

Evidence for extramural settlement north of the Roman fort at Newstead (Trimontium), Roxburghshire

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ABSTRACT

Excavation and geophysical survey undertaken in the summer of 1996 north of the Roman fort at Newstead (Trimontium) revealed information about the fort defences, north and west annexe defences, amphitheatre, and first- and second-century AD extramural settlement. This contributes to the debate on the function and status of annexes both at Newstead and in other contemporary Roman forts, and to our understanding of Roman interaction with the indigenous population. Proposed identification of a small amphitheatre underlies the status of Newstead as a major military base, but also suggests that arenas were far more common than has generally been recognized, stimulating a search for similar structures at other Roman sites in Scotland.

INTRODUCTION

In 1996 a team from the University of Bradford, directed by the authors and Abigail Tebbs, undertook fieldwork in the scheduled area north of the Roman fort at Newstead (NGR: NT 571 346) in the former county of Roxburghshire, Scottish Borders. The objectives of the field season were threefold: first, geophysical survey of the entire area north of the fort, in an attempt to define the defences and occupation areas; second, limited excavation of potential features revealed by the geophysical survey in order to assess their character and date; and, third, excavation in the depression north-east of the Roman fort to assess the presence of an amphitheatre.

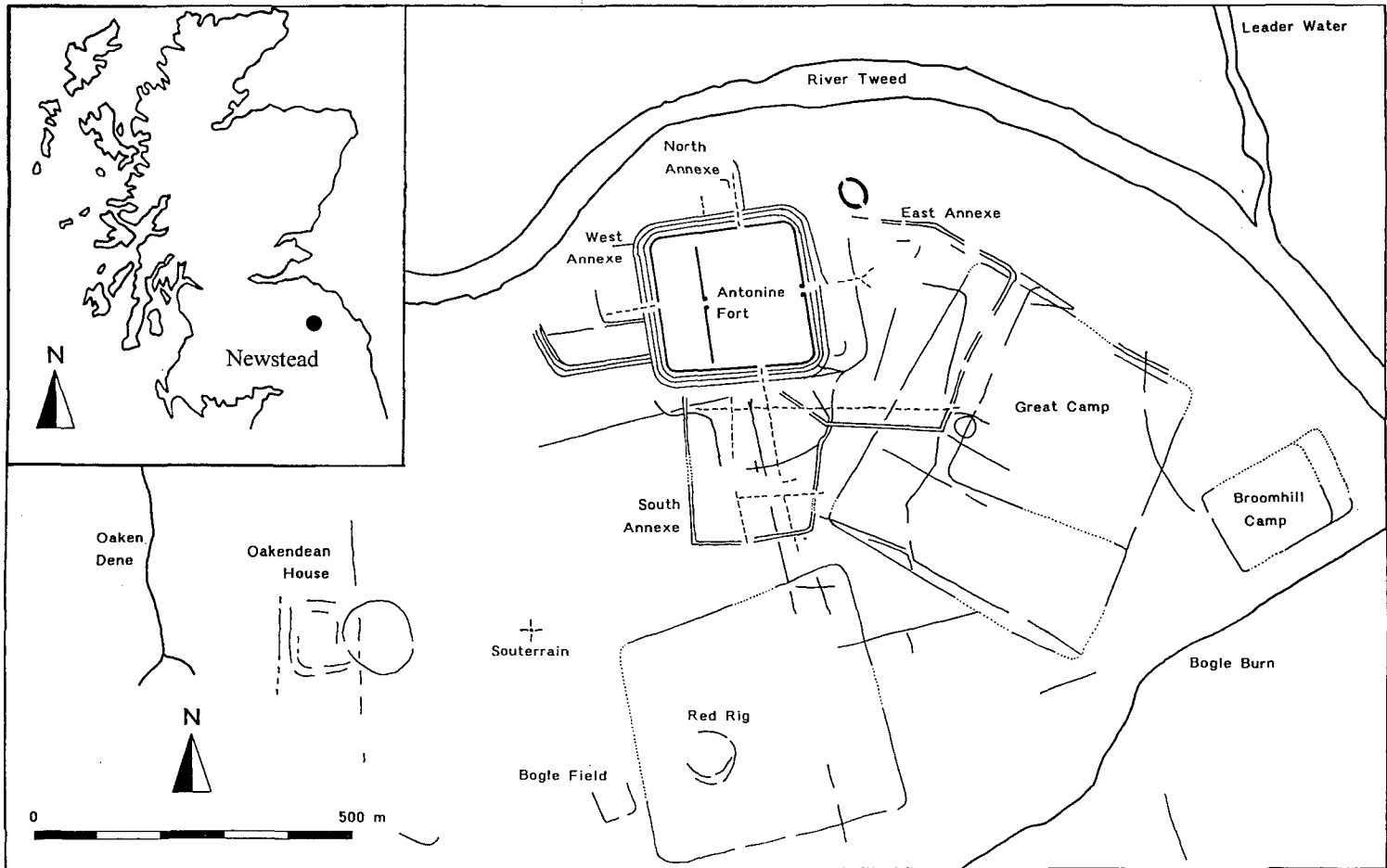
ARCHAEOLOGICAL BACKGROUND

The fort itself occupies 6 ha of level ground on an east/west ridge between the River Tweed and the Eildon Hills. To the east, west and south, occupying moderate slopes, is a sequence of annexe enclosures (illus 1 & 2). To the north the ground slopes steeply down from a disused modern road to a scarp above the River Tweed.

In 1996 the part of the military complex about which least was known was that to the north of the fort. Prior to 1996 information about this area of Newstead derived from James Curle's excavation in 1908. No detailed account of his trenches here or elsewhere within the complex survives, but later excavations have shown that he generally excavated in narrow parallel trenches set between 1.5 m and 3 m apart (Clarke & Jones 1996; Clarke 1997, 73). In the north field he

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ILLUS 1 Location map of Newstead/Trimontium and adjacent cropmarks

discovered a series of ditches which comprised the north defences of the fort itself (Curle 1911: plans opp. pp 14 & 38, section 1 opp. p 30) and 11 pits. Numbered 58–68, the pits included some of the deepest and most artefact-rich features discovered within the complex (Curle 1911, 129–32). However, the majority of archaeological deposits likely to be encountered in this part of the site would not have been easily recognized using Curle's trenching techniques. With the exception of one small stone-founded building near the fort's north-west corner (Curle 1911: plan opp. p 38), no accompanying structures were discovered. Furthermore, in contrast to the three other extramural areas in which Curle excavated, no evidence for the line of the annexe defences was recovered.

