ditches isolating the promontory apex at Littledean Tower became available this year. The magnetometer identified five, with an inturned entrance in the south, and a substantial area of activity in the interior. The combination of magnetometer and resistivity results suggests that the promontory fort succeeded an earlier

Newstead Research Project

Geophysical Survey 1993



North of Newstead Fort

Fluxgate Gradiometer Survey

The Fort is to the south of this survey and the land slopes steeply down to the River Tweed in the north. The survey has revealed a complex of linear and curvilinear anomalies that may be interpreted as ditches. Anomalous areas in the southern centre and south eastern parts of the survey parallel responses from the South Annexe which were found to be timber workshops flanking roads leading from the Fort.



enclosure on a different alignment. At Drygrange Mains, another new site, the aerial photograph showed what appeared to be two conjoined sub-rectangular enclosures. The magnetometer results, although faint, confirmed this, but the resistivity produced a clear, apparently undivided, sub-rectangular site, single ditched with opposing east and west entrances. Clearly the two techniques have each distinguished a different phase.

The importance of the dual techniques is clear. Throughout the five years of the project, with very few exceptions each site has produced some details which are only visible by one method or the other, and a significant number of sites would have produced incomplete or inaccurate interpretations had reliance been placed in the results of only one survey technique.

Another new aerial photograph in the east of the region suggested a small enclosure with associated linear features in the field adjacent to the site at Whitrighill, which we had surveyed in 1991 and excavated in 1992. The magnetometer recovered a small circular site at the side of the stream, with no visible internal features and much disturbed by the cut of a water pipe. On the other side of the same valley at Third we investigated a site known to us only by a note in the NMR as a visible cropmark. The results are clear, complex and intriguing, with double curvilinear ditches abutted by two enclosures. One of these is rectangular, and the magnetometer shows a rectangular building within. The other has produced strong resistivity and magnetometer signals over the enclosing linear feature and signs of activity in the interior. What appears to be further structural features can be seen inside the double ditches. This is almost certainly a complex multi-phase site.

Within 300 m of the 1993 excavation at Cairneymount Ridgewalls was an earthwork preserved within a narrow plantation (Cairneymount Chesterlee), and we mounted a survey to define the extent and morphology of the enclosure. We found it to be a single ditched, probably oval site, with a long axis length of about 140 m and a short axis of about 30 m. This shape and dimension has so far not repeated within the region.

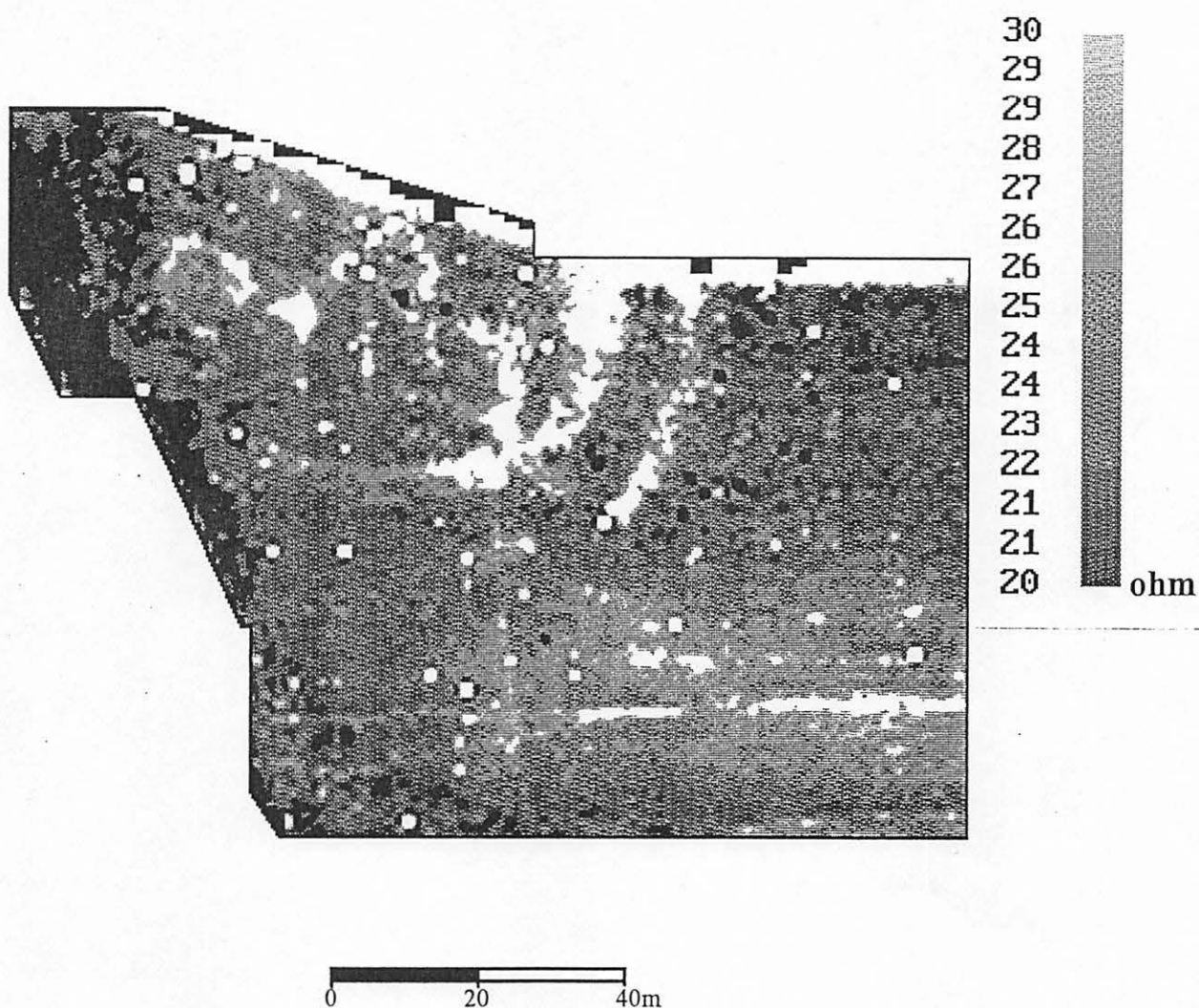
In the west of the survey region at Kaeside we set up another survey on the basis of an NMR note. This time an aerial photograph, which was no longer available, had produced what appeared to be a rampart. On subsequent visits the Royal Commission had concluded that this was a terrace produced by tree growth on the scarp of the knoll. Our survey shows that the headland is circumscribed by at least one, and probably two curvilinear ditches, and the crest of the knoll is occupied by two circular features, again each of about 20 m diameter.

