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**UNIVERSITY HOSPITAL BIRMINGHAM NHS TRUST  
ARCHAEOLOGICAL ASSESSMENT 1999**

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## ARCHAEOLOGICAL ASSESSMENT 1999

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# UNIVERSITY HOSPITAL BIRMINGHAM NHS TRUST

## ARCHAEOLOGICAL ASSESSMENT 1999

### 1.0: SUMMARY

This report provides an archaeological assessment of a proposed new hospital development, most notably including part of the complex of Roman forts at Metchley, Birmingham. For completeness, the assessment also includes the remainder of the Roman fort complex and also the immediately-adjointing areas (together hereafter called 'the study area'), although these areas lie outside the proposed development. The report provides a summary of the historical and archaeological evidence, principally concentrating upon the Roman forts, although the scope of this assessment is not limited to Roman archaeology. Archaeological sites and areas of potential for further discoveries of prehistoric, medieval or post-medieval date are also considered. The relevant national and local policies and plans concerning archaeology are also summarised. The report assesses the predicted degree of archaeological survival within each of the 12 zones defined within the study area. A predictive model of potential archaeological survival and significance is also provided, together with a suggested strategy for archaeological mitigation.

The earliest activity recorded in the study area comprises a group of burnt mounds of probable Bronze Age date, identified during archaeological salvage recording. Five main phases of Roman military activity have been identified at the Metchley forts. The earliest (Phase 1) fort was constructed in the late AD 40s, enclosing approximately 4 ha. Parts of a number of the contemporary internal buildings, including barrack-blocks, workshops, a possible store and a granary have been excavated. Later, ditched annexes were added to the northern, eastern, and southern sides of the fort (Phase 2A). The deliberate clearance of the internal buildings within the Phase 1 fort was immediately followed by the construction of temporary, irregularly-shaped timber-framed buildings and fenced compounds (Phase 2B), associated with the use of the site as a stores' depot. Following an abandonment of the site, a smaller fort (Phase 3) enclosing 2.6 ha. was built within the slighted defences of the earlier, larger fort. The turf rampart of this latest fort was later reconstructed in timber. The only contemporary buildings excavated comprise a granary and a possible cook-house. The site may have been abandoned by the military around AD 75. The fifth and final phase of military occupation (Phase 4) at the site is represented by traces of at least three further double-ditched forts, cut on differing alignments to the forts belonging to the preceding phases. This phase is also represented by a small quantity of pottery and other finds dating to the period AD 75-120. The western defences of a further, newly-identified fort, located between the same side of the Phase 1-2 and Phase 3 forts cannot presently be phased.

Trial-trenching to the west of the forts in late 1999 has identified traces of an associated *vicus* (see Appendix 1 for a glossary of the terms used), of probable pre-Flavian date. This *vicus* was represented by pebble surfaces, probably adjoining the

cast-west aligned road exiting the fort's *porta principalis dextra*, drainage and plot boundary ditches, spreads of *in situ* occupation deposits, and possible fence-lines.

In the 18th century the forts and their surrounds were sited within a hunting park. In the late-18th-19th-century the site was turned over to agriculture. The Worcester-Birmingham Canal was cut across the forts in 1791, and an adjoining railway line was constructed in 1822.

A summary of this assessment may be found in the Environmental Statement. Further, more detailed reports describing the results of the associated programme of archaeological trial-trenching are available for consultation separately.

## **2.0: INTRODUCTION**

### **2.1: The report**

This report provides an archaeological assessment of the area of the proposed new hospital development, together with the remainder of the site of Metchley Roman forts, and also other areas immediately adjoining the forts (centred on NGR. SP 044838: Figs. 1-2, Maps 1-7). Birmingham University Field Archaeology Unit (BUFAU) were commissioned to undertake the assessment by the University Hospital Birmingham NIIS Trust. The aim of the report is to provide an integrated archaeological assessment of the proposed development area, in accordance with Planning Policy Guidance Note 16 (Department of the Environment 1991), and Policy 8.36 of the Birmingham Unitary Development Plan.

The assessment follows the methodology set down in a brief prepared by Birmingham City Council (Appendix 2), and a Written Scheme of Investigation prepared by BUFAU (BUFAU 1999). The report is compiled in accordance with the 'Standard and Guidance for Archaeological Desk-Based Assessments' (Institute of Field Archaeologists 1994). The assessment criteria are as defined by 'A New Approach to Appraisal' (hereafter TNATA; following English Heritage guidelines, July 1998), together with a consideration of the broader research potential of the forts and other archaeological features or groups of related features.

This assessment is based upon information available as at 30 September 1999. A summary of this report formed the archaeological component of the Environmental Statement. Additionally, this report also includes some information from recently-completed fieldwork, which was not available when the archaeological input to the Environmental Statement was prepared.

### **2.2: Study area**

The extent of the study area is mapped (Maps 1-3). Briefly, it includes the existing Psychiatric and Women's Hospitals, the Employment Rehabilitation Centre, and part of the University Hospital complex. To the south of Vincent Drive the study area comprises a largely-overgrown area whose landform has been extensively altered by

modern dumping. The study area also includes land to the east and south of the Roman fort complex, located within the campus of the University of Birmingham which is excluded from the scope of the development proposals. Much of the eastern study area boundary is defined by the modern railway line. The southern study area boundary is formed by the southern edge of the infilled Dudley No. 2 Canal. The western boundary is formed by the rear of properties fronting onto Harborne Lane and Vincent Drive. The northern study area boundary is formed by the northern limits of the Women's and University Hospitals.

Known or suspected archaeological sites located outside the study area are also assessed, where such sites or any associated features could extend into the proposed development area boundary, and also, where appropriate, to provide a broader context for the archaeology of the study area.

The assessment includes consideration of above-ground features of archaeological, or potential archaeological, interest, but excludes consideration of the historic landscape character of the study area and also any above or below-ground features dated post-1945. Features and areas of possible archaeological potential to the south of the Bourn Brook are not considered in detail.

### **2.3: Aims**

The purpose of the assessment is to identify and describe the known or suspected archaeological remains within the study area, and to assess their survival and potential significance. The assessment also provides a statement of the likely impact of the proposed development, taking into account the agreed mitigation measures.

The detailed aims of the assessment are:

- 1) To define the extent, survival and significance of the archaeological remains of the fort and its surroundings.
- 2) To assess the implications of variations in ground level on the potential for survival of the archaeological remains.
- 3) To identify zones of archaeological potential across the entire study area.
- 4) To provide an integrated description and interpretation of the results of previous archaeological fieldwork at the forts.
- 5) To consider the forts within their wider archaeological context.
- 6) To identify the future requirements for *in situ* archaeological preservation or for further assessment by field evaluation in advance of the consideration of further development proposals.
- 7) To consider the evidence for both pre-and post-Roman activity within the study area.

### **2.4: Sources**

The sources consulted during the preparation of this assessment include the following:

- Previous published reports and syntheses concerning the forts (St. Joseph and Shotton 1937; Webster 1954, Webster 1981; Rowley 1967, 1968 and 1969).

- The completed draft report describing the results of the 1963-4, 1967-9 and 1997 excavations (Jones forthcoming a) and the excavation archives.
- Reports summarising the results of the most-recently completed excavations at the forts (Jones 1999a; Jones in preparation a and b) and the archives of the 1998 and 1999 excavations.
- The results of trial-trenching undertaken in connection with the proposed new hospital development (Jones 1999b and 1999c).
- Desk-based studies (Jones 1995a, 1995b, 1997, Jones 1998a; Jones 1999d, Hewitson 1999) concerned with parts of the study area.
- The results of other fieldwork (Jones 1988, 1989, 1996, 1998b, 1999e, 1999f; Atkins 1992) within the study area.
- The Birmingham Sites and Monuments Record (SMR).
- Secondary archaeological and historical sources, most notably comparative data from other Roman forts.
- Air photographs.
- Antiquarian, estate, enclosure and early editions of Ordnance Survey maps.
- Geological, geotechnical and service information.
- Information provided by site inspection.
- The Environmental Impact Statement, prepared September 1999.

Appendix 3 provides a detailed listing of the sources.

## **2.5: Topography and land use**

The Roman fort complex at Metchley (Birmingham S.M.R. No. 2005) is located 4 km to the southwest of Birmingham City Centre, mainly within the campus of the University of Birmingham. The only visible above-ground remains of the forts comprise the partly-reconstructed, northwestern corner of the northern Phase 2A annexe defences (West Midlands S.A.M. No. 1, Plates 1-2). The forts occupy a gently-sloping, northwest-southeast aligned plateau formed by an island of sands and gravels, surrounded mainly by boulder clay (Geological Survey drift map, sheet 168), between the 130m-150m contours. Although overlooked by higher ground to the northwest, the plateau dominates the more low-lying ground on the other three sides (Fig. 2). The forts may also have been located here to take advantage of a good water supply provided by the natural springs located to the north of the forts. The forts adjoined streams which flowed southwards into the Bourn Brook, which in turn joined the River Rea to the east.

## **3.0: BACKGROUND**

### **3.1: Prehistoric**

Little information is available concerning prehistoric activity within the vicinity of the forts. A group of burnt mounds of probable Bronze Age date was located adjoining a former stream course, to the west of the forts (Jones 1988; 1989: Birmingham SMR No. 01682). However, burnt mounds, and scattered chance finds of Bronze Age metalwork found elsewhere in the Birmingham area (c.g. Gibson 1988) do not in



themselves confirm early prehistoric settlement in the vicinity. There is presently no evidence for the exploitation of the immediate area in the Iron Age, although Iron Age hillforts are known at Wychbury Hill (Hogg 1979), 15 km to the west of Metchley, and also at Berry Mound, Solihull, to the east, and at Castle Old Fort, Walsall to the north of the site. The boundary between the *Dobuni* and the *Corieltavi* is suggested to be in the vicinity of Watling Street, to the northeast of the forts (Fig. 1; Todd 1991, fig. 1; Booth 1996).

### 3.2: Roman

The location of Metchley was pivotal within the road network established during the Roman military advances in the mid-1st-century in the west midlands (Fig. 1). The forts may have been located at, or close to, a major road junction. Ryknild Street linked Metchley with Alcester to the south, and Wall and Watling Street to the north (Margary 1973, route 18b). Margary described two further routes, linking Metchley with Droitwich to the south (route 180) and Greensforge and Kinvaston to the north (route 190), but neither is fully identified.

### 3.3: Medieval and post-medieval (Table 1)

In the medieval period Metchley was part of the Manor of Edgbaston (Chatwin 1914), described in the Domesday Book of 1086 as containing both arable land and woodland. The name of the locale is thought to be a corruption of the name of a former landowner called Michael. The site of the forts and their immediate environs lie within a hunting park, perhaps first mapped in 1701 by William Deeley (Fig. 3), and then surrounded by a ditched boundary. The mapping also suggests that there could have been a medieval village nucleus surrounding Edgbaston Church to the east of the fort site, although this cannot be proven. The medieval nucleus of Harborne village lay to the northwest of the forts.

Sparry's detailed plan of 1718 (Fig. 4A) is perhaps the earliest depiction of the Roman fort complex, which is represented as a single, rectilinear enclosure with rounded corners, containing a hunting lodge set within a hunting park. Writing later in that century, local antiquarian William Hutton (1783) described the site as follows:

"In Mitchley-park, three miles west of Birmingham, in the parish of Edgbaston, is The Camp; which might be ascribed to the Romans, lying within two or three stones east of the Icknield Street, where it divides the counties of Warwick and Worcester, but it is too extensive for that people, being about thirty acres; I know none of their camps more than four, sometimes much less; it must therefore have been the work of those pilfering vermin the Danes, better acquainted with other peoples' property than their own;...

No part of this fortification is wholly obliterated, though, in many places, it is nearly levelled by modern cultivation, that dreadful enemy to the antiquary. Pieces of armour are frequently ploughed up, particularly pieces of the sword and the battleaxe,...

The platform is quadrangular, every side nearly four hundred yards; the center is about six acres, surrounded by three ditches, each about eight yards over at unequal distances; though upon a descent, it is amply furnished with water. An undertaking of such immense labour, could not have been designed for temporary use."

The antiquarian John Finch, writing in 1822 (Fig. 4B) was more confident of the complex's Roman origin. His description is as follows:

"The exterior vallum is 330 yards long, and 228 wide (a measurement made as accurately as the ground would admit), and enclosing about 15.5 acres. The interior camp is 187 yards long by 165 wide, enclosing 6.25 acres. It is quadrangular, and pieces of armour have been frequently ploughed-up.

The ancient vallum and fosse have suffered much by the lapse of time, and by the attempts of the occupiers of the farm to level the ground, and by the unfortunate circumstance of the Worcester and Birmingham Canal passing through it, to make the banks of which the southern extremity of the camp has been completely destroyed. Notwithstanding these various means of destruction, sufficient remains are still visible, by which to ascertain that the original camp must have nearly approached the plan which accompanies this article (Fig. 4B). Mr Hutton describes a third embankment, enclosing 30 acres, and surrounding the two before mentioned, but I could not exactly ascertain it; on the eastern side there is some appearance of it, but I am uncertain whether or not it is the natural formation of the ground. On the northwest, there are decidedly three banks as the ground being more on a level required an extra fortification; and I believe the entrance was on this side. At the eastern angle is a field, still called 'Camp Leasow', where the ancient entrenchments are still distinct...

Mr Hutton considers this camp as the work of the Danes but for the following reasons I think it may be considered as a Roman station. An undertaking of such immense labour could not have been designed for temporary use. In shape it exactly resembles those camps, which are most usually considered as Roman...This camp is placed on the side of a hill, and is supplied with water, which is well known to have been considered of great importance by the former people.

The Icknield Street runs within a very short distance of this camp. From Etocetum, or Wall, to Mitchley is 16 English, or about 21 Roman miles; from Mitchley to Alauna or Alcester is 15 and a half English, or about 20 and a half Roman miles.

Thus it is situated nearly in the centre between Etocetum and Alauna, and this circumstance, together with the regularity and great strength of the fortification, seems to prove that it was the intermediate station between them."

**TABLE 1: METCHLEY ROMAN FORTS, EARLY HISTORY**

1718	Sperry's Plan of Edgbaston Estate shows fort as rectilinear earthwork.
1783	William Hutton ( <i>An History of Birmingham</i> ) describes the site as a 'camp, which must have been the work of those pilfering vermin the Danes'.
1791	Birmingham and Worcester Canal cut through southeast corner of forts.
1819	Canal cutting widened to accommodate Birmingham and West Suburban Railway.
1822	John Finch illustrates the earthworks of two forts, one inside the other.
1890	Ordnance Survey map shows ramparts as surviving earthworks; traces of possible southern annexe also depicted.
1901	Elan Aqueduct built across forts.
1911	Road junction built across centre of forts.
1934	Professor F.W. Shotton observes Roman pottery on surface during construction of new hospital access.
1935/6	Excavations by F.W. Shotton and J.K. St. Joseph. Extensive trenching of defences of larger (Phase 1/2) and smaller (Phase 3) forts. Larger fort dated AD 50-60; date of smaller fort estimated as 20 years later.
1949	K.D.M. Dauncey, Archaeology Department, University of Birmingham mechanically cleared length of two ditches on the western side of the fort in preparation for a reconstruction of the defences.
1954	Small-scale excavation by Dr. G. Webster exposed northwestern corner of larger, Phase 1/2 fort.
1956	Northwestern corner tower and adjoining rampart reconstructed; later destroyed by vandals.

**TABLE 2: METCHLEY ROMAN FORTS, LATER EXCAVATIONS**

See Map 4 for location of investigations.

1963	<b>Area 1A.</b> Field group for Young Members, Birmingham Museum carried out trial excavation through defences of Phase 1/2 and Phase 3 forts.
Mch 1964	<b>Area 1B.</b> Field Group: second season, examined area within Phase 1/2 fort. No features or artifacts found.
Jul 1964	<b>Area 1C.</b> Located ditch interpreted as field boundary, probably part of northern defences of Phase 1 fort; director K. Pretty.
1967	<b>Area 2</b> (Camp Cottages: T. Rowley) excavation in southeast corner of forts. Phase 1-3 timber buildings and Phase 3 defences identified.
1968	<b>Area 3</b> (main area: T. Rowley) excavated in northwest corner of Phase 3 fort. Phase 1-3 timber buildings and defences excavated. Three phase sequence of activity first defined.
1969	<b>Area 4</b> (main area, adjoining Area 3: T. Rowley) located barrack buildings and granaries of Phase 1/2.
1969	<b>Area 5</b> (Garden Site: T. Rowley) tested sequence of defences.
1988/9	Area west of fort perimeter: BUFAU. Evaluated to test for possible associated civilian settlement. Bronze Age burnt mounds and post-medieval features found.
1992	Area east of fort perimeter: BUFAU. Evaluated to test for possible civilian settlement. No Roman features or finds.
1996	<b>Areas 6A-C</b> (southwest of Area 2) trenched: BUFAU. Defences of Phase 1/2 and Phase 3 forts identified; no other features found.
1997	<b>Area 6.</b> Excavation of area inside southeast corner of fort complex. BUFAU.
1998/9	<b>Area 7.</b> Evaluation and excavation of eastern annexe. BUFAU.
1999	<b>Area 8.</b> Excavation of southeastern corner of Phase 1-2 fort and eastern side of Phase 2A southern annexe. Identified two hitherto-unidentified forts, cut on different alignments to Phase 1-3 forts (Phase 4 in this report).
1999	<b>University Hospital Evaluation (Areas A-C).</b> Identified <i>vicus</i> to west of forts, western defences of a newly-identified fort (Phase 4 in this report), and a second granary building.

Although the forts' earthworks are not recorded on the 1827 and 1852 (Fig. 5) Tithe Maps of Edgbaston Parish, it is nevertheless possible to trace the outer fort defences which have become fossilised as rectilinear field boundaries. The field name evidence is also of interest. Field 545 of the Tithe Map of 1827 (not illustrated) is described as 'Camp Leasow', a name which serves to emphasise the visibility of the forts' earthworks in that area (the modern 'Genetics Field' Map 2, Zone 1). The remaining field names suggest that the fort area comprised arable farmland or gardens.

The forts' earthworks are depicted in detail on early Ordnance Survey mapping. The First Edition map of 1890 (Fig. 6) indicates that the southern and eastern defences were especially well preserved as above-ground earthworks. Part of the northern annexe, and the smaller, innermost fort first mapped by Finch, are also represented. The 1890 map also shows an earthwork joining the southwestern corner of the larger fort, defining the western side of a southern annexe (Jones 1995a). The southern side of this annexe is represented by two offset field boundaries, located on either side of the canal. The Ordnance Survey map of 1904 (Fig. 7) shows the near-obliteration of the forts' western defences as above-ground features, and also severe disturbance to the remaining sides of the forts by ploughing in the intervening period. Writing in 1901, Haverfield noted in the Victoria County History of Warwickshire (VCH 1901, 245) that there was no evidence to confirm the supposed Roman origin of the complex. The continued uncertainty concerning the possible Roman date of the forts persisted to 1917 (Fig. 8), when the site remained described as a 'Supposed Roman Camp'.

#### **4.0: ARCHAEOLOGICAL INVESTIGATIONS**

##### **4.1: Areas investigated (Maps 1, 4, Tables 1-2)**

Confirmation of the earthworks' Roman origin was first obtained in 1934 when Roman pottery was collected during the construction of a new hospital (St. Joseph and Shotton 1937, 71 and Table 1). Subsequent excavations were limited to testing and dating the defensive earthworks (St. Joseph and Shotton 1937), interpreted as the remains of two forts, the smaller (Phase 3 in this report) constructed within the interior of the earlier, larger fort (Phase 1-2 in this report). The larger fort corresponds in form and size with the earthwork depicted by Sperry (Fig. 4A) and also described by Hutton. The dating evidence obtained from the 1934-6 excavations indicated occupation in the decade AD 50-60, with some later, Agricolan material which, significantly, derived from the smaller fort (St. Joseph and Shotton 1937, 77). The smaller fort, described by Hutton, was first illustrated by Finch, although the northern side of the Phase 1-2 fort depicted by Finch was not fully identified until 1968.

Excavation in the northwestern angle of the northern annexe (Webster 1954) was followed by reconstruction of this part of the fort defences (Plates 1-2; photographed around 1963), later destroyed by vandals. Other parts of the forts' original defences continued to be visible as above-ground earthworks into the 1960s (Plate 3, photographed in 1967). In 1963 a single, 1m-wide trench (Area 1A: Map 4) was cut by the Young Members Group of Birmingham Museum and Art Gallery to test the

western defences of the Phase 1-2 and 3 forts. In the following year part of the northern annexe interior was investigated (Area 1Ba-b, Area 1C).

The 1967-9 (Area 3-5) excavations were funded by the Ministry of Public Buildings and Works in advance of development proposals by the University of Birmingham Medical School. The excavations provided the first opportunity for the detailed examination of extensive parts of the interior of the Phase 1-2 and Phase 3 forts, within large, open areas, unobstructed by baulks. The purpose of these open-area excavations was to test the sequence of deposits first identified by Webster (1954, 4), to recover detailed ground-plans of the internal buildings to enable a reconstruction of the structural and functional sequence, and to provide dating evidence. The fort defences were also trenched at this time.

The first season of work directed by Trevor Rowley (1967, Area 2) involved examination of an area in the right *praetentura* (see Appendix 1) of the Phase 1-2 and Phase 3 fort interiors, and part of the Phase 3 fort's eastern defences. The principal areas excavated in 1968-9 (Areas 3-4, Map 4) comprised the left *retentura* (see Appendix 1) of the Phase 1 and 3 forts, and the northwestern corner of the Phase 3 defences. A further excavation in 1969 (Area 5) tested the junction between the northwestern corner of the Phase 1 fort defences and the Phase 2A northern annexe. Additionally, the Phase 1-2 and Phase 3 fort defences were trenched. The results of the 1967-9 excavations were initially summarised in interim reports (Rowley 1967, 1968 and 1969) and by Webster (1968, 1981).

Subsequent fieldwork, sponsored by the Estate Management Office of the University of Birmingham has involved the examination of areas outside the western (Jones 1988, 1989) and eastern defences (Atkins 1992). Fieldwork between 1996-9 has largely been concentrated within the southeastern corner of the fort defences and in adjoining, internal areas. The earliest stage of archaeological work comprised the preparation of a desk-based assessment (Jones 1995a, 1995b, 1998a, 1999d), followed by trial-trenching (Jones 1996, Jones 1998b, Jones 1999c). Excavation of the eastern Phase 2 annexe was undertaken in two stages in 1998-9 (Map 4, Area 7, Jones 1999a and in preparation b). Parts of the eastern Phase 1-2 fort defences were also examined in 1998-9 (Areas 7-8, Jones 1999a and in preparation b). The southern Phase 1-3 fort defences and the southern *intervallum* area were examined in 1997 and 1999 (Map 2, Areas 6 and 8 respectively). The western side of the southern annexe was also excavated in 1999 (Area 8). For completeness, this assessment also provides a brief summary of the results of the 1998-9 fieldwork. Since the results of the 1998-9 area excavations have not been fully analysed, the data presented in this assessment should be treated as provisional only.

This assessment also summarises the results of a programme of targeted trial-trenching sponsored by the University Hospital Birmingham NHS Trust undertaken specifically to test the areas to be affected by the proposed hospital development. The trial-trenching was concentrated within the left side of the *retentura* and its central range, on the adjoining western defences, and in the area to the west of the forts (Jones 1999b-c). Trial-trenching comprises the first stage in archaeological field investigation, and necessarily involves only a limited sampling by hand-excavation of

a representative range of features or feature-types. Such trial-trenching provides a useful basis for the definition of an appropriate mitigation strategy (e.g. preservation *in situ*, detailed area excavation etc.), but trial-trenching should not be seen as a substitute for detailed area excavation.

This trial-trenching provided the first archaeological evidence for the existence of the western defences of a fort constructed between the Phase 1-2 and Phase 3 forts, first identified by Finch, who correctly identified three partly-demolished ramparts in this location. Perhaps the most important result of the trial-trenching was the identification of pebble surfaces, above-ground deposits, ditches and fences associated with a pre-Flavian *vicus* adjoining the western fort defences.

#### **4.2: Methodology (Map 4)**

Areas 1A-C were sub-divided by parallel baulks. Areas 2-8 were dug as open area excavations, unobstructed by baulks. Topsoil and modern overburden was removed by machine under archaeological control, with the exception of Area 1A which was totally hand-dug. The uppermost level of archaeological deposits in all areas was cleaned and recorded, and the archaeological features and deposits were excavated systematically according to the principles of archaeological stratigraphy. Excavation in Area 8 was restricted by extensive disturbance caused by both abandoned and live service-trenches, with the result that some of the main archaeological feature intersections could not be investigated.

### **5.0: ARRANGEMENT OF ASSESSMENT**

Section 6.0 provides a phased description, interpretation and discussion of the principal excavated structures, features and layers, arranged by phase. Summaries of the main defensive features (Tables 3 and 5) and the main buildings (Table 4) are also tabulated. Section 7.0 summarises the relevant policies concerning archaeology. Section 8.0 provides a summary of the excavated evidence and a predictive archaeological model of the archaeological features within each of twelve zones making up the study area; this section also considers the evidence for recent and current land-use, to provide a model of predicted archaeological survival. Section 9.0 provides a summary of the potential of the finds and environmental data from the forts. Section 10.0 provides an assessment of the survival and significance of the features associated with each of the main phases of Roman occupation. Section 11.0 outlines a strategy for further work at the site. Sections 12.0 and 13.0 contain the acknowledgements and references respectively.

Appendix 1 provides a glossary of the main Latin (italicised) terms used in the assessment. Appendix 2 contains the Design Brief for this assessment, and Appendix 3 lists the sources consulted.

For simplicity, it will be assumed throughout this report that the main axis of the forts is north-south, although the drawings remain labelled with compass north. Mapping of the forts is partly based upon old, and possibly inaccurate, survey data, and the

location of pre-1996 investigations is not always secure. A selection of the plans and sections relating to excavations at the forts up to, and including, 1999 included in this report. The plates (Plates 5-9) illustrate the main views from the reconstructed defences, and the northeastern and northwestern corners of the Phase 1-2 fort.

## 6.0: RESULTS (Figs. 9-16)

### 6.1: Phasing

A sequence of six main phases has been defined according to the principles of archaeological stratigraphy. This phasing is based upon the sequence first defined by the excavator (Rowley 1967; 1968; 1969), published in a revised form by Webster (1981, 65-71), as amended by recent analysis of the surviving records (Jones forthcoming a).

The integrated phasing sequence for Areas 1-8 is defined as follows:

Phase 0: Prehistoric.

Phase 1: First fort. AD 40s. Probably associated with the *vicus*.

Phase 2: Represented by two sub-phases (2A and 2B) which may be contemporary; both post-date the initial Phase 1 fort layout, and pre-date the Phase 3 fort. ? AD 50/60s.

Phase 2A: Construction of northern, eastern and southern annexes, and associated internal features. May be contemporary with the later occupation and partial re-building of the Phase 1 fort.

Phase 2B: Construction and use of temporary buildings in the Phase 1 fort interior.

Phase 3: Re-occupation of the site. Smaller fort built within Phase 1-2 fort. ? AD 50/60s.

Phase 4: Later Roman, or unphased Roman, activity. Two further forts, cut on new alignments, and the western defences of a further, unphased fort.

Phase 5: All post-Roman activity.

As noted above, the phasing defined for Areas 7 and 8 is necessarily provisional. For simplicity the settlement has been attributed to Phase 1.

Within each phase the defences are described and then interpreted, in a clockwise manner, starting with the western side. The internal features are described and then interpreted, the *retentura* and central range being considered first (Areas 3-4), followed by the *praetentura* (Area 7, then Areas 2, 6 and 8). The main information provided by trial-trenching is integrated into this sequence, where appropriate.

For simplicity, further details of the defences (Tables 1 and 3) and the buildings (Table 2) are tabulated.