Subsequent research has consistently overlooked the area to the north of the fort, although features here could be defined on several aerial photographs (eg CUCAP K17-AS30; illus 2). Elsewhere, fieldwalking by local amateurs and cropmarks from aerial photography provided a good indication of the layout of the site, but the north field lies under permanent pasture and is seldom susceptible to these techniques. Richmond (1950) opened two trenches at Newstead in 1947, which revised the phasing of the fort defences, but added nothing specific to our understanding of the area to the north of the fort. More recently, the Newstead Research Project, directed by R F J Jones of Bradford University between 1987–93, revealed a substantial body of information about the character of the fort and its surrounding annexes (Jones 1989; 1990; Jones *et al* 1991; 1992; 1993; Jones & Gillings 1987). However, geophysical survey, though extensive over the complex as a whole, never fully investigated the north field. Similarly, excavation outside the fort itself was confined to the east and south annexes, the latter investigated again in 1994 in advance of construction of the Melrose bypass (Clarke & Jones 1994).

The depression north-east of the fort had also attracted speculation for some time, without receiving significant attention. One long-standing suggestion was that it represented the remnants of a clay extraction site for construction of the fort's ramparts (Richmond 1950, 26). However, in the early 1990s a local amateur archaeologist, Bill Lonie, suggested the more exciting explanation that the depression represented a small amphitheatre (Keppie 1993, 282–3). This led in 1992 to an inconclusive geophysical survey using both resistivity meter and magnetometer (Jones *et al* 1992). A contour survey the following year accurately mapped the feature's present-day shape (Jones *et al* 1993), but this has clearly been modified by the construction of the modern road and would also have been significantly altered by erosion over the 1800 years since the Roman occupation of the site.

GEOPHYSICAL SURVEY

Newstead fort is located on arable class 3 land (Bibby *et al* 1982) in lower Tweeddale. The fields in which the 1996 survey took place are currently used for sheep and cattle pasture and have not been ploughed since the 1970s (J W Elliot, pers comm). The soils are a mixture of imperfectly drained brown forest soils of the Etrick association and soils of the Yarrow association (Ordnance Survey 1959). These overlie a drift geology of boulder clay highly variable in character, as confirmed by our trial trenches. Trenches 1 to 4 encountered gravels and cobbles; Trenches 6 and 7 encountered coarse clay/silt; while Trenches 5 and 8 revealed natural geologies of sand and silt. (Other results of trial trench excavations are described below; see illus 5 for trench locations).

Two complementary geophysical survey techniques were applied to the area north of the fort. Resistance meters are particularly useful for detection of ditches and stone structures such as masonry foundations and road surfaces. Magnetometers are particularly useful for the identification of burnt features such as buildings destroyed by fire, industrial workings, kilns, or

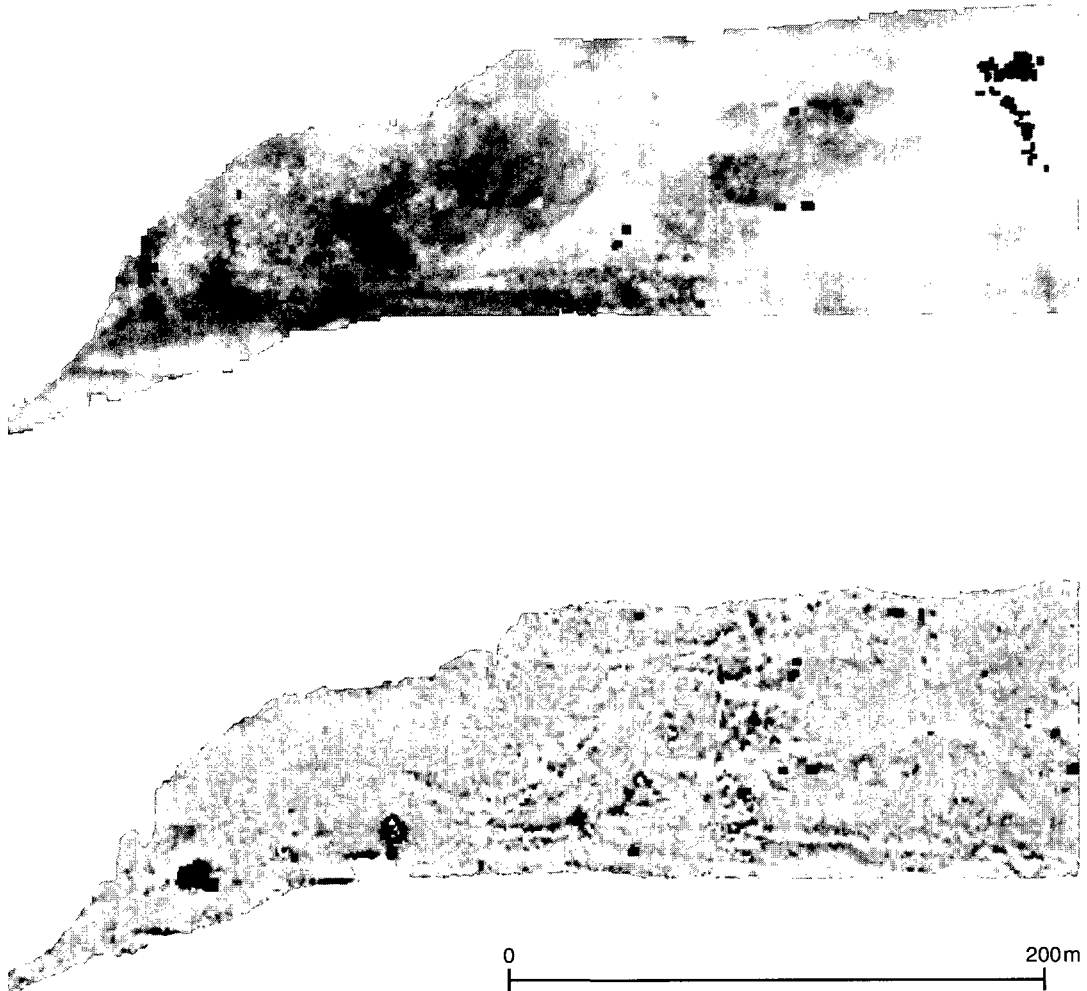


ILLUS 2 Aerial view of the site showing the fort and temporary camps (*Royal Commission on the Ancient and Historical Monuments of Scotland: C433/1992* © Crown copyright)

magnetized material associated with ditch or well fills. Previous work undertaken at Newstead suggested that all of these were likely to be encountered in the north annexe field.

RESISTIVITY (ILLUS 3 & 4)

Survey was carried out using a Geoscan RM-15 resistance meter in twin-probe configuration at a setting of 1 ohm. Sample spacing was 1 m, with transects recorded in a zigzag pattern. The summer of 1996 was relatively dry and resistivity results were poor due to the ground's dryness in August. Only the largest ditch features associated with the fort and west annexe were detected with this method.