At Turfford Burn, in the north-east of our area, we were able to access Set Aside land again to investigate a cropmark reported on an RAF vertical AP. Once in the field however we found a standing circular earthwork just inside the adjoining plantation. Although our attempts to identify a perimeter ditch were inconclusive the dimensions of this unrecorded earthwork, with an internal diameter of no more than 30 m, suggests a previously unrecorded class of small enclosed sites located on less productive land.

Three small surveys undertaken at Easter Housebyres (site suggested by documentary evidence) and Chester Knowe (site suggested by slight earthworks) and Birch Grove (site suggested by aerial photograph) were the least successful enterprises of the season. At Easter Housebyres we could recover no evidence at all, and at Chester Knowe the data was dominated by the cultivation effects, probably as a result of deep ploughing on thin soil cover. Geophysical survey at Birch Grove, an enclosure clearly defined on an aerial photograph, produced no useful results.

Appropriately we included in our final year Red Rig, the site first examined at the project's start in 1989. The enclosure is quartered by field boundaries and in 1993 we were able to survey a further two quadrants. The results produced the full dimensions of the site and support the view that it was a multi-phase settlement.

Our final survey took us southwards, just into the outer region at Lilliesleaf, to a pair of sites recorded on aerial photographs above Lilliesleaf Moss. Our main interest was in what appeared to be a single ditched sub-rectangular enclosure sited on a plateau overlooking the valley floor.



Heckside 1

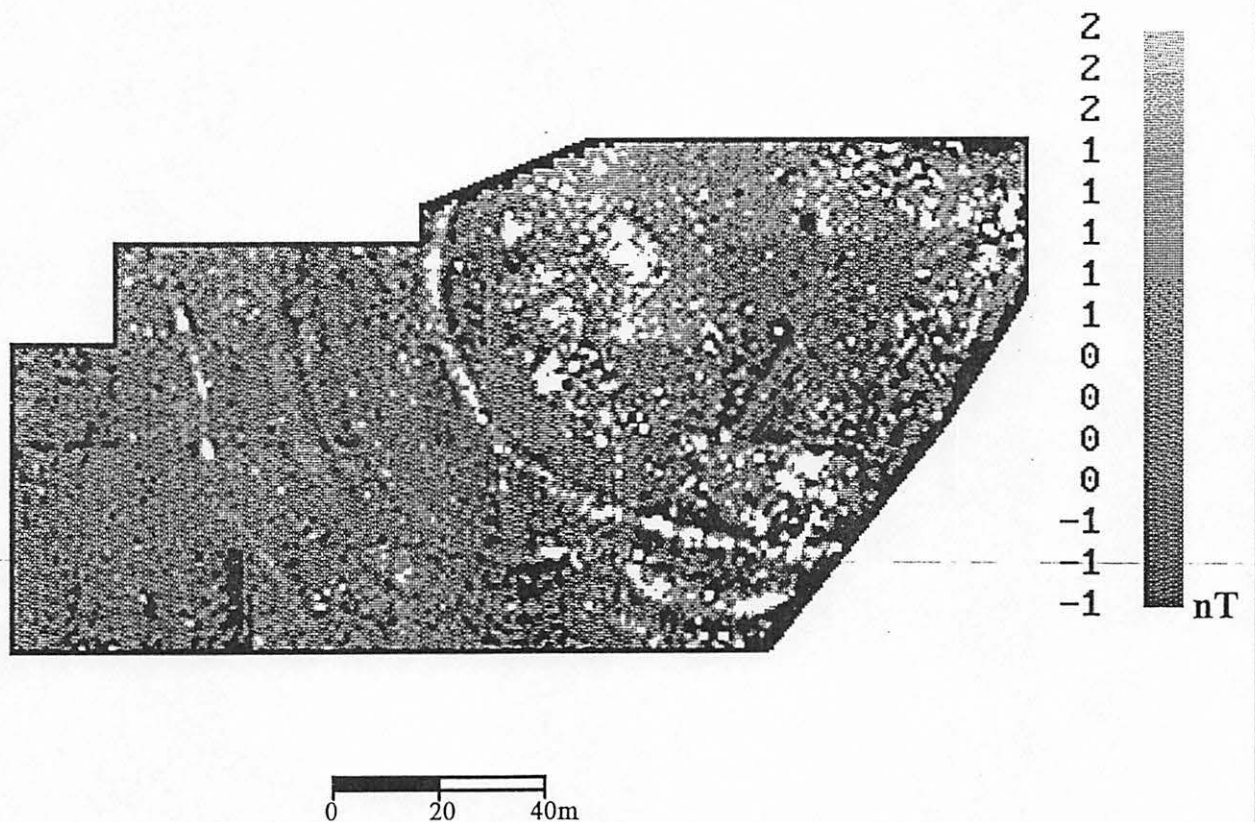
Twin-Probe Resistivity Survey

The survey has revealed a double ditched enclosure with internal structures. Note that the ditches respond as a high resistance. This is a common phenomenon in this area during the late summer months as the upper parts of the looser ditch fills dry out preferentially.