## **6.2: PHASE 0: Prehistoric (Fig. 3)**

### Description and interpretation

Parts of three burnt mounds were identified during salvage recording to the north of Vincent Drive, prior to the construction of the Psychiatric Hospital (Jones 1988, 1989). These sites comprised mounds of heat-shattered pebbles set in a matrix of charcoal-rich soil, and are often, as here, located adjoining stream-courses. Burnt mounds may be variously interpreted as being associated with bathing or cooking during the Bronze Age, although no dating evidence was found at Metchley. Finds of further heat-shattered pebbles have come from Roman contexts during excavations at the forts, and may derive from Roman military hearths or from further disturbed burnt mounds.

A total of 13 flint artifacts has also been identified during excavation of Roman contexts or in the topsoil, both within and immediately adjoining the fort complex.

## **6.3: PHASE 1 (AD 40s)**

### 6.3.1: Description of the Phase 1 Defences (Table 3)

All four sides of the Phase 1 fort defences were examined between 1963 and 1999 (Map 4).

The Phase 1 defences comprised two parallel ditches, dug into the subsoil, approximately 6.5m apart (measured centre to centre), and a rampart. The innermost ditch along the northern, eastern and southern defences was dug away by a later re-cut, and its full profile could not be recovered.

The western rampart foundation (not illustrated) was formed by stake-holes (F2-F6), cut into the subsoil, which were sealed by layers of sand (11, 12, 13, 16), overlain by the rampart which measured 5.5m in width and a maximum of 0.4m in height. Its base comprised a clay-sand (14), overlain by a buried turf horizon (10), sealed by a sand layer (15), interpreted as decayed turf, forming the uppermost surviving level of the rampart. The ramparts along the remaining three sides of the fort have not been identified at excavation, because of modern disturbance, although disturbed rampart material was recorded along the southern defences (F336, Area 8).

Traces of contemporary, additional defensive obstacles were also found. The northern terminal of a third ditch (D5), measuring 1.2m in width, cut between ditches D3 and D1, was also identified adjoining the fort's northwestern corner (Fig. 9, Area 5A). A layer of clay deposited between the fort ditches to artificially raise the intervening ground level was recorded at the northwestern corner of the fort (Area 5) and along its southern defences (Area 6). Traces of a timber palisade were recorded along the western and eastern sides of the fort.

A northeast-southwest aligned beam-slot (S1: Fig. 9, Area 5) was recorded for a length of 2.5m on the inside of ditch D1a in the northwestern angle of the fort, outside

the area fully excavated. The beam-slot terminated to the north in a post-hole (PII1). A vertically-sided post-pit (F334, Arca 8) and a shallow post-pit (F335), approximately 2.9m apart, were located in the extreme southeastern angle of the fort defences.

### 6.3.2: Interpretation of the Phase 1 defences

The fort was defended on all sides by double ditches. Measuring respectively 3m and 4m in width and 1m and 1.8m in depth, the ditches on the western side of the fort lay in the middle of the size range suggested by Jones (1975, 106: 2.4m to 6.1m in width; 1.2 to 2.7m in depth) for double-ditched defences. The innermost ditch may have been originally the larger, although this comparison could not usefully be made elsewhere because variations in the intensity of modern land-use around the perimeter will have caused differing degrees of truncation.

Traces of a palisade were recorded between the contemporary ditches along the western and eastern defences. Later re-cutting may have removed traces of similar features elsewhere along the defences. Further protection from attack was provided by artificially heightening the ground level between the ditches with a dump of clay (Jones 1975, 113), recorded at the northwestern corner and along the southern side of the fort.

Trench 3A along the fort's western side provided details of Phase 1 rampart construction. The rampart formed the main barrier to attack on the fort, and comprised a bank, usually composed of material dug out of the adjoining ditches, retained at the front or rear by turf or timber revetments. The western rampart foundation was formed by sand, perhaps intended to level-up the natural slope or to raise the ground level artificially. The stakes (F2-F6) may have anchored the base of the rampart. The rampart was formed by sand (14), sealed by a turf horizon (10), to provide stability, which was overlain by the loose turf rampart core (15). There was no surviving trace of a turf revetment. Measuring 5.5m in width at the base, the width of the Metchley rampart is slightly smaller than the reconstructed turf-revetted rampart at Baginton, which measured 3.6m in height and was surmounted by a timber walkway (Hobley 1975, 19-23).

Although not fully excavated, the positioning and alignment of beam-slot S1 (Arca 5, Fig. 9), in the northwestern angle of the fort interior, could indicate that it formed the outermost side of a northwestern corner tower. Such a tower would have been supported by four posts driven into the subsoil, linked by four horizontal beams (see Plates 1-2 for the reconstructed northwestern Phase 2A corner tower). Post-pit F334 could have formed one of the frontal supports of a southeastern corner tower, although the adjoining post-pit (F335) was probably too shallow to be associated.

**TABLE 3: SUMMARY OF PHASE 1-2 DEFENCES**

Key to measurements: (W) = width, (D)= depth	
<b><u>PHASE 1</u></b>	
<i>Feature</i>	<i>Main details</i>
<u>Western side: Area 3A (Fig. 6)</u>	
Outer ditch D3	Irregular V-shape, possibly a result of re-cutting. 3m (W), 1m (D).
Inner ditch D1	V-profile. 4m (W), 1.8m (D).
	7. Clay layer deposited between ditches to raise ground level.
Rampart	Rampart based on foundation of stakes. Rampart 5.5m in width.
Other	Pit of possible palisade (P1), possible outer counterscarp bank (1).
<u>Northern side: Areas 5, 5A (Figs. 7-8)</u>	
Outer ditch D3	V-profile. 3m (W), 1.5m (D). Possibly re-cut in Phase 3.
Inner ditch D1	Dug away by Phase 3 re-cut (D1a).
D5	Ditch of possible stockade 1.2m wide; did not extend along north side of fort.
S1/PH1	Possible traces of northwestern corner tower (outside area fully excavated.).
<u>Area 3B (Figs. 6-7)</u>	
Outer ditch D3	Irregular, V-shaped profile. 4.2m (W), 1.7m (D). Possible Phase 3 re-cut.
Inner ditch D1	Re-cut in Phase 3 (D1a).
<u>Southern side: Area 6 (Figs. 9-10)</u>	
Outer ditch F406	3.5m (W), cut by modern drain.
Inner ditch F416	4m (W), 1.5m (D).
4131	Clay layer (0.4m max. D), deposited between ditches to raise ground level.
<b><u>PHASE 2</u></b>	
<u>Western side: Area 3A (Fig. 6)</u>	
Outer ditch D3	Phase 1-2 silts sealed by destruction deposit (3), sealed by redeposited rampart material (4).
Inner ditch D1	Phase 1-2 silts sealed by destruction deposit (6-7), sealed by sand (8-9) and destruction material, filling remaining hollow of ditch. Rampart slighted. Rampart material pushed into ditch D3 (4), D1 (8-9).
<u>Northern side:</u>	
<u>Areas 5, 5A (Figs. 7-8)</u>	
Outer ditch D4	(Phase 2A), 2m (W), 0.9m (D), formed by northward continuation of Phase 1 ditch D3.
Inner ditch D2	(Phase 2A), 2.5m (W), 1m (D), formed by northward continuation of Phase 1 ditch D1.
Outer ditch D3	(Phase 1) deliberately backfilled with gravel from excavation of ditches D2 and D4, including deliberate packing with turf to prevent collapse of northern annexe ditch D2 at junction. Outer ditch D3 deliberately infilled, including careful turf packing where it crossed line of D2 (Phase 2).
	Basal silting of Phase 2A ditches D2 and D4, sealed by occupation material on abandonment.
D1, D3	Re-cut in Phase 3 along northern side of fort.
Possible southern annexe. Identified from map evidence only.	

**TABLE 4: THE MAIN STRUCTURES**

<i>Area</i>	<i>Struct.</i>	<i>Represented by</i>	<i>Interpretation</i>
<b><u>PHASE 1</u></b>			
3	3.1	<i>Contubernia</i> and officers' quarters or special <i>contubernia</i> .	Southern barrack-block of facing pair.
3	3.2	Northern part of building. Six parallel beam-slots.	Granary.
4	4.1	Eastern unit, workshop or officers' quarters. Central unit, men's quarters, 8 <i>contubernia</i> . Western unit, men's quarters, 2 <i>contubernia</i> .	Northern barrack-block of facing pair.
2	2.1	Northern and southern units. Southern unit contained industrial pit group.	<i>Fabrica</i> (workshop).
2	2.2	Northern and southern sides, cut on slightly varying alignments.	Store.
<b><u>PHASE 2B</u></b>			
3	3.4	Northern, eastern and southern sides (western side not found). Clay floor.	Associated with ironworking or a wicker granary.
3	3.5	Eastern side and part of northern and southern sides. Cellular building, divided into 5 or 6 rooms. Possibly associated with annexe to cast.	Store building.
3	3.6	Two parallel beam-slots, 1m apart. Joining other beam-slots at a right-angle. On a different alignment to other contemporary buildings.	Not known.
2	2.3	Northern and southern sides, formed by re-excavation of Phase 1 slots.	Stables/ grooms' quarters.
<b><u>PHASE 3</u></b>			
3-4	4.2	Regularly arranged, parallel beam-slots adjoining northern rampart tail.	Rearward support to rampart. Usually associated with box ramparts.
	4.3	Four, possibly five, parallel beam-slots, irregularly spaced.	Possible granary within northern intervallum space.
	-	Ditched enclosure: open on southern side. Follows alignment of northwestern corner of Phase 3 defences. No internal structures identified.	Function not known. Possibly the latest Roman structure on site. Alternatively a post-medieval game-pen.
2	2.4	Eastern, southern and western sides. Two pairs of <i>contubernia</i> and officer's quarters.	Barrack-block, aligned north-south. Alternatively, a possible cookhouse.

### 6.3.3: Description of Phase 1 Internal Features

#### Areas investigated

Areas 3-4 investigated part of the left *retentura*, Area 2 part of the right *praetentura*. Areas 6 and 7 examined part of the southern and eastern *intervallum* spaces, respectively.

#### Areas 3-4 (Map 4, Fig. 10)

Preservation of Phase 1 features was generally better in the west of Area 3 and in the north of Area 4, where the overlying Phase 3 rampart had provided protection from later truncation. The incomplete ground-plans of four timber-framed buildings (Structures 3.1, 3.2, 3.3 and 4.1), represented by beam-slots cut into the subsoil, with associated floor surfaces, together with pits and other features, were identified.

#### *Structure 3.1* (Fig. 10)

Part of the east-west-aligned Structure 3.1 was recorded in the south of Area 3. Measuring from the outer edges of the beam-slots, the building measured 12m in width and was recorded for a length of 24m. Parts of the northern (S10, S75, S71) and southern (S35, S35a, S31) sides of the building were recorded; its eastern and western ends lay outside the area excavated. A corridor ran along the northern side of the building. The interior of this building was sub-divided into rooms and further possible corridors by internal walls represented by beam-slots cutting the subsoil. Two adjoining structural units may be discerned. The western unit comprised two pairs of rooms (1-4), and a further room (5) to the west which may also have been similarly sub-divided. The eastern unit comprised the remainder of the building (rooms 6-8).

Timber partitions were recorded within the interior of rooms 1 (S72a, S80a) and 3 (S88), and a possible corridor (S74) was recorded along the eastern side of room 3. Room 4 contained a hearth (E6 H2), defined by a stone spread, cut by a west-east aligned beam-slot (S70a) forming a partition. Room 5 may have originally extended over the entire width of the eastern unit. Two north-south aligned beam-slots (S32, S67) may have defined the western side of a corridor adjoining the eastern side of this room. Beam-slot S67 cut hearth E6 H1. Stub wall S68a, recorded on the eastern side of the room, was flush with the dividing wall between rooms 3 and 4 to the east. It may have originally continued across the whole width of room 5, continuing the division of this unit into paired rooms of unequal size.

The western unit (rooms 6-8) was distinguished from the eastern unit mainly by the absence of the westward continuation of the east-west wall which divided the eastern unit, although the western unit was also divided into two rooms across its width. Room 8 contained three pairs of post-pits (D6 PH1-4, 6 and D6 H2). Beam-slots S50, S35 and S43, recorded to the extreme west of room 7, may indicate the westward continuation of the outer walls of the building, and also of the northern corridor, beyond the area excavated.

### *Structures 3.2 and 3.3 (Fig. 10)*

The excavated northern part of Structure 3.2 measured 4.5m north-south and 10m east-west. It was defined by six roughly parallel, north-south-aligned beam-slots, positioned at an average separation of 1.8m. The easternmost excavated beam-slot (S15) joined east-west aligned beam-slot S16, together forming an L-shape in plan. Structure 3.3 comprised a square, single-cell building, its northern side interrupted by an entry-gap. The eastern side of this building (S6) cut beam-slot S2a which formed a northward continuation of Structure 3.2 beam-slot S2. The similarity in alignment and positioning between beam-slots S2a and S2 suggests that the two buildings were associated, although the two beam-slots were not recorded as contiguous at excavation.

### *Structure 4.1 (Fig. 10)*

Structure 4.1 was aligned east-west. It was defined by beam-slots cut into the subsoil and by floor surfaces. Measuring from the outer edges of the beam-slots this building was 21m in width and was recorded for a length of approximately 50m. Parts of its northern (S32, S27, S30 and S26) and southern sides (S34, S37) were defined by excavation; the eastern, and western sides lay wholly outside the area excavated. A corridor ran along the southern side of the building. Only part of the northern side of the corridor (beam-slots S47, S49, and S51 to the west) was recorded. The structure consisted of three structural units (eastern, central, and western), divided by two north-south aligned corridors, which probably extended across the full width of the building. A near-complete ground-plan of the internal arrangements within the central unit (rooms 1-12) was recovered. A partial ground-plan of the western unit (rooms 13-16) was identifiable; but only the extreme western limit of the eastern unit was excavated.

The eastern unit lay to the east of the north-south-aligned eastern wall (S51, S33) of the eastern corridor. Part of this wall (S51) formed a right-angle with beam-slot S51a, which may have formed the central division or midrib of the building, also recorded within the central (S42, S13) and western (S5) units. No further details of the eastern unit were identifiable. The eastern corridor, measuring 3m in width internally, divided the eastern and central units.

The central unit lay between the eastern and western corridors. It was sub-divided into at least 12 rooms by internal walls, represented by beam-slots. These rooms were arranged in four rows across the width of the building, each containing three rooms. If the arguments discussed below for the original sub-division of rooms 2, 5, 8 and 11 into two equal halves are accepted, a total of four rows, originally containing four rooms each, may be proposed. Beam-slots S13 and S42, aligned east-west, formed a midrib dividing the unit into two equal halves (northern and southern), each containing six (or eight) rooms, with the arrangement and dimensions of the rooms within one half of the unit forming a mirror image of the internal arrangements within the other. For simplicity, the rooms are described in numerical order below. Since the sub-division of rooms 2, 5, 8 and 11 is probable rather than proven, the rooms have

not been numbered as if they had been sub-divided in the following account, or on the figure.

Rooms 1-3 each contained a hearth. Room 2 may have been formerly sub-divided into two equal halves by the southwards continuation of beam-slot S4, recorded in the north of this room, and rooms 5, 8 and 11 to the south were probably also similarly sub-divided. Identification of the southwards continuation of this north-south internal dividing wall may have been obscured by later features cut in the same position and alignment. The use of differing material for the flooring in the eastern (pebbles) and western (earth) halves of room 8 further supports the argument for the original sub-division of this and other rooms (2, 5, and 11). Furthermore, the western edge of the surviving pebble surface in the eastern half of this room was flush with the eastern edge of the projected southwards continuation of beam-slot S4 (room 2). Room 10 may have been later sub-divided by the insertion of north-south-aligned beam-slot S20, defining the western side of a corridor 0.5m in width internally, adjoining the eastern side of the room (S16).

The western corridor divided the central and western units. The western corridor was L-shaped in plan, measuring between 1.2m and 3.6m in width internally. The wider part of the corridor lay to the south of the midrib. The western side of the corridor was formed by beam-slot S1, possibly continued in the south of the corridor by beam-slot S18. To the south of the midrib the western side of the corridor may also have been defined by beam-slot S22. Room 13 in the western unit was partly surfaced with pebbles and partly with beaten earth.

No coherent details of the internal arrangement of this building could be identified to the west of beam-slot S65, although the position and alignment of beam-slot S56 suggests that it may have formed a westwards continuation of the midrib recorded to the east (S5, S13, S42).

#### Other Phase 1 internal features (Fig. 10)

Three large sub-circular hearth-pits (F6 P2-4) were cut in the interior of Structure 3.1. The sides of pit F6 P3 contained traces of staining, interpreted at excavation to indicate a former timber lining. Other hearth-pits were cut to the north of Structure 3.1, and also along the line of the western corridor of Structure 4.1.

#### **Trial-trenches A4A-B (Map 4)**

Trial-trenching to the north of Vincent Drive identified further hearths, backfilled with burnt red clay, flecked with charcoal (Jones 1999b).

#### **Trial-trench B2 (Map 4)**

Trial-trench B2 (Jones 1999b) located to the south of Vincent Drive identified three roughly-parallel, north-south-aligned beam-slots (F750, F751, F752), measuring an average of 0.7m in width. The easternmost beam-slot (F752) was joined by an east-west-aligned beam-slot (F753).

### Area 7 (Map 4)

The only Phase 1 internal features identified in the eastern *intervallum* space comprised three hearths (F206, F207 and F232). These features were backfilled with charcoal-rich soil, containing fragments of burnt clay and heat-shattered burnt stones.

### Area 2 (Map 4)

Parts of two timber-framed buildings (Structures 2.1 and 2.2, Table 4) were identified in this area, together with contemporary pits and post-holes.

#### *Structure 2.1* (Fig. 11)

Part of the two, offset northern walls (F106, F114) and the southern wall (F140) of this east-west-aligned structure were defined by beam-slots cutting the subsoil. Its eastern and western limits lay outside the central zone of Area 2 which was fully investigated. Measuring from the outer edges of the beam-slots this building measured 7m in width and was recorded for a length of 15m. The building comprised two structural units (southern and northern).

The southern unit was defined by the southern wall of the building (F140) and a parallel wall, cut to the north (F129). This unit was sub-divided by two north-south-aligned dividing walls, one formed by a beam-slot (F136), which joined feature F129; the second by a line of post-holes (F134). A group of four circular pits (F130, F133, F135, F137) was sited within this unit. The northern unit lay between the northern wall of the building (F107, F114), defined by two parallel, offset beam-slots, separated by an entry-gap, and the northern internal wall (F129) of the southern unit. The northern unit was sub-divided along its length by a main internal dividing wall, represented by a beam-slot (F124). The western part of the northern unit was divided into six rooms of differing size by further beam-slots (F127, F125, F123) dug at right angles to the main internal dividing wall (F124), and by a beam-slot (F128) forming a right angle with the southern wall (F129) of the unit.

#### *Structure 2.2* (Fig. 11)

Structure 2.2, aligned east-west, was also represented by beam-slots. The slightly-offset northern walls (F145, F151) of this building were also mis-aligned. Measuring from the outer edges of the beam-slots Structure 2.2 was a minimum of 3m in width and was recorded for a maximum length of 16m. Lengths of its northern (F145, F151), and possible southern (F152), sides were identified. The excavated part of the building's interior was divided into three rooms (1-3) by internal walls F146 and F147. The line of wall F147 was continued beyond northern wall F145, forming a stub-wall 0.5m in length.



### Other Phase 1 features (Fig. 11)

Other Phase 1 features comprise an east-west aligned gully, hearth-pits and pits (F105, F102, F106). Part of a cobbled surface (F155, F192), belonging to Phases 1 or 2B overlay Structure 2.1 beam-slots F143 and F191.

### Areas 6 (Fig. 12)

The bases of four heavily-truncated hearth-pits or ovens (F401-F405) were identified in the northern part of the excavated area.

#### 6.3.4: Interpretation of Phase 1 internal features

### Areas 3-4

#### *Structure 3.1* (Fig. 10)

Although only part of Structure 3.1 lay within the excavated area, its ground-plan and location within the southwestern corner of the *retentura* suggests that it may be confidently interpreted as a barrack-block (Davison 1989, fig. A, type A). Barrack-blocks were usually of L-shaped plan, with the wider part of the building housing the officers quarters (possibly represented by the western unit of this building), located adjoining the *intervallum*. The remainder of the barrack-block was divided into a range of paired *contubernia*, forming the men's quarters, represented by the eastern structural unit and further rooms to the east of the excavated area. Structure 3.1 lay slightly above the upper end of the average width range for auxiliary barracks of 4-12m suggested by Davison (1989, 89). The corridor running along the northern side of the building may be interpreted as a verandah. Unusually, two of the internal walls (S76, S100) of rooms 1 and 5 to the south are continued into the verandah, possibly forming open cubicles, as at Carrawburgh (Breeze 1972, 92) and Longthorpe (Frere and St. Joseph 1974, fig. 17).

Each *contubernium* was divided into two rooms, the *armae* (Appendix 1, rooms 1, 3, 5 north), located towards the front of the building adjoining the verandah and used for equipment storage, and the *papiliones* to the rear (rooms 2, 4, 5 south) used for sleeping. The excavated part of the eastern unit comprised three pairs of *contubernia*, assuming that room 5 was originally similarly sub-divided. The internal floor area of the *contubernia*, at 31.5 square metres, lay just beyond the average range of 14-29 square metres suggested by Davison (1989, 13) for auxiliary barracks. The size ratio between the area of the *armae* and *papiliones* (based on rooms 3 and 4 respectively) is 61% to 39%, whilst it is more usual for the sizes of the two rooms to be in reverse proportions or to be the same (Johnson 1983, 171). An unusual feature of the two *armae* (rooms 1 and 3) is their sub-division by partitions, which probably marked a later re-arrangement of the building, also recorded in one *papilio* (room 4). These partitions may define the positions of cupboards, or benches as at Wall (Round 1983, 5) and Pen Lystyn (Hogg 1968, 128). The sub-divisions at Metchley could suggest a later storage function for the building, as may the timber-lined pits in room 2.

Another, later adaptation of the men's quarters is represented by the insertion of a corridor along the eastern side of room 5 (beam-slots S32 and S67), cutting hearth E6 H1. If part of the original internal layout, the room 5 corridor would be a very unusual feature, although a corridor is recorded in the contemporary barrack-block Structure 4.1 at Metchley, and such corridors are also recorded dividing the officers quarters from the *contubernia* at Strageath (Frere and Wilkes 1989, fig. 66), Maryport, Watercrock and Caernarvon (Davison 1989, 82, fig. C, type C variant), a feature notably associated with the barracks of the XXth legion, but also recorded at the auxiliary fort at Rocester (Esmonde Cleary and Ferris 1996, fig. 6). This corridor may have provided greater privacy to the officers, or have functioned to facilitate movement through the building. It is possible that the remainder of room 5 could have formed a special *contubernium*.

The western unit interior appeared disturbed by later activity, and its internal arrangement differed from the layout of the eastern unit, principally by the absence of evidence for the westwards continuation of the longitudinal dividing wall, along which was instead positioned a line of post-pits. The southern ends of rooms 6-7 could indicate the location of a slighter east-west aligned dividing wall, scoured-out by later disturbance. Another difference between rooms 6-7 and the *contubernia* to the east was in their respective widths, although the similarity in width between the suggested special *contubernium* and adjoining room 7 may be significant. These differences in internal layout could suggest that rooms 6-8 formed part of the officer's quarters, which were often sub-divided across their width (e.g. Davison 1989, fig. D, type j variant), although only the eastern end of this accommodation was excavated at Metchley.

The excavated part of the western unit measured 240 square metres in area, which may be considered exceptionally large for officer's quarters, even after making allowance for the unusually large width of the building. Davison (1989, 93) suggested a size range of 64-170 square metres for Claudio-Neronian auxiliary officer's quarters. Moreover, this part of the building would have originally been larger, since excavation did not locate its western limit. Accordingly, it may be suggested that rooms 5 and 6 may have both formed special *contubernia*, although it is not impossible that rooms 7 and 8 may have also formed part of this suite of rooms, in which case the officer's quarters would have been located wholly outside the excavated area.

### *Structures 3.2 and 3.3 (Fig. 10)*

Part of the northern side of Structure 3.2 was exposed in the extreme south of Area 3, but the full length of this building was not defined at excavation. The excavated part of this building was defined by six parallel beam-slots, dug approximately 1.8m apart. This building was located on the left side of the central range of buildings, immediately to the south of the *via quintana* (Appendix 1), which would have divided the southern barrack-block (Structure 3.1) to the north from the central range. No trace of this road survived at Metchley. The form of Structure 3.2, and its location within the central range suggests that it may be confidently interpreted as a granary. Granaries were usually located within the central range of buildings in a fort and close

to a gate (here the *porta principalis dextra*), to facilitate the loading and unloading of supplies with minimal disturbance to the remainder of the fort (Johnson 1983, 152). The raised floor of this building, required to maintain ventilation, would have been supported upon vertical timber posts jointed into the timber ground-beams. An average size range for granaries between 17-24m in length and 8-9m in width is suggested by Johnson (1983, 144).

Beam-slots S15 and S16, together forming an L-shape in plan, probably defined a loading-platform projecting outside the line of the building, paralleled by an example from Obserstimm, Germany (Johnson 1983, fig. 105), located roughly half-way along that granary. Such a projecting loading-platform was an unusual feature. It was more usual to use part of the granary itself for loading.

Structure 3.3, a rectangular, single-cell building, adjoined the northern side of Structure 3.2. Structure 3.3 may be interpreted as a loading bay to the granary to the south, as is suggested by the close proximity of the two structures, and the similarity in alignment and positioning between beam-slots S2a (Structure 3.3) and S2 (Structure 2.2), although the beam-slots were not contiguous. Structure 3.3 is paralleled by a reconstructed example from Baginton (Hobley 1969, fig. 6).

#### *Structure 4.1 (Fig. 10)*

Structure 4.1 was located in the northwestern corner of the left *retentura*, and formed the northernmost of a pair of facing barrack-blocks (with Structure 3.1). Structure 4.1 measured 21m in width and was recorded for a length of approximately 50m, but its eastern and western ends were not found within the excavated area. The corridor running along the southern side of the western and central units may be interpreted as a verandah, although it did not survive as a continuous feature. The apparently-interrupted northern wall of the building could indicate that a further verandah was laid out on this side of this building (Davison 1989, fig. A, type Z variant). The building was divided across its width by two corridors (eastern and western), forming three independent structural units (eastern, central and western).

The layout of this building does not conform to the standard barrack-block layout, exemplified by the incompletely-excavated Structure 3.1. Structure 4.1 may be most convincingly interpreted as a double barrack-block, formed by two barrack-blocks constructed back-to-back, without an intervening space. The dividing wall between the two barrack-blocks would have been formed by the midrib of the Metchley building. In Britain, double barracks have been identified at Carrawburgh (Breeze 1972, 94), South Shields (Dore and Gillam 1979, 34), and Elginhaugh (Davison 1989, plan 10), although the double barracks at these sites may be distinguished from the Metchley building by the presence of a double midrib. Double barrack blocks without a double midrib have been identified on the continent at Heidenheim (Johnson 1983, fig. 129), Kunzing, Valkenburg Castellum 2-3 (Glasbergen 1972, figs. 47-8) and Neuss (Davison 1989, plan 1).

Only the extreme western edge of the eastern unit was uncovered by excavation. The eastern end of the northern side of this building may have been identified by Webster

(1954, fig. plate 2), to the west of the projected line of the *via decumana* (see Map 4 for location of excavation). The eastern corridor may have contained a number of latrine-pits, backfilled with destruction deposits during the clearance of the Phase 1 fort.

By analogy with published parallels the eastern structural unit may be interpreted as structurally or functionally distinct 'end rooms' or 'end buildings', interpreted as a *fabrica* forming an integral part of the barrack block. Finds of iron objects in the vicinity of this unit including fragments of possible *pilae*, iron rings, an iron tool and chisel fragment (S25); an iron gouge (J3 F3), a *pila* fragment, and an iron spearhead (J2 F2), might support this interpretation, especially since there were very few other iron objects found in Phase 1 contexts in Areas 3-4, although the evidence is not conclusive.