ILLUS 3 Geophysical survey plots: resistivity (above) and magnetometry

Amphitheatre field

The resistivity survey between the north field and possible amphitheatre was intended to examine the possibility that the line of the inner east annexe defences continued as far as the scarp above the Tweed. However, no evidence for archaeological features was encountered. As the inner east annexe defences were clearly detected by resistivity survey south of the modern road (Jones *et al* 1990) it is more likely that the ditch turned west, to join the fort defences, rather than going straight on to the north. Two strong anomalies were detected during the 1996 survey, but represent the modern effects of livestock: a funnel-shaped low-resistance feature and linear low-resistance feature to its north probably correspond, respectively, to trampling adjacent to the field gate and to an animal trail (illus 4: features 1 & 2). The latter closely resembles a geophysical anomaly encountered in the 1992 amphitheatre survey, which at the time was interpreted as evidence for a structure, possibly a retaining wall for the amphitheatre (Jones *et al* 1992). This suggestion may now be discounted.

North annexe field

In the north annexe field, the resistivity survey produced fewer significant anomalies than the magnetometer survey. This poor response is probably due to the overall dryness of the soil at the time of the survey. An additional factor in the north of the field was the depth of soil overlying archaeological features. Excavation at Trench 6 indicated substantial soil creep in the last 1800 years, burying features at the foot of the slope more deeply than can be detected using a twin probe array with 0.5 m spacing. A wider probe array might have improved detection, but unfortunately the slope is too steep for safe use of such equipment.

Interpretation of a variety of data printouts and images derived from the resistivity survey resulted in identification of the following ditch features: A, B, D & F–L (Table 1). In one sense features A–I provide little new information as they comprise only a very partial plan of the north defences of the fort. On the other hand they do correspond accurately with Curle's findings in this area (Curle 1911: plans opp. pp 14 & 38, section 1 opp. p 30). This makes it very likely that his plan is reliable, and not simply a schematic interpretation based on his excavation in other parts of the complex. The other features detected by resistivity — J, K and L — are entirely new discoveries, relating to the west annexe.

MAGNETOMETRY (ILLUS 3 & 4)

The survey was carried out using a Geoscan FM-18 fluxgate gradiometer with a setting of 0.1 nT. Sampling was carried out in parallel transects south to north. The survey was more successful than that with the resistivity meter, detecting a wide range of features. As well as the fort's defences the magnetometer detected the line of the north annexe defences and evidence for settlement occupation north of the fort.

Amphitheatre field

Magnetometer survey in the amphitheatre field produced no clear evidence for archaeological features. As the inner east annexe ditch produced a clear signal in the survey immediately south of the modern road (Jones *et al* 1990) this supports the resistivity evidence in suggesting that these defences swing west at this point. The data collected is fairly 'noisy', but most of these signals were produced by modern metal debris scattered about the field surface.

North annexe field

In the north field the magnetometer provided extensive evidence for settlement. The easiest features to describe are those that relate to the complex's defences. Features B, C, D and E are parts of the outermost ditch of the second-century fort defences. The fact that they show up, in contrast to the other fort ditches immediately to the south, suggests the deposition of cultural debris within the ditch fills. This in turn suggests proximity to settlement occupation. It is also notable that the part of west annexe defences visible as a magnetometer anomaly (the eastern part of feature K) was adjacent to the bathhouse with its firing operation. Feature M represents the eastern defences of the north annexe. The anomaly is not particularly prominent on this plot because a de-stripping program has been run. However, on some plots the line of the ditch can be seen to extend almost to the field edge, and to be overlain by feature C. Feature N, though visible as a strong anomaly, proved to be a much smaller ditch, perhaps defining a building or animal enclosure (see below).

There were so many other minor features visible on the gradiometer plots that it is necessary to interpret the general character of clusters of anomalies. The most subtle cluster of anomalies is feature O, which perhaps represents occupation adjacent to the line of a road. Closely associated with this is a group of features aligned roughly SW/NE which suggests another road running from the fort's north-west corner to a possible gap in the north annexe defences (feature R). Feature Q represents a strip of intense magnetic activity, probably occupation debris, extending along the projected line of the second-century *via Principalis*.

TABLE 1

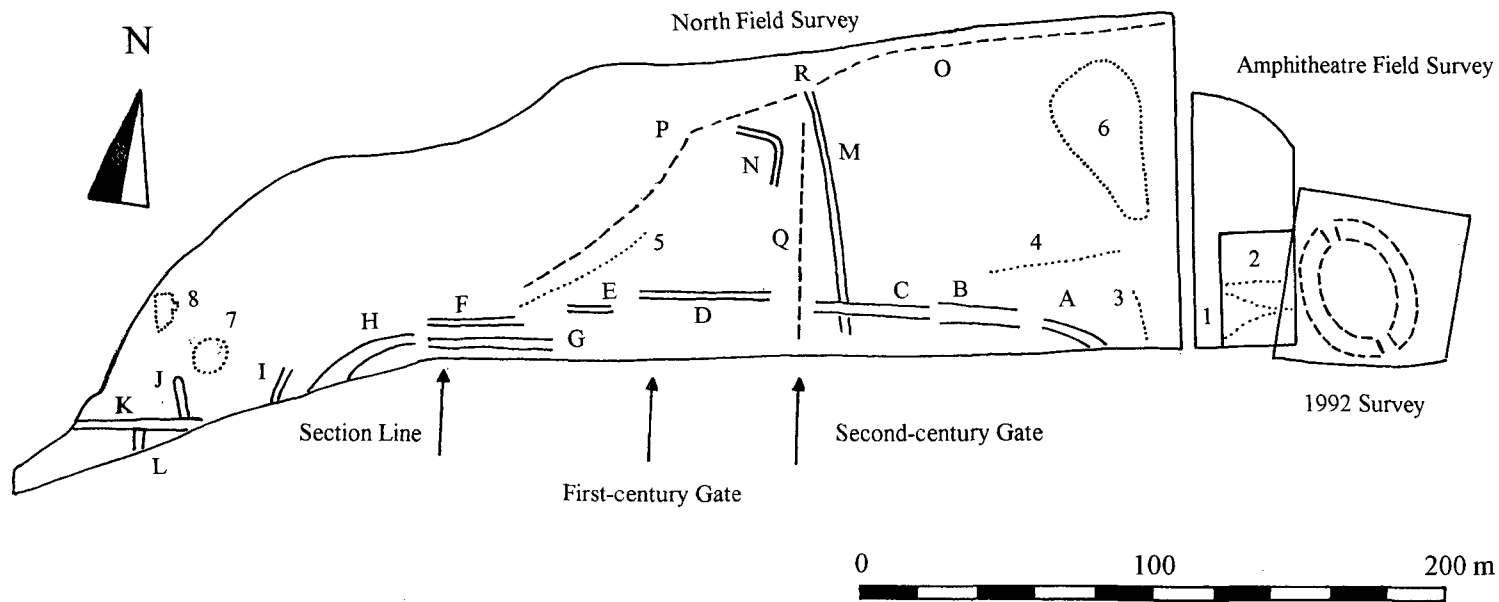
Archaeological (A–R) and non-archaeological (1–8) anomalies detected by geophysical survey in 1996