Newstead Research Project

Geophysical Survey 1993



Littledean Tower

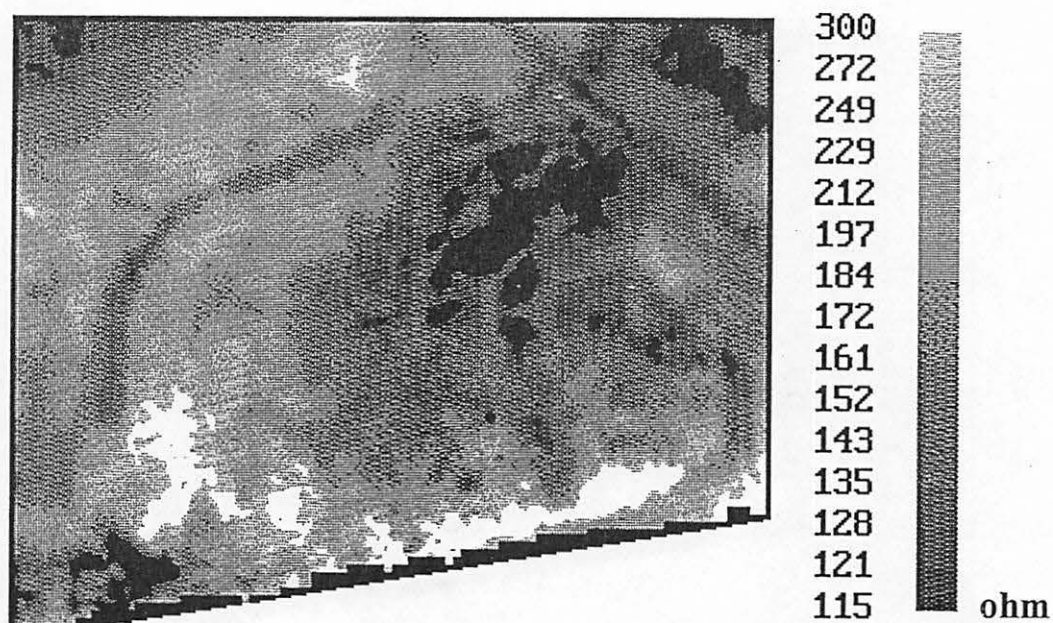
Fluxgate Gradiometer Survey

The survey has revealed five ditches and an inturned entrance to the south of this promontory fort. There are also a number of probable internal structures.



Newstead Research Project

Geophysical Survey 1993



Drygrange Mains

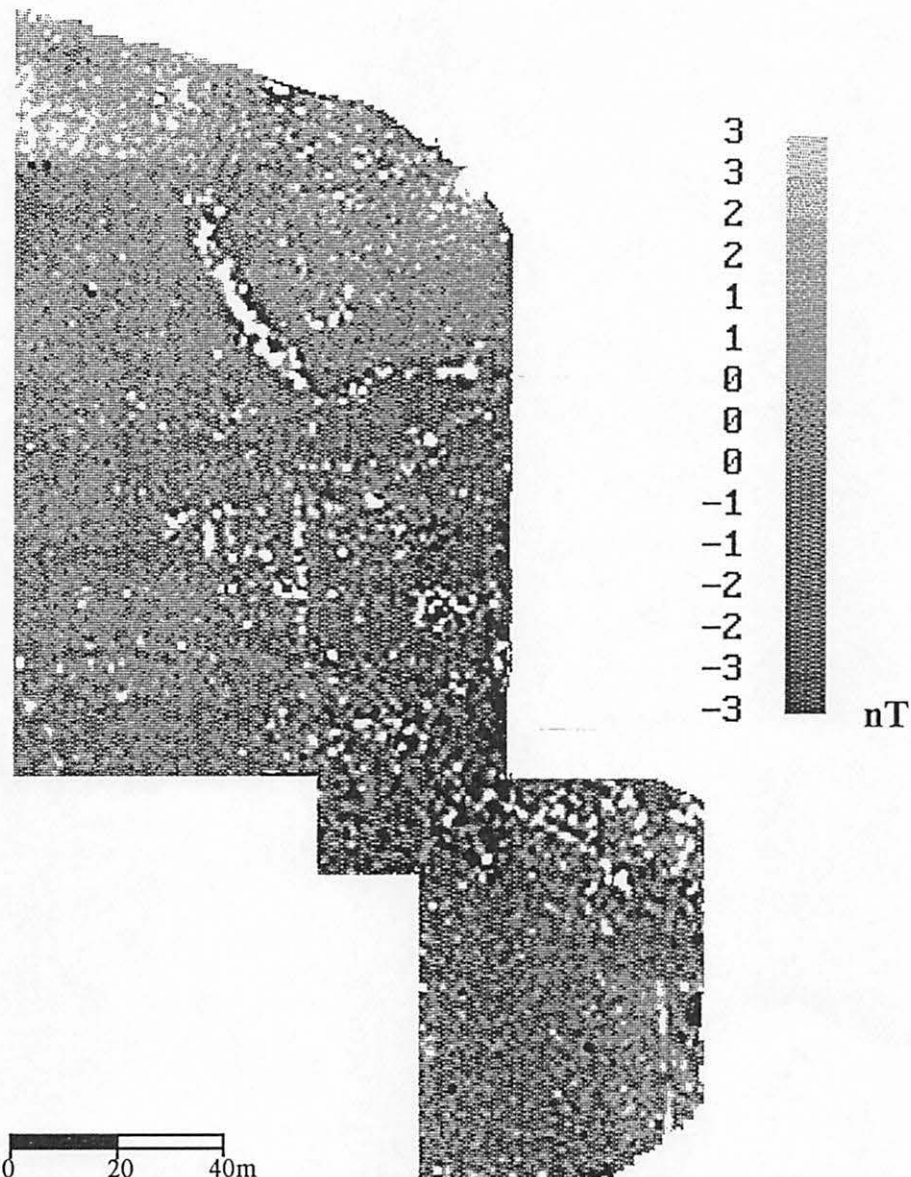
Twin-Probe Resistivity Survey

The survey shows the ditch of a sub-rectangular enclosure, but is without clear evidence for internal structures. Aerial photographs and the magnetometry survey show another phase of ditch not recovered on the resistivity survey.