Alternatively, it is possible that the decurions (see Appendix 1) were housed in suites of rooms at both ends of the barrack-block (Breeze and Dobson 1974, 13), the excavated eastern unit representing the innermost of these decurions' quarters. Because the Metchley building was a double barrack-block, a total of four *turmae* could have been accommodated in the building, with two decurions housed at either end of the building. Alternatively, the officers' quarters, more usually located towards the *intervallum* space, may have been located on the inside of the fort (e.g. Hod Hill, Richmond 1968, fig. 47), a placement suggested to be influenced by the need for extra security.

To the west of the eastern corridor lay the central unit, which was almost completely excavated. If the arguments discussed above for the original sub-division of rooms 2, 5, 8 and 11 into two equal halves are accepted, an original total of 16 rooms, arranged in four rows each containing four rooms may be proposed. The midrib (S13 and S42) divided the unit into two equal halves, the internal arrangements in the northern half forming a mirror image of those in the southern half. The northern barrack-block (rooms 1-6) and the southern barrack-block (rooms 7-12) each contained four *contubernia*. The larger rooms flanking the southern, and the possible northern verandah, were the *armae*, and the innermost rooms formed *papiliones*.

The Structure 3.1 and Structure 4.1 *contubernia* shared two unusual characteristics: the *arma* was larger than the *papilio* (Structure 3.1, 61%; Structure 4.1, 55%) and the comparatively large area of each *contubernium* (Structure 3.1, 31.5 square metres; Structure 4.1, 30 square metres internally). In contrast, in the double barrack-blocks at Heidenheim, Kunzing, Valkenburg and Neuss, the *arma* was either smaller than, or the same size as, the *papilio*. The Structure 4.1 *contubernia* were larger than those in double barrack 2/3 at Valkenberg Castellum 2-3 (23 square metres: Glasbergen 1972, fig. 47), but smaller than the *contubernia* in the double barrack-block at Heidenheim (33.6 square metres).

The western corridor lay to the west of the central unit. This corridor measured 1.3m in width internally in the northern half of the building, and between 1.3-3.5m in the southern half of the building, the latter figure approximating to the width of the adjoining *contubernium* (rooms 7 and 10). The narrow corridor was probably an

original feature of the building. Beam-slot S22, which was mis-aligned with the remainder of the building was probably a later insertion, defining the eastern side of a fifth *contubernium*, adjoining the four *contubernia* to the south of the midrib in the central unit (rooms 7-12). The southern wall of the *papilio* within this new *contubernium* was probably defined by the southern limit of the earth flooring, which was flush with the southern wall of the adjoining *papilio* (room 7).

The western unit lay to the west of the western corridor, although it is difficult to interpret this unit since only part of its ground-plan (rooms 13-16) was recovered. The internal arrangement of the excavated part of this unit suggests that rooms 13-16 formed two *contubernia*. If this interpretation is correct, the corridor dividing the two units containing *contubernia* would be a very unusual feature.

No coherent details of the ground-plan of the building could be identified to the west of feature S65 because of later disturbance, although the westward continuation of the verandah (S50, S51) and the midrib (S56) indicates that this building continued beyond the western edge of the excavation. This western end of the building, either wholly or partly outside the excavated area, would have contained the officers' quarters, or, alternatively, further special *contubernia*. The westwards continuation of the verandah (S51), although only fragmentarily recorded, could be inconsistent with this interpretation, since the front of the officers' quarters' of double barrack-blocks is more usually flush with the outside of the building (e.g. Valkenberg Castellum 2-3, Glasbergen 1972, figs. 47-49; Davison 1989, fig. A, type Z).

Measuring 21m in width, Structure 4.1 is most closely paralleled in size and internal arrangement by double barrack block 2/3 at Valkenburg Castellum 2-3 (Glasbergen 1972, fig. 47), although the Metchley building was evidently the longer. The Valkenburg barrack block comprised officers' quarters adjoining the *intervallum*, six *contubernia* in the men's quarters, possibly flanked on the inside of the fort by a range of end rooms forming the *fabrica* for each century, similar to the end rooms also identified at Hod Hill (Richmond 1968). These are possibly represented at Metchley by the incompletely-excavated eastern unit. A more usual arrangement was to house breadmaking hearths in the *intervallum* space and to have an independent *fabrica*.

#### **Trial-trench B2 (Map 4)**

The three roughly-parallel beam-slots (F750-F752, not illustrated) formed the foundation trenches of a timber-framed granary. If associated, east-west aligned beam-slot F753 could have defined one side of a loading platform, in which case beam-slot F752 would have formed the eastern exterior wall of the building. Although the full width of this granary was not exposed in the trial-trench, the beam-slots were probably aligned at a right-angle to the main, east-west axis of the building. These beam-slots probably belong to a second granary, possibly parallel with, and located to the south of, the excavated Structure 3.2 (see above).

## Areas 6 and 7 (Map 4)

The hearths located in the southern (Area 6) and eastern (Area 7) *intervallum* spaces could have been associated with breadmaking.

## Area 2 (Fig. 11)

Only part of the centre of Structure 2.1 was exposed in the right *praetentura*. The western and eastern ends of this building lay outside the area excavated in detail. This building was divided into two structural units. The southern unit comprised a narrow 'compartment'; the northern unit was divided into small rectangular rooms. The apparently deliberate siting of four flat-based pits, possibly associated with metalworking, within the southern unit of this building suggests that Structure 2.1 may be interpreted as a *fabrica* (Appendix 1), used for the repair of tools and equipment. However, the absence of associated residues hampers the identification of the processes undertaken here. Auxiliary *fabricae* are often U-shaped in plan (Johnson 1983, 183), and the excavated part of the building could perhaps have formed part of the central range of a *fabrica*.

The Structure 2.1 pit group may have formed bowl furnaces, associated with ore roasting (Bestwick and Cleland 1974, 144). Adjoining features F131 and F142 might possibly have formed the bases of furnaces built over a cobble foundation (e.g. Jones and Grealey 1974, 67).

Only part of Structure 2.2 was excavated; its eastern and western ends lay outside the area excavated in detail. Its interior was divided into at least three rooms of unequal size. Although interpretation of this building is difficult, its location within the *praetentura* and its proximity to the excavated *fabrica* (Structure 2.1) to the north suggests that it may be interpreted as a store building.

### 6.3.5: *Vicus* (Area C Trial-trenching (Map 4, Fig. 13))

#### Description

Trial-trenching outside the western defences of the Phase 1-2 fort identified a concentration of Roman features of probable pre-Flavian date (Jones 1999c). These features are probably contemporary with the Phase 1-2 forts, but for convenience are discussed and interpreted below.

The principal features identified comprised pebble surfaces (F1504, F1902). Surface F1504 may have measured up to 12m in width, and was constructed overlying the subsoil. No evidence of patching or resurfacing was observed. Surface F1902 may have been aligned approximately north-south, although it was disturbed by recent activity. A broad ditch (F1400) was cut along the northern edge of pebble surface F1504. To the north of the ditch were two boundary ditches (F2900, F1402) and a possible post-pit (F2901). Further post-pits (F1403, F1407) were recorded cutting the backfilled ditch.

A narrow ditch (F1606) was cut along the southern edge of pebble surface F1504. Further ditches (F1603, F1604) were cut on different alignments to the south of the surface, together with other possible post-pits (F1600, F1601, F1602, F1900) dug further to the south.

A sequence of horizontally-stratified deposits was recorded adjoining both the northern and southern edges of pebble surface F1504.

#### Interpretation

A buried turf horizon, sealed by *in situ* occupation deposits, was recorded on the northern and southern edges of pebble surface F1504. This surface measured approximately 12m in width (between ditches F1400 and F1606), almost certainly too broad to represent a road alone. Rather, surface F1504 may be interpreted as hardstanding adjoining the road exiting the fort's western gate, although this road surface was not itself investigated. The positioning and alignment of ditch F1400 suggests it may have formed a drainage ditch along the northern edge of the pebble surface, although it is admittedly rather broad for this function. Post-holes F2901, F1403 and F1407 may have defined a fence-line, post-dating the abandonment and infilling of ditch F1400. A further possible fence-line may have been represented by possible post-holes F1600, F1601, F1602 and F1900 cut to the south of the pebble surface. Further drainage ditches (F1603, F1604) dug to the south of the pebble surface, and on several alignments to its north (F2900, F1402) indicate changes in layout.

No traces of buildings were identified during trial-trenching. It is possible that the contemporary structures were located to the rear of pebble surface frontage areas principally investigated. Alternatively, it is possible that the timber-framed buildings were constructed on earth-fast ground-beams, which would leave no trace at excavation.

Pebble surface F1902 incorporated a quantity of heavily-abraded Roman pottery. This feature corresponds approximately in position and alignment with a trackway recorded on Ordnance Survey mapping (Figs. 6-8). The Roman pottery recovered from this surface could indicate a Roman date, although this could also be residual material. Given the widespread adoption of Roman military road lines (e.g. the northern continuation of the *via decumana* (Appendix 1) between the northern fort defences and Metchley Park Farm) into the present century it is possible to speculate that this excavated surface could have been Roman in origin and have been re-used into the present century.

## 6.4: PHASE 2

Phase 2 comprises two sub-phases (2A and 2B), which may have been wholly or partly contemporary, although as presently defined they do not overlap spatially. Both post-date the initial layout of the Phase 1 fort, and both pre-date the layout of the Phase 3 fort. Phase 2A may be contemporary with the later occupation of the Phase 1 fort, in particular with the rebuilding of the Phase 1 structures described in the preceding section of this report. Phase 2A comprises the construction of the northern, eastern and southern annexes. The temporary buildings constructed in the Phase 1 fort interior, after the destruction of the Phase 1 buildings, are attributed to Phase 2B. The northern annexe and Phase 1 fort ditches were backfilled at the end of Phase 2B. Each sub-phase is described and interpreted separately below.

### 6.4.1: PHASE 2A (Map 4)

#### 6.4.1.1: Description of Phase 2A Defences (Fig. 9, Table 3)

Investigation of the northern annexe was concentrated upon its junction with the northwestern corner of the Phase 1-2 fort (Area 5). Part of the defences and interior of the eastern and southern annexes was excavated in Areas 7 and 8 respectively.

##### Northern annexe (Fig. 9)

Phase 2A ditches D2 and D4, cut 5m apart (measured centre-to-centre), formed the western side of the northern annexe. These ditches formed a northwards continuation of the western side of the Phase 1 ditches (D1, D3). The annexe ditches (D2 and D4) were dug into the subsoil, and the southern end of the latter was also cut into the Phase 1 backfills of Phase 1 ditch D3. Phase 2A ditch D2 was also cut across the outermost Phase 1 ditch D3, and into Phase 1 clay dump (7). The relationship between Phase 2A ditch D2 and the adjoining Phase 1 ditch D1 was not definable because of a Phase 3 re-cut (D1a) of the latter feature. A length of Phase 1 ditch D3 between Phase 2A ditches D2 and D4 was deliberately backfilled with subsoil, sealed with turf packing, during the excavation of the adjoining annexe ditches.

##### Eastern annexe (Area 6, Fig. 14)

The eastern annexe was defended by a single north-south-aligned ditch (F200-F202), a rampart (F164) and outer ditches (F128, F167, F205). The earliest annexe ditch (F200) was re-cut twice (F201-F202) in Phase 2A/B. Each ditch re-cut was dug slightly downslope, and to the east of, the now-backfilled original feature(s). Ditch F200 was V-shaped in profile, with a cleaning-slot. It was backfilled with deposits derived from weathering of the ditch sides, sealed by collapsed rampart material. The eastern side of this ditch was dug-away by the first re-cut ditch (F201), which was backfilled with a rampart collapse. The eastern side of this re-cut was, in turn, dug-away by the second re-cut (F202), excavated slightly to the east of backfilled ditch F201. Although heavily-truncated by a Phase 3 re-cut (F203), the profile of ditch F202 may have been V-shaped. This ditch was backfilled with sand, sealed by clay, and overlain by rampart collapse.



The base of the eastern annexe rampart (F164) survived to a maximum depth of 0.35m and a maximum width of 6m. Part of its eastern side had been cut away by later ditches (F203, F204), and gulleys (F122, F123) had also been cut along the rampart tail. The northern terminus of the annexe rampart defined the southern side of a possible gateway. No trace of the rampart could be found to the north of this gateway. Immediately below the rampart was a layer of orange mottled clay-sand (1457), interpreted as a buried soil horizon overlying the subsoil. This buried soil was sealed by the base of the rampart, made of light grey sand (1456), interpreted as decayed turf, sealed by a layer of red clay (1421). Post-pit F166 was cut through the rampart (F164) and into the subsoil just inside the northern limit of the rampart. The post-pit was cut by pit F165, which may have been associated with the dismantling of the post from the earlier feature. Another post-pit (F132) was located 10m to the north of pits F165-6.

Two ditches located outside the annexe ditches could have formed outer defences. The innermost ditch (F167, F205) was represented by two slightly misaligned ditches. These two ditches were separated by an entry-gap measuring approximately 10m in width. A further ditch (F128) was cut further to the east, following the line of the natural contours of the slope but slightly misaligned with the annexe defences. Ditch F128 also appeared to be cut across the line of the entrance gap between ditches F167 and F205.

#### Southern annexe (Area 8: Map 4)

The eastern side of the southern annexe was represented by four parallel, heavily-truncated, flat-based ditches (F302, F305) measuring an average of 3m in width and a maximum of 0.3m in depth. The ditches were backfilled with grey-brown silt-clay. No trace of the associated rampart could be recorded. It was not possible to test the junction between the southern and the eastern annexe ditches, or the junction between the southern annexe and the southeastern corner of the Phase 1-2 fort because of live services and abandoned service trenches.

#### 6.4.1.2: Interpretation of Phase 2A defences

##### Northern annexe (Fig. 9)

By the time of the cutting of annexe ditch D2 across Phase 1 ditch D3, the latter had been infilled with up to 0.7m of silt, which probably represented no more than a season's silting, and does not evidence an abandonment of the site between Phases 1 and 2A. The cutting of the Phase 2A annexe ditches as an extension to the Phase 1 ditched defences also implies that the earlier fort defences continued to be maintained. Phase 2A ditches D2 and D4 formed the western side of the northern annexe. A length of Phase 1 ditch D3 between ditches D2 and D4 was deliberately backfilled to prevent the collapse of Phase 2A ditch D2 at the intersection. This backfilling almost certainly utilised the spoil and turf dug out of the annexe ditches, and employed a gravel core with turf capping to retain the profile of later ditch D2 at the intersection; elsewhere the backfilling of ditch D3 was less methodical, because stability was less important.

Cut to an average depth of 1m and width of 2m, the Phase 2A northern annexe ditches were smaller than their Phase 1 counterparts. The ditches defining the northern side of the annexe were of similar size (St. Joseph and Shotton 1937, 72-4) and were generally more irregular in profile than the Phase 1 ditches.

#### Eastern annexe (Fig. 14)

The eastern annexe, along with the northern and southern annexes is attributed to Phase 2A. The eastern annexe cannot on present evidence be linked stratigraphically to the main sequence of fort ditches. Furthermore, the attribution of the ditch and re-cut sequence to either Phases 2A/B or Phase 3 is also necessarily somewhat arbitrary on the basis of the present preliminary analysis. It is possible that the eastern annexe joined the southern annexe, forming a single L-shaped annexe, along the southern and eastern sides of the fort (Jones 1999a), although this cannot be proven. Similarly, the northernmost extent of the eastern annexe remains to be established.

In contrast to the Phase 1 fort and the Phase 2A northern annexe, both defended by double ditches, the eastern annexe was first defended by a single ditch (F200), and the annexe continued to be defended by a single ditch after re-cutting (F201, F202). To compensate for the single-ditched defences, the eastern annexe ditches were both deeper and broader than the northern annexe ditches, which measured an average of 1m in width and 0.7m in depth. Although the full fill sequences of ditches F200-F202 were not recorded because of re-cutting, the majority of the surviving deposits appear to derive from weathering of the ditch sides and from rampart collapse.

Because of later re-cutting (F203, F204) it was not clear if the rampart belonged to Phases 2A/B or 3, although the latter is the less-likely alternative. The rampart measured approximately 5.5m in width, an average size for turf-revetted ramparts (Jones 1975). The uppermost deposit of the eastern annexe rampart (1456) is interpreted as a 'lacing' of red clay, intended for additional stability, also recorded along part of the northern Phase 3 rampart (Area 4B, Jones forthcoming a).

Post-pits F165 and F132, dug 10m apart, may have defined the southern and northern uprights of a gateway. No other post-holes or post-pits associated with this entrance were found, although it is possible that such features could have been dug away by later ditches F203 and F204. The ditch butt-ends of this entrance were presumably removed by later re-cutting, after it went out of use. Further evidence for an entrance between the pair of excavated post-pits is provided by the gap between external ditches F167 and F205, the northernmost butt-end of the rampart (F164), respected by gulleys F122-3, and perhaps also by the positioning of the southern butt-end of internal feature F131 to the north of this suspected entrance.

Ditches F167, F205 and F128, external to the rampart, may have formed additional lines of defence. Feature F205 may have contained a palisade or thorn-set hedge, as is suggested by the irregular profiles recorded. Although the outermost ditch (F128) was misaligned with the fort, the regularity of its profile and absence of later pottery from its fills suggests that this feature could also belong to Phases 2A/B or 3.

### Southern annexe

Although heavily truncated, ditches F302-F305 (not illustrated) may be interpreted as defining the eastern side of the southern annexe. It is not clear if the ditches belonged to Phase 2A or to a subsequent re-cutting. Their flat-based profile is relatively unusual in a military context and suggests comparison with eastern annexe ditch F203 (Phase 3) which was also cut to a similar profile. Because of truncation, no relationships could be observed between ditches F302-F304, although ditch F305 cut ditch F304. It is possible that this eastern side of the southern annexe could have been defended by double ditches.

#### 6.4.1.3: Description and interpretation of Phase 2A internal features

### Northern annexe

No contemporary internal features were identified in the interior of the northern annexe, despite the stripping of approximately 1300 square metres (Pretty 1969: Map 4), and no Roman finds were recovered. Since plough-marks were identified in this area, it is possible that any shallow internal features could have been scoured-out.

### Eastern annexe

#### Area 7 (Fig. 14)

The eastern annexe rampart (F164) tail was cut by two shallow gulleys (F122, F123); feature F122 cut feature F123. The northern butt-ends of these features were located just inside the northern terminus of the rampart (F164); neither gully was recorded as continuing to the north of the suggested entrance. Gully F122.02 was cut by gully F178, a possible re-cut, not recorded in the other hand-excavated segments. Gulleys F122.02 and F178 were cut by hearth or oven F130. Gulleys F122.03 and F123.03 were cut by two hearths (F141, F142). Gulleys F122.04 and F123.04 were cut by a further hearth (F179). Further ovens (F210-F212: not illustrated) were located towards the northern part of the excavated part of the eastern annexe interior. Traces of a possible pebble surface (F228) were recorded within the annexe interior, adjoining the canal bank, where modern overburden had provided protection from later truncation.

#### Area 7 (Fig. 14)

Intercutting features F122, F123 and F178 are interpreted as drainage gulleys cut at the back of the eastern annexe rampart. Similar features were recorded by Webster (1954, 3), cutting the tail of the northern Phase 3 rampart. These eastern annexe gulleys were probably contemporary with annexe ditches F200-F203. Features F130, F141, F142 and F179 were hearths or ovens cut to the rear of the rampart, in an area often containing ironworking or breadmaking features (c.g. Area 6 at Metchley, adjoining the southern rampart tail; Jones forthcoming a ).

No traces of buildings could be identified in the annexe interior. It is possible that this annexe was constructed to provide an open storage area, or that any buildings within its interior were located outside the area investigated. Alternatively, any traces of such internal features could have been removed by root disturbance.

#### Southern annexe

No internal features were located within the southern annexe interior (Area 8, Map 4), possibly because the excavated area had been subject to extensive modern disturbance.

### 6.4.2: PHASE 2B

#### 6.4.2.1: Description and interpretation of Phase 2B defences

##### Areas investigated (Map 4)

The Phase 2A/B backfilling of the Phase 1 defensive ditches was recorded along the western (Area 3A), northern (Areas 5, 3B and 1C), eastern (Area 7) and southern (Areas 6 and 8) sides of the Phase 1-2 fort.

The Phase 1 defences remained in use during Phase 2B and continued to be cleaned-out. The Phase 1 defences were backfilled immediately prior to the abandonment of the site at the end of Phase 2B. The sequence of Phase 2B backfills was similar: the primary fills were sand-silts derived from weathering of the ditch sides, sealed by destruction deposits, including burnt daub, overlain by sand, interpreted as demolished rampart material. The outermost ditch along the northern, eastern and southern sides of the Phase 1-2 fort was re-cut in Phase 3, since no trace of any basal silts were found in the primary feature.

The uppermost, sand backfills of the ditches derived from slighting the rampart, either at the end of Phase 2B or to provide a clear line of sight for the Phase 3 fort, by analogy with the evidence from Longthorpe (Frere and St. Joseph 1974).

#### 6.4.2.2: Description of Phase 2B Internal features

##### Areas investigated (Map 4)

The internal areas of the contemporary fort investigated comprised part of the left *retentura* (Areas 3-4), part of the right *praetentura* (Area 2), and parts of the eastern (Area 7) and southern (Area 6) *intervallum* spaces, although the excavated evidence suggests that this phase of activity did not conform to the usual planned military fort layout.

#### Areas 3-4

The Phase 2B buildings were distinguished from their Phase 1 predecessors by the frequent absence of ground-beams, and by the irregularity of the foundation trenches,

which are accordingly termed slots in the following account. The Phase 2B features were cut through the Phase 1 destruction deposit, into backfilled Phase 1 features and the subsoil. The Phase 2B features and deposits were better preserved in the western and northern zones of Areas 3-4, where the overlying Phase 3 rampart had provided protection against later truncation.

The buildings (Table 4)

*Structure 3.4 (Fig. 15)*

Structure 3.4 respected the position of the disused Phase 1 loading platform (Structure 3.3). Structure 3.4 was defined by a red clay floor (C7 F2), overlying the gravel subsoil, and also by slots and stake-hole alignments. The clay floor was L-shaped in plan. The northern side of the building was formed by a slightly curvilinear slot (S35a), containing a number of stake-holes, formed by a partial re-excavation of Phase 1 beam-slot S35 (Structure 3.1). The northeastern corner of Structure 3.4 was defined by a further curvilinear slot (S33), which contained a possible door-post at its southern terminal. The southeastern and southern sides of this building were formed by an L-shaped stake-hole alignment (C7 F3), partly set within a slot dug into the clay floor (C7 F2).

*Structure 3.5 (Fig. 15)*

Part of the eastern side of this east-west aligned building, first identified by Rowley, was recorded in the extreme west of Area 3. The full length of the eastern side of the building, and the eastern ends of its northern and southern sides, was identified, but its western side lay outside the area excavated. The external walls and internal divisions of this building were defined by slots cut into the subsoil. The northern side of the building (slot S34) was interrupted by an entry-gap. The northern end of the eastern side of the building was also defined by a slot (S59). The remainder of this side may have been open, or it may have been defined by slots scoured-out by later features (S43, S45, see below) following approximately the same alignment. The southeastern corner of the building was formed by two slots (S12, S13), together forming an L-shape in plan. The southern side of the building was defined by a further slot (S14). Slots S13 and S14 contained traces of stake-holes cut at regular intervals along their length.

The interior of the excavated part of this building was sub-divided by internal partitions or walls, aligned north-south and east-west. Features S9a and S10a were formed by re-cuts of Phase 1 beam-slots S37 and S10 respectively. These internal walls defined five rooms or compartments of varying size and shape within the excavated part of the building.

*Structure 3.6 (Fig. 15)*

This possible building was represented by two parallel slots (S95, S96) cut into the subsoil. No other possibly associated features could be identified. Structure 3.6 was

slightly misaligned with the remainder of the Phase 2B features, and was also cut across Enclosure 1 slot S94 (see below).

#### Later Phase 2B features (Fig. 15)

Two zones containing hearths and ovens were identified, to the northeast and southeast of Structure 3.5, for simplicity discussed separately below.

The northeastern feature group comprised 11 hearths or ovens which were mostly circular in plan and located outside the building, although this group could include one oven (C3 P1) located within the interior of Structure 3.5. The positioning of three ovens lined with crushed stone, overlain with burnt red clay (D4 F1-2, D3 H2), roughly in line to the east of Structure 3.5, may be significant. Hearths backfilled with red clay and other hearths, were also recorded.

The feature group to the southeast of Structure 3.5 included 13 hearths or ovens. One hearth (C7 H2) was cut into the red clay floor of Structure 3.4. Most of the hearths were circular in plan and were backfilled with red clay, although one stone-based oven was also recorded.

Although not readily identifiable, the location of a further group of hearths or ovens constructed wholly above the contemporary ground-level was indicated by a number of amorphous spreads of burnt red clay overlying the Phase 1 destruction deposit, and interpreted in the Director's Notebook as 'clay capping' (not illustrated). The position of this burnt clay material appeared to respect the location of feature C2 H1 and also the group of stone-lined ovens to the east of Structure 3.5.

#### Stake-hole alignments

##### *Enclosure 1* (Fig. 15)

Enclosure 1 measured 16m east-west by 18m north-south. The southern side of this enclosure was defined by stake-hole alignment S10a, which was formed by the eastwards continuation of beam-slot S10a recorded within the interior of Structure 3.5. The Excavation Diary records that beam-slot S10a (and beam-slot S9a to the north), both recorded within the interior of Structure 3.5, 'became stake hole alignments when they emerged from under the Phase 3 fort rampart' (unfortunately positioned approximately flush with the eastern wall of the building). The southern end of the enclosure's western side was formed by stake-hole alignment S45, possibly blocking a gap in the eastern side of Structure 3.5. The remainder of the western side of the enclosure was formed by a stake-hole alignment (S53a), forming a slightly offset, northward continuation of the eastern wall (S59) of the adjoining building. The eastern end of the northern side of the enclosure was formed by slot S91 (containing a stake-hole alignment), which cut Structure 3.6 slot S95, but the remainder of this side may have been removed by later disturbances. Slots S91 and S97 together formed the northeastern corner of the enclosure. The southern terminal of the eastern side of the enclosure (S97) was approximately flush with the alignment of east-west slot S50a. A group of irregularly-distributed stake-holes was cut in the southeast corner of the

enclosure, and also extending immediately outside it, may have been associated with temporary gate-posts or fences.

A notable feature of the enclosure was an interrupted 'inner wall', formed by slots, perhaps defining the inner side of a 'walkway' recorded on its northern (S20, S22, S82), eastern (S57) and southern (S9, S50a,) sides. Feature S81 may have been cut down the middle of the eastern 'walkway'. It is possible that a corresponding western 'inner wall' could have been scoured-out by a later feature (Phase 3/4, S17). Other stake-hole alignments located within the enclosure interior, cut north-south (S77) and east-west (F2 F1, S21), were also recorded.

Other stake hole alignments apparently respecting the northern (S58) and southern walls (S38) of the building could have been associated with Structure 3.5 and Enclosure 1. Stake-hole alignment S13a may have formed a southwards continuation of the eastern wall (S13) of the building, possibly forming a right-angle with stake-hole alignment S38. Another east-west-aligned stake-hole alignment (S101) approximately continued the line of internal walls S40 and S12 to the west.

#### *Enclosure 2 (Fig. 15)*

The southeastern corner of a further possible enclosure was represented by two slots forming an approximate right-angle (S64, S94), positioned flush with the northeastern corner of Enclosure 1. Slot S94 was cut 2.5m to the north of the enclosure, the same separation as that recorded between the inner and outer stake-hole alignments forming the southern, eastern and northern sides of Enclosure 1.

#### **Area 1A (Map 4)**

Although no other records survive for Area 1A, the photographs in archive show irregularly-shaped beam-slots and an adjacent concentration of stake-holes, which may be attributed to Phase 2B on the basis of their morphological similarity with the Phase 2B stake-hole alignments recorded in Areas 2 and 3, and also because this feature group appears to be cut by Phase 3 ditch D6. The significance of the finds from Area 1A is considered in the discussion.

#### **Trial-trench A3 (Map 4)**

A number of possible hearths, ovens and associated gulleys (F303, F310, F311, F312, F314, Jones 1999b) located in this trench could belong to this phase.