	Geophysical evidence	Interpretation
A	resistivity anomaly	outer ditch at the fort's north-east corner, second century
B	magnetometer and resistivity anomalies	fort's outer ditch, second century
C	magnetometer anomaly	fort's outer ditch, second century
D	magnetometer and resistivity anomalies	fort's outer ditch, second century
E	magnetometer anomaly	fort's outer ditch? second century
F	resistivity anomaly	fort's middle ditch, second century
G	resistivity anomaly	fort's narrow inner ditch, second century, but overlying first-century ditch
H	resistivity anomaly	wide inner ditch at the fort's north-west corner, first century
I	resistivity anomaly	outer ditch at the fort's north-west corner, second century
J	resistivity anomaly	north/south ditch, part of west annexe defences, first century?
K	magnetometer and resistivity anomalies	east/west ditch, part of west annexe defences, second century?
L	resistivity anomaly	north/south ditch, an extension to the ditch known to cut the <i>mansio</i> foundations (Curle 1911, 92–3); this defensive line is part of later second-century reduction of the west annexe perimeter
M	magnetometer anomaly	north/south ditch, only north part of which shows on this plot, appears to be cut by feature C; probably first-century north annexe defences
N	magnetometer anomaly	minor ditch, north and east sides of a small enclosure
O	magnetometer anomalies	possible east/west track indicated by topography and ribbon of possible archaeological features
P	magnetometer anomalies	possible NE/SW track indicated by a series of short lengths of ditch; either side of a carriageway?
Q	magnetometer anomalies	north/south road line through break in a second-century defences associated with intensive industrial or domestic occupation
R	magnetometer anomaly	ditch terminus? possible entrance to the north annexe?
1	resistivity anomaly	area of livestock trampling associated with field gate
2–5	resistivity anomaly	livestock tracks
6	resistivity anomaly	poor probe contacts due to geology/dryness
7	magnetometer anomaly	electricity pylon/transformer
8	unsurveyed	overgrown with nettles

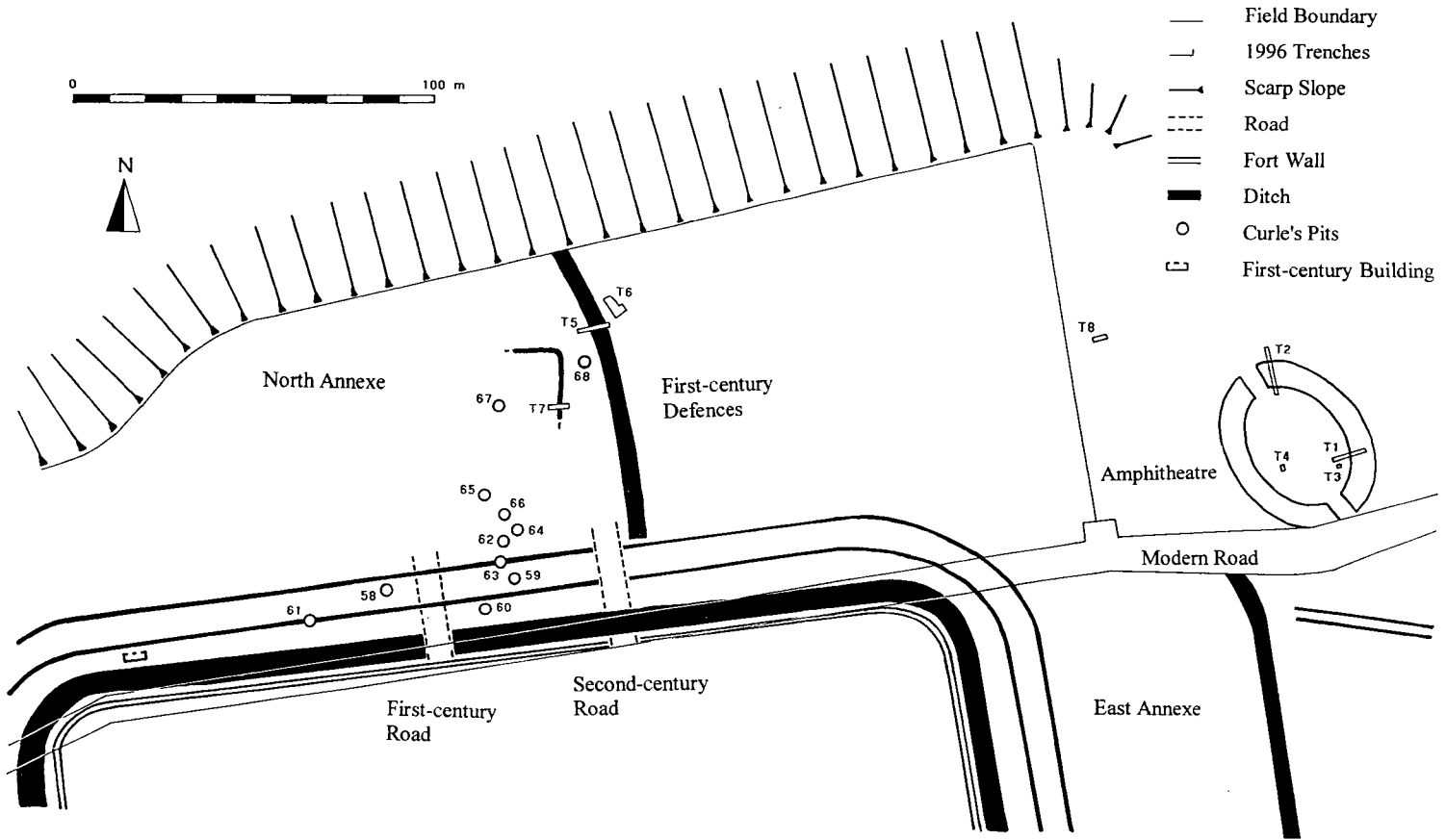
SUMMARY

In spite of the poor response to the resistivity survey over the majority of the field the 1996 geophysical survey clearly benefited from the use of both techniques. As expected, both the magnetometer and resistivity surveys revealed evidence of the fort's northern defensive ditches. Though these had already been identified, geophysics confirmed the reliability of Curle's (1911) plans and substantiated Richmond's (1950) conclusion that the outermost ditches related to the second-century defensive system.

More importantly, two previously unknown defensive works were clearly identified by the 1996 survey. In the extreme west of the survey area resistivity showed a single east/west ditch running from the north-west corner of the fort's outer ditches to the field edge. This probably



ILLUS 4 Interpretive plan of the geophysical anomalies



ILLUS 5 Features north of the Roman fort include pits 58–67, recorded by J Curle in 1908, and a north/south ditch investigated by Trench 5 (T5) in 1996

represents the northern boundary of the west annexe. A north/south ditch (feature L), known from excavation immediately to the south (Curle 1911, 91–2), is also visible and meets the first ditch at right angles. Cut through the first-century *mansio* foundations, the ditch represents a reduction in the area enclosed within the west annexe, probably in the later second century.