Newstead Research Project

Geophysical Survey 1993

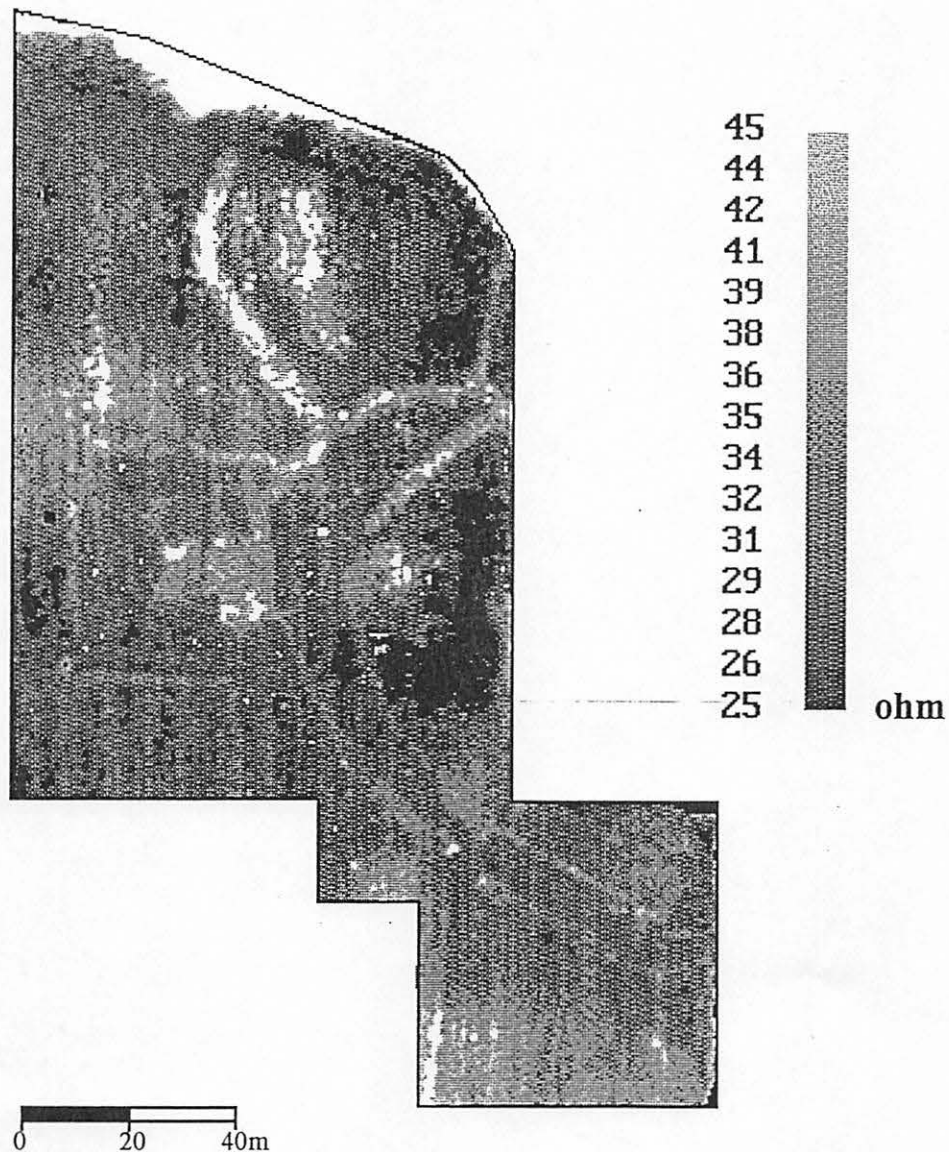


Third

Fluxgate Gradiometer Survey

The survey has revealed a complex of linear and curvilinear anomalies which can be interpreted as the arc of a double ditched enclosure with two or more abutting enclosures. The resistivity survey shows some of these with greater clarity.



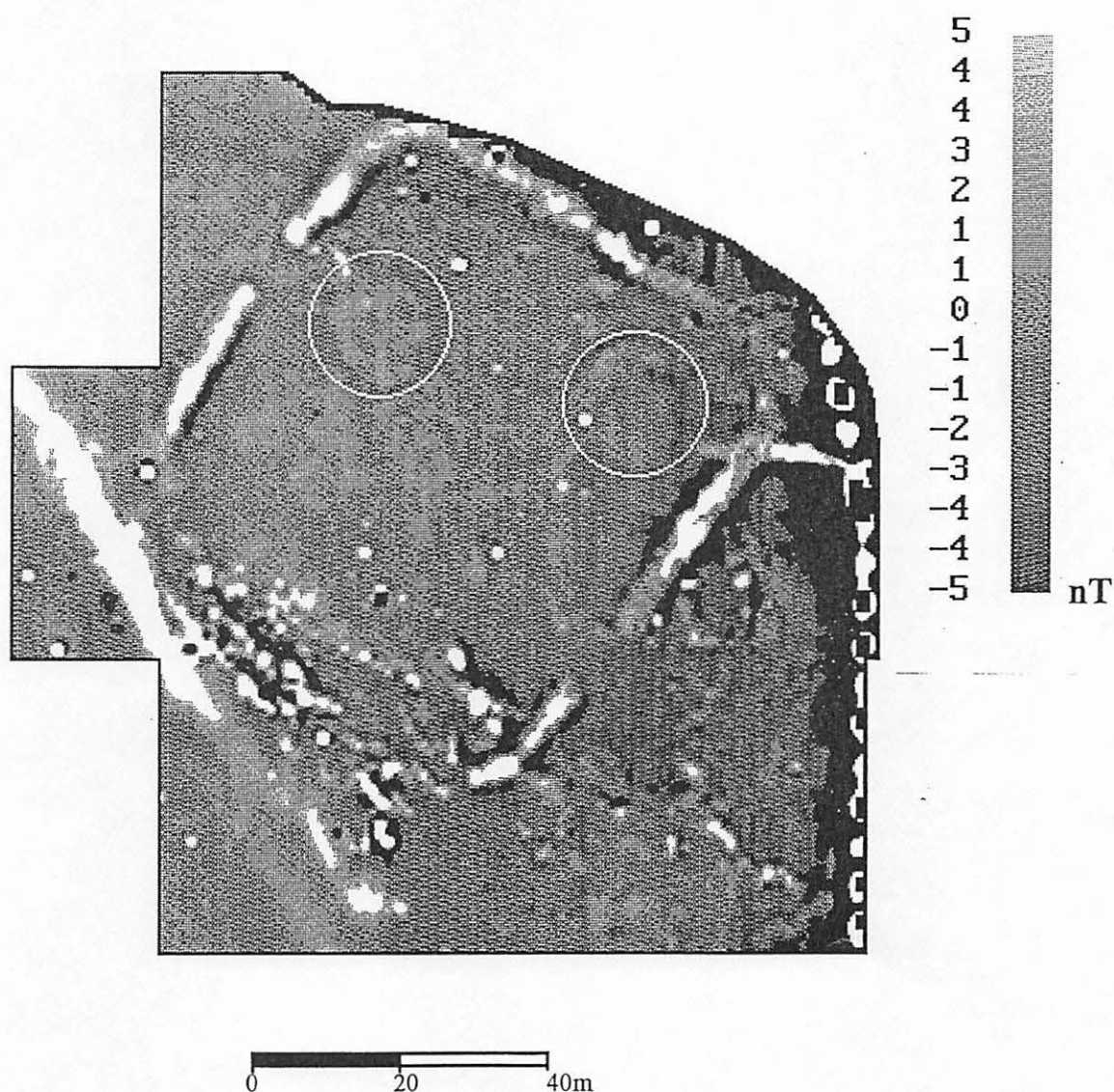


Third

Twin-Probe Resistivity Survey

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Lilliesleaf North

Fluxgate Gradiometer Survey

One of two enclosures above Lilliesleaf Moss. The plot shows a single sub-rectangular enclosing ditch with two opposed entrances. Evidence of two possible round houses (positions marked by circles, although not clearly visible on this general plot) is evident in a more detailed analysis. A modern pipeline runs up the eastern edge of the survey, but the status of the two linear anomalies intersecting the south-west ditch of the enclosure is unclear at this stage.