#### **Trial-trench B2 (Map 4)**

Phase 1 granary beam-slot F751 was re-cut, possibly in this phase. The Phase 1 destruction deposit was cut by a group of hearths (F756-F759, Jones 1999b), backfilled with burnt red clay.

### **Area 7 (Map 4)**

The western side, and parts of the western ends of the northern and southern sides, of a timber-framed building (Structure 7.1) was recorded in the extreme southwestern corner of Area 7. Measured from the inside of the slots, the building measured 2.5m north-south, but its eastern wall lay outside the area excavated. The building was defined by three slots (F202, F203, F209) which were irregular both in plan and profile. Although its full extent was not recorded one possibility is that this building was a latrine.

### **Area 2 (Map 4)**

Part of a further Phase 2B timber-framed building (Structure 2.3, Table 4), or other structure, was represented by irregular slots dug through the Phase 1 destruction deposit into backfilled Phase 1 features and the underlying subsoil. Other contemporary features included post-holes, pits and gulleys.

#### *Structure 2.3 (Fig. 16)*

Part of the east-west aligned Structure 2.3 was recorded in the south of the area excavated. The slots belonging to this building were cut through the backfilled beam-slots of Phase 1 Structure 2.2, whose position and alignment was respected by the Phase 2B building, which was also of similar width. Despite this similarity in plan, the Structure 2.3 slots were easily distinguishable, being shallower and more irregular in plan and profile. The eastern, and also possibly the western, end of this structure lay outside the area excavated in detail. The northern and southern sides of this building were formed by slots F178 and F183 respectively. The eastern and western excavated sides of the building were defined by slots F188 and F182 respectively. The centreline of this building was formed by slots F183 and F190, separated by a gap measuring 1m in width. To the south of the centreline the building was divided into three small rooms (1-3) by slots F184 and F186. Room 3 contained a hearth.

Other contemporary features included a pit (F179), two adjoining hearths (F180, F181) and two concentric gulleys (F100, F104). The Phase 2 internal features were sealed by a charcoal-rich destruction deposit, including quantities of burnt daub. The destruction deposit was cut by a north-south-aligned palisade trench (F160).

### **Area 6 (Fig. 12)**

A shallow east-west-aligned possible palisade gully (F448) was recorded for a length of 13m. It was irregularly-shaped in profile and backfilled with brown clay-silt. No associated features were recorded.

#### **6.4.2.3: Interpretation of Phase 2B Internal Features**



### Areas 3-4 (Fig. 15)

The earliest Phase 2B activity was probably represented by the buildings (Structures 3.5 and 3.6). Subsequently, the hearth/oven group was in use. Later, the wattle fence structures may have been constructed adjoining Structures 3.5 and 3.6, which may have remained in use. Because of the limited military parallels for some of the Phase 2B buildings, it is often necessary to consider alternative sources, including examples of structures found in civilian contexts.

#### Buildings

##### *Structure 3.4 (Fig. 15)*

This building respected the position of the loading-bay (Structure 3.3). The encircling northern and eastern walls of Structure 3.4 were probably of wattle and daub construction, set in a slot dug into the subsoil and into the clay floor (C7 F2). It is possible that the walls and floor were not contemporary, although the floor is clearly the earlier feature. It is difficult to find a close parallel for this irregularly-shaped building from a military context. By association with the group of adjoining ovens and hearths, interpreted below as associated with ironworking, the floor could have formed the base of a furnace (e.g. Whitchurch - Jones and Webster 1969, fig. 206 and 210), or a clay working-floor as at Wilderspool, forming part of a smithing-shop (Hinchcliffe and Williams 1992, 20 and fig. 12). The stake-hole alignments, partly set within slots, could have been formed by the impressions of branches forming the supports of a clay dome, as at Manchester (Bestwick and Cleland 1974, 150). None of these parallels is entirely convincing in the absence of other evidence from the Metchley building for its association with metalworking, such as associated slag deposits or the presence of heavily burnt clay.

An alternative interpretation of Structure 3.5 is that it formed a wicker granary, similar to an example recorded in a civilian context from Godmanchester (Green 1975, fig. 7). This example had a clay floor, and a roof of wicker set in clay the roof of which may have been reconstructed a number of times, as is also suggested at the Metchley building by numerous stake-holes cut surrounding the clay floor of the building. At Metchley, the apparent mis-alignment of the floor and walls of the building could suggest that the floor formed part of a building which was later re-used as the base for a granary. The interpretation of Structure 3.5 as a granary is perhaps supported by the previous use of its site as part of an earlier granary and, perhaps more convincingly, by association with the use of the adjoining Structure 3.5 as a store.

##### *Structure 3.5 (Fig. 15)*

As with other contemporary buildings, Structure 3.5 was partly formed by the re-excavation of Phase 1 beam-slots (S37, S10). This superimposition was also recorded at Baginton where Phase 2 structures incorporated elements of their Phase 1 predecessors (Hobley 1975, 15). This re-use of the earlier beam-slots suggests the earlier wall lines remained visible, implying a short interval between demolition of the

Phase 1 structures and Phase 2B reconstruction, or that both events were part of one military operation.

Although only partly excavated, this building displayed the use of two different constructional techniques: slots into which timber uprights had been jointed, and slots containing traces of timber stake-holes set at regular intervals along their length, the latter arrangement interpreted as the remains of vertically-supported wattle-work wall panels, presumably driven through the beam-slot (Davison 1989, 220), as at Baginton (e.g. Phase 1a, Hobley 1973, fig. 5), Strageath, (Frere and Wilkes 1989) and most notably in the contemporary Structure 2.3 at Metchley.

The interior of this building was divided by beam-slots into five rooms. Although difficult to interpret because its full ground-plan was not found at excavation, this building may be most convincingly interpreted as a store, divided by beam-slots forming a cellular pattern, as at Wall (Round 1983, fig. 5) where the excavator interpreted the internal slots as supports for a raised floor.

Too little of Structure 3.6 survives to suggest its original ground-plan, or function, although the misalignment of this building with the adjoining structures is notable.

#### Hearths or ovens (Fig. 15)

It is difficult to interpret the function of the hearth/oven group in the absence of any associated metalworking residues or charred plant remains, and the interpretations presented in this section of the report are therefore necessarily tentative.

The majority of the hearths or ovens were backfilled with burnt red clay, and may have been used for breadmaking (e.g. Baginton, Hobley 1975). These features are typically found in the *intervallum* space or cut into the back of the rampart (e.g. Phase 3 oven/hearth group at Metchley adjoining the southern rampart rear, Area 6, Fig. 12). Ovens were frequently located adjoining the outer ends of barrack-blocks (e.g. at Inchtuthil, Pitts and St. Joseph 1985, 200), an arrangement suggesting that each oven served one barrack-block, with the *contubernia* taking turns to prepare bread on a daily basis (Johnson 1983, 200). Although the overall layout of the Phase 2B fort at Metchley is not known, this oven/hearth group would have been located at least 30m from the rampart tail, perhaps inside the *via sagularis*, although it is not necessarily to be expected that the Phase 2B internal features adhered to the usual fort internal layout (e.g. Johnson 1983, fig. 19).

The distribution of the Phase 2B features at Metchley could suggest another arrangement, within a zone of the fort designated for breadmaking or small-scale industrial activity (e.g. at Derby - Dool 1986, fig. 61), although it is also possible that the excavated oven/hearth group could be the chance survivors of a larger feature group, fortuitously protected from plough truncation by the overlying Phase 3 rampart and its collapse.

The remaining hearths or ovens could have been used for metalworking. The bowl-shaped hearths could have been used for primary smithing, which involves heating

iron blooms to 900 degrees C. (Dool 1986, 174, Bestwick and Cleland 1974, 175). The burnt clay backfill of the features identified at Metchley could represent redeposited lining material since none was recorded *in situ*. The clay would have been probably derived from the subsoil. Other circular bowl-shaped furnaces from Derby similar in morphology to the Metchley examples were interpreted as being used for the secondary forging of iron tools and weapons (Dool 1986, 174-5).

It is also possible that some of the stone-filled hearths were backfilled with burnt clay as part of a process of levelling-up after their abandonment, as at Manchester (Bestwick and Cleland 1974, 151). Some of the Metchley examples had stone-lined sides, which suggests an association with an industrial process, perhaps performing a similar function to furnaces 30 and 31 at Manchester, which were interpreted as smelting furnaces (Hinchcliffe and Williams 1974, 69), unless the stone was derived from a surround or base to the feature, as at Derby (Wheeler 1986, fig. 69).

A third type of possible metalworking feature found at Metchley comprises the spreads of burnt clay, interpreted as the collapsed remains of domed or shaft furnaces built wholly above ground level, which may have been used for iron smelting by analogy with excavated parallels from Manchester (Bestwick and Cleland 1974, 145).

Further ovens, hearths and possibly associated features were found in Trench A3.

#### Stake-hole alignments

The stake-hole alignments were probably constructed during the use of Structure 3.5, respecting its location. The only stake-hole alignment to encroach upon the building was feature S11, which was not recorded within its interior. Part of the eastern side of Enclosure 1 may have been formed by the 'blocking' of the eastern wall of Structure 3.5 by a fence. An even closer nexus between the enclosure and the building is suggested by the eastward continuation of internal walls S9a and S10a into the enclosure. A possibly similar association between enclosures or fenced compounds and a timber-framed building is recorded at Wilderspool (Hinchcliffe and Williams 1992, 20 and figs. 4-5), where the building was associated with smithing.

Some stake-hole alignments set within slots were formed by the re-excavation of Phase 1 beam-slots. These stake-hole alignments, interpreted at excavation as wattle fence-lines, may have defined the walls of buildings or associated stockades, formed by vertically-supported wattling as opposed to horizontally-supported wattling (Davison 1989, 220; e.g. S13, Structure 3.5).

It is difficult to find parallels for the Metchley features within a Roman military context. Perhaps the closest parallel comes from the northwest sector of Derby fort or annexe (Wheeler 1986), where a group of fence-lines defined by gulleys and stake-hole alignments was identified, belonging to the earliest, Flavian-Trajanic, occupation of the site. Wheeler noted that 'because the structures ... seem atypical of a fort interior, it is possible that Derby had some other form of military installation. It might have been a shrine and possibly stabling'. This arrangement at Derby was interpreted as comprising stockades, possibly fencing-off horses or animals from other areas

within the fort (*op cit*, fig. 15, 43-4), although the interpretation of this area is complicated by the insertion of a baby burial, interpreted as a shrine.

The parallel linear features (S97 and features to west) might have functioned as divisions in cattle stalls or stabling. A possible entry-gap on the southeastern corner of Enclosure 1 at Metchley may have been 'closed' by further, temporary wattle fences, which may have been repeatedly re-positioned, represented archaeologically by the concentration of stake-hole alignments recorded in this angle of the enclosure.

The clustering of the hearth/oven group within the interior of Enclosure 1, and in particular their location within its 'inner wall', could suggest that the enclosure was associated with this industrial feature group, although this association could have marked a change of use of the enclosure. The enclosure could also have functioned as a wind-break, perhaps with an internal passageway.

## Area 2

### *Structure 2.3 (Fig. 16)*

This building was largely formed by the re-excavation of Phase 1 Structure 2.2 beam-slots. The plan of Structure 2.3 was irregular, as were the profiles of its slots. This irregularity suggests that the slots of this building retained walls of wattle and daub construction, built without a ground-beam. The absence of a ground-beam could indicate that the building was a temporary construction. As has been noted above, the closely-spaced stake-holes indicate that the walls were of vertically - rather than horizontally - supported wattling. The northern part of the building (1.8m in width internally) was undivided. To the south of the centreline (F183 and F190) the building was divided into two partly-open-sided rooms (1-2) and a third enclosed room (3).

Interpretation of the function of this building is difficult. The most probable interpretation of this building is as a stable, although no trace of a drain was found at Metchley, nor was there supporting environmental data. Although a central drain is a common characteristic of stables, it is not always present (Johnson 1983, 178; Frere and Wilkes 1989, 123). Stables were usually long rectangular buildings with space for one or two rows of horses, typically with a passage on one side of the building (possibly represented by the northern half of Structure 2.3), with the remainder of the building sub-divided into small 'rooms' (Davison 1989, fig. A, type R building). Structure 2.3 may have accommodated a single row of horses, perhaps interspersed with smaller rooms for grooms or the storage of fodder or equipment. The size of rooms 1-3 at Metchley may be rather small for the tethering of horses, although this small size may not preclude the use of the building for the tethering of pack animals which would require less space than cavalry mounts. A building at Strageath with rooms of similar size to the Metchley example but located within the central range, was interpreted as accommodation for two men per room, possibly drivers, grooms or store-keepers (Frere and Wilkes 1989, 47). The Metchley building differs from the published examples in the partly-open-sided nature of the rooms.

Alternatively, it is possible that this building formed a small barrack-block (Davison 1989, Type C or E, fig. A), the undivided part of the building forming the *arma*, the southern part the *papilio*, an arrangement perhaps paralleled at Baginton (Hobley 1975, fig. 1), interpreted as forming the temporary quarters of troops moving from a marching camp. However, the overall width of the Baginton building was larger, as were the *papiliones*, and the presence of open-sided rooms is unexpected in a barrack-block.

#### Other features

If correctly identified as a stable, the adjoining hearths would be later, intrusive features, in turn cut by a palisade trench (F160). A similar sequence was represented by Phase 2B features within Areas 3-4, where slot-based buildings (Structures 3.4 and 3.5) were succeeded by a group of ovens and hearths, some of which were cut by fences.

#### Area 6 (Fig. 12)

A linear gully (F448) was fortuitously preserved beneath the Phase 3 rampart. The irregularity of its base suggests this feature could be a palisade trench, similar to feature F160 (Area 2) and other possibly contemporary examples from Area 3.

### 6.5: PHASE 3

#### 6.5.1: Description of Phase 3 Defences (Table 5)

All four sides of the Phase 3 fort defences (Map 2) were examined between 1963 and 1999.

The western defences of the Phase 3 fort comprised a single ditch (D6, western defences, Area 3A) and a rampart, constructed overlying the Phase 2B destruction deposit. Along the northern, eastern and southern sides of the fort the innermost Phase 1-2 fort ditch was re-cut to provide an additional line of defence. No trace of a similar re-cut could be found along the western defences. The ditches were backfilled with sand and silt, sealed by destruction material including daub burnt clay and charcoal, in turn overlain by collapsed rampart material. Pits P2 (Area 3), Y0 P1 (Area 4B, Fig. 15), may have defined a palisade on the western and northern sides of the fort, respectively.

The western Phase 3 rampart (Area 3/3A) measured a maximum of 5.5m in width and survived to a height of 0.4m. The rampart foundation was formed by a discontinuous layer of turf (Area 3, 2). Towards the outer face of the rampart was a layer of black to black-red turf of a peat-like texture (7: Area 3). Above basal turf layer 2 was the rampart core, comprising mixed sand deposits (4-6), interpreted as decayed turf, in turn sealed by a destruction horizon (3).

Just to the south of the northwestern corner of the defences (Fig. 17, Area 3, S.2) the Phase 3 rampart measured 5.1m in width and survived to a height of 0.4m. The

rampart was anchored by a group of tapering stakes driven into the subsoil. The outer cheek of the rampart was formed by clay-sand (20). The rampart core was formed by a layer of light-brown clay-sand (14), sealed by a discontinuous lens of red sand-clay (18), in turn overlain by a layer of destruction material.

The outer face of the western and northern ramparts was retained by a timber revetment, defined by eight post-holes (X PH1-1, C4 PH1, C3 PH1-2, C2 PH1, C1 PH1: western side; F0 P1-2, northern side, Fig. 15) dug 2.10m apart. Two roughly circular post-pits (C5 P1, C6 P1), cut 2.85m apart, were dug to the rear of the western rampart and a single rectangular post-pit (I0 PH1, Fig. 15) was cut to the rear of the northern rampart.

Just beyond the northwestern corner of the defences (Fig. 17, Area 4) the Phase 3 rampart foundation was formed by a discontinuous layer of turf (33). An irregular arrangement of tapering stakes, represented by dark organic stains, was driven through this turf horizon into the underlying layers. The rampart core comprised mixed dark organic material (34-5), interpreted as loose turf. Above were several layers of turf (37-39). In Area 3C, to the east (Fig. 17), the Phase 3 rampart measured a maximum of 5.5m in width and survived to a height of 0.45m. This section of the rampart was anchored by an irregular arrangement of tapering timber stakes, the stake-holes measuring an average of 0.2m in length and 0.15m in diameter, and being driven into the underlying deposits. The outer face of the rampart comprised white-yellow clay-sand (11B), interpreted as turf. The rampart core was formed by a dark brown-black clay-sand (11A).

#### *Structure 4.2 (Fig. 15)*

This structure adjoining the rear of the northern rampart was formed by five parallel, north-south aligned beam-slots (S8, S10, S11, S3, S15). They may have retained part of the rearward face of the rampart. The Structure 4.2 beam-slots measured an average of 3m in length and were dug at a right angle to the rampart. The beam-slots were positioned symmetrically; the central slots (S10, S11, S3) were dug at a uniform separation of 3m and the outermost beam-slots (S8, S15) were cut at a distance of 6m from this central group.

#### *Porta decumana (Area 4D)*

Area 4D (Map 4) located the *via decumana* adjoining the northern gateway of the Phase 3 fort, to the northwest of Webster's 1954 trench (Webster 1954, 2, fig. 3). The foundation of the *via decumana* consisted of clay 'packing' (3), sealed by a grey silt (5) which was overlain by the lower road surface, made of clay (6) packed with stone. Above the first road surface was a deposit of brown clay (7) which was sealed by the upper road surface (8).

#### *Eastern annexe (Area 7, Fig. 14, Map 4)*

The eastern side of the latest Phase 2A/B eastern annexe ditch (F202) was dug away by ditch F203, probably the latest Roman military ditch in the sequence, which may

**TABLE 5: SUMMARY OF THE PHASE 3 DEFENCES**

<i>Feature</i>	<i>Main details</i>
<u>Western side:</u>	Area 3/3A (Fig. 6)
D6	Single ditch (D6). V-shaped profile.
Rampart	Turf-revetted, cut back to insert timber revetment formed by post-holes dug 2.1m apart. Foundation formed by wooden stakes (Fig. 20).
Interval tower.	Rearward post-pits C5P1, C6P1. Posts later dug out for re-use. (Sections C6 P1 and C5 P1, both east-west, see Fig. 13, S7-S8).
<u>Northern side:</u>	Area 5, 5A (Figs. 7-8)
D1a	Phase 3 re-cut of Phase 1 ditch D1, cutting back filled Phase 2 ditch D2. Primary silts sealed by dumped destruction material.
Outer ditch D3	Area 3B (Figs. 7-8) Possibly re-cut during Phases 2-3.
Inner ditch D1a	Phase 1 basal silting sealed by sand/gravel from slighting of rampart.
Ditch D6	Area 4B V-shaped profile, with basal cleaning slot. Basal silts sealed by patches of turf, sealed by deliberate infilling of remaining ditch hollow, including occupation material.
Y0 P1	Post-pit associated with palisade.
Post-holes	Area 3 (Fig. 17) Frontal revetment formed by post-holes (F0PH1-2), continuing similar arrangement on west side of fort.
Rampart	Area 4 (Fig. 20) Base formed by turf. Irregular arrangement of tapering stakes driven through turf. Revetment to front and rear of turf blocks. Core formed by mixed organic material.
Structure 4.2	Rearward support for rampart, formed by five parallel beam-slots.
Rampart	Area 3C (Fig. 20) Based on stakes. Front face of laid turf, rampart core formed by clay-sand.
<u>Eastern side:</u>	Area 2 (Fig. 15)
Ditch F161	V-shaped profile, 3m (W), 1.2m (D).
Rampart F154	Turf foundation layer for rampart. Triangular bracing (F155-9) for box rampart.
<u>Southern side:</u>	Area 6 (Figs. 10, 16)
Ditch F400	V-shaped profile, 4.25m (W), 1.5m (D).
Rampart	Not surviving. Triangular support for box rampart formed by post-pits (F453, F442-3, F444-5). Posts later dug-out for re-use.
See Map 4 for location of areas investigated.	

belong to Phase 3. Although partially cut-away by Phase 4 ditch F204, the Phase 3 ditch may have been cut to a U-shaped profile, measuring a maximum of 1.6m in width and 0.8m in depth. The primary fill of ditch F203 was a light orange sand-gravel (1412), sealed by a layer of light grey sand (1411), in turn overlain by a layer of light brown silt (1414). The partly-backfilled ditch F203 was overlain by a dump of pebbles (F229), forming a possible causeway over the ditch, located adjoining the southern bank of the canal.

Eastern (Area 2, Fig. 16) and southern (Area 6, Fig. 12) defences (Map 4)

The excavated eastern rampart (F154) measured 3.3m in width, and survived to a height of 0.1m. It comprised a layer of white sand (R1), which sealed a band of dirty off-white sand-soil (R2). The rampart revetment was defined by post-holes (F155-F159), measuring an average of 0.4m in diameter and braced in a triangular arrangement. One complete bracing (F157-F159) and part (F155-6) of a second were excavated. The southern rampart was braced in a triangular arrangement, defined by post-pits (F442/3 and F444/5) cut into the subsoil, similar to the bracing recorded along the fort's eastern side. The re-cutting was probably associated with the recovery of timber uprights during dismantling. Post-pit F449 may define one part of a similar bracing, although no trace of any associated post-pits was observed because of tree-root disturbance. No trace of rampart material was recorded along the southern defences.

#### 6.5.2: Interpretation of Phase 3 defences

Western defences (Area 3/3A, Fig. 15)

In contrast to the Phase 1-2 fort, the western side of the Phase 3 fort was defended by a single ditch and rampart. Along the fort's western side the ditch measured 3.8m in width and 1.2m in depth, towards the lower end of the size range (3.7m to 4.9m in width and 1.2m to 2.7m in depth: Jones 1975, 106) for single-ditch systems. The outwardly-splayed ditch profile and the comparatively-narrow berm (1m) between the ditch and rampart both suggest re-cutting, which would have tended to progressively increase the size of the ditch. No trace of earlier ditch fills survived. Post-pits recorded along the western (Area 3A, P2) and northern defences (Area 3, Y0 P1) may have defined a palisade, although it is not known if this possible structure was continuous.

At 5.5m in width, the western rampart was at the lower end of the width range for turf-revetted ramparts (5.5m to 7.6m: Jones 1975, 70), although the turf rampart may have been subsequently cut-back to receive the later timber revetment. The western rampart appeared to be constructed on a discontinuous turf foundation, overlying Phase 2B destruction deposits.

A frontal turf revetment measuring between 0.7m (Area 3, S2, 19-20, Fig. 17), and 1m (Area 3A) was recognised along the western side of the fort, adjoining the northwestern corner of the defences. This form of revetment was the most common form of rampart construction in Britain up to the Trajanic period (Jones 1975, 59 and fig. 14). Since it is more usual for the turf revetment to measure approximately one



third of the width of the rampart (Jones 1975, 81), it is probable that this turf frontal revetment was subsequently cut back to insert the timber revetment, possibly after a rampart collapse. The absence of an inner turf revetment is curious, since there was no surviving evidence for a rearward timber revetment (forming a box rampart) which might have involved the digging-out of this innermost turf face. The rampart core comprised mixed deposits including turf fragments (St. Joseph and Shotton 1937, pl. XXVIII, tr. XXVIII). Adjoining the northwestern corner, the core was separated by a lens of clay (18, S2, Fig. 16), inserted to provide stability, as also recorded at Ilkley (Jones 1975, 81), Strageath (Frere and Wilkes 1989, fig. 11) and, most notably, in the Phase 2A eastern annexe rampart at Metchley (Jones 1999a and in preparation).

The rampart was subsequently reconstructed along the western and northern sides of the fort by the insertion of a timber frontal revetment, formed by uprights dug at a separation of 2.1m (Fig. 15), extending up to the level of the parapet walkway (e.g. at Baginton, Hobley 1969, fig. 8). These post-holes would have been dug into the subsoil to provide increased stability. The timber-revetted rampart was relatively unusual in Britain, although common in Germany. Johnson (1983, 59) has suggested that timber was only added to turf ramparts which had become unstable, which is a possibility at Metchley.

The pair of post-pits (C5 P1 and C6 P1, Fig. 15) cut at the rear of the rampart probably retained the rear timber uprights of a timber-framed interval tower, probably extending one storey above the timber walkway surmounting the rampart, as in the reconstructed example (Plates 1-2). Similarly, post-pit 10 PH1 along the northern defences may have defined one corner of another interval-tower.

#### Northern defences (Arcas 3B, 4C, 3, 4, 3C, 4D)

The northern defences were provided with an additional defensive ditch, formed by a re-cut (D1a) of innermost Phase 1 ditch D1. This additional defensive ditch was also recognised along the eastern and southern defences.

The subsequently-inserted timber revetment along the northern rampart was complemented by a rearward-supporting structure (Fig. 15, Structure 4.2), although the association between these two structures cannot be proven. This structure comprised five parallel beam-slots, each 3m in length, immediately adjoining the rampart rear. By analogy with a possibly similar structure at Valkenburg (Jones 1975, fig. 4), the Structure 4.2 horizontal timbers may have been jointed at 45 degrees to the timber rampart tail supports. Post-pit 10 PH1 (Fig. 15) probably formed the southeastern corner of an interval tower, although the remaining three corners of this structure lay outside the area excavated. This probable northern interval tower lay at an equal distance between the *porta decumana* (Webster 1954, plate 2) and the northwestern angle of the fort.

Area 4D investigated the *porta decumana*. Here two road surfacings were recorded, separated by a layer of clay (7). The earlier road surface (6) could possibly belong to the Phase 1-2 fort, although it is also possible that the upper surface (8) was associated with the rebuilding of the rampart with a timber revetment during Phase 3. The

western half of the gateway, investigated by Webster (1954, 2), contained a guard chamber defined by six post-holes built against the supporting gate (Manning and Scott 1979, fig. 1, type IIIa).

#### Eastern defences

The latest Roman re-cut ditch (F203) along the line of the eastern annexe is provisionally ascribed to Phase 3. It is not known if this ditch marked a further definition of the eastern side of the eastern annexe, which continued in use into Phase 3, or was re-defined in that phase. Alternatively, it may have functioned merely as a further, outer defensive ditch to the Phase 3 fort.

#### Eastern (Area 2, Fig. 16) and southern sides (Area 6, Fig. 12)

The eastern rampart was found to be better preserved during St. Joseph and Shotton's investigations (1937, 74), when courses of laid turf (Trenches XXVIII and XXIX) and a rearward turf revetment (Trench XXVIII) were identified towards the northern end of this side. This suggests that the earliest, turf-built rampart was replaced by one of box construction. In contrast to the frontal revetment recorded along the western and northern sides of the fort, the eastern and southern ramparts were re-constructed within a box rampart (Area 2: Fig. 16). Measuring only 3m in width, it was slightly narrower than the average size range (3.3-4m: Jones 1975, 70) for timber-revetted box ramparts. The comparatively narrow width of the eastern rampart could indicate that it was not as high as its counterpart on the southern side of the fort. As at Baginton (Hobley 1975) and Chesterholm (Johnson 1983, 63), the revetment was braced in an alternating, triangular arrangement to provide additional rigidity. The similarity in size of the revetment post-holes along the inner and outer sides of the rampart could suggest that the face of the rampart rose vertically to the height of the rampart walk at front and rear, with a parapet added to the front (Johnson 1983, 62).

Although no trace of the rampart material survived modern disturbance, the positioning of the triangular revetments in Area 6 suggests the rampart measured approximately 4m in width (post-pits measured centre-to-centre), 1m broader than is suggested along the eastern side, although this interpretation is based on a single complete triangular bracing only.

#### 6.5.3: Description of Phase 3 Internal Features

The internal areas of the Phase 3 fort investigated comprised part of the left *retentura* (Areas 3-4), part of the right *praetentura* (Area 2), and a length of the southern *intervallum* space (Area 6), in addition to Trial-trench B2 (dug in 1999).

#### Areas 3-4 (Fig. 15)

The Phase 3 internal features were cut through the Phase 2B destruction deposit and into the backfilled Phase 1-2B features and the subsoil.