The other newly discovered defensive feature was a wide north/south ditch running from just east of the second-century fort's north gate to the edge of the scarp above the River Tweed. It appears to represent the western defences of a previously unknown north annexe, bounded on the north and east by the natural scarp slope and to the south by the fort and west annexe. Though not clear from the geophysical survey plot, this feature appears to underlie a second-century fort ditch, suggesting a first-century date for the enclosure.

The final major element in the evidence provided by geophysics is for minor ditches and general occupation noise located in a broad band to either side of the projected line of the road leaving the fort's more easterly north gate. As this was dated to the second century it seems probable that the occupation detected was of a similar date. Comparable geophysics evidence from the south annexe was found on excavation to have been associated with small timber strip buildings used in a range of domestic and industrial activities (Jones 1989; Jones *et al* 1993; Clarke 1995).

EXCAVATION

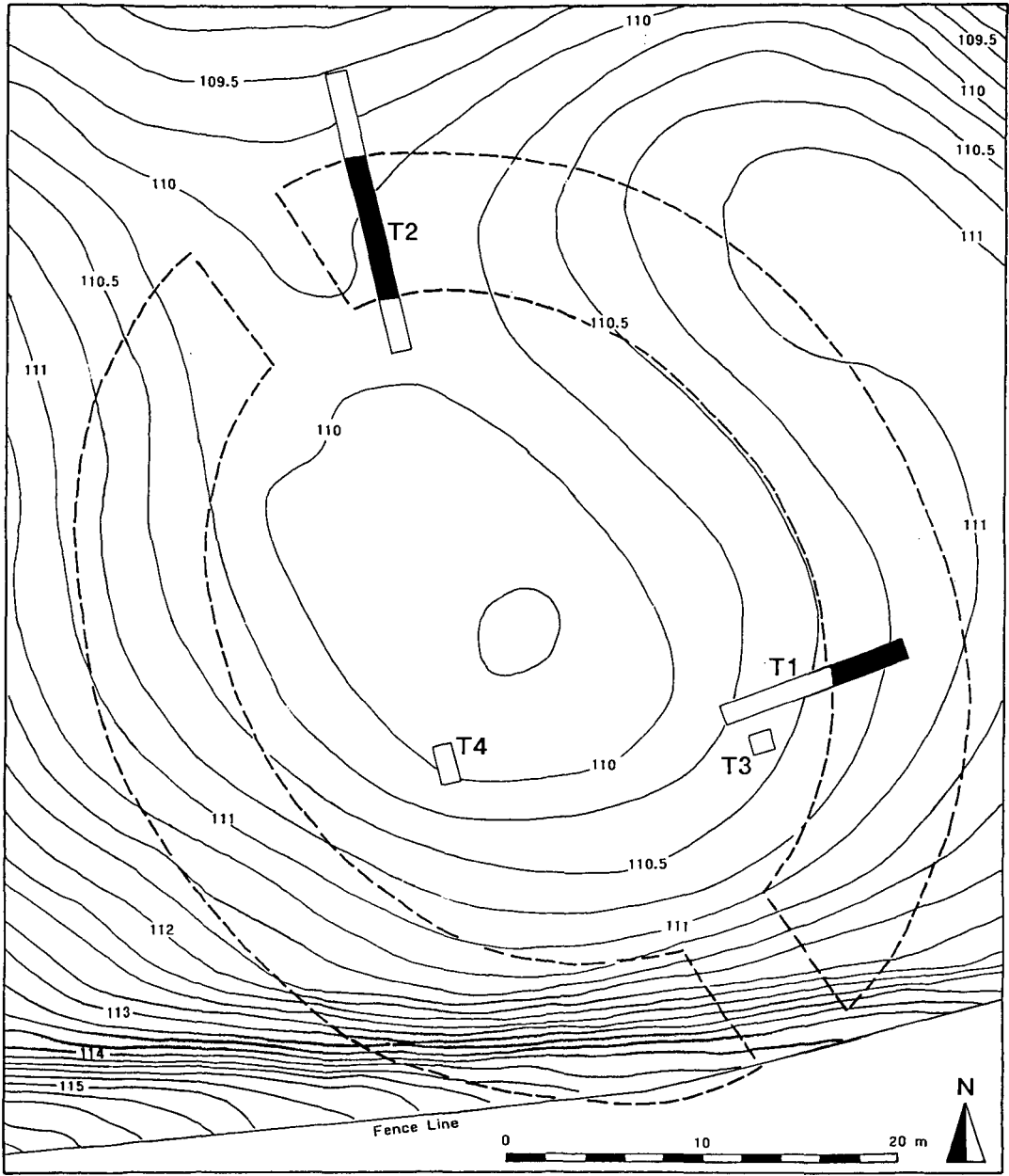
AMPHITHEATRE (ILLUS 5–7)

Exploration of the amphitheatre involved four excavation trenches: two across the suspected line of the amphitheatre's bank (Trenches 1 & 2) and two small trenches in the central depression (Trenches 3 & 4).

The artificial nature of the depression was suggested during the 1993 contour survey by the discovery that the centre of the hollow was lower than the lowest point from which water could escape to the north-west. The feature was unlikely therefore to be a product of normal erosion processes. Proof that the hollow was artificial need not imply its use as an amphitheatre. The assertion by Richmond (1950, 26) that the feature represented quarrying remained a viable alternative, although cobble and gravel rather than clay would have been the material extracted. Nonetheless, we feel that the evidence for an amphitheatre is convincing — or at least persuasive — and present the following account of the excavated trenches in the light of this interpretation.

Excavation in 1996 was able to show that the hollow had originally been much deeper. Modern pottery was present in considerable quantity to a depth of 0.3 m. Thereafter the sediment was sterile of artefacts to a depth of 1 m. Underlying this was a narrow band in which Roman period artefacts were relatively numerous. This probably represented material trampled into the Roman period ground surface.