Our survey produced a clear plot of this enclosure, which can now be seen to have opposing entrances, and in the interior a circular feature of about 20 m diameter close to the north west entrance. This seems very likely to have been a large round house. Another structure of this type is possibly indicated by a circular feature in the eastern corner.

It is never possible to say that a project such as this is finished: there are sites which we would have liked to survey but which have never become available. New sites continue to appear and this final season has extended the role of geophysics well beyond the role of upgrading aerial photograph evidence. What we can say, however, is that the data already collected has substantially improved our understanding of the region and presented a whole new range of questions about the role and methods of regional studies generally.

Excavations at Ridgewalls, Cairneymount

Cairneymount farm is located in the north of the survey region, well away from previously examined sites. It sits at an altitude of 230 metres on a ridge which runs west up Lauderdale between two burns. The bedrock consisted of tightly folded Silurian greywackes which, although they outcrop in places, are smeared with a thin covering of boulder clay. This is marginal land today and is exclusively given over to grazing, although in the past the ground has been put under the plough. Immediately to the south of Ridgewalls is a rectilinear enclosure measuring some 30 m by 42 m, adjoining which are a small roofless farmhouse and remains of an outbuilding of late eighteenth/early nineteenth century date. The mid-nineteenth century farm which replaced it is still in use today.

The prehistoric enclosure remains as a slight earthwork, although it has survived much better in the adjacent plantation, where parts of banks remain standing to one metre. Cropmarks revealed the site to have been sub-rectangular, with the ditches to north, east and south sides being fairly straight, but with a distinct bow on the western side. Survey in 1992 using magnetometer and resistivity meter enhanced the aerial images of the defensive line, suggesting the presence of a gate on the eastern side. It also suggested that while no specific structural patterns could be discerned, there were internal features on the northern and western sides. The south-eastern parts of the enclosure were noticeably lower lying than the north and west, which suggested, *prima facie* a division of the interior into a low yard with an elevated platform at the back to accommodate buildings. Excavation aimed to examine three aspects of the site: the enclosing earthworks, the gateway and the building platform.

Trench RGT 160 was a partial section through the northern earthworks, examining two ditches and the levelled remains of a clay bank between them. The innermost bank and outermost ditch were not examined. The inner ditch was 5 m wide and 2.2 m deep, and the middle ditch, 2 m deep by 6 m wide. Both contained many stones, mainly concentrated in the middle filling. In addition, thick pot sherds of Iron Age type were recovered from the middle ditch. The ditches cut the overlying till to penetrate the bedrock below. This allowed water to drain away freely, to the detriment of any organic matter. The surviving clay bank was stone-free, suggesting that material quarried from the ditch was sorted, with tumbled rock in the ditch fills representing collapsed drystone retaining walls. A similar pattern was discovered in trench RGT 163, cut into the middle ditch on the enclosure's south eastern side.

Trench RGT 161 examined the entrance through the inner ditch and bank. The entrance itself was found to consist of a 4 m wide road of roughly laid stones, reinforced by stone curbs to prevent subsidence where it passed between the ditch terminals. No post holes or stonework were found to indicate how the clay banks had been retained along the passageway. Only one ditch terminal was excavated, and this contained a number of tumbled stones like those encountered in RGT 160. The top of the other ditch terminus was represented by a spread of stone, probably derived from early field clearances as the result of cultivation of the enclosure for the first time in the eighteenth century.

Trenches RGT 162 and 183 investigated the slightly raised ground in the south-west of the enclosure's interior, an area of resistivity anomalies. In trench RGT 162, which abutted the clay bank on its south side, evidence was found of at least two ring-groove roundhouses on the north and south, with perhaps a third centred somewhat to the west. The small trench RGT 183 to the north found evidence of another roundhouse, which had been rebuilt on two occasions. This suggested a row of three buildings in line north-south, of which the most southerly, may have been contemporary with a saucer-shaped depression floored in places with pebbles. Parts of this surface appeared to be protected by horizontal stone slabs, and there was a more general scatter of stones in the area, which may have produced the anomaly on the resistivity survey. The pebbled surface could have been a house floor, or may have been part of a more extensive yard, represented by the low lying eastern and southern part of the enclosure. Among finds from RGT 162 were perforated stones, including two spindle whorls, while a stratigraphically late pit contained two sherds of medieval pottery.

In sum, arrangements suggested by the surface topography and by earlier surveys were clarified by excavation, which established the defensive scale of the enclosing earthworks, the position (but not the structural detail) of the entrance and the use of the back of the enclosure for buildings. At the same time an Iron Age date for the sub-rectangular enclosure was strongly implied by the character of the pottery found in the middle ditch.

Excavation At Newstead

Excavation at the Newstead Fort Complex returned again to the extramural settlement south of the fort itself. Two trenches examined the areas either side of the more easterly of the two north-south roads, 20 to 40 m south of the outer fort ditch and just to the north of the presumed line of the east-west side road noted in 1989 (RGT 33).

The north-south road itself was found to have consisted of an approximately 4 m wide roughly cobbled carriageway, bounded by neither curb stones or side ditches. This year's excavation, as with all others in the South Annexe, found the area to have been thoroughly examined by James Curle's workmen, who had dug narrow trenches at 1 to 3 m intervals across the site. However Curle seems to have had some difficulties in recognising the road at this point, plotting its position some 10 to 15 m further east, perhaps confusing it with the extensive cobble and gravel spreads noted on this line during this year's excavation. Certainly the error has not resulted from inaccurate plotting of his findings as pit 18 was accurately located by Curle's 1911 plan.