### *Structure 4.3*

This possible building comprised four, or possibly five, roughly-parallel beam-slots (S19, S23, S28, S29, I3 F1), dug approximately north-south. These beam-slots may have defined a rectangular building measuring 8m by 3.5m.

#### *Other features*

Three hearth-pits or ovens (H1 F2, H4 F3-4) were located mainly to the south of the building. A further group of contemporary hearths or ovens (J1 F1-3) was located to the rear of the northern rampart.

Perhaps the latest Phase 3 feature was a gully (Enclosure 3, S17; Fig. 15), defining three sides of an enclosure. This gully was cut through the Phase 3 Structure 4.2 beam-slots, and into the underlying Phase 2B destruction deposit. The western and northern sides of the enclosure were cut parallel to the northwestern angle of the fort, just outside the limits of the rampart collapse. The eastern limit of the enclosure was straight-sided in plan. No trace of the southern side of the enclosure was found, although it could have been located partly outside the area investigated. The enclosure measured approximately 22m north-south and 27m east-west.

## **Area 2**

### *Structure 2.4*

Structure 2.4 (Fig. 16) was located 1m to the rear of the contemporary rampart (F154). This building was represented by beam-slots cut through the Phase 2B destruction deposit and into the infilled beam-slots of Phase 1 Structure 2.1 and the underlying subsoil. Only the southern side (F172) and the southern ends of its western (F169) and eastern (F164) sides were identified. The western beam-slot (F169) contained a number of irregularly-shaped, but regularly positioned, stake-holes in its base. Structure 2.4 comprised two structural units, the northern measuring 5.5m in width (measured east-west) and the southern 4m in width.

The northern unit may have contained paired rooms of unequal size, although only one pair was excavated, having a possible corridor located on its western side. Room 2 contained a hearth (F166) backfilled with angular stone rubble. A spread of ashy soil (F193), presumably from hearth F166, was recorded within part of rooms 1 and 2. The southern unit of this building, which may have been only one room in width, contained two rooms (4 and 5).

North-south aligned ditch F177 was cut to the west of Structure 2.4.

## **Area 6 (Fig. 12)**

The Phase 3 internal features in this area comprised hearth-pits, ovens and gulleys, cut to the rear of the southern rampart. The majority of these features comprised shallow sub-circular or sub-oval hearth-pits (F411, F414, F418, F419, F421, F425, F431).

Feature F418 was the largest of this group. Two other, very shallow features (F422, F423) of more irregular shape, partly exposed in the extreme north of the excavated area, may also be interpreted as hearth-pits. Hearth-pits F411 and F414 were cut by an L-shaped gully (F412/F408). Gully F408 was cut by feature F409. Two other gulleys (F430, F440) were recorded. The former was aligned east-west and was round-ended. Gully F440 to the south, aligned approximately north-south, was more irregular in plan and contained a narrow slot (F438), cut to a U-shaped profile. The gulleys were sealed by a layer of charcoal (4062/4093), interpreted as a destruction deposit.

Two near-vertically-sided intercutting pits (F432, F435) were also recorded in the north of the excavated area. The earlier pit (F432) was cut by a post-hole (F427).

#### 6.5.4: Interpretation of Phase 3 Internal Features

##### **Areas 3-4** (Fig. 15)

Structure 4.3 was the only excavated building in the *retentura*, and it is difficult to interpret this building in isolation from other contemporary structures. The parallel beam-slots of this building may have supported the raised floor of a granary. A similarly-sized example was excavated at Derby (Wheeler 1986, fig. 20). Enclosure 3 gully S17 cut through the backfilled beam-slots of rampart support Structure 4.2, and probably also post-dated the abandonment of Structure 4.3, since the gully appeared to be cut down the middle of the granary. There are no clear Roman military parallels for this enclosure.

##### **Area 2**

Structure 2.4 was the only Phase 3 building excavated within the *praetentura*. Aligned north-south (following the long axis of the Phase 3 fort), it was the only building departing from the east-west alignment defined in Phase 1 and subsequently respected (by Phase 3 Structure 4.2). Structure 2.4 was located between the rampart and the presumed line of the *via sagularis* to the west. Its internal and external walls were mainly defined by beam-slots which contained timber ground beams which had been dismantled or robbed.

Although only an incomplete ground-plan of this building was recovered, it may be interpreted as a barrack-block. The location of such a building in the eastern *intervallum* space is somewhat unexpected, although very little is known of the internal layout of the contemporary fort. The western corridor may be interpreted as a verandah. Rooms 1-3 within the northern unit may be interpreted as *contubernia*. Room 3 comprised the *arma*, and room 2 to the rear, which contained a hearth (F166), the *papilio* which was the larger room (amounting to approximately 72% of the total *contubernium* area). The narrow width of beam-slot F162 (room 1) suggests it formed an internal division rather than the northern wall of the building. The southern unit (rooms 4-5), which was one room in width, comprised the officers' quarters.

The overall size of the building (and of its individual components) was unusually small for an auxiliary barrack-block. Davison (1989, 6) suggests a size range of 4m to

13m in width (the Metchley building was 5m in width) and an average *contubernium* area of 14-29 square metres (8 square metres for Structure 2.4). The officers' quarters in the Phase 3 Metchley building measured 16 square metres in area, as against a range of 25-375 square metres (legionary and auxiliary figures combined, *op. cit.*, 9).

Alternatively, it is possible to re-interpret this building as a cookhouse (e.g. Pen Llystyn, Hogg 1968; Rocester, Esmonde Cleary and Ferris 1996), by analogy with the frequent positioning of these buildings adjoining the defences and near a gate, and the association of the Metchley building with ovens, possibly used for cooking.

## Area 6

The features investigated here lay within the southern *intervallum* space and were probably associated with breadmaking, as is indicated by the associated charred plant remains and the very small quantity of ironworking slag recovered. However, it has been noted above that some ironworking processes, such as smithing, produce little if any slag (Bestwick and Cleland 1974, 143-5).

### 6.6: PHASE 4, Latest, or unphased Roman activity

The Roman military features attributed to this phase comprise defensive ditches cut on different alignments to the preceding Phase 1-3 forts and a further defensive ditch which cannot be stratigraphically related to the phased forts. Roman features and individual finds dating post-AD 75 have also been attributed to this phase.

Description and interpretation

#### Trial-trenches A3, A5 (Map 4)

Trial-trenching in late 1999 in connection with the proposed hospital development identified an archaeologically hitherto-unidentified defensive line, represented by re-cut ditches (F200, F202, F203), associated with the surviving base of a turf rampart (F300: Jones 1999b, figs. 3-4). The ditches and the rampart to the east provide the first evidence of the western defences of a possible further fort, constructed between the outer (Phase 1-2) and the inner (Phase 3) fort. The antiquarian Finch first identified traces of three fort defences in this northwestern corner of the military complex, but this evaluation has provided the first opportunity to identify this potential new defensive circuit archaeologically. With the exception of the rampart (F300), no other internal features could be identified, although it is possible that some of the internal features within the interior of the Phase 4, and the Phase 1-2 fort could have been associated.

#### Area 6 (Fig. 12)

Late Roman military activity is represented by the excavation of two adjoining pits (F417, F426), cut into backfilled Phase 3 hearth-pits in the southern *intervallum* area of the Phase 3 fort. The western edge of backfilled pit F426 was cut by pit F417 which was also dug into infilled gully F433, recorded along the southern edge of the

former feature. The Phase 3 features were sealed by a destruction deposit (4093). Pits F417 and F426 produced pottery of Flavian-Trajanic date.

### **Area 8 (Map 4)**

Area excavation in later 1999 identified ditched features following two differing alignments.

Two approximately north-south-aligned ditches (F310, F312) were recorded for a distance of 10m in the extreme southeastern corner of this area. Traces of the base of a turf rampart (F331) were recorded to the west of ditch F310. The double ditches and rampart together define the eastern defences of a further, hitherto-unidentified fort. No other associated features could be identified at excavation, since very little of the interior of this fort lay within the excavated area.

The second group of newly-identified ditches was represented by ditch F320, aligned approximately northwest-southeast. It was cut across the backfilled eastern ditches of the southern annexe (F302-F305). Ditch F320 was in turn cut by re-cuts (F311, F321, F322), which were dug on slightly differing alignments. No trace of an associated rampart could be identified, and the ditches could only be located for short lengths because of extensive modern disturbance in the surrounding area.

## **6.7: Phase 5: Post-Roman activity**

### **6.7.1: Post-Roman activity at Metchley**

#### **Description and Interpretation**

### **Trial-trench A5 (Map 4)**

A post-medieval re-cut (F504) of the outermost, north-south aligned western ditch (F505) of the Phase 1-2 fort was recorded during trial-trenching in 1999 to the north of Vincent Drive (Jones 1999b). This re-cut was positioned to the west of the infilled Roman ditch and may have been associated with the post-medieval hunting park, perhaps forming one side of an animal pen.

### **Area 7 (Fig. 14)**

The latest re-cut of the Phase 2/3 north-south ditch (F204) may have been dug in the post-medieval period. Ditch F204, the latest ditch in the excavated sequence, was cut slightly to the west of Phase 3 ditch F203. The Phase 4 ditch was flat-based in profile, with more steeply-sloping sides on its eastern (downslope) side. This ditch also curved slightly to the northwest, approaching the northern edge of the excavation. This curve may be respecting the roughly parallel, eastern side of Metchley Park. Ditch F204 was backfilled with dark brown sand-silt, similar to the overlying topsoil. It is possible that this ditch defined one side of a game-pen within Metchley Park.

## Other areas

No features datable to the medieval period were excavated. The latest backfills of the fort ditches belonged to the post-medieval period. Up to the 18th century the forts were located in Metchley Park, which would have protected the site from plough damage. The area continued to be farmed into the 19th century. Ordnance Survey mapping indicates the gradual obliteration of the defences by agriculture (Figs. 6-8). However, the defensive ditches continued to be visible in places into the present century (Plate 3). In the present century the ditches were finally infilled and the surrounding areas was subjected to levelling, notably adjoining Camp Cottages (Areas 2 and 6).

### 6.7.2: Other post-Roman activity in the study area (Map 3)

#### Medieval

There are no recorded sites or find-spots of medieval date within the study area. Harborne Lane, which forms part of the western boundary of the proposed development area, follows the approximate line of a medieval hollow-way. The site of a medieval cross ('Stubbe Cross': SMR No. 02989) adjoins Harborne Bridge. A mill founded in the 16th century (SMR No. 03205: outside the proposed development area) was located 100m to the west of Harborne Lane.

#### Post-medieval

Early-18th-century antiquarian maps (Deeley, 1703, Fig. 3; Sparry 1718, Fig. 4) indicate that the northern part of the proposed development area lay within a hunting park which was bounded on its southern side by the Bourn Brook, and on its western side by Harborne Lane. The eastern boundary was formed by a stream-course within the present University Hospital complex. The extent of the park would have been defined by a ditch, possibly located by trial-trenching to the north of the Bourn Brook and by an associated bank. A hunting lodge was constructed within the interior of the Roman forts. Excavation has suggested that a number of the fort ditches may have been re-cut at this time, possibly to provide game-pens, and a further ditched game-pen may have been dug in the fort interior. A gravelled trackway located by salvage recording to the northwest of the forts may have been associated with the hunting park.

The mill adjoining Harborne Lane was owned by a gunsmith in the 18th century, and operated as a boring mill until 1819. It was later used for wire extraction, corn grinding, and subsequently for steel-pin manufacture. Parts of the brick-built mill, the wheel-pit and mill dam remain visible. Although the mill site is located outside the proposed development area, traces of associated mill leats are mapped along the western edge of the proposed development area, to the south of the Bourn Brook. A second mill was located in Dale Road (SMR No. 03206: outside the proposed development area). This site was associated with the metal industry from the 18th century. The mill site has been recently re-developed, but there are no known associated features within the proposed development area.

The Worcester-Birmingham canal, opened in 1791, and the adjoining railway line, built in 1822, define the eastern boundary of the proposed development area. The southern boundary of the study area is formed by the eastern terminus of the Dudley No. 2 Canal, which joined the Birmingham-Worcester canal. The eastern terminus of the Dudley No. 2 was a focus for a number of industrial buildings into the present century. Both the canal and the adjoining area are presently infilled. Ordnance Survey mapping shows wharves to the north and south of the canal in 1890 (Fig. 6) and factory buildings to the south of the canal by 1904 (Fig. 7). The 1917 edition of the Ordnance Survey map (Fig. 8) shows further development to the north of the Dudley No. 2 canal, including canal basins. A possibly early canal line may survive between the present Worcester-Birmingham canal and railway.



## **6.7: DISCUSSION**

This section of the report principally provides a review and discussion of the data from the excavations of 1963 to 1969 and 1997 (Jones forthcoming a), it also draws on evidence from earlier fieldwork at the site (St. Joseph and Shotton 1937, Webster 1954) and the results of desk-based assessments (Jones 1998; 1999); evaluations, and post-1997 excavations at Metchley which will be published in detail subsequently (Jones in preparation b). This section of the assessment also summarises the principal new information provided by the 1999 fieldwork (Jones in preparation a).

### **6.7.1: PHASE 0: PREHISTORIC**

The recovery of flint artifacts of Neolithic-Bronze Age date adds to the growing database of early prehistoric activity in the area, also represented by finds of Bronze Age metalwork (e.g. Barfield and Hodder 1989, fig. 1:3) and the adjoining group of excavated burnt mounds (Jones 1998, 1989, Map 3). This artifactual evidence and the presence of the group of burnt mounds does not attest settlement here, although an association between burnt mounds and a permanent farming population, based on the evidence for woodland clearance adjoining the Cob Lane burnt mound in Birmingham, has been suggested (Barfield, Hodder and Jones forthcoming).

There is no known Iron Age context for Metchley and the surrounding area. Only one residual sherd of Iron Age pottery has been recovered from the Birmingham area. The main monuments of the Iron Age in the vicinity of Metchley were the hillforts located at Wychbury Hill, Worcestershire, Castle Old Fort, Walsall, and Berry Mound, Solihull, although it is not known if these sites continued to be occupied into the early-1st century AD.

### **6.7.2: PHASE 1 (Map 4)**

Introduction and location (Figs. 1-2)

The Phase 1 military enclosure probably forms the earliest Roman activity on the site. The defences and the internal layout indicate that the enclosure was a fort, intended for occupation over a number of seasons, and was not a marching camp (Welfare and Swan 1995), a class of temporary military enclosure which may not presently be represented at Metchley.

The Metchley forts were located, as recommended by the Latin writer Hyginus 'on a slight prominence on gently sloping land' (Johnson 1983, 36), here comprising an island of gravel surrounded by boulder clay. The forts may have been located here to take advantage of a local water supply, whilst the surrounding marshy ground may have provided cover from attack from the adjoining higher ground, as is suggested by Jones (1975, 46) elsewhere.

## Defences (Map 4, Figs. 9, 12)

The Phase 1 fort was defended by double ditches and a rampart. The ditches lay in the middle of the size range suggested by Jones (1975, 106) for double-ditched systems, although the extent of modern truncation cannot be assessed. The provision of additional defences, including the artificial heightening of ground level between the ditches and the palisade, may have been required to compensate for the unstable nature of the subsoil, which may not have allowed deeply-cut ditches to be maintained. The excavated Phase 1-2 ditch profiles were probably the products of re-cutting in Phase 2B, which will have progressively broadened their profiles.

Fort size was defined on the basis of the internal buildings that they were intended to enclose. These varied according to the nature and strength of the garrison and the fort's siting. It is impossible to relate the size of the fort to its garrison, because of the frequent practice of garrisoning differing units together and also because of changes in garrison composition throughout the life of the fort. These latter will tend to cross these size differentials.

Although only one entrance, the *porta principalis dextra*, has been located by excavation (St. Joseph and Shotton 1937, pl. XXV), the positions of the other gates can be inferred. The *porta principalis dextra* lay approximately half way along the western side of the fort, defining a central range and *retentura* with a combined length of approximately 110m (measured north-south, from the rampart tail to the northern entrance terminal). The division of the fort interior into two roughly-equal halves is a typical feature of the layout of Claudian forts (e.g. Hod Hill, Richmond 1968, 47; Valkenburg Castellum 1, dated to AD 40 (Glasbergen 1972, fig. 46). This arrangement limits the space available in the *retentura* (measuring 50m north-south at Metchley), which undoubtedly influenced the ground-plans of the internal buildings constructed here.

## Internal features (Figs. 10-11)

The left *retentura* contained two partly-excavated, facing barrack-blocks (Structures 3.1 and 4.1). In the south of the left *retentura* lay a partly-excavated granary (Structure 3.2) and an associated single-cell building (Structure 3.3), the only buildings excavated within the central range, together with part of a second granary identified only by trial-trenching (B2). The excavated part of the right *praetentura* contained part of a *fabrica* (Structure 2.1) and an associated store (Structure 2.2). The walls would have been surfaced with daub, found extensively in destruction deposits. The roofs were presumably of wooden shingles, since no tiles were found at excavation.

### *Structure 3.1* (Fig. 10)

This building was the southernmost of the paired barrack-blocks. The excavated part of this building comprised a northern verandah, three *contubernia* (rooms 1-5: eastern unit), together with three rooms (6-8: western unit) to the west, forming the officers' quarters or special *contubernia*. Both the barrack-block and the individual

*contubernia* were of larger than average size, although size alone is not sufficient for the distinction of legionary accommodation (Davison 1989, 178). The frequent practice of garrisoning legionary and auxiliary detachments together, and, more importantly, changes in garrison during the life of a fort or fortress tend to blur such distinctions. Johnson (1983, 173) and Maxfield (1986) have suggested that larger than average *contubernia* may be a feature of cavalry barracks, because of the requirement for additional storage space, although this argument is questioned by Davison (1989, 187). Within the *contubernia* the larger size of the *armae* (61% to 39%) is suggested by Davison (1989, 15, 94) to be more usually a feature of auxiliary barracks.

It was argued above that the changes in room 5 could have had the effect of providing more accommodation for the officers (or special *contubernia*) and also greater privacy for the western unit of the building. Davison has noted (1989, 94) that the provision of special *contubernia* is a feature of *ala* barracks, or legionary barracks associated with the XXth legion. However, this suite of rooms may not have formed officers' quarters. Two reasons are suggested for this hypothesis. Firstly, the size of the excavated western unit of the building is beyond the average size range of Claudian/Neronian officers' quarters, although it is also possible that the remainder of rooms 5 and 6 formed special *contubernia*, or quarters for the *principales*. Secondly, the apparent continuation of the verandah along the side of the western unit appears to suggest that this suite of rooms formed part of the men's quarters, since the officers' quarters were more usually constructed flush with the outside wall of the barrack.

Whichever interpretation is preferred, the net effect would have been to reduce the men's quarters by at least one *contubernium* (room 5), and up to three *contubernia* (rooms 1-5). This reduction in barrack accommodation may represent the need for storage space, and also the diminishing size of the garrison.

#### *Structures 3.2 and 3.3 (Fig. 10)*

The northern part of granary Structure 3.2 was defined by parallel beam-slots. This building was located immediately to the south of the *Via Quintana*, represented at Metchley by a gap measuring 3m in width between this building and the southern side of Structure 3.1 to the north. It is possible that this granary could have formed one of a pair, a common arrangement. The southern building of this suggested pair may have been identified by trial-trenching to the south of Vincent Drive (beam-slots F750-2: Trench B2, Map 4). Although the two Structure 3.1 loading-bays (S15-6, Structure 3.3) may not have been contemporary, their provision could suggest a need to maximise storage capacity. More usually, direct access would have been obtained for loading and unloading, an arrangement which would have necessitated the allocation of space for this purpose within the building, which might otherwise be used for storage. The positioning of Structure 3.3 across the *Via Quintana* suggests a departure from the usual fort layout. The construction of a further building (Structure 3.3) over Structure 3.2 in Phase 2B suggests the location of this loading platform continued to be respected even after the intervening clearance of the fort interior, which might imply that Structure 3.2 continued in use up to the abandonment of the Phase 1 fort.

The parallel beam-slots belonging to a second granary were located by trial-trenching to the south of Vincent Drive (Trench B2, Map 4, Jones 1999b). This second granary probably formed the southern building of a pair with Structure 3.2, a common arrangement.

*Structure 4.1* (Fig. 10)

Structure 4.1 formed the northernmost barrack-block of the pair (with Structure 3.1), although a slight difference in alignment may be discerned between the two buildings. The width and internal arrangement of Structure 4.1 suggests it may be confidently interpreted as a double barrack-block (Davison 1989, fig. A, barrack type Z), although unusually within the British examples there was no evidence of a double midrib. Double barrack-blocks are often interpreted as a space-saving arrangement in comparatively-early Claudian forts such as Metchley, where the *retentura* and central range combined occupied just over half of the overall fort length. Verandahs ran along the southern, and possibly also along the northern, side of the building, and the excavated part of the building was divided by two corridors, almost certainly running across its entire width to define three independent structural units.

The eastern and western structural units may be interpreted alternatively as forming *fabricae* or suites of rooms for the *decurions*.

The central structural unit, interpreted as forming part of the men's quarters, lay between the two corridors running across the width of the building. On the assumption that rooms 2, 5, 8 and 11 were formerly sub-divided, this almost completely excavated unit comprised eight *contubernia*, four located in each of the northern and southern barrack blocks. This suite of rooms would have provided accommodation for a *turma* of cavalry in the northern part of the unit (rooms 1-6) and a similar unit in the southern block (rooms 7-12). Each room would have housed eight men, making a total *turma* strength of 32 men. The decurion, and possibly also the junior officers (*duplicarius* and *sesquuplicarius*), may have been housed elsewhere in the barrack-block. The overall size, and the relative size of the *armae* and *papiliones* in the central unit of this building, was approximately similar to that recorded in Structure 3.1 to the south, which might suggest that the accommodation in both barrack-blocks was intended for a unit of similar composition. Based on the apparently-alternating layouts of barrack-blocks at Valkenburg Castellum 1, Maxfield (1986, 62-3) suggested that these paired buildings could have housed two halves of a single unit, and this interpretation needs also to be considered in the context of the double barrack-block at Metchley which shared a number of similarities in layout with Valkenburg. Some traces of possible re-arrangement were noted in the central unit at Metchley (beam-slots S25, S43 in room 6, and the possibly inserted corridor adjoining the eastern side of room 10), but its significance is not clear. Another unusual, possibly original, feature of this unit is the line of post-holes that defined the northern wall of room 3 in the north of the unit, which may have adjoined the possible northern verandah.

It may be assumed that the narrow western corridor (defined by beam-slots S1, S18, S24 on its western side, and S2 and S15 on its eastern side) originally extended across

the whole width of the building. The apparent sub-division of the western unit (rooms 13-16) into *contubernia* suggests that this corridor formed a division within the men's quarters, which would be a very unusual feature, although such an arrangement could have been necessary to maintain access around this building. Subsequently, the southern half of the corridor was blocked and a *contubernium* was inserted, which presumably also extended into the original accommodation provided in the western unit to the west of the north-south aligned beam-slot S18.

By analogy with the arrangement of the central unit, the excavated part of the western unit may have formed the easternmost two *contubernia* of a range of eight *contubernia*, four located in each of the northern and southern halves of this part of the building. This interpretation is supported by the fragmentary evidence for the continuation of the midrib (S56) and the verandah (S51) in this part of the building.

### Garrison

The lack of complete barrack-block ground-plans or supporting epigraphic evidence hampers an assessment of the fort's garrison. The evidence provided by the size and layout of Structure 4.1 (and Structure 3.1) for the nature of the occupying unit appears to be fraught with contradictions, although these could at least in part be caused by re-planning of the building to accommodate a unit of different composition. The overall size of the *contubernia* is larger than the average range suggested by Davison for auxiliary barracks, although not totally without parallel in an auxiliary context. The larger size of the *armae* (central unit) is most usually a feature of auxiliary barracks, though not exclusively so, and could also be interpreted to illustrate the need for additional equipment storage by an *ala* (Maxfield 1986, 62, Johnson 1983), although this interpretation is questioned by Davison (1989, 188). Maxfield also notes that the usual complement of eight men per *contubernium* need not necessarily be strictly adhered to. Thus unusually large size of the Metchley *contubernia* could hint at a larger number of men in each room, possibly also including the *principales* of the *turma*, although this cannot be proven.

The four *contubernia* in the northern and southern parts of the central unit suggest occupation by a cavalry *turma*, with the officers housed elsewhere. A similar unit may have been accommodated to the west of the western corridor in the northern and southern parts of this double barrack-block, although the corridor between the two structural units is an unexpected feature. Thus, the barrack-block could have housed four *turmae*, two housed on either side of the midrib, with ranges of *decurions'* quarters located at the eastern and western ends of the building. Another possibility is that the eastern unit formed a *fabrica*. Assuming that the arrangement of barrack-blocks in the left and right *retentura* was symmetrical, each double barrack-block could have accommodated four *turmae*, and their *decurions*, making a total of eight *turmae*. This would amount to half of the complement of 16 *turmae* in an *ala quingenaria*. Alternatively, the Structure 4.1 barrack-block could have accommodated the four *turmae* of a *cohors quingenaria equitata*, in which case the remaining contingent of that unit, comprising six centuries of infantry, would have been housed elsewhere. Too little of the ground-plan of the other excavated barrack-block

(Structure 3.1) was examined to permit speculation about the composition of its occupying unit.

The blocking of the southern part of the western corridor suggests an adaptation of the barrack accommodation for a changed garrison. Based on the suggested size predominance of the *armae* in this inserted *contubernium*, and by analogy with the arrangement in the adjoining central unit, this *contubernium* could have housed part of an *ala* or the *principales* of such a unit.

Another possibility is that the garrison included a legionary vexillation. The finds from this phase include harness mounts and loops which could equally be associated with an infantry baggage train (Maxfield 1986, 66) or with cavalry. Webster notes that the only copper alloy item of possibly legionary association is a scabbard mount. The identification of wall-sided mortaria at Metchley, associated with the XIVth legion at Wroxeter and possibly Mancetter but otherwise very rare, might further hint at a legionary vexillation in the garrison, although similarly-small quantities of material could have been left by a legionary building party (Maxfield 1986, 68).

One of the most distinctive elements of the original ground-plan of Structure 4.1 is the presence of the two corridors crossing the width of the building. This is a feature often associated with the XXth legion, although its wide distribution, including an example at Wroxeter associated with the XIVth legion, is interpreted by Davison (1989, 24, 82) as a feature of early cohort barrack planning in England, not necessarily confined to the XXth legion.

#### Structures 2.1 and 2.2 (Fig. 11)

Structure 2.1 was interpreted as a workshop because of its association with a group of pits associated with ironworking, although no slags or other industrial residues were recovered. Originally, this timber-framed building could have been a barrack-block, as was suggested at Baginton (Hobley 1973, fig. 1). Too little of Structure 2.2 was excavated to suggest a function confidently, although its proximity to Structure 2.1 could suggest that it was an associated store-building.

#### Changes in layout (Figs. 10-11)

A number of changes in the internal layouts of the Phase 1 buildings have been noted. The overall effect of the changes to the southern barrack-block (Structure 3.1) may have been to reduce the size of the men's quarters, and possibly to create new storage accommodation. A *contubernium* was added to the northern barrack-block and certain rooms in the men's quarters were also modified. The granary (Structure 3.2) loading platform (Structure 3.3) may not have been an original feature of the Phase 1 layout since it projected across the presumed line of the *Via Quintana*. The abandonment of the *fabrica* (Structure 2.1, Area 2) and its replacement with a gravelled surface (F155, F191) represent other changes in the Phase 1 layout.

These changes could be associated with one or more changes in the garrison or in the function of the fort. One possibility to be considered is that at least some of these

structural changes were associated with a change in function of the fort associated with the use of the annexes (Phase 2A), which would imply the changed function of the site was reflected not only in the enclosure of additional adjoining areas, but also within the fort interior itself.