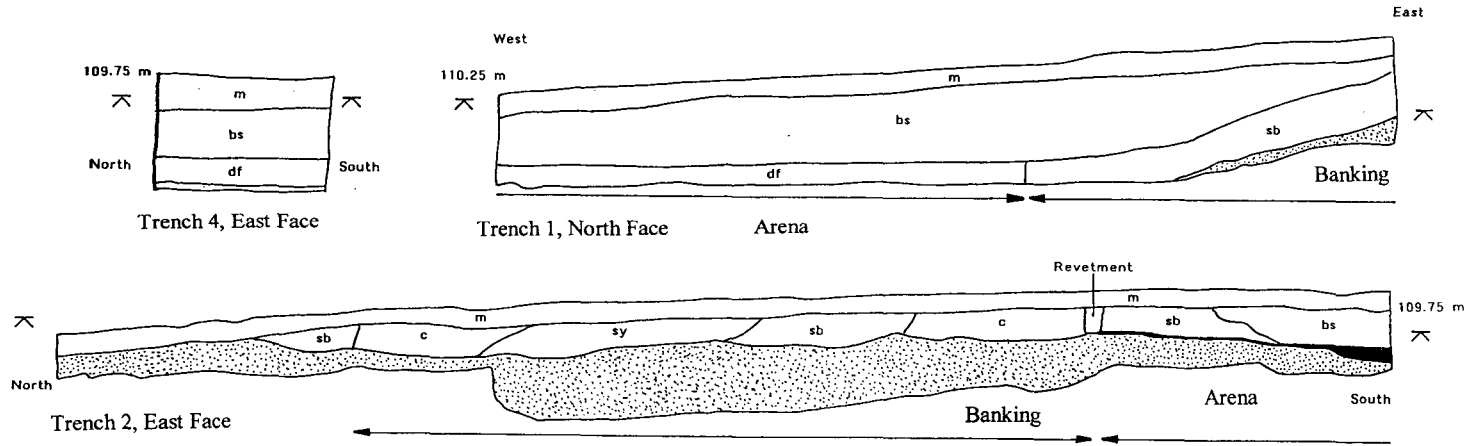
Excavation of sections across the east bank of the amphitheatre produced evidence that it had been artificially heightened. The sections were extremely difficult to interpret (illus 7). The surrounding bank was constructed of sediment and rocks upcast from the centre of the amphitheatre, and no buried soil existed to separate undisturbed natural deposits from the very similar material re-deposited to form the bank. The latter, however, could be identified by its more silty matrix, occasional voids, and a small assemblage of Roman period artefacts and animal bone. The artificial dump that makes up the bank was shown to stand in places to 0.5 m above the natural ground surface. At its highest point the bank survives to a height of over 2 m



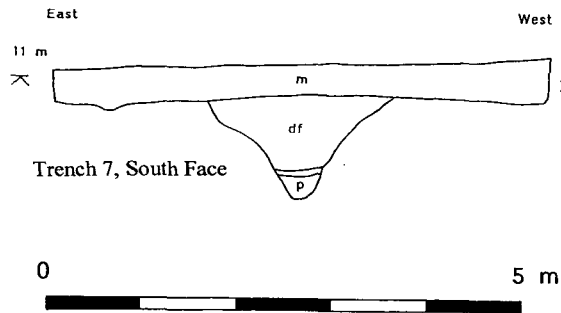
ILLUS 6 Plan of the amphitheatre based on a 1993 contour survey; and locations of the 1996 trial trenches

above the now buried surface of the central depression. Originally it must have stood even higher, as erosion processes have substantially filled this central area with sediments displaced from the bank. There was little evidence for sophistication in the construction technique. At the inner edge of the bank, both sections indicated that the upcast material ended abruptly with a near vertical face. A slot 0.2 m wide was recorded in Trench 2. This was presumably for a substantial series of

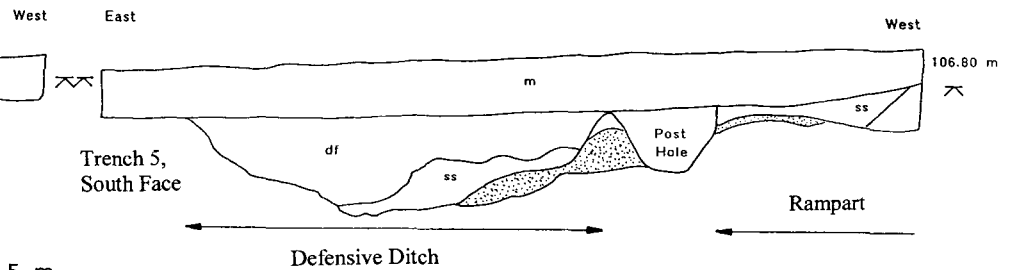
Amphitheatre



Minor Ditch



North Annexe Defences



ILLUS 7 Sections through Trenches 1, 2, 4, 5 & 7

timber beams or logs which would have acted both to retain the banked seating area and to enclose the arena.

On the evidence of only two excavated sections across the bank it is difficult to accurately assess the shape of the amphitheatre arena. However, combining evidence from excavation with the detailed contour survey carried out in 1993 allows the determination of an approximate outline with some confidence. The amphitheatre can be seen to have been elliptical rather than circular, with its long axis c 40 degrees west of north (illus 6). Topography strongly suggests an entrance existed at the north-west end of the long axis. An opposing entrance may reasonably be anticipated to the south-east, although any evidence for this has been destroyed by the modern road embankment. If the depression's present-day low point represents the centre of the amphitheatre, the arena would have measured about 37 m by 30 m (an area of 870 sq m).

The full width of the embankment surrounding the arena was examined at only one place, in Trench 2. Here the bank survived to a width of only 7 m. If this were typical of the amphitheatre as a whole it would imply a crowd capacity smaller than most other known Romano-British examples. As this section was close to the suspected position of the amphitheatre's northern entrance, and was on the downhill side of the amphitheatre (requiring the most effort to build) it may not be representative of the seating area as a whole. Even so, a seating depth of 7 m would suggest a minimum capacity of 1000–2000 people, following estimates of the area required per person at other Romano-British arenas (Wacher 1976).

NORTH ANNEXE DEFENCES (ILLUS 4, 5 & 7)

The relationship of the north annexe boundary ditch to the spread of occupation activity was of central importance to our investigations north of the fort. For this reason a trench was excavated across the ditch line (Trench 5), while two additional trenches examined areas to the west (Trench 7) and east (Trench 6), ie just inside and outside the enclosed area. A final small trench explored one anomaly on the geophysical survey (Trench 8) which proved to be caused by underlying geology.

The north annexe defences consisted of a wide, shallow ditch fronting a rampart constructed from the up-cast material. The ditch was just over 4.5 m wide and 1.2 m deep. The accumulation of a substantial overburden (up to 0.5 m) allowed the survival of unusually good evidence for the rampart. A post-hole or slot cut indicated that this was fronted by a timber retaining wall or palisade, behind which a substantial dump of silty sand had been deposited. The full width of the rampart was not exposed.