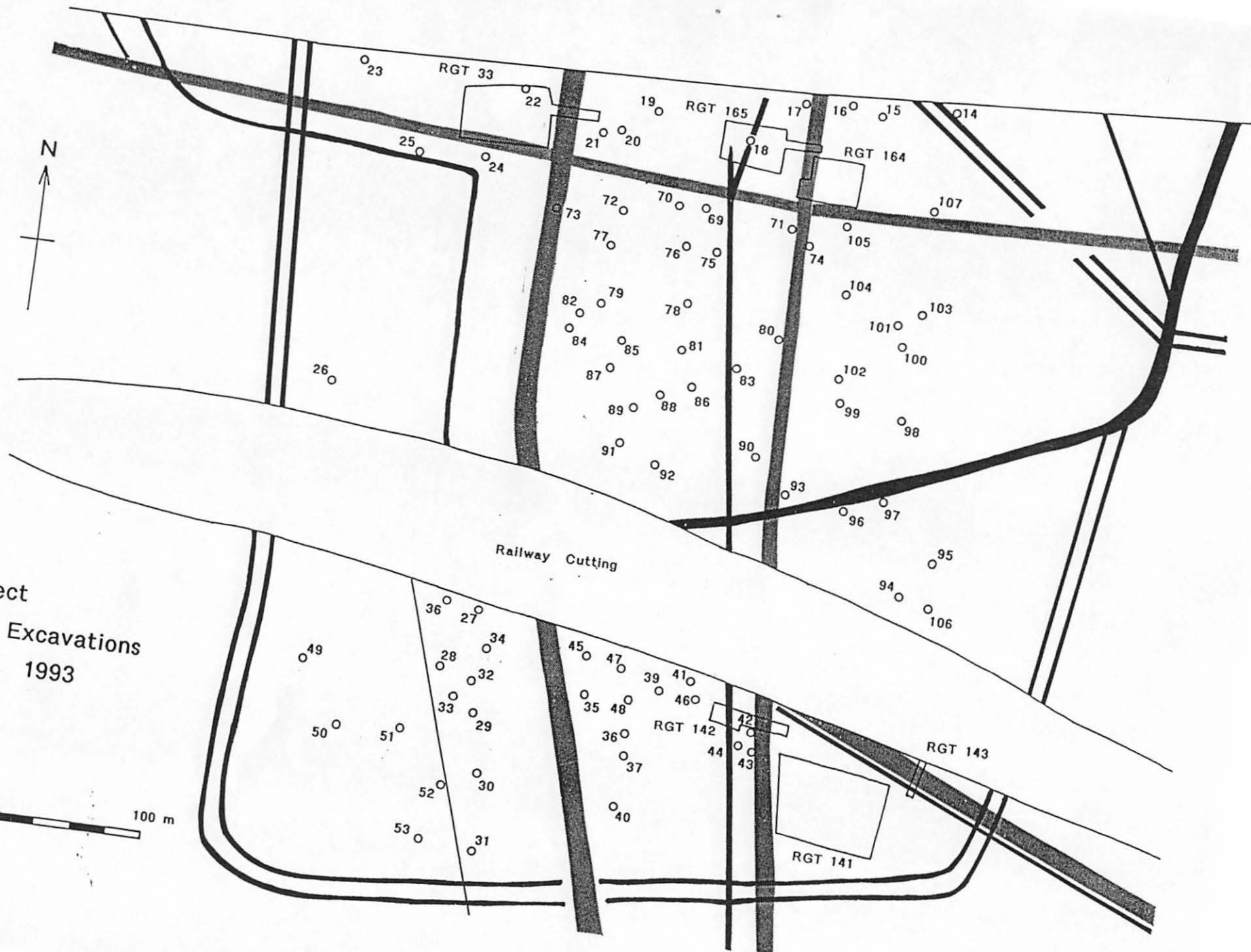
The area to the east of the road (RGT 164) proved to have been occupied by a complex sequence of drainage gullies and metalled surfaces, the detailed history of which proved impossible to disentangle. They appear to represent piecemeal dumping in outdoor areas around and between post-built timber structures, only a few elements of which have been identified. These probably possessed wooden floors similar to those postulated for the buildings excavated in 1992 (RGT 141). Unless these buildings were very small the remains probably represent numerous superimposed structures, with different phases fronting onto both the main and side roads. Interestingly, however, the most prominent alignments are parallel and perpendicular, not to the adjacent roads, but to the street and building alignments of the fort. The possible significance of this is examined below.

The most striking feature of the trench, however, was not the evidence for structural remains, which were slight and difficult to interpret, but the character of the finds recovered. These were very sparse, especially in comparison with the level of finds recovered just the other side of the road, which was approximately ten times greater. Its content could also be described as rather poor. Although both samian and iron work made up a relatively large percentage of the total assemblage there were no coins, and a fragment of glass bead and a single bronze object constituted the only evidence for personal ornamentation. In terms of both finds density and composition RGT 164 most closely resembles RGT 141 located on the same side of the same north-south road, but 150 m to the south. That area was postulated to have been inhabited by

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Newstead Project
South Annexe Excavations
1989, 1992 and 1993