A number of forts of Claudian/Neronian date may have been broadly contemporary with Phase 1 fort at Metchley, including forts at Lower Oversley Lodge, near Alcester (Booth 1996, 28 and fig. 4) and Crutch Lane, Droitwich (Buteux and Hurst 1996, 10). Other possibly contemporary forts may include the earliest military phases at Greensforge (Frere and St. Joseph 1983, 96-7), Penkridge (Welfare and Swan 1995), and the vexillation fortresses at Mancetter (Scott 1984, 22) and Leighton, near Wroxeter (White and Barker 1998, 38). The identification of a Claudian military phase at Wall is disputed. Gould (1993, 1998a, 350-2, 1998b) identifies buildings of this date, and two recently identified cropmarked marching camps could also belong to this period (Welfare and Swan 1995, fig. 146). However, Round places the earliest military activity at Wall firmly in the Neronian period (Round 1993, 2).

### 6.7.3: *Vicus* (Map 4, Fig. 13, Trial-trenching Area C)

As noted above, the *vicus* was probably occupied during military Phases 1-2 but for convenience is discussed below.

The most important discovery during trial-trenching in 1999 in connection with the proposed hospital development was the identification of the first evidence for a *vicus* at Metchley (Jones 1999c). Previously, the evidence for such a *vicus* was somewhat tenuous – comprising a group of unstratified copper alloy objects found during trenching in 1963 to the northwest of the forts (Webster forthcoming), and a small quantity of finds of Roman date that post-dated the supposed military abandonment of the forts around AD 75 (Jones forthcoming a). Indeed, Crickmore (1984) doubted the existence of a settlement at the site. Clearly, the Roman military establishment at Metchley failed to provide the economic impetus for the establishment of a small town, such as those which developed at Alcester, Droitwich and Wall. Burnham and Wachter (1990, 8) defined criteria for the successful establishment of such a civilian settlement. Firstly, it is necessary for the site to be capable of being assimilated easily into the pre-existing road network. Secondly, the site must have potential for growth within the existing socio-economic framework. Thirdly and finally, its military occupation must have been sufficiently long-lived to permit the establishment of such a dependant civilian community. Recent fieldwork in the south Birmingham area has suggested that the forts may have been located at an important crossroads, with roads leading to Alcester, Droitwich and Wall.

The remaining criteria may not have been fulfilled except for a very short period of time, if at all. The military occupation of the site, between AD 48 and AD 75, was almost certainly interspersed with one or more abandonment. Moreover, the garrison of the Phase 2B stores-depot is suspected to have been small. Overall, the Roman military occupation of the Metchley site may have been too brief and on too small a scale, to create the impetus for the development of a small town. Alcester probably developed around an existing *civitas* centre, while Droitwich may have prospered later

because of its association with the salt industry. Wall was also a military foundation, which developed into a thriving community based on roadside trade. Continued civilian settlement, albeit on a smaller scale, is suggested adjoining the forts at Greensforge, Staffordshire, extending possibly into the 4th century (Jones forthcoming b). The proximity of the streams to the west could have made the Metchley settlement area vulnerable to flooding, which could be another possible cause of site abandonment.

In contrast, the pottery dating evidence from the newly-discovered Metchley settlement suggests that the site was abandoned in the 1st century. There was no evidence of pottery of possible post-AD 75 date, such as the rusticated jars of late-1st-early-2nd century date recovered from Phase 3 fort contexts (Hancocks forthcoming). Much of the coarse and fine wares recovered from the settlement was datable to the pre-Flavian period, which would suggest the settlement was broadly contemporary with Phases 1-2B of the fort's occupation. The pottery from the Roman settlement included coarse wares of 'native' origin, such as Malvernian ware, also located in the backfills of fort ditches to the north of Vincent Drive (Area A, Jones 1999a).

It is probable that the settlement was laid out alongside the east-west aligned road exiting the fort's western gate, and that the settlement extended for a distance of at least 60m outside the fort defences. Settlement features and associated deposits mostly adjoining the exposed pebble surfaces which probably originally laid out on both the northern and southern sides of the road. A second, north-south aligned road or track (F1902: Trenches C10 and C21) was recorded to the south of the main roadline, but the date of this southern road remains to be confirmed.

The northern limit of the *vicus* could have been formed by Vincent Drive. The land to the north, adjoining the western fort defences, sloped to the west and may have been less suitable for settlement, although pottery and copper alloy objects of possible civilian association have been found in this area. Recent trial-trenching in this area (Map 4, Jones 1999b) has been inconclusive, possibly because of the limited areas available for investigation and also because of modern disturbances. Topographically, the southern limit of the settlement could have been formed by the gentle, southwest-facing slope in the area of Trenches C9 and C11. The western limit of the settlement could have been defined by the eastern side of the valley containing the streams to the south of Vincent Drive, in the area of Trenches C16-C17. The eastern edge of the settlement is presumed to have extended up to the fort defences, although the zone within 25m of the fort defences was heavily-wooded and not available for investigation. As presently defined, it is unlikely that the settlement extended over an area greater than approximately 0.7ha.

The main feature investigated in the settlement area comprised pebble surfaces (F1504, F1902), the former presumably located adjoining the main road entering the fort's west gate, previously exposed by St. Joseph and Shotton (1937). Ditches were identified along the northern and southern edges of the pebble surface. The northern ditch (F1400) was much broader, and may have had an ancillary function, as an animal drinking trough or a quenching tank for use in metalworking, although none of these alternatives can be proven on the present evidence. The upper fill (2512) of the



southern ditch (F1606) contained fine-grained gravel which may be interpreted as run-off material from the pebble surface, which suggests the surface continued in use after the ditch had become partly infilled.

One of the most important aspects of the trial-trenching was the identification of horizontal deposits adjoining both the northern and southern edges of pebble surface F1504. Significantly, the sequence identified on both sides of the surface was the same. These deposits may have been formed *in situ*, or they have been dumped along the edges of the pebble surface, either from elsewhere within the settlement or even from within the fort interior.

Trial-trenching has also provided information concerning the settlement layout. The main alignment was represented by pebble surface F1504 and by associated drainage ditches (F1400 and F1606). Other ditches may have defined individual plot boundaries. Ditch F2900 was cut parallel with an adjoining ditch (F1400). Ditches F1603/F1513 and F1604 were cut on different alignments. Ditches F2902 and F1604, both aligned east-west, could have been contemporary. Ditches F1402 and F1602/F1513 could have formed an approximate right-angle. Features F2901, F1403 and F1407 could have together defined the position of a fence-line, post-dating the infilling and abandonment of ditch F1400. A similar fence-line could have been defined by features F1600, F1601 and F1602 to the south of the pebble surface. Insufficient of the overall plot arrangement was seen in the trial-trenches to establish an average plot width or depth. It is possible that pebble surface F1902 may have originally have been laid at an approximate right-angle to pebble surface F1504, forming another element of the Roman settlement layout, although it may not have been a continuous feature, since it was not recorded in the east of Trench C6.

A notable feature of the trial-trenching results was the absence of evidence for buildings. It is possible that any buildings were located away from the areas trenched. Alternatively, it is possible that the buildings could have been based on ground-fast beam-slots which would leave little or no trace at excavation.

#### **6.7.4: PHASE 2 (Map 4)**

Phase 2 comprises two sub-phases (2A and 2B) which do not overlap spatially, although they could have overlapped chronologically. Both sub-phases post-date the original Phase 1 fort layout and pre-date the Phase 3 fort. Phase 2A is defined to include construction of the northern, southern and eastern annexes and may also be contemporary with the later use of the Phase 1 fort. Phase 2B post-dates the levelling of the Phase 1 fort's internal buildings and comprises the construction of mainly-temporary structures within the Phase 1 fort interior and, later, the slighting of the Phase 1 fort defences prior to site abandonment.

## Phase 2A: Northern annexe

The Phase 2A northern annexe enclosed the highest land within the overall fort complex, excluded from the Phase 1 fort. The care taken in backfilling the Phase 1 ditches, in order to retain the ditch profiles at their junction with the southwestern corner of the northern annexe, confirms that the remainder of the Phase 1 ditched defences continued in use. Excavation has confirmed that the annexe ditches were shallower and more irregularly cut than the fort ditches. The annexe was also slightly irregular in plan, possibly due to surveying difficulties over the sloping ground or the need to construct the annexe rapidly during an on-going campaign. The eastern annexe was also mis-aligned with the Phase 1 fort.

Further annexes have been identified along the eastern and southern sides of the Phase 1 fort (Jones 1998b, 1999a and in preparation a). The eastern annexe was defended by a rampart and a single ditch which was repeatedly re-cut. Although heavily-truncated, the western side of the southern annexe may have been defended by double-ditches. The interior of the eastern annexe contained a number of hearths and gulleys cutting the rampart tail. No internal features were identified within the excavated part of the southern annexe.

## Phase 2B internal features

The other main element of Phase 2 activity was the Phase 2B buildings constructed within the Phase 1 fort interior after clearance of the Phase 1 structures. The structural evidence of this phase is contradictory. Their apparently-irregular layout and the suggested temporary nature of their construction, perhaps suggests a civilian association. In contrast, the evidence provided for Phase 1- Phase 2B continuity by the re-excavation and re-use of the earlier beam-slots. This re-use implies a short hiatus between demolition and reconstruction or even that both activities were undertaken as part of one operation. This appears to support the argument for the military nature of continuing site occupation.

The earliest Phase 2B internal structures comprised timber-framed buildings. Although set out by the re-excavation of Phase 1 beam-slots S9 and S10, the positioning of Structure 3.5, across the east-west aligned internal road between the paired barrack-blocks (Structures 3.1 and 4.1), provides a clear demonstration of the abandonment of the original fort layout. Similarly, Structure 3.4, which may have provided an element of functional and spatial continuity with its Phase 1 predecessor (Structure 3.3), was located across the *via quintana*, although it is also possible that the earlier structure may have caused a re-planning of the road layout here. Structure 3.6 was cut across the presumed location of the northern *via sagularis*, and also followed a different alignment to other Phase 1-2 internal structures. Structure 2.3 (Area 2) was similarly formed by the re-excavation of the Phase 1 Structure 2.1 beam-slots.

The alternative interpretations suggested for Structure 3.4 - functioning either as an ironworking floor or as a wicker granary - are dependant upon the correct identification of adjoining structures or working areas which might provide a function

by association. The apparent mis-alignment between the floor and walls of the building suggests a further, alternative interpretation - the floor first being used for ironworking and later being re-used as the base of a granary. The most probable interpretation of Structure 3.5 is as a store. It may be significant that this was the only building of the phase to be founded on ground-beams, suggesting a greater degree of permanency than the other structures.

#### Hearths and ovens

As noted above, interpretation of the hearths/ovens is difficult in the absence of associated residues. Some of the features may have been bread-ovens, as is suggested by the possibly-associated quernstones, while others may have been associated with ironworking. The morphology of this feature group could suggest an association with different ironworking processes. The spreads of burnt clay may perhaps be interpreted as the remains of collapsed furnaces used for iron smelting. There were no associated iron or non-ferrous finds which may be associated with this feature group.

Further ovens/hearths were identified by trenching to the south of Vincent Drive (B2, Map 4).

#### Stake-hole alignments

Enclosure 1 is also difficult to interpret, although a clear nexus both in layout and also, by implication, in function, may be suggested with the adjoining store or workshop (Structure 3.5). The enclosure may have formed a fenced animal compound, paralleled by similar structures at Derby (Wheeler 1986). Alternatively, the enclosure could have formed an open storage area or 'transport park' (e.g. Longthorpe, Frere and St. Joseph 1974, 25), or could have been part of an arrangement of buildings and lean-to sheds in the Camelot annexe (McCord and Tait 1980). Further fenced compounds could have been formed by palisade trenches F160 and F448 (Areas 2 and 6), and traces of possibly-contemporary, incomplete circular compounds (F100, F104, Area 2) have been recorded. The hearths/ovens within the inner walls of the enclosure suggests the feature group were contemporary with the enclosure, although the enclosure may not necessarily be the original function of the enclosure.

Structure 2.3 may be interpreted as a stables/grooms quarters, or even possibly as a small barrack-block.

#### Function of the Phase 2B fort

Excavation was insufficient to reconstruct an overall layout for the Phase 2B fort and no clear published parallels exist which could provide predictive models. The adoption of such apparently *ad hoc* internal arrangements could be due to a number of factors, including the temporary nature of the intended military occupation, the function of the fort, the nature of its garrison, or a combination of these factors. These alternatives are considered further below.

The irregularity in layout may have been caused by the temporary nature of the intended occupation, as is principally suggested by the absence of ground-beams (e.g. Structure 3.3, Enclosure 1, Structure 2.3). Alternatively, the absence of ground-beams at Metchley could merely reflect the adoption of vertically-supported, rather than horizontally-supported, wattling. The irregular layouts of many of the internal buildings at Longthorpe fortress I were interpreted by Frere and St. Joseph (1974, 30) as evidence of the need for very rapid construction during an on-going military campaign, and a similar interpretation could be placed upon the somewhat irregularly-planned Metchley structures.

A second alternative interpretation of the structures could be that the irregular layouts were determined by functional factors.

A third alternative interpretation of the irregular layout may be provided by the nature of the occupation. Some of the Phase 2B structures are paralleled in a civilian context, for example by rectangular buildings of Roman date in an Iron Age building tradition at Dunston's Clump, Nottinghamshire (Garton 1988, 64). These buildings were defined by lines of small post or stake-holes, representing the wattle walls. Despite the parallels for the Phase 2B buildings within a civilian context, the presence of civilians within the fort would have contravened normal military practice (Bidwell 1985, 31). A possibly-unique exception to this rule has been suggested at Vindolanda, where the excavator identified a number of circular buildings as the dwellings of civilians, possibly forming conscripted labour, allocated plots and allowed to build dwellings in the Iron Age style (*op. cit.*, 1985, 29-30). These structures were alternatively interpreted by Frere as housing hostages or native militia. Two incompletely-excavated, concentric circular gulleys at Metchley (F100, F104, Area 2) have been interpreted above as defining circular compounds. The presence of irregular troops such as *numeri* or *cunei* at Metchley is unlikely since these irregular units were raised towards the end of the 1st-century (Johnson 1983, 25), after the likely abandonment of the site.

If the Phase 2B fort was a store-depot, it is perhaps possible that this function may have involved the use of civilians, by analogy with the suggested evidence for civilian specialist potters operating under the supervision of a military master potter at the Longthorpe military works depot (Dannell and Wild 1987, 66). At Metchley the possible range of such specialist functions could include ironworking, milling and also possibly livestock herding.

The finds of this phase include fragments of a number of cart harness mounts and a number of unstratified quernstones (from Area 3). These finds are not necessarily associated with the suggested function of the site as a store depot, although they are not inconsistent with this interpretation. The bell and suspension loop is interpreted by Webster as an object commonly associated with cavalry.

The internal structures in the northwestern corner of the Phase 2B fort interior could have been associated. Structure 3.4 could have formed a granary. Structure 3.5 may have functioned as a store, with an adjoining compound for open storage or animal pens. Later, Structure 3.5 may have been used as a workshop, with the association

between this building and the adjoining Enclosure 1 being continued by the use of the latter as an ironworking compound. The stables/grooms quarters (Structure 2.3) could have been associated with the transport of basic commodities. The small size of its rooms suggest a use by baggage animals rather than cavalry mounts, while the open-sided rooms could have been used for the storage of fodder. The interpretation of the Phase 2B fort as forming a stores base is also supported by the absence of traces of barrack-blocks over the comparatively-large areas of the *retentura* and the *praetentura* investigated, implying perhaps a small garrison, although the evidence from excavation suggests that conformity to the usual military layout is not to be expected in this phase.

A number of forts of Neronian date may be broadly contemporary with the Phase 2 fort although the limitations of the present dating evidence from Metchley and elsewhere does not allow precise chronological comparisons to be made. Neronian activity at Wall is represented by a possible vexillation fortress (Lyon and Gould 1964) containing excavated barrack-blocks (Round 1983, fig. 3) and evidence for scatters of Neronian pottery to the north of the baths (Gould 1968, 7). The first fort at Baginton also dated to the Neronian period (Hobley 1969; 1973). Other contemporary forts may have been located at Dodderhill, Droitwich (Whitehouse 1962, 56), which produced coins and pottery dated AD 50-75, and the forts at Bleachfield Street, Alcester (Booth 1994, 164-5), Mancetter (Scott 1984, 2 and 23), Kinvaston, and possibly Greensforge. Further to the west the fortress at Wroxeter was founded by AD 57 (White and Barker 1998, 41), and other contemporary forts in this area were located at Whitchurch (Jones and Webster 1968) and Rhyn Park (Davies 1980, 258).

#### **6.7.5: PHASE 3 (Map 4)**

##### Defences (Figs. 9, 14-17)

The re-establishment of a fort at Metchley in this phase suggests the strategic importance of the site was renewed. The duration of the previous abandonment of the site is unknown. The Phase 3 fort was located off-centre within the earlier defences, closer to the northern side of the earlier forts. The innermost and possibly also the outermost ditches along this side of the earlier fort were re-cut to provide additional protection from attack from the facing higher ground, and the later fort's eastern side could have been similarly reinforced. Recent work along the southern and eastern defences (Areas 6 and 8, respectively, Map 4) suggests that the innermost Phase 1-2 fort ditch may have also been re-cut at this time.

Measuring 2.6 ha. in extent, the Phase 3 fort belongs to a group of forts in the range 2.2ha.-2.8 ha., all dated to the pre-Flavian period, including forts garrisoned with cavalry (Jones 1975, 52). No details of the Phase 3 fort garrison can be suggested, except perhaps by analysis of the width of the excavated fort gates, which can be an indicator of garrison type (Davison 1989, 208). Measuring 7m in width (Webster 1954, fig. 1), the Metchley example is closer in size to the gates of forts garrisoned by cavalry *ala* than those of an infantry garrison (around 2.4-4m in width), although this is admittedly a relatively-crude indicator of garrison type.

The rampart was subsequently reconstructed in timber, possibly because of the instability of the marshy ground at Metchley. A frontal timber revetment was inserted along the western and northern defences, while the eastern and southern ramparts were reconstructed in the form of a box rampart, with timber uprights braced in an alternating, triangular arrangement. This difference in the form of later rampart rebuilding may reflect differences in construction of the original turf rampart. St. Joseph and Shotton (1937) noted that the western rampart was composed of turf facing with an earthen core, while the eastern rampart was composed entirely of turf, which would provide added strength. It may be significant that it was this side and the southern side which were subsequently reconstructed with the stronger, box-rampart construction. The box rampart varied in width between 3.3m (eastern side) and 4m (southern side), which may reflect the differing rampart heights on these sides. An unexpected feature of the northern defences was the suggested use of a supporting structure (Structure 4.2) along part of its inner side. This structure may have been built at Metchley to obviate the need for a box rampart or because only a short length of the northern rampart was prone to collapse.

#### Internal features (Figs. 15-16)

Little of the Phase 3 fort's internal layout has been revealed by excavation. Only two buildings (Structure 4.3, Structure 2.4) have been identified. Given the evidence for the reconstruction of the rampart in timber, it is unlikely that the fort was abandoned before the completion of its internal layout. It is possible that most of the contemporary internal structures at Metchley were built on ground-fast timber beams (e.g. Whitchurch, Jones and Webster 1969, 211) at Metchley, leaving no trace at excavation.

Although it is difficult to interpret Structure 4.3 in isolation, it is probable that this building was a granary, a building perhaps more-usually located adjoining a fort gate. Structure 2.4, positioned in the eastern *intervallum* space, has been interpreted as a barrack-block, the excavated southern part of the building comprising the officers' quarters with one excavated *contubernium* adjoining the southern end of the verandah. An alternative interpretation of the building as a cook-house has also been suggested, although this is the less-likely alternative.

The abandonment of the fort was preceded by the dismantling of the defences and possibly also of the internal buildings. As previously noted the fort interior may have been deliberately cleared by burning and the defences partially levelled.

The dating evidence suggests that Metchley may have been abandoned by the Roman military for a second time around AD 75. Other forts, including Greensforge, Baginton (Hobley 1975, 3 and 24) and Mancetter (Scott 1984, 2) may have been abandoned around this time. Demolition squads were recorded in the *gyrus* at Baginton around AD 78-80, and the Flavian fort at Wall was abandoned in the AD 80s (Round 1983, 14), although later military activity is also recorded at the site. Later-1st-century military activity was concentrated in the north midlands, for example at Rocester (Phase 1A, Esmond Cleary and Ferris 1996); and Chesterfield (Ellis 1989, 124-6), and to the west, in the Marches, at Wroxeter, Chester, Whitchurch

and Rhyn Park (Davies 1980). Later military activity at Dodderhill, Droitwich was possibly associated with imperial control of the local salt industry into the 2nd century (Burnham and Wachter 1990, 214), although continued military occupation into the 2nd-century is also suggested at Alcester (Bleachfield St, Booth 1996, 32).

#### **6.7.6: PHASE 4: LATEST ROMAN MILITARY ACTIVITY**

Pits F417 and F426 which contained Flavian-Trajanic pottery (Area 6, Map 4) may be attributed to this phase (Jones forthcoming a).

The north-south aligned western defences identified in Trial-trenches A3, A5 (Map 4), and the new defensive alignments excavated in Area 8 to the southeast of the Phase 1-2 fort add a new level of complexity to the military history of the site. Five phases of military activity are now represented by north-south, and east-west alignments (Phases 1-3 and newly-identified western defences), in addition to the two new alignments identified in 1999, making for a total of seven potential military phases in all. The attribution of the newly-identified forts to Phase 4 is necessarily provisional on the present information, pending full examination of the pottery and other dating. The new defensive features represented in Area 8 may be more confidently attributed to post-Phase 3, on the basis of the differences in alignment to the Phase 1-3 military forts. Accurate dating of the western defences of the newly-identified fort to the north of Vincent Drive is not presently possible.

The identification of further phases of military activity at the site highlights its continued strategic importance, including possible evidence for post-AD 75 military activity. One explanation of the newly-identified defensive ditches is that the site was occupied intermittently in the period AD 75-120. This new data could provide a valuable insight into later-1st-early-2nd century Roman military deployment. Overall, the complexity of the military occupation at Metchley invites comparison with sites of similar complexity such as Wall, Mancetter, Kinvaston and Greensforge.

#### **6.7.7: FINDS, DATING AND MILITARY SUPPLY (Phases 1-3)**

In his report on the Roman coins from the site, Reece (forthcoming) notes that they were probably lost by AD 75, with a date earlier in the range AD 43-64 being suggested by the style of the *asses* and the countermarked coins. An exception is a coin of Domitian (dated AD 84-6). The samian assemblage suggests a date in the AD 40s rather than AD 50s, which supports other finds and stratigraphic evidence for a smaller garrison and a more short-lived occupation of the site in Phases 2-4. Most of the samian is pre-Flavian, with little Neronian-Flavian material found. Only one sherd is more probably Flavian than Neronian in date. Similarly, analysis of the samian ware from the site (Dickinson forthcoming) suggests that significant use of Samian had ceased on the site by AD 75. The dominant form of amphora was the Baetican Dressel 20 form, dated AD 30-70. The Rhodian amphora found at the site are common on British and German military sites of the AD 40s and AD 50s. Williams (forthcoming) notes that the absence of Gauloise 4 amphorae, not imported to any extent until after the Boudiccan revolt, and the presence of Hofheim flagons are both

indicators of an early military presence, as is the absence of ring-necked flagons, a typically Flavian type,

The earliest brooch from the site (No. 8, Hod III), was going out of use between AD 60-70. The remaining brooches may be dated during the later military occupation of the site or even possibly after the suggested date for its military abandonment. The latest coarse pottery comprises the rusticated jars (dated AD 80-120) found in Phase 3 features in Area 6 and also by St. Joseph and Shotton. A mortarium of Septimianus is dated no earlier than AD 90, and possibly in the range AD 90-130. The absence of Black Burnished ware I (BB I) forms suggests the final abandonment of Metchley occurred by around AD 120.

A high proportion of the Metchley pottery, including the mortaria (69.5%) and flagons was probably locally produced. Hartley (forthcoming) notes that it is not impossible that some of the mortaria could have been produced by a local workshop supplying the Metchley forts. It is only in the Flavian period that evidence of products from other mortaria production centres, such as Mancetter and Verulamium, is represented at the site.

The Metchley pottery demonstrates a number of key features characteristic of Claudio-Neronian military groups. One parallel between Wroxeter, Mancetter, and Metchley is the presence of wall-sided mortaria, otherwise very rare in the midlands. This evidence does not necessarily indicate a legionary garrison at the site, since a legionary vexillation could have been responsible for its construction. Another feature of the Metchley assemblage is a 'Belgic' influence, which is recorded more widely within the midlands. As may be anticipated, the Metchley assemblage is more restricted in the range of forms, than is Wroxeter in the fine wares, mortaria and amphorae, and the range of continental sources. The vessel classes noted at Wroxeter, but absent at Metchley comprise cups, honey pots and lamps.

Metchley appears to conform to the model of pre-Flavian military supply defined by Hurst (1985, 124), which expresses a 'polarity' in the use of resources, with extensive use of imported and locally-sourced pottery, but little trade from elsewhere in Britain, a pattern typically associated with an invading army. An exception to this pattern is the quernstones from the site, which were derived from Millstone Grit deposits in Derbyshire, Staffordshire and the Pennines. Hurst (*ibid.* 124) argues that the long-distance supply arrangements of the pre-Flavian army in Britain were an extension of the Rhineland army, the arrangements for supply being unrelated to the marketable value of the items or to the transportation costs, with pottery following the movements of the other basic commodities.

Later Roman activity in the Birmingham area is represented by the roadside settlement at Parson's Lane, Kings Norton (towards the southwest of the modern city), by pottery kilns at Perry Barr and Sutton Coldfield and more widely by chance finds of metalwork and pottery. The Parson's Lane roadside settlement (SMR No. 2939) consisted of gravel surfaces, associated with clay and daub deposits and dated to the 1st-3rd centuries AD. Pottery kilns were established at Perry Barr (SMR No. 2912, Hughes 1959) in the 1st-2nd century, and at Sutton Coldfield (SMR No. 4606,



Booth 1987), in the late-1st-early-2nd century (*pers. comm.* Jane Evans). Other nearby early Roman activity is represented by the earliest phase of the temple at Coleshill (Magilton 1980, 32), established in the mid-late-2nd century, and by ploughsoil scatters of Roman pottery from fieldwalking in the Sutton Coldfield area.

#### 6.7.8: PHASE 5: POST-ROMAN ACTIVITY

For simplicity, this phase is defined to include all post-Roman activity at the site.

##### Medieval

Little is known of the medieval context of the study area. The forts were located away from the medieval village centres of Harborne (VCH 1964, 22), to the northwest, and Edgbaston (Chatwin 1914), to the east. The Bourn Brook, to the south of the forts, divided the parishes of Harborne and Edgbaston, and Harborne Lane, to the east of the forts, follows the line of a medieval hollow-way.

##### Post-medieval

Metchley Park may have been carved out of woodland or waste-land between the villages of Harborne and Edgbaston. Sparry's map of 1718 (Fig. 4A) shows a hunting lodge within the fort's interior. Although slighted and also weathered in the long period since their abandonment, the earthworks of the forts would nevertheless have formed an important landscape feature. Furthermore, the line of the Roman military *via decumana* remained fossilised as a field boundary and its northern continuation formed a track to Metchley Park Farm to the north. Later in the 18th century the fort site itself was ploughed, although parts of the original forts' defences continued to be visible as earthwork features up to the 1960s.

An alternative interpretation of Phase 3 Enclosure 3 is that it was a post-medieval game-pen, associated with the use of the hunting park. The excavation of an internal ditch to the bank (formed by the partly demolished rampart) at the Metchley enclosure may have been intended to retain animals, by analogy with the evidence from Sutton Park, Birmingham (Hodder 1980, 166). The ditch of the fort's eastern annex may have been re-cut during the use of the hunting park, possibly forming a further 'game-pen' adjoining the eastern side of the forts. The line of this re-cut was slightly curved in plan, suggesting it was cut parallel with the line of the eastern park boundary (Fig. 4A). Other evidence for the post-medieval land-use of the site comprises a scatter of tile associated with the Hunting Lodge (St. Joseph and Shotton 1937), and an undated gravel trackway, possibly of post-medieval date, identified adjoining the western fort defences (Jones 1988, 1989).