The date of the north annexe defences is somewhat problematic. The rampart, which could have produced the clearest dating for the construction of the defences, produced no datable finds. The lower fill of the ditch was virtually sterile, in marked contrast with the upper fill, which was extremely rich in finds. Charcoals were concentrated at the interface between the upper and lower fills. Evidently the palisade was deliberately dismantled, its timbers burnt and rampart cast down while the ditch was in a relatively clean condition. At least one sherd of pottery from the lower ditch fill was of second-century date, but this may have originated in the upper fill as the whole area has been extensively burrowed by rabbits. The dating of this feature is therefore somewhat insecure. Nonetheless, a probable date can be put forward on the strength of three pieces of evidence. Firstly, geophysics evidence from further south suggests that the ditch was overlain by the outermost (ie second-century) ditches of the fort itself. Secondly, occupation appears to have spread over the defensive line, implying that it had gone out of use, at least by the later second century. Finally, in terms of design, the north annexe defences, consisting of a single large ditch,

seem most closely to resemble Newstead defences of the first-century date, specifically those surrounding the first-century fort, the inner south annexe and the inner east annexe. However, a construction date in the early part of the second century occupation remains possible. Certainly the line of the north annexe ditch survived for some time during the second century, as a shallow linear depression accumulating debris.

OCCUPATION WITHIN THE NORTH ANNEXE (ILLUS 4, 5 & 7)

Trench 7 examined an area just inside the north annexe defences and was intended to provide evidence for the character of occupation contemporary with it. The trench was 1 m wide by 5 m long and aimed to section a strong linear feature, known from the magnetometer survey to run north/south for at least 20 m before swinging sharply to the west. This proved to be a V-shaped ditch, 2 m wide by 1.1 m deep, cut into natural boulder clay. No occupation deposits survived outside the ditch, ploughing presumably having truncated the archaeological sequence. The ditch itself could be dated to the second century by its fill. Although some residual first-century material was present, it now seems likely that most of the magnetic noise identified by geophysics in the north annexe enclosure (particularly feature Q) relates to second-century occupation. First-century enclosed settlement must have existed to have required the construction of the deep shafts — perhaps wells — recorded by Curle as pits 59–67 (Curle 1911, 129–32; Clarke 1997, 78–9), but its character cannot be ascertained from the 1996 evidence.

SETTLEMENT OUTSIDE THE NORTH ANNEXE (ILLUS 4 & 5)

Just to the east of the north annexe defences, Trench 6, an irregular area 4 m by 6 m, encountered evidence for a complex structural sequence. Artefacts recovered from these structures suggest a second-century occupation and, therefore, this settlement appears to be extramural, post-dating the north annexe defences. (An alternative explanation would be that this settlement lies within an extension to the north annexe, created in response to the demand for extra space, but no evidence for this additional enclosure has been recorded to date.)

The earliest building event was the construction of a flat terrace cut into the hillside to create a building platform. The most southerly part of the platform was occupied by a shallow east/west gully at least 3 m long, 0.1 m deep and 0.75 m wide, which probably acted as an eaves drip. The full extent of the platform was not exposed. Relatively little can be stated with confidence about the building which occupied it. However, the short length of the eaves drip is enough to suggest a rectilinear form, with post-holes indicating a timber superstructure, while the absence of tile implies a thatch or shingle roof. A second building platform, located immediately uphill (to the south), was probably contemporary. A single post-hole provides the only evidence for the occupying structure.

Judging by the level of debris which accumulated over the terraces, the buildings may well have been abandoned for some time before the second major structural event. This was the construction of a post-in-trench fence-line or wall, running down the slope (north/south). Immediately to the west and parallel to this ran a shallow ditch or gully.

FINDS (NOT ILLUS)

Considering the extremely limited size of the trenches in the north annexe field, an impressive finds assemblage was recovered. A total of 613 sherds of pre-modern pottery was collected.

Although first-century ceramics were present these would appear to represent residual material. The assemblage was dominated by forms and fabrics from the second century and, evidently, was primarily the product of second-century occupation of the area. Samian ware formed 10.4% of the ceramic assemblage. Roman glass, mostly from simple vessels, was present in significant quantities (nine sherds). There was also a single fragment from a window pane. Iron work was relatively plentiful (113 objects), mainly nails, but also personal items such as a buckle, a mason's chisel and a leather worker's awl. Fragments of bronze (seven pieces) were also relatively common. Too much should not be read into the discovery of a single silver coin, but the overall impression is of a relatively rich artefact assemblage. Other debris, such as animal bone, charcoal and coal, was abundant, giving the impression of a relatively dirty environment, where casual dumping of waste was common and dropped valuables were not easily recovered.

The four amphitheatre trenches (1–4) produced an assemblage very different in character. Less than 100 pre-modern finds were recovered. The amphitheatre bank yielded iron nails, a group of about 30 hobnails (probably the sole of a single shoe), and a very small quantity of animal bone. This scarcity of material is easily explained by the lack of opportunity for debris to build up during the short period of bank construction. However, there is also little accumulation of debris in the amphitheatre arena. Only 11 sherds of pre-modern pottery were recovered, and most of these abraded orange fragments (almost all from Trench 1) could have originated from a single vessel. Ceramic finds, normally common at Newstead (cf Clarke 1995), were outnumbered in the amphitheatre area by iron objects (65 in total). The most common metal objects were hobnails (36), but other nails (22), a belt-fitting and a coin (the last two both of copper alloy) were also recovered. Seven iron objects were too corroded or fragmentary for functions to be suggested. Some of the nails may have their origin in the construction of the amphitheatre, but the majority of the rest of the finds probably represent accidental losses rather than discarded material. It is not unreasonable to conclude that, unlike the fort's occupation areas, the arena was deliberately kept clear of rubbish.

A detailed catalogue of the finds can be consulted in the archive of the project records at the National Monuments Record of Scotland (RCAHMS).

DISCUSSION

AMPHITHEATRE

Persuasive evidence that an amphitheatre existed at Newstead fort is one of the most significant findings of the 1996 field season. The Roman world's largest amphitheatres were vast structures capable of holding in excess of 50,000 spectators, with correspondingly complex provision for access. Newstead's amphitheatre was nothing like this. Even Britain's largest amphitheatres in major cities held less than a fifth of the capacity of the Colosseum in Rome. These in turn still dwarfed the structure at Newstead. This is hardly surprising as at its height the garrison probably consisted of no more than 1500 soldiers attended by a smaller civilian population. In terms of scale, the Newstead amphitheatre can most closely be compared to those at Carmarthen *civitas* capital (south-west Wales) and the small town at Frilford (Oxfordshire). Carmarthen's arena was smaller and more elliptical than Newstead (25 m by 42 m, giving an area of 825 sq m), but with a somewhat more substantial bank. Aerial photography and limited excavation at Frilford have revealed a masonry-reveted bank, c 10 m across and surrounding a circular arena 37 m in diameter, with a total area of 1075 sq m (Hingley 1985). The amphitheatre at Newstead was, strictly speaking, more probably a *humus*, primarily for military displays rather than civic

entertainments, and better parallels can perhaps be found at other Roman military sites. The known legionary amphitheatres at Chester and Caerleon are far larger and more elaborate than that at Newstead, but a surviving earthwork outside the 1.34 ha auxiliary fort at Tomen-Y-Mar (north Wales) provides an example of an amphitheatre even smaller than that at Newstead. Sub-circular rather than elliptical, it measures 25 m by 20 m with an area of 400 sq m, and was surrounded by a bank only 4 m wide. Recently, a rather larger example has been discovered during rescue excavation at Catterick, in North Yorkshire (Moloney 1996). The discovery of a military amphitheatre at Newstead should cause no real surprise, and we should anticipate that other (perhaps most) large forts in Scotland would also have been thus equipped.