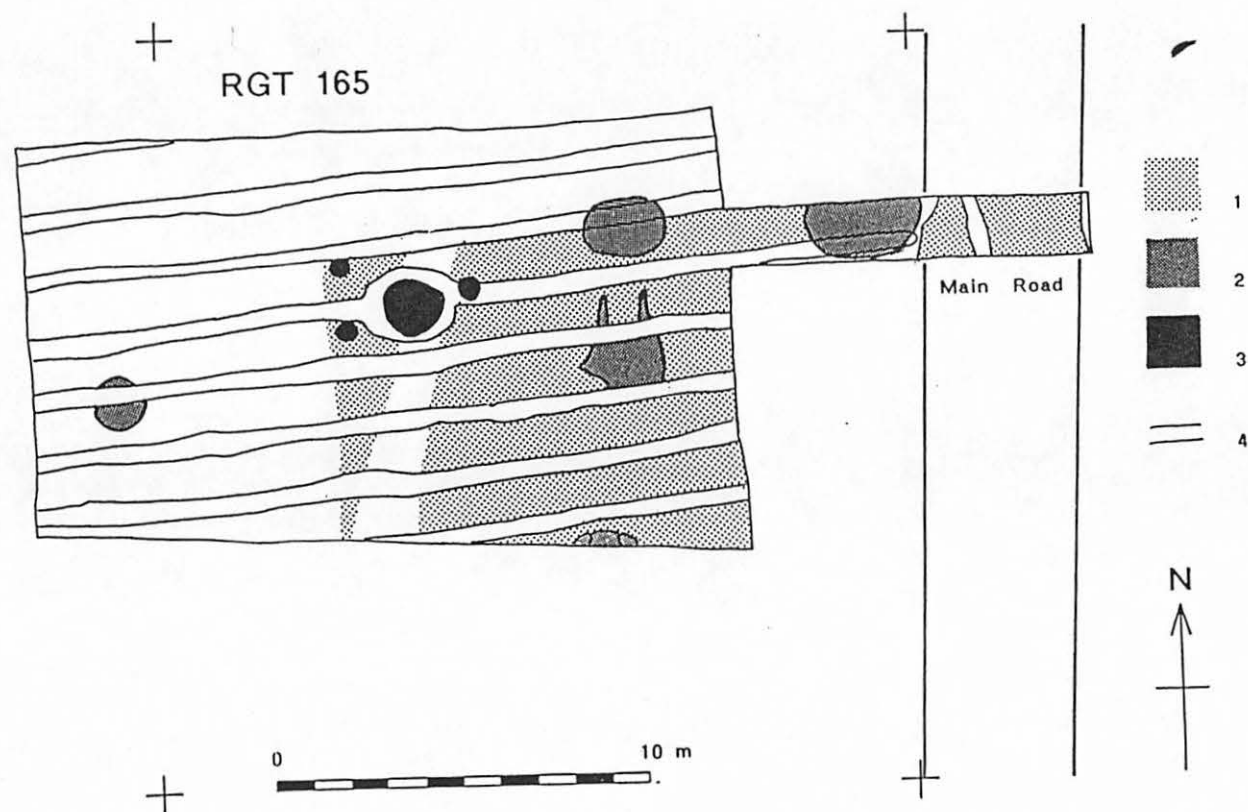


agriculturalists. It may be that the poverty of the evidence for material culture resulted not only from the relatively low status of the inhabitants, but also the removal of domestic debris to manure the land, a custom widely assumed to have been practised by Britain's rural populations in both the Iron Age and Roman periods.

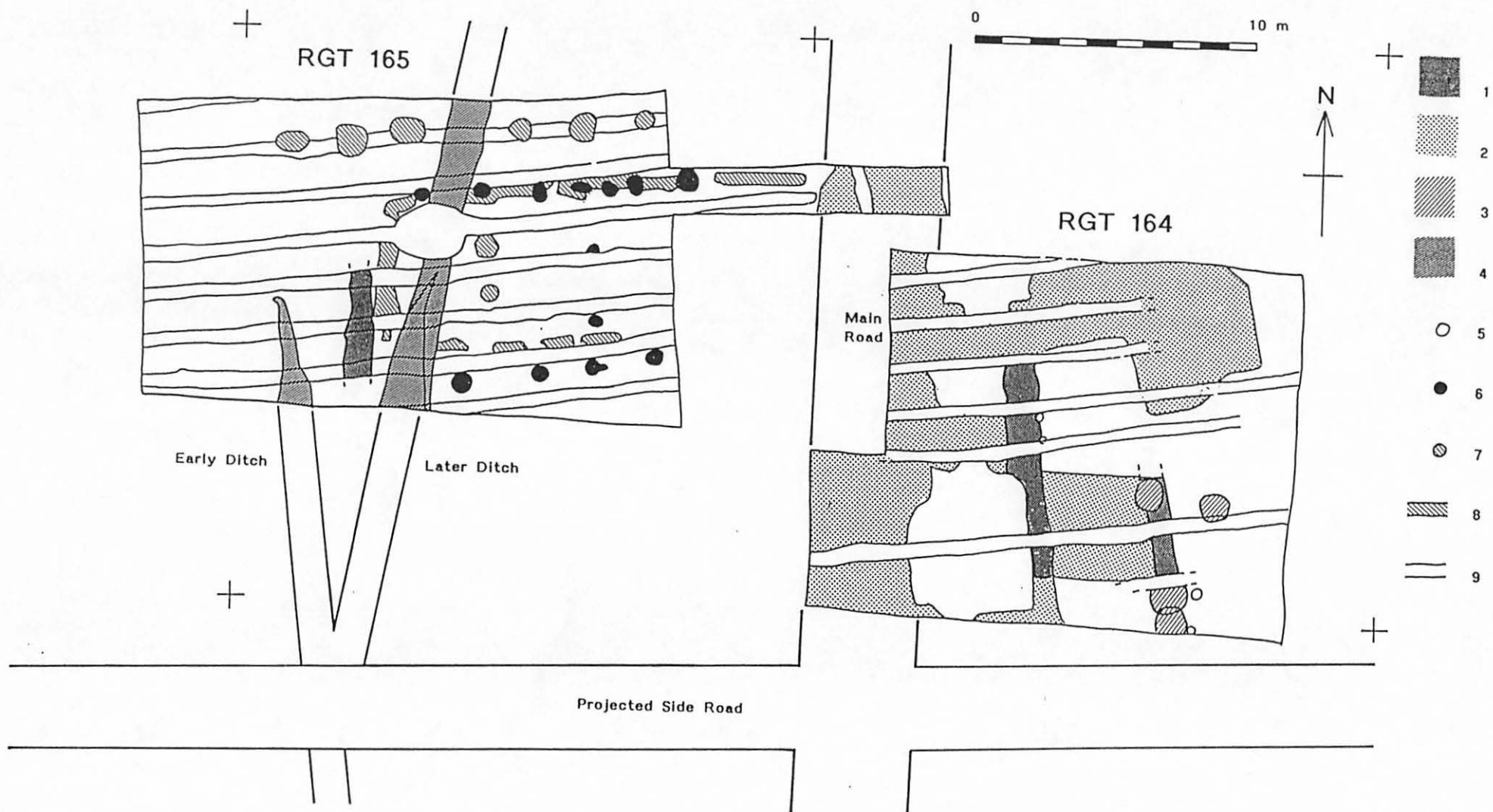
Examination of the area to the west of the main road in contrast produced a highly complex sequence of recognisable structures associated with a finds collection rich in both quantity and content. The earliest major phase of occupation was a series of pits, post-holes and gullies, not investigated but exposed by later features, which cut through them, or implied by subsidence of an overlying cobble spread extending over most of the eastern part of the trench. The succeeding phase saw the creation of a large unroofed industrial area. This consisted of a fine pebble surface, which extended 15 to 16 metres west of the main road and whose limits to the north and south extended beyond the excavated area. Directly associated with this surface were four hearths or furnaces. A fifth, located just to the west should probably also be associated with this phase. The furnaces varied in form: two consisted of shallow pits, while the others had been upstanding with either clay or stone superstructures. No specific function can be attributed to these, although the absence of distinctive iron working slags or pottery wasters narrows the range of possibilities. Also probably of this phase was pit 18, excavated in 1906 by James Curle. This was recorded as having been 5 feet (1.5 m) wide at the surface and 3 feet 8 inches (1.1 m) at its base, 11 feet 4 inches (3.4 m) below the surface. Curle's excavation of the shaft itself had completely destroyed the evidence for its relationship to surrounding archaeology. However post holes, which are best interpreted as some sort of well head structure, were clearly later than the cobble surface, but underlie subsequent buildings. The absence of a lining, to shore up the silty clay geology into which the shaft is cut, may explain the well's relatively short working life. The shaft then appears to have been used for rubbish disposal. Curle recorded the pit to have been back filled with a mixture of industrial and domestic debris in a matrix of organically rich black earth.

The next phase was a post-built timber building 6.5 m wide by 9.5 m long, roughly perpendicular to the main road, from which it was set back about 4 m. A very regular 4 cm wide soil stain running between the post holes of the south wall suggest a clap board construction. No prepared floor surfaces or hearths were discovered associated with this building. While it is possible that one has been removed by ploughing or that no special provision was made it is perhaps more likely that a suspended wooden floor existed. Internal post settings, probably of this phase are interpreted as an internal wall, dividing the building into two rooms: front and back. A probable door has been identified on the building's north side. Another might be anticipated opening onto the street. This building was succeeded in turn by a sill-beam, strip building, set on rough cobbled foundations. In spite of constructional differences the two buildings were very similar. Though larger at 5.5 m wide by 15 m long and fronting directly onto the road itself it occupied an almost identical building plot. It also possessed a probable side door (on the south side), internal division into two rooms and in the absence of evidence for a solid floor or hearths perhaps had raised wooden floors. To the north, separated by an eaves drip alley just under 2 m wide, was a massively constructed post-built timber building, which extended back 18 m from the street frontage. The proximity of this building to the sill beam building suggests a highly built up character, with considerable pressure on street frontage resulting in long narrow buildings with open space behind. This style of settlement is typical of artisan and merchant communities throughout the Roman Empire, with shops at the front and domestic accommodation to the rear. No specific trade could be suggested, but a loom weight, several spindle whorls, ten coins and a measuring weight were amongst this year's finds. Though possibly of a higher status than the agriculturalists the wealth of this area's finds is also a function of a different attitude to rubbish disposal. As well as higher levels of pottery, iron and non-ferrous metal work there are also much higher densities of animal bone and evidence for burning in the form of charcoal and fired clay. This seems unlikely to have resulted entirely from an abundance of possessions, rather it probably reflects the absence of systematic refuse collection. While perhaps indicating lower standards of cleanliness it is perhaps more relevant that this community was not engaged in working the land and so will not have been engaged in its manuring.

Newstead Project 1993 Phase 2



Newstead Project 1993 Phases 3 to 5



These buildings were followed by a ditch already known from geophysics and aerial photography. This has been recognised extending for at least 300 m south of the fort, perhaps as much as 750 m. Within RGT 165 this ditch exhibits a complex history. The earliest alignments continued the line known from APs and geophysics as a v-shaped ditch just over 1.5 m wide and about 1 m deep. Less than half way across the trench, however, it peters out, refuting Prof St. Joseph's contention that it turned to the west and joined another linear cropmark to form the corner of a marching camp. Later phases of the north-south ditch seem to have been diverted to the east, presumably to reduce the distance between the main road and ditch, which had grown from 6 m just south of the railway cutting to 18 m in RGT 165. Initially the new alignment retained its v-shaped profile and petered out as the earlier line had. Later however the ditch was extended further north, with a flat bottomed steep sided profile similar to that recorded in 1992 (RGT 142). That section of the ditch was interpreted as a drain, but early ditch cuts discovered this year seem unlikely to have served that function. It has also been noted that the direction of the ditch, straight down the hill slope, is not practical as a drain as it would not intercept the surface flow of water. Certainly the ditch runs contra to the known modern field drains which criss cross the 1992 excavation trenches. It would also have been paradoxical for such a large effort to have been made to drain the area after the clearance of buildings. A more likely role is perhaps suggested by the observation that the early ditch is aligned precisely with both the fort's internal features and the buildings discovered in the 1993 excavations. As neither side road nor main road share this alignment (in this area) it is probable that they are the result of some centrally imposed land allocation. In view of the ditch's length and the absence of evidence for structures of a contemporary or later date the boundary must relate to the demarcation of agricultural land. The similarities between this ditch and ditches identified actually within the fort (e.g. the late east-west ditch identified in RGT 101) are also a point of some interest. It seems possible that the final phase of occupation at Newstead saw the drastic reduction of both military and civilian population and the extension of the field system into abandoned settlement areas.

In conclusion the complex sequence identified in RGT 165 shows strong similarities to RGT 33 (1989) with a cobble surface, apparently unroofed and associated with industrial activity being succeeded by typically urban strip buildings. This is particularly significant for our understanding of the extent of settlement to the south of the fort as geophysics offered no explicit evidence for buildings in marked contrast to the area examined in 1989. In both cases almost all the finds can be attributed to 50 years or so in the later second century. In the case of RGT 165 each cycle of construction and demolition perhaps represents just 10 years, testifying to the vigour of the extramural settlement and also helping to explain the density of Curle's deep pits. If these were open on average only ten years most can be interpreted as wells without implying massive over capacity of water provision. RGT 164 just the other side of the main road, though very different in character to RGT 165 and RGT 33, also sees strong parallels in previous excavation south of the fort. Both RGT 164 and 141 appear to represent lower status agriculturalists with a different material culture and a different attitude to the disposal of refuse. Though the sample size even within this most intensively investigated area remains tiny it seems likely that there was a basic division of the south annexe's population into two groups. One was essentially urban, participating in a money economy and supported itself by trade and industry. The other was essentially rural in both occupation and outlook. On the basis of coin distribution it participated far less in the market economy and appears also to have had a markedly different range of goods at its disposal. That Newstead should possess both classes of people is not surprising, but what is was that both remain so rigidly separate spatially.