## 7.0: POLICIES AND PLANS

### 7.1: General

This section of the report provides a summary of the relevant government and local authority policies concerning archaeology, to place this assessment within its planning context.

*Planning Policy Guidance Note: Archaeology and Planning* (PPG 16) summarises the existing planning policies concerning archaeology, which are self-explanatory. This document is worth quoting selectively:

‘6. Archaeological remains should be seen as a finite, and non-renewable, resource, in many cases highly fragile and vulnerable to damage and destruction. Appropriate management is therefore essential to ensure that they survive in good condition. In particular, care must be taken to ensure that archaeological remains are not needlessly or thoughtlessly destroyed. They contain irreplaceable information about our past and the potential for an increase in future knowledge. They are part of our sense of national identity and are valuable both for their own sake and for their role in education, leisure and tourism.

8. With the many demands of modern society it is not always feasible to save all archaeological remains. The key question is where and how to strike the right balance. **Where nationally important remains, whether scheduled or not, and their settings, are affected by proposed development there should be a presumption in favour of their physical preservation.**

13. If physical preservation *in situ* is not feasible, an archaeological excavation for the purposes of ‘preservation by record’ may be an acceptable alternative... From the archaeological point of view this should be regarded as the second best option. The science of archaeology is developing rapidly. Excavation means the total destruction of evidence (apart from removable artifacts) from which future techniques could almost certainly extract more information than is currently possible. Excavation is also expensive and time-consuming, and discoveries have to be evaluated in a hurry against an inadequate research framework. The preservation *in situ* of important archaeological remains is therefore nearly always to be preferred.’

Sections 3.30-3.32 and 8.36 of the *Birmingham (Unitary Development Plan) 1993* set down the Council’s policies towards archaeology, and are worth quoting in detail:

3.30: Archaeological remains are the product of human activity over thousands of years and are valuable both for their own sake and for their role in education, leisure and tourism. There are ten Scheduled Ancient Monuments in Birmingham which are statutorily protected because of their national importance. A range of other sites is included on the Birmingham Sites and Monuments Record.

3.31: There is a need for further improvement to this Record which will continue to be monitored and updated. Wherever possible, sites and remains included on this register and their settings, in particular scheduled ancient monuments, will be protected and enhanced according to their merits, as will further monuments which may be added to the list.

3.32: The development of the educational, recreational and tourist potential of archaeological sites and monuments, through management and interpretation will be encouraged.

8.36: Development proposals affecting areas of archaeological importance will be considered in the light of the following policies:-

- the archaeological aspects of the development proposals will be examined and evaluated before the planning application is determined. Planning permission will not normally be granted in cases where the assessment of the archaeological implications is inadequate.
- **development proposals which will have an adverse effect on scheduled ancient monuments and other nationally important archaeological sites and monuments and their settings will not normally be allowed.**
- development adversely affecting other known sites and monuments of archaeological significance will be resisted, although permission may be granted if the applicant has demonstrated that particular archaeological sites and monuments will either be satisfactorily preserved either *in situ* or, where this is not feasible, 'by record.'

Policy 3.34 is concerned with canals.

3.34: Birmingham lies at the heart of the national network of canals which played an important part in the town's early industrial development. The historic importance of canals is acknowledged, and wherever possible, important groups of canal buildings and features will be protected. Consideration will be given to the designation of canal settings as conservation areas.

## **7.2: Scheduled Ancient Monument**

Part of the northwestern corner of the Phase 2A northern annexe and the northern part of the western Phase 1-2 fort defences have been designated as a Scheduled Ancient Monument (West Midlands S.A.M. No. 1: Maps 2-7). The scheduled area at Metchley, in common with other scheduled ancient monuments, is governed by the Ancient Monuments and Archaeological Areas Act 1979 which has created a number of offences relating to ancient monuments. Any works which would have the effect of disturbing, including covering, the monument, require the written consent of the Secretary of State for Culture, Media and Sport.

The scheduling of part of the forts is not in itself evidence to determine the relative archaeological merits of the scheduled and unscheduled areas. It would be a gross error to assume that the unscheduled part of the forts is only of regional or local significance. Both PPG 16, and the Monument Protection Programme (MPP) acknowledge that not all nationally-important sites are scheduled. Both PPG 16 and Policy 8.36 of Birmingham City Council refer to sites of national importance, whether or not they are scheduled.

**Scheduling was undertaken in two stages, in 1950 and 1976, and was based on the information available concerning the complex at those times. The earliest scheduling was undertaken after limited examination of the northwestern and northern defences (by G. Webster and others). The extension to the scheduled area in 1976 followed the large-scale excavations within the forts' interiors, undertaken 1967-9, but preceded the full analysis and interpretation of the evidence, which was undertaken in 1985-6 and 1996-8. Accordingly, the scheduling is not based upon the most-up-to-date information concerning the monument, its preservation, and, more importantly, its academic significance. The English Heritage Monument Protection Programme (MPP) is currently evaluating archaeological sites with a view to increasing the number of sites which are scheduled, and the extent of the existing scheduled areas, but this programme has yet to consider Metchley.**

### **7.3: The site's setting (Fig. 2, Maps 4 and 7, Plates 4-9)**

Paragraph 8 of PPG 16 refers to sites of national importance, whether scheduled or not, and their settings or contexts. Policy 8.36 of Birmingham City Council also refers to Scheduled Ancient Monuments and other sites of national importance and their settings. Consideration of a site's context is important, because it is necessary to appreciate 'the immediate setting of the site, and its intelligibility within its surroundings. It covers the detail and quality of its immediate visual context, and the value of any associations within that with other sites either of related period or class or as part of the palimpsest illustrating the historic development of its setting' (TNATA, 1998). The concept of 'setting' is particularly important at Metchley to appreciate the contemporary topographic setting of the forts and *vicus*, to comprehend physical relationships between the Roman features belonging to the different phases, and, of equal importance, to appreciate the sheer scale of the forts.

The concept of landscape setting is also significant at Metchley because of the visible, albeit reconstructed northwestern corner of the northern annexe, providing a reference point in the modern landscape (Plates 4-5). The key viewpoints from the forts (Plates 4-9) are considered to be from the reconstructed rampart section (Zone 7) and from the northwestern and northeastern corners of the Phase 1-2 fort (Zone 4).

## **8.0: ARCHAEOLOGY AND PREDICTED ARCHAEOLOGICAL SURVIVAL (Zones 1-12)**

### **8.1: Introduction**

This section of the assessment provides a summary of the data from excavation at Metchley and information from other comparable Roman military sites. For ease of description the study area has been divided into a total of 12 zones within which known sites, and areas of potential for the identification of archaeological sites or find-spots of prehistoric-post-medieval date, have been considered. These zones are mainly defined on the basis of modern land-use, and the zone boundaries do not in themselves have any archaeological or historical significance. The present land-use, the nature and extent of the archaeological work undertaken, the potential archaeological significance, and the potential archaeological survival within each of these zones is described separately. Inevitably, those zones containing part of the Roman fort complex are considered in more detail than the other zones, although areas of known or potential archaeology of prehistoric or post-medieval date are also considered.

The zones are defined in Table 6 and in Map 2.

**TABLE 6: ZONES OF ASSESSMENT**

<i>No.</i>	<i>Description</i>	<i>Current land-use summary</i>
1	University of Birmingham campus	Being developed as new 'Teaching Resources Centre'
2	University of Birmingham campus	Includes part of new 'Teaching Resources Centre'
3	South Birmingham Mental Health Trust	Single-storey buildings and hardstandings
4	University of Birmingham Medical School	Buildings, car parking, lawns
5	University of Birmingham campus	Tennis courts, car parking
6	National Blood Transfusion Service	Buildings, car parking, lawns
7	University Hospital	Multi-storey buildings, car parking and reconstructed corner of fort defences
8	Queen Elizabeth Psychiatric Hospital	Multi-storey buildings, car parking and lawns
9	Employment Rehabilitation Service	Single-storey buildings in landscaped surrounds
10	Women's Hospital	Multi-storey buildings, car parks and landscaping
11	Overgrown land to the north of the Bourn Brook	Overgrown with scrub, with evidence for modern dumping
12*	Overgrown land to the south of the Bourn Brook	Not inspected, but believed to contain modern landfill

\* Zone not considered in detail.

The overall potential survival of each fort, and its potential academic significance, is considered separately in Section 10.0.

For convenience, the study area has been defined to include a zone 50m outside the outermost limit of the forts and associated annexes (Maps 2 and 4). However, the extent of the study area must not be taken as an indication of the maximum extent of the fort complex and of any associated features. Other contemporary features, such as road lines, cemeteries and other elements of the military complex, may extend outside this area.

Areas within the study area which have been excavated in detail have been excluded from detailed assessment in this section of the report, although a summary of the information obtained is included for completeness.

The model of potential archaeological survival presented in this section of the report is not intended to replace field evaluation (by trial-trenching, geophysical survey etc.). Rather, this information is intended to assist in the preparation of a detailed and

informed strategy for the field evaluation of development proposals, if this is considered appropriate. As a result of trial-trenching, a strategy for archaeological mitigation may be defined involving preservation *in situ*, or further more extensive excavation in advance of development, or a mixture of both, followed by post-excavation analysis and publication of the results (see PPG 16 and Policy 8.36, Birmingham C.C.).

The following aspects are excluded from consideration in this assessment:

- The landscape character and visual appraisal of the study area, or its constituent zones and parts.
- The ecological value of the study area for historic landscape reconstruction, for example using species counts within hedgerows (e.g. Zone 4).

*Map 5 indicates the differing levels of predicted archaeological preservation by different colour shading, within the areas identified as being of archaeological potential. The potential level of archaeological preservation is not provided for zones where no archaeological features are presently known, or may be predicted on the basis of the present information. The criteria adopted for the assessment of potential archaeological survival are set down in TNATA (English Heritage, 1998).*

## **8.2: ZONE 1, former Genetics Field (Maps 2 and 4)**

### 8.2.1: Present land use

This zone was formerly used as a trials field for experiments in plant genetics. The northwestern boundary of this zone (adjoining the canal) is formed by a raised bank, containing material dredged out of the canal. Topsoil was imported onto the field in the 1950s. This zone is currently being developed to form part of the new University 'Teaching Resources Centre'. The extreme southwestern corner of this zone has been fenced-off, and is excluded from future development because of the survival of the fort defences here as above-ground remains.

### 8.2.2: Archaeological history (Map 4)

Previous archaeological work concerned with this zone has comprised:

- A narrow trench cut across the eastern defences of the Phase 1-2 fort in 1934-6 (St. Joseph and Shotton 1937).
- An archaeological assessment (Jones 1995b), which was recently updated (Jones 1999d).
- Evaluation by fieldwalking, geophysical survey and trial-trenching (Jones 1998b).
- Two stages of area excavation, in 1988 (Area 7, Jones 1999a) and in 1999 (Jones in preparation b), examining the defences and interior of the Phase 1 fort and the eastern annexe.

### 8.2.3: Archaeological potential (Fig. 14, Map 4)

#### Phase 1-2 fort and annexe defences

This zone contains a length of approximately 40m of the eastern defences of this earliest fort, which comprised two ditches and a turf rampart. The innermost ditch was re-cut in Phases 1 or 2. This zone also contains a length of approximately 85m of the

defences of the Phase 2A eastern annexe and part of the annexe interior. It is probable that a gateway to this annexe was located towards the north of this zone. Two ditches located by excavation outside the annexe could have formed contemporary outer defences.

#### Phase 1-2B fort and annexe interior

This zone contains a short length of the eastern *intervallum* space of the Phase 1-2 forts, where evidence of ovens or hearths, associated with breadmaking or ironworking, have been identified by excavation. Part of a possible Phase 2B timber-framed latrine (Structure 7.1, not illustrated) was found during the 1999 excavations. Cook-houses were often located near the fort gates, and such a building could be located within this zone, near to the *porta principalis sinistra* to the north of the zone.

#### Phase 3 fort defences

The Phase 3 fort lies wholly outside this zone. However, the defences of the eastern side of this latest fort were reinforced by a re-cut of the innermost eastern ditch of the Phase 1-2 fort and of the Phase 2A eastern annexe ditch. The Phase 2A eastern annexe ditch was also re-cut in Phase 3. A stone causeway was laid over the partly-backfilled, latest re-cut of the eastern annexe ditch in Phases 3-4.

#### Extra-mural settlement

The close proximity of the northern part of this zone to the projected line of the road leading into the *porta principalis sinistra* could suggest that there is some potential for the identification of a roadside civilian settlement along the southern side of the road, within the northern part of this zone. Such a civilian settlement would typically be represented by ditched rectangular plot boundaries cut at right-angles to the road, containing timber-framed buildings or other structures (e.g. Greensforge, Staffordshire, Jones forthcoming b). Traces of a cremation cemetery might also be anticipated outside the fort, adjoining the main roads.

#### Post-medieval

Excavation in 1998 (Area 7) identified a post-medieval re-cut of the eastern Phase 2-3 fort annexe ditch. This re-cut probably formed one side of a game-pen possibly adjoining the eastern side of the Phase 1-2 fort (Jones 1999a).

#### 8.2.4: Predicted archaeological survival (Map 5)

The archaeological remains in this zone are exceptionally well preserved, as has been demonstrated by evaluation (Jones 1998b) and excavation (Jones in preparation b). The majority of this area has now been archaeologically-excavated. Because of the limited degree of modern disturbance in this zone, the eastern defences of the Phase 1-2 fort are visible as above-ground earthworks. This zone is the only area within the fort complex where the original defences are visible as above-ground features,



although a length of the reconstructed Phase 2A northern annexe is also visible (Plates 1-2).

The predicted level of archaeological survival within the area proposed for preservation in the southwestern angle of the zone is high. It is intended that the public 'visibility' of this length of the fort defences will be enhanced by the marking of the fort's alignment using different paving materials in the proposed new West Campus entrance. The remaining areas of archaeological significance within the zone have been archaeologically excavated.

### **8.3: ZONE 2, West Car Park and adjoining areas (Maps 2 and 4)**

This zone is located to the southeast of the canal and to the south of University Road West.

#### **8.3.1: Present land use**

With the exception of the areas recently archaeologically investigated (Areas 2, 6 and 8), most of the zone is built-over. Most of the buildings are of two or more storeys, with the exception of a range of single-storey brick buildings adjoining the eastern edge of Area 8. Additionally, this zone includes an underpass under a University Service Road and areas of deep terracing into the ground surface. An ornamental lawn is located towards the southern boundary of the zone. This zone also includes part of the northwestern end of University Road West.

#### **8.3.2: Archaeological history (Map 4)**

Previous archaeological work concerned with this zone has comprised:

- Trenching of the southeastern corner of the Phase 1-3 forts during 1934-6 (St. Joseph and Shotton 1937).
- Excavation in 1967 (Area 2) which examined part of the right *praetentura* of the Phase 1-2 fort and part of the eastern defences of the Phase 3 fort.
- An archaeological assessment (Jones 1995a), subsequently updated (Jones 1998a) to consider the implications of the newly-discovered eastern annexe, and also to consider areas excluded from the preceding assessment. The zone was also included within the more extensive assessment prepared earlier this year (Jones 1999d).
- Trial-trenching was undertaken in two stages. The first stage investigated land in the east of the zone (Jones 1996). The second examined the southeastern corner of the Phase 1-2 forts and part of the southern annexe interior (Jones 1999e).
- An area excavation in 1997 examined the Phase 1-3 defences and part of the forts' southern *intervallum* space (Area 6, Jones forthcoming a). Further excavation in 1999 examined the southeastern defences of the Phase 1-2 forts and the eastern defences and interior of the southern annexe (Area 8, Jones in preparation b).

#### **8.3.3: Archaeological potential (Map 4)**

##### **Phase 1-2 fort and annexe defences (Fig. 12)**

This zone contains a length of approximately 30m of the eastern side and approximately 120m of the southern side of the Phase 1-2 fort. Associated with these defences was a probable corner tower located in the southeastern angle of the fort and

a possible interval tower sited mid-way between the southeastern corner of the fort and the *porta praetoria*, itself located adjoining the southwestern boundary of this zone. The Droitwich-Metchley road may have entered the forts at, or near, this gate.

This zone also contains the eastern side of the Phase 2A southern annexe and a length of approximately 160m of the southern side of this annexe, including the possible location of a gate which may have been sited mid-way along the southern side of the annexe, in line with the *porta praetoria* of the Phase 1-2 fort. The intersection between the southeastern corner of the Phase 1-2 fort and the suggested northeastern corner of the Phase 2A southern annexe also lies within this zone. The suggested southern side of the Phase 2A eastern annexe defences also crosses this zone.

#### Phase 1-2 fort and annexe interior (Fig. 12)

Briefly the zone contains part of the southern and eastern *intervallum* spaces and a small part of the right *praetentura*, where part of a workshop and store building were excavated in 1967 (Area 2). A temporary building interpreted as forming stables and/or grooms' quarters was built in this area during the succeeding Phase 2B.

The zone also contains part of the interior of the possible southern annexe and a small part of the eastern annexe interior. No associated features could be found within the excavated part of this annexe interior (Area 8, Jones in preparation b). A number of hearths or ovens was cut into the rear of the eastern annexe rampart to the north of this zone (Zone 1, Area 7, Maps 2 and 4), but no structures were found in the excavated part of its interior (Jones 1999a).

#### Phase 3 fort, defences and interior (Figs. 12 and 16)

Most of the southeastern corner of the Phase 3 fort, located within this zone, has been excavated (Areas 2 and 6). The innermost Phase 1-2 fort ditch was also re-cut along the eastern and southern sides in Phase 3, to provide an additional line of defence.

A small part of the *intervallum* space adjoining the southeastern corner of the Phase 3 fort is located within the extreme northwest of this zone. Excavation in this area during 1997 (Area 6) identified a concentration of breadmaking ovens (Jones forthcoming a).

#### Phase 4

A quantity of rusticated ware jar fragments was recovered from excavations in 1997 (Area 6, Maps 2 and 4) which suggests some form of activity within the fort interior after the suggested date of its military abandonment around AD 75. Area excavation in 1999 (Area 8, Jones in preparation b) identified the double-ditched defences of two hitherto-unidentified forts, cut on differing alignments to the Phase 1-3 forts. Unfortunately, only short lengths of these defences could be investigated because of intensive modern disturbance. For this reason, it was not possible to identify any associated internal features.

## Other features

A concentration of flint finds recovered from this area during excavation in 1967 (Area 2, Map 4) could indicate that there is some further potential for the identification of pre-Roman activity nearby.

Although the land adjoining the southern side of the forts was low-lying, some potential nevertheless exists for the identification of traces of a civilian settlement or of a cemetery in this zone which partly adjoined the north-south-aligned road entering the *porta praetoria*. Further, outer defences could also be located outside the southern fort defences within this zone.

It may be presumed that the post-medieval re-cut of the latest eastern annexe ditch, associated with the use of the hunting park, extends into this zone.

### 8.3.4: Predicted archaeological survival (Map 5)

The criteria for the definition of archaeological survival are those set down in TNATA.

With the exception of the areas excavated, the anticipated degree of survival of archaeological features within this zone is generally assessed to be low. However, it is important to note that these areas suggested to be of poor potential for archaeological preservation have not been tested by an evaluation, and some islands of better archaeological survival may be identified, possibly including the lawned areas just outside the southern side of the southern annexe. An exception is the northwestern end of University Road West, where preservation is anticipated to be moderate. Although located on a raised embankment, some disturbance to the buried archaeology is anticipated by the numerous recorded service trenches.

## **8.4: ZONE 3, Mental Health Trust property (Maps 2 and 4)**

This zone is defined by Vincent Drive, University Road West, and the railway line, on its northwestern, northeastern and eastern sides respectively. The southwestern boundary of this zone is defined by a steep slope, facing to the southwest, created by modern dumping adjoining Zone 11.

### 8.4.1: Present land use

Part of this largely built-up zone is in the occupation of the South Birmingham Mental Health Trust. The remainder is occupied by a range of ancillary hospital buildings. Four major buildings, including a Boiler House, linked by tarmac roads, and adjoining surface car parking are located within the zone. The other buildings within the zone are of temporary construction, including a range of linked buildings adjoining Vincent Drive, constructed on rafted foundations. The zone also includes slightly-terraced, lawned areas. This zone also includes the a length of Vincent Drive and the roundabout to the northeast.

#### 8.4.2: Archaeological history

This zone has probably been the least archaeologically investigated within the fort complex overall. Previous archaeological work concerned with this zone has comprised:

- Trenching of the western defences of the Phase 1-2 and Phase 3 forts by St. Joseph and Shotton (1937) during 1934-6 in the vicinity of the *porta principalis dextra*, but this gate was not itself examined.
- This zone was included in archaeological assessments which also considered other parts of the fort complex (Jones 1997, Jones 1999d).
- Three trial-trenches were cut in connection with the proposed hospital development, to test the archaeological potential of internal areas within the Phase 1-3 forts (Jones 1999b).

#### 8.4.3: Archaeological potential (Map 4)

##### Phase 1-2 fort and annexe defences

This zone contains a length of approximately 130m of the western side of the Phase 1-2 fort defences, including the location of the *porta principalis dextra* and a length of 60m of the southern defences. It is probable that a corner-tower was located at the southwestern corner of this fort. Additionally, interval-towers could have been located mid-way between the *porta principalis dextra* and the southwestern angle of the fort, and also mid-way between this corner of the fort and the *porta praetoria*. The turf rampart and double-ditched defences along the western and southern sides of the fort were supplemented by various additional obstacles (excavated in Areas 3A, 3-4, Zone 4, Map 4).

This zone also includes the full length of the western side of the southern annexe.

##### Phase 1-2 fort and annexe interior

This zone contains part of the western and southern *intervallum* spaces of the Phase 1-2 forts, which could contain evidence of metalworking or breadmaking features, such as ovens and hearths, as well as latrines. Parts of the left *praetentura*, most of the left part of the central range, and a small part of the right side of the central range lay within this zone. The left *praetentura* would have contained barrack-blocks, workshops and store-buildings. A workshop and store-building (Zone 2, Area 2, Structures 2.1-2.2, Fig. 11) were located by excavation in the right *praetentura*.

The central range would have contained granaries and administrative buildings. A granary (Structure 3.2, Area 2, Fig. 10) was partly excavated to the north of Vincent Drive. On the assumption that it was constructed on longitudinally-placed beam-slots, this building could have extended southwards into the northern part of this zone. A loading-platform may have been constructed adjoining its northern side. Trial-trenching identified beam-slots associated with a second granary (Trench B2, Map 4, Jones 1999b), forming the southernmost building of the pair, although this latter building has not been fully investigated. As is also noted in the archaeological description of Zone 5 below, the layout of the central range of the forts is largely unknown because of limited excavation in this part of the interior.

Based on the published parallels, the central range of the Phase 1-2 fort at Metchley would probably have contained a *principia* (headquarters building) and a *praetorium* (the commander's house). The *principia* (Johnson 1983, fig. 98) was usually centrally located, adjoining the junction of the two principal streets of a fort, at Metchley probably located towards the northeastern angle of Zone 3. The *principia* generally incorporated a courtyard which would have been flanked by one or more ranges of buildings, used as armouries, store-rooms, administrative offices and also containing the regimental shrine and the treasury. The *principia* at the Claudian forts of Valkenburg in Holland (Glasbergen 1972) and Hod Hill, Dorset (Richmond 1968), which are approximately contemporary with the Phase 1 occupation of Metchley, both comprised a courtyard with a portico on four sides and a range of small rooms to the rear.

The *praetorium* usually adjoined the *principia*. The *praetorium* may have occupied the area between the *principia* and the side gate, or it could have shared this space with one or more granaries. The *praetorium* at Metchley could have been located in the extreme northeastern corner of Zone 3, or alternatively it could have been either partly or wholly in Zones 5 and 6 (see below). The *praetorium* housed the commanding officer, his family, their domestic servants, and also contained rooms for official guests. The plan of this building usually comprised four ranges of rooms, grouped around a central courtyard (Johnson 1983, 133), closely resembling the layout of provincial houses. Yards or compounds have been located adjoining the *praetorium*, sometimes associated with sheds, latrines, and possible stabling. In some excavated examples this includes rooms for the general use of the garrison, for storage or washing.

Excavation in the left *retentura* (in Zone 4) identified evidence for extensive internal alterations to the Phase 1 buildings which may be attributed to Phase 2A, and it is possible that the contemporary internal buildings within Zone 3 could have been similarly modified either as a result of a change or overall reduction in garrison, or consequent upon a change of site function, for example to a stores depot.

Following the deliberate clearance of the Phase 1 internal structures by fire, temporary structures, including buildings and fenced compounds, were constructed in the succeeding Phase 2B during the suggested use of the site as a stores depot (Zone 4, Areas 3-4, Fig. 15, Map 4). Trial-trenching identified a group of ovens or hearths backfilled with burnt red clay, some surviving as mostly above-ground features (Trench B2, Jones 1999b). Given the limited extent of investigations within the Phase 2B fort interior and the apparently haphazard and unusual layouts uncovered, it is impossible to predict the nature of the buildings or other structures located within this part of the forts during this phase of military occupation. In addition to the structural evidence, excavation elsewhere in the fort interior has uncovered evidence for possible ironworking, and similar features could have been located within this zone.

The zone also includes part of the interior of the southern annexe. By analogy with the evidence provided by excavation within the eastern annexe (Map 2, Area 7, Fig. 14), ovens and hearths cut into the rear of the annexe rampart could also be located within this zone, and traces of timber-framed buildings could be found within its interior.

### Phase 3 fort, defences and interior

Zone 3 contains a length of approximately 100m of the western defences of the Phase 3 fort and a length of approximately 60m of the southern defences of this fort. The evidence from excavation elsewhere along these sides suggests that the original ramparts were of turf. The southern rampart was reconstructed as a box rampart and the western rampart was reconstructed with a frontal timber revetment. The southern defences were reinforced by the re-cutting of the innermost ditch of the Phase 1-2 fort ditches along the southern side of the fort but no trace of this re-cutting could be identified along the western defences. This zone also contained the *porta principalis dextra* of this fort. Additionally, a corner-tower could have been located at the southwestern angle of this fort, and interval towers may have been located within this zone mid-way between the *porta principalis dextra* and the southwestern corner of the fort and also along the southern defences, between the southwestern angle of the fort and the *porta praetoria*. Interval towers have been identified along the more extensively investigated part of the western defences to the north of Vincent Drive and also along the northern defences.

This zone also contains parts of the western and southern *intervallum* spaces of the fort, which could have contained features associated with breadmaking or metalworking. Few details of the internal layout of the Phase 3 fort have been identified. On the assumption that this fort conformed to the usual Roman military layout, Zone 3 may include part of the left *praetentura* and much of the central range of this fort. The central range may have contained granaries, the *praetorium* and *principia*. The left *praetentura* would have contained barrack-blocks, workshops and store-buildings. The relative dearth of Phase 3 buildings identified within the substantial area of the left *retentura* investigated (Areas 3-4, Fig. 15) could suggest that the contemporary structures were constructed on earth-fast ground-beams, and that, consequently, little trace of these buildings may survive, except in those parts of the fort which are exceptionally well preserved.

### Phase 4

This zone could also contain the southward continuations of the western defences of a newly-identified fort, located by trial-trenching to the north of Vincent Drive (Trenches A2-3, Jones 1999b). The zone could also contain traces of other newly-identified forts, cut on different alignments to the Phase 1-3 forts. In addition to the defences of these newly-identified forts, traces of their internal buildings and other associated features could also be identified.

### Phase 5

This zone also contains the site of the post-medieval hunting lodge surrounded by a fence, mapped by Deeley (Fig. 3) and Sparry (Fig. 4A). The lodge was represented by a scatter of post-medieval tile identified during the archaeological monitoring of hospital building in the 1930s (St. Joseph and Shotton 1937).

#### 8.4.4: Predicted archaeological survival (Map 5)

A high level of potential archaeological survival may be predicted in the lawned area adjoining Vincent Drive. A medium level of potential survival may be anticipated beneath the footprint of the temporary buildings constructed on rafted foundations adjoining Vincent Drive. Potential archaeological survival in other areas of the zone may be predicted as low, although some islands of better preservation may be anticipated. A poor level of survival may be anticipated along the roads and within the present roundabout area.

#### 8.5: ZONE 4, University of Birmingham Medical School (Maps 2 and 4)

This zone is located to the north of Vincent Drive.

##### 8.5.1: Present land use

This zone mainly comprises the University of Birmingham Medical School buildings. An overgrown, west-facing embankment, planted with trees, defines part of the western zone boundary. The ornamental lawns to the north of Vincent Drive are planted with drifts of semi-mature trees. Various areas of surface car parking are located adjoining the Medical School, together with areas of temporary, stone-surfaced car parking.

##### 8.5.2: Archaeological history

Part of the northwestern defences of the Phase 1-2 fort is included within the area of the Scheduled Ancient Monument.

This zone probably comprises the most-intensively investigated part of the fort complex overall. Previous archaeological work concerned with this zone has comprised:

- Trenching of the northern and part of the western defences of the Phase 1-3 forts and of the northern and eastern defences of the Phase 2A northern annexe (St. Joseph and Shotton 1937).
- Investigations within the northern annexe interior in 1964 (Area 1B-C, Pretty 1969).
- Excavations in 1963 (Area 1A) and 1968-9 (Areas 3-4), examined parts of the western and northern defences of the Phase 1-3 forts, mainly within trenches.
- Large-scale investigations in 1968-9 (Areas 3-4) examined part of the left *retentura*. The *porta decumana* was further excavated in 1969 (Area 4D).
- This zone was included within the extensive assessment prepared earlier in 1999 (Jones 1999d).
- A number of trial-trenches was located within the zone in 1999 to test the archaeological potential of areas affected by the proposed hospital development (Jones 1999b).
- An area outside the eastern fort defences was examined by trial-trenching in 1992 (Atkins 1992).

##### 8.5.3: Archaeological potential (Map 4)

###### Phase 1-2 fort and annexe defences

This zone contains almost the full length of the northern side of this fort and lengths of approximately 70m and 20m of the northern ends of the western and eastern sides respectively. The western and northern sides of this fort were defended by a turf rampart and two outer ditches. Further obstacles to attack were provided by an outer

palisade and by the artificial raising of ground-level between the ditches. A possible corner tower was located by excavation (Area 5, Fig. 9) in the northwestern corner of the fort, and a similar structure was probably located in the northeastern angle of the fort. Further towers may have flanked the *porta decumana*, and interval towers may have been located mid-way between the northwestern and northeastern corners of the fort and this entrance, and also mid-way between the fort's northwestern corner and the *porta principalis dextra* along the western defences. However, excavation of the Phase 1-2 fort defences has not been sufficient to confirm the presence of such interval towers. One, or possibly both, of the Phase 1-2 ditches along the northern and eastern sides of the fort may have been re-cut in Phase 3.

The zone also contains part of the defences and interior of the Phase 2A northern annexe, and the extreme northern end of the Phase 2A eastern annexe defences, on the assumption that this latter annexe extended along the whole length of the Phase 1-2 fort.

#### Phase 1-2B fort and annexe interior

The zone includes the whole length of the northern *intervallum* space and parts of the eastern and western *intervallum* spaces of the Phase 1-2 fort, where evidence of breadmaking or industrial features may be located. More importantly, this zone contains the left *retentura*, part of the left side of the central range, and part of the right *retentura*. The *retentura* most usually contained barrack-blocks and workshops.

The excavated part of the left *retentura* contained two facing barrack-blocks (Fig. 10), of which the northernmost is most convincingly interpreted as a double-barrack block - an unusual building configuration often adopted as a space-saving measure. As excavated, the double barrack-block comprised three semi-independent structural units, separated by corridors. The eastern unit (mostly located outside the area investigated) may have comprised the quarters of two decurions or have been a self-contained *fabrica*. The central range comprised the men's quarters, providing accommodation for two cavalry *turmae*, each comprising 32 troopers, housed in a total of eight *contubernia*, each containing eight men. The western unit may have contained similar accommodation to the central unit, although it was incompletely excavated. A further suite of rooms for two decurions may have been located further to the west, either partly or wholly outside the area excavated. To the south of this barrack-block lay a further barrack-block. A similar arrangement of facing barrack-blocks may be expected in the right *retentura*, although sometimes this area of the fort was reserved for the senior unit, in which case the internal arrangements of this pair of barrack-blocks may have differed, chiefly in the provision of larger accommodation for the officers. Barrack-blocks housing units of different composition may have had different internal arrangements.

The excavated pair of barracks in the left *retentura* provided evidence of a change in the composition of the garrison, and possibly also for the conversion of the southernmost barrack-block for storage, possibly contemporary with the construction of the Phase 2A annexes.



This zone of the fort interior also contains the northern part of the central range. The northern part of a granary with two associated loading platforms was excavated in the south of this zone (Area 3-4, Fig. 10), and a further, adjoining granary, identified by trial-trenching to the south of Vincent Drive (Trench B2, Jones 1999b), may also have extended northwards into Zone 4. It is possible that the extreme southern edge of this zone could also contain the northern part of the *principia*, which was usually centrally placed within the fort.

This zone also contains much of the interior of the Phase 2A northern annexe. Although approximately 10% of its interior has been examined (Area 1B, Map 4), with largely negative results, the archaeological potential of the remainder of its interior remains to be tested. In particular, features could be concentrated along and adjoining the line of the northward continuation of the *via decumana*. Further features, such as ovens and hearths, could have been cut into the back of the northern annexe rampart, and similar features could be anticipated within the interior of the eastern annexe, if it extended into Zone 4.

Based on the excavated evidence from this area of the fort (Areas 3-4, Fig. 15), and the limited parallels recorded, it is unlikely that the Phase 2B structures - comprising timber-framed buildings, fenced compounds and other features - adhered to the usual fort layout. A store building with a raised floor, a possible wicker granary, and a fenced compound were identified in this part of the fort. The fenced compound may have been re-used during the later Phase 2B use of this area for ironworking. The identification of buildings associated with storage activity, and the largely negative evidence for barrack-type accommodation, together suggest that the Phase 2B fort probably functioned as a stores depot, with a small garrison.

#### Phase 3 fort defences and interior

The zone includes the whole length of the northern defences and lengths of approximately 60m and 15m of the northern ends of the eastern and western sides of this fort respectively. The northern defences of this fort were reinforced by the excavation of the innermost northern and eastern ditches of the Phase 1-2 fort. The Phase 3 rampart was constructed in turf, and was later reconstructed along the western and northern sides of the fort with a frontal timber revetment. The eastern rampart was reconstructed as a box rampart. This zone also includes the site of the *porta decumana* and the possible northeastern and northwestern corner towers of this fort. Two interval towers, positioned mid-way between the *porta principalis dextra* and the northwestern corner of the fort, and between this corner of the defences and the *porta decumana*, have been partly excavated along the western and northern defences respectively. A further interval tower, located mid-way between the *porta decumana* and the northwestern corner of the fort, may also be predicted within this zone. Excavation has suggested that the northern and western defences were strengthened by a palisade, and evidence of further, outer defensive obstacles could be found by more extensive excavation.

The zone includes the whole length of the northern *intervallum* space and the northern end of the western *intervallum* space, where ovens and hearths and a possible

cookhouse, located near to the *porta decumana*, could be anticipated. Only one building, a probable granary (Structure 4.3, Fig. 15), has been identified in the *retentura*, despite the examination of a substantial area. If, as is probable (but not proven), this fort followed the usual military layout, other buildings, including barrack-blocks and store-buildings, may have been located within this zone. The relative absence of buildings within the excavated parts of the Phase 3 fort interior could indicate that the contemporary structures were founded upon earth-fast ground-beams. It is possible that the ovens excavated in the northern *intervallum* space may indicate the positioning of the adjoining barrack-blocks, since these features were often used on a centurial basis and are frequently found by excavation to be placed adjoining the barrack-blocks which they served (e.g. Inchtuthil - Pitts and St. Joseph 1985). No contemporary buildings have been identified in the small part of the central range of this latest fort which has been investigated. Traces of further granaries, a *principia* and *praetorium* may be anticipated here if the fort adhered to the usual military layout.

#### Phase 4

This zone could also contain a length of the western defences of a newly-identified fort, located by trial-trenching to the north of Vincent Drive (Trenches A2-3, Jones 1999b, Map 4). Additionally, the zone could also contain traces of other newly-identified forts, cut on different alignments to the Phase 1-3 forts (not illustrated). In addition to the defences of these newly-identified forts, traces of their internal buildings and other associated features could also be identified.

#### Possible *vicus*

The identification of a group of copper alloy objects of probable civilian association from trenching of the Phase 1-2 and Phase 3 fort defences in 1963, and the proximity of the east-west aligned road entering the *porta principalis dextra* (positioned just outside the southern boundary of Zone 4), together suggest that this area may have formed part of the civilian settlement. Limited trial-trenching in the extreme west of this zone (Jones 1999b) failed to identify any structural or artifactual evidence of Roman civilian activity, although the belt of trees in this area has necessarily limited the scope of trial-trenching. However, trenching further to the east (Trenches A2 and A3, Jones 1999b) identified a quantity of pottery of 'native' origin, which could be civilian in association. It is also possible that this zone could contain part of a military cemetery laid out along the road entering the *porta principalis dextra*.

#### Phase 5

Trial-trenching identified a post-medieval re-cut of a Roman military ditch. This re-cut may be associated with the use of the surrounding area as a hunting park.

#### 8.5.4: Predicted archaeological survival (Map 5)

The level of archaeological survival is predicted to be generally high in the areas of temporary, stone-based car parking adjoining the eastern end of the Medical School,

along the wooded western margin of the zone, and within the lawned areas between Vincent Drive and the University Medical School. An exception is those areas previously investigated (Areas 3-4, 1968-9 excavations, Map 2) where archaeological preservation is predicted to be medium. Previous excavation will have extensively sampled the structural and other features present, although trial-trenching in 1999 (Trenches A3, A4A-B, Jones 1999b) demonstrated that some structural and other features do survive in part at least unexcavated. Preservation elsewhere in the zone may be predicted to be low.

#### **8.6: ZONE 5, Land to the south of Vincent Drive (Maps 2 and 4)**

This zone lies on the eastern side of the study area, and currently comprises an area of land of mixed use located to the southeast of Vincent Drive and to the northwest of the railway cutting.

##### 8.6.1: Present land use

The southwestern fringe of the zone, adjoining University Road West, comprises a grassed area planted with mature and semi-mature trees. The remainder of this zone comprises abandoned tennis courts and a newly-constructed car park. This car park was recently constructed overlying dumped ash and other deposits to ensure any underlying archaeological features were not disturbed (Jones 1999f). A boiler-house adjoining Vincent Drive is the only building within the zone. The area adjoining the railway embankment is overgrown. This zone also includes a length of Vincent Drive to the northeast of the roundabout.

##### 8.6.2: Archaeological history

Previous archaeological work concerned with this zone has comprised:

- Trenches cut in this zone during 1934-6 by St. Joseph and Shotton (1937) to test the eastern Phase 1-3 fort defences.
- An archaeological watching brief was maintained in 1999 (Jones 1999c) to monitor the construction of a new car park, but no archaeological features or deposits were recorded.
- This zone was included in the wider archaeological assessment prepared earlier in 1999 (Jones 1999d).

##### 8.6.3: Archaeological potential (Map 4)

###### Phase 1-2 fort and annexe defences

This zone contains a length of approximately 45m of the eastern defences of the Phase 1-2 fort. It is possible that an interval tower, located mid-way between the *porta principalis sinistra* and the northwestern corner of this fort, is located within this zone.

This zone also contained a length of approximately 40m of the eastern annexe defences, on the assumption that the eastern annexe joined the northeastern corner of the Phase 1-2 fort or the same corner of the northern annexe. Further, outer defensive ditches, possibly associated with this annexe, located by excavation (Zone 1, Area 6,

Map 2, Jones 1999a) to the south of this zone may have continued northward into Zone 5.

#### Phase 1-2 fort and annexe interior

A length of the eastern *intervallum* space of the Phase 1-2 fort, which could have contained hearths or ovens associated with breadmaking or ironworking, is located within the zone. This zone also includes part of the right *retentura*, which would have contained barrack-blocks, store-buildings and workshops. In particular, this zone could include the outermost barrack-block ends where the officers would have been housed. Detailed examination of the Phase 1-2 buildings within this part of the fort interior could also provide further evidence for their possible modification, possibly in Phase 2A, as is suggested by the results of excavation elsewhere in the fort interior (for example in the left *retentura*). It is possible that the extreme southwestern part of this zone could have included part of the right side of the central range, where one or more granaries and possibly the *praetorium* could have been located. As is noted in the Zone 3 description above, the layout of the central range of the Metchley forts is largely unknown because of very limited excavation in this area of the fort interior.

Further temporary buildings, other structures, and features associated with ironworking activities during the Phase 2B use of the site as a stores depot could be located within this zone.

The eastern annexe defences could be associated with hearths and ovens cut within the eastern *intervallum* space, by analogy with the evidence provided by excavation in the extreme south of the fort interior (Area 6, Fig. 12).

#### Phase 3 fort defences and interior

This zone contains a length of approximately 50m of the eastern defences of the Phase 3 fort, which comprised a rampart and single ditch. Investigations by St. Joseph and Shotton (1937) confirmed that the rampart on this side of the fort was composed of stacked turf, an arrangement probably adopted for stability. The rampart was later reconstructed on this eastern side of the fort with a timber revetment, forming a box rampart. Excavation outside this zone (in Zone 2, Maps 2 and 4) has confirmed that the timber supports of a box rampart along this side of the fort were braced in an alternating, triangular arrangement for stability. It is possible that an interval tower sited mid-way between the northeastern corner of the fort and the *porta principalis dextra* may be located within this zone, although contemporary interval towers have only been located along the western and northern sides of the fort, which have been more extensively investigated. The innermost Phase 1-2 fort ditch was re-cut in Phase 3, to provide an additional line of defence.

Part of the eastern *intervallum* space of this fort, which could have contained hearths and ovens associated with breadmaking or ironworking, is located within this zone. The proximity of this part of the *intervallum* space to the *porta principalis dextra*, and the location of a contemporary cook-house (Area 2, Map 4) adjoining the south side of this gate, could suggest that a further cook-house may be located in this area. If the

Phase 3 fort followed the usual military layout, parts of the right *retentura* and the right side of the central range would be located within this zone. The right *retentura* could have contained barrack-blocks, store-buildings and workshops. The central range could have comprised one or more granaries, the *principia* and the *praetorium*.

#### Phase 4

Given the recent discovery of the defences of newly-identified forts within Zones 2 and 4 (not illustrated), some cut on different alignments, it is possible to speculate that further parts of their defences could be located within this zone.

#### *Vicus*

The *porta principalis dextra* of the Phase 1-2 and Phase 3 forts was sited just to the south of this zone, although its exact position has yet to be located. It is possible that any roadside *vicus* adjoining the northern side of the road leading out of this gate could have extended northwards into this zone (e.g. former Tennis Courts).

#### Other features

The post-medieval re-cut of the eastern annexe ditch, probably associated with the use of the hunting park, may have extended northwards into this zone.

#### 8.6.4: Predicted archaeological survival (Map 5)

The predicted level of archaeological survival within this zone is generally predicted to be high, with the exception of the footprint of a service building and along part of Vincent Drive, where preservation may be low. A particularly high level of preservation may be anticipated beneath the raised edges of the terraces in this zone.

### **8.7: Zone 6. Blood Transfusion Service (Maps 2-4)**

#### 8.7.1: Present land use

This zone, located to the southeast of Vincent Drive, comprises the premises of the Blood Transfusion Service, which are adjoined by lawned areas and car parks, and Vincent Drive.

#### 8.7.2: Archaeological history

No archaeological fieldwork has been undertaken in this zone. This zone has not been included in any previous archaeological assessments.

#### 8.7.3: Archaeological potential

No archaeological features or deposits are presently identified within this zone. The northeastern boundary of this zone adjoins the projected course of a stream, now infilled. By analogy with the association between stream-channels and burnt mounds,

it is possible that further burnt mounds could be located to the southwest of the stream, just within this zone. This stream also formed part of the northeastern boundary of the hunting park. A further possibility is that traces of a ditch and possible bank enclosing the park could be found here. A ditched boundary, probably associated with the park, was located to the north of the Bourn Brook by trial-trenching (Jones 1999c, Map 2, Trench C2).

#### 8.7.4: Predicted archaeological survival

The potential for the preservation of archaeological features in this zone is generally low, although areas of better survival may be located outside the building footprints.

### 8.8: Zone 7. University Hospital (Maps 2-4)

#### 8.8.1: Present land use

Most notably, the zone includes the partially-reconstructed northwestern corner of the Phase 2A annexe defences, to the west of the University Medical School extension. The majority of this zone comprises the premises of the University Hospital. The zone also includes areas of surface car parking to the west of the hospital, Metchley Park Road, and modern, single-storey premises adjoining Harborne Lane.

#### 8.8.2: Archaeological history

The northwestern corner of the Phase 2A northern annexe is a Scheduled Ancient Monument.

Previous archaeological work within the zone has comprised:

- Part of the northeastern end of the northern side of the Phase 2A northern annexe was trial-trenched by St. Joseph and Shotton during 1934-7.
- The reconstructed northwestern corner of the Phase 2 northern annexe was archaeologically excavated by K. Dancey in 1949.
- The northwestern corner tower of the Phase 2A northern annexe was excavated by Webster in 1950 (Webster 1954), and reconstructed in 1956.
- This zone was included in the Metchley forts assessment prepared earlier in 1999 (Jones 1999d).

#### 8.8.3: Archaeological potential

The northeastern boundary of this zone adjoins the projected course of a stream, now infilled. By analogy with the association between stream-channels and burnt mounds, it is possible traces of burnt mounds could be located to the southwest of the stream-channel within this zone.

Most notably, the zone includes the partially-reconstructed northwestern corner of the Phase 2A northern annexe, including the reconstructed base of the northwestern corner tower. Parts of the adjoining *intervallum* area may contain traces of hearths or ovens associated with breadmaking or ironworking. The zone also includes the area immediately outside the defences, where additional defensive features could be located. The zone also includes the extreme northeastern corner of the Phase 2A northern annexe.

The stream adjoining the northeastern zone boundary also formed part of the northeastern boundary of the hunting park. A further possibility is that traces of a ditch and possible bank enclosing the park could be identified within this zone. A ditched boundary, probably associated with the park was located to the north of the Bourn Brook by trial-trenching (Jones 1999c). The northern edge of this zone could also include the site of Park House, mapped in 1813, and later known as Metchley Park Farm.

#### 8.8.4: Predicted archaeological survival (Map 5)

The partially-reconstructed northwestern corner of the Phase 2A northern annexe and the land immediately adjoining its western side are areas of predicted medium survival, and the opposing northeastern corner of the same annexe may be in an area of predicted poor survival.

### 8.9: Zone 8. Queen Elizabeth Psychiatric Hospital (Maps 2 and 4)

#### 8.9.1: Present land use

This zone, located to the north of Vincent Drive, comprises the Queen Elizabeth Psychiatric Hospital. It includes areas of surface car parking, landscaped areas to the south and west of the hospital, and a service road to the north of Vincent Drive.

#### 8.9.2: Archaeological history

Previous archaeological work within the zone has comprised:

- A programme of salvage recording was undertaken in 1988 and 1989 (Jones 1988, 1989) prior to the construction of the present hospital, to record a number of prehistoric burnt mounds.
- This zone was included within earlier assessments of Metchley Roman forts and their environs (Jones 1997 and 1999d).

#### 8.9.3: Archaeological potential (Maps 3-4)

Archaeological salvage recording in 1988-9 identified three burnt mounds of probable Bronze Age date (Jones 1988, 1989). These features adjoined a north-south aligned stream, which ran along the long axis of the main modern hospital building. A north-south-aligned gravelled trackway of probable post-medieval date, possibly associated with the Hunting Lodge, was also identified during this fieldwork. No features or artifacts of Roman date were recovered, although the scope of this fieldwork was admittedly very limited.

#### 8.9.4: Predicted archaeological survival (Map 4)

The predicted level of archaeological survival within this zone is low, with the exception of the landscaped areas to the south and west of the hospital, where a medium level of archaeological survival may be predicted.

## **8.10: Zone 9. Employment Rehabilitation Service (Map 2)**

### 8.10.1: Present land use

This zone comprises the single-storey premises of the Employment Rehabilitation Service. The surrounding area has been heavily terraced and landscaped.

### 8.10.2: Archaeological history

No archaeological fieldwork has been undertaken within this zone, nor has it been included within any previous archaeological assessments.

### 8.10.3: Archaeological potential (Map 2)

No known features or finds of archaeological significance are presently recorded within this zone. Given the distance between this zone and the western defences of the Metchley forts and the identified *vicus*, it is unlikely, although not impossible, that any associated features of Roman date may be located here.

### 8.10.4: Predicted archaeological survival

Since this zone has been built-over and also extensively landscaped, it is predicted that the potential survival of any archaeological remains would be low.

## **8.11: Zone 10. Women's Hospital (Maps 2-3)**

### 8.11.1: Present land use

This zone comprises hospital premises, together with associated surface car parking and landscaping.

### 8.11.2: Archaeological history

No archaeological fieldwork has been undertaken in this zone, nor has this zone been included in any previous archaeological assessments.

### 8.11.3: Archaeological potential (Map 3)

No known features or finds of archaeological significance are recorded within this zone. Given the distance between this zone and the western defences of the Metchley forts and the identified *vicus*, it is unlikely that any associated features of Roman date may be located here. Since the western boundary of this zone adjoins Harborne Lane, it is possible that traces of a possible bank and ditch forming the western boundary of the hunting park could be located just inside this zone boundary.

### 8.11.4: Predicted archaeological survival (Map 5)

No information is currently available concerning the survival of any archaeological features within this zone. However, the predicted degree of survival may be suggested



to be low in the area of the modern build, and moderate to low in the remaining parts of the zone.

## **8.12: Zone 11. Land to the south of Vincent Drive (Maps 2-4)**

### 8.12.1: Present land use

This zone comprises an area of overgrown land to the south of Vincent Drive. It contains areas of modern dumping.

### 8.12.2: Archaeological history

Previous archaeological work concerning the zone comprises the following:

- A trial-trench cut by St. Joseph and Shotton (1937) to the west of the fort, to identify an external road surface.
- Trial-trenching in connection with the proposed hospital development in 1999, which concentrated upon examining areas to the west of the forts, and to the south of the Bourn Brook (Jones 1999c).
- This zone was included within other more extensive archaeological assessments of the forts and its environs (Jones 1997 and 1999d).

### 8.12.3: Archaeological potential (Maps 3-4)

It is possible that further burnt mounds with associated waterlogged deposits could be associated with the two parallel north-south-aligned streams located towards the northern edge of this zone. Trial-trenching in connection with the proposed new hospital development in 1999 (Jones 1999c) failed to identify any evidence for such features, although the areas investigated were necessarily restricted by the considerable depth of modern overburden. A number of burnt mounds were identified along the same streams to the north of Vincent Drive (Zone 8). Further such sites could be located to the south of the road, especially since one of the principal attributes of the mounds is clustering. Associated waterlogged deposits could contain important plant and insect remains which may provide valuable data concerning the prehistoric environment (see Section 9.0).

The principal features identified by trial-trenching in this zone were associated with a *vicus* of mid-1st-century AD date, recorded outside the western defences of the fort complex. This *vicus* was probably laid out adjoining the road exiting the fort's *porta principalis dextra*. The remains comprised pebble surfaces, drainage and plot boundary ditches, post-holes defining fence-alignments and *in situ* occupation deposits adjoining the pebble surfaces. No traces of timber-framed buildings could be identified within the necessarily-limited areas investigated by trial-trenching. This *vicus* had been comparatively little disturbed by post-Roman activity, such as the recent widespread dumping operations in the valley to the west of the forts. More importantly, the *vicus* appears to be pre-Flavian in date, and to be largely unaffected by later Roman activity. Further investigation could provide a unique opportunity to recover a near complete ground-plan of one of the potentially earliest *vici* in the midlands.

A length of the postulated alignment of the Droitwich-Metchley Roman road may cross the southeastern corner of this zone.

Trial-trenching identified the southern ditched boundary of the hunting park (Jones 1999c) just inside the southern boundary of this zone. Traces of former mill leats are mapped (Map 3) in the extreme southwestern corner of this zone. These features were associated with Harborne Mill, sited to the west of Harborne Lane.

#### 8.12.4: Predicted archaeological survival (Map 5)

As demonstrated by trial-trenching, the level of survival of archaeological features and deposits in the *vicus* area is high. The horizontally-stratified deposits adjoining the southern and northern edges of the pebble surfaces will have provided especially good protection to the underlying features and deposits from later disturbances, although survival may be medium. The area to the south of the *vicus* may have been significantly disturbed by more intense dumping, and archaeological survival here may be anticipated to be low.

It is difficult to predict the level of survival of archaeological features and deposits along the line of the stream-courses to the west of the forts, because of the depth of the modern overburden, as demonstrated by the results of trial-trenching. The survival of archaeological features adjoining the northern bank of the Bourn Brook may be assessed to be poor.

### **8.13: Zone 12: South of Bourn Brook (Maps 2-4)**

#### 8.13.1: Present land use

This zone has been subject to extensive modern dumping and parts are heavily overgrown. The western edge of the zone comprises allotments. For health and safety reasons this zone was not inspected, and it is only included in the assessment for completeness.

#### 8.13.2: Archaeological history

No archaeological fieldwork has been undertaken in this zone.

#### 8.13.3: Archaeological potential (Map 3)

This zone contains a number of stream-courses, in addition to the southern bank of the Bourn Brook, which could be associated with burnt mounds and waterlogged, organic deposits of environmental significance. It is possible that the suggested alignment of the Roman Droitwich-Metchley road crossed this zone on a northeast-southwest alignment. Traces of mill leats associated with Harborne Mill may be located in the extreme northwestern corner of the zone. Towards the southern boundary of the zone lie the infilled remains of the Dudley No. 2 canal, and possibly also of associated structures (Figs. 6-8).

#### 8.13.4: Predicted archaeological survival

No information is presently available.

#### **8.14: Other areas** (Maps 3-4)

Although consideration of the archaeological significance of the Birmingham-Worcester canal and the adjoining railway is outside the scope of this assessment, it is nevertheless important to emphasise that these two features form important elements of the historic landscape in their own right.

## **9.0: FINDS AND ENVIRONMENTAL DATA**

This section describes the significance and potential significance of the finds and environmental data from the forts.

### **9.1: Roman pottery by Jane Evans**

The various excavations on the site of the Roman forts at Metchley have produced in excess of 6000 sherds of Roman pottery. The largest quantified assemblage came from Areas 1-5 (Map 4), excavated by Trevor Rowley during the 1960s. A publication report has been completed on this (Green *et al.* forthcoming) and on the small assemblage of 403 sherds from the West Car Park site excavated by BUFAU in 1997 (Hancocks forthcoming). A further assemblage of 1220 sherds was recovered during archaeological investigations by BUFAU in 1998. This has been assessed (Evans 1999) and awaits full post-excavation analysis. A summary of the pottery recovered by St. Joseph and Shotton in the 1930s has been published (St. Joseph and Shotton 1937, 79-83) and a selection of forms has been illustrated (*ibid.* figs 23-5), but the assemblage is not quantified. Only a few indeterminate sherds of pottery were recovered during Webster's excavations in the 1950s, none of which is illustrated (Webster 1954, 4). This section of the report aims to highlight the knowledge that has been gained from the pottery analysis completed to date, and to suggest questions which remain to be addressed if further work is to be undertaken. Willis (1997) has highlighted some research priorities for the study of Roman pottery.

Rowley's excavations added a significant assemblage of Claudio-Neronian pottery to the regional database and, based on the presence of rusticated jars, provided some evidence for activity continuing on the site into the late 1st or early 2nd century. In this respect it consolidated the findings of St. Joseph and Shotton in the 1930s. More detailed analysis of the forms and fabrics represented in the Rowley assemblage, however, allowed new insights into patterns of supply to the site, which could then be compared with other sites in the region. Until the Flavian period most of the pottery was locally made. Some of the mortaria may have been made on site, probably by military potters (Hartley forthcoming). With the exception of the Dressel