SETTLEMENT IN THE NORTH ANNEXE IN THE FIRST CENTURY

Excavation in 1996 within the defended area of the north annexe uncovered only a few sherds of first-century pottery. These really tell us very little about the character of occupation within the north annexe at this time. The pot sherds might just as easily represent dumping of refuse from the fort itself rather than occupation of the annexe. Nevertheless, that the area was more than just a defended open space or paddock in the first century was indicated by a series of deep shafts, probably wells, located by Curle (Curle 1911, 129–32). Furthermore, while it is difficult to argue from negative evidence, the geophysics does provide some clues as to the character of occupation outside the first-century gate. The absence of resistivity anomalies suggests that buildings here were made of wood rather than stone, very much in line with what has been discovered elsewhere. The absence of magnetic noise implies that domestic and industrial debris was not allowed to accumulate. This is in marked contrast with occupation in the fort itself and with the second-century occupation of the south annexe (the best known of the fort's extramural areas). First-century occupation in the south annexe and second-century occupation in the east annexe, both of which seem to have been 'clean' settlement environments, may provide closer parallels.

SETTLEMENT IN THE NORTH ANNEXE IN THE SECOND CENTURY

More can be said about the second-century occupation, which supplied the bulk of the finds collected and also some structural evidence. Because of the limited scale of excavation the assemblage is relatively small and therefore should not be over-interpreted. Nevertheless, some general comments can be made. First, finds were very plentiful and were evidently deposited in an environment where debris, including animal bone, was not systematically removed. The relatively low proportion of samian ware in the pottery assemblage (just 10.4% from a total of 613 sherds) suggests a community of modest means, though the glass and metalwork, in contrast, suggest wealth. The overall impression is of a civilian community, similar to that identified by investigations in the south annexe in 1989 and 1993, heavily engaged in industrial activities and trade (Clarke 1995).

The evidence for relatively dense second-century occupation in this steep-sloping and north-facing area suggests some strong imperative for settling on this side of the fort. A possible explanation for this dense northern settlement is that there was a lack of space in other areas of the fort at this time, though excavations in the south annexe suggest that this area at least was not fully occupied. A better explanation for the dense northern settlement is proximity to the road leading north from the fort toward the, still undiscovered, location of a Roman bridge or ford across the Tweed.

NATIVES AND ROMANS

The nature of relationships between native inhabitants of the region, the inhabitants of the fort's annexes, and the 'Roman' inhabitants of the fort itself has been a significant theme throughout history of research at Newstead. Scottish archaeology has moved away from initial interpretations that the Roman military had a major impact on native populations (eg Armit & Ralston 1997; Hanson 1997).

Civilian settlement outside the fort at Newstead was first suggested by Curle (1913); he imagined native people living as serfs in the fort's annexes, toiling on behalf of Roman masters. The potential clustering of native residents in and around the fort annexes has proved an especially interesting topic for subsequent research. Evidence north of the fort in 1996 suggests extramural settlement comparable to that of the south annexe. There is good reason to suppose that the small strip buildings proposed here were civilian in character, but nothing to suggest that the structures were either built or inhabited by the local indigenous population. Like the native building traditions in evidence at other settlements in the region, the extramural structures at Newstead are constructed of timber and are located on platforms constructed on relatively steep slopes. However, unlike native building traditions in the region, these extramural structures are exclusively rectilinear. Furthermore, in the case of the north field settlement, the choice of a north-facing slope would have been alien to native builders.

It is tempting to interpret the extramural settlement at Newstead as a *vicus*, or self-governing village inhabited by camp followers, merchants, and natives. Some impact on the surrounding regional settlement pattern would be expected, however, if a larger number of native inhabitants relocated to such a village. No evidence for radical re-structuring of the settlement patterns is in evidence, and indeed a surprising stability of social place characterizes the prehistoric, protohistoric, and post-Roman archaeology of the region (Wise, in press). It is possible that extramural settlement at Newstead was seasonal or periodic, or that it provided a base for merchants catering for the needs of the Roman military. Occasional trade with at least some natives took place, as demonstrated by the recovery of Roman artefacts from brochs (Macinnes 1984) and rectilinear farmstead enclosures in the Newstead area (Clarke & Wise, in prep). However, it remains unclear who brokered this exchange, where it took place, or how representative inhabitants of sites with access to this exchange system may have been (Macinnes 1989).

CONCLUSION

The 1996 discoveries at Newstead are useful additions to our understanding of one of Scotland's most important Roman period sites. They prove that, during its first-century occupation, all of Newstead's extramural settlements were defended. In the second century, in contrast, some settlement in the north field appears to have been open. (At least no evidence was found for an extension to the north annexe, enclosing these buildings, though this must be considered a possibility pending further investigation.) The open nature of the north field 'suburb' sets it apart from the other communities outside Newstead fort and invites the suggestion that it had legally independent *vicus* status. Whatever the population of this area, it appears to have adopted Roman construction techniques which were not imitated in native settlements elsewhere in the region.

Future work to the north of Newstead fort could target additional evidence for first- and second-century settlement. There is likely to be unrecorded first-century occupation of the north annexe in the area around Curle's (1911) pits 58–67. It is also likely that similar, unexcavated pits

could be found around the area of second-century settlement excavated in 1996. If Curle had investigated this area extensively enough to recover evidence of pits he surely would have found the defensive ditch around the north annexe; but as he discovered no evidence for a defended north annexe, his work in this area was evidently slight. It could still provide an opportunity, therefore, to excavate well-preserved pits using contemporary techniques.

ACKNOWLEDGEMENTS

Access to the site for geophysical survey and excavation was graciously supplied by the landowners, Viscount Devonport and Colonel Younger. We gratefully acknowledge financial support from the Society of Antiquaries of Scotland and the Trimontium Trust. Field equipment was supplied by the Department of Archaeological Sciences, University of Bradford. Permission to work on this scheduled monument was granted by Historic Scotland. The project was co-directed by Abigail Tebbs, and the geophysical survey was supervised by Ian Barnes. The 1993 contour survey was supervised by Rob McNaught. Thanks are also due to the hard-working students and volunteers who so ably excavated in 1996: Stuart Herkes (York University); Walter Elliot, Donald Gordon, and Bill Lonie (Trimontium Trust); Maaïke Groot (University of Amsterdam); and Carol Fenner, Emma Kicks, Cassie McGinley, Alex Odlin, Hazel Slatter, Paul Stead, and Angharad Williams (Bradford University).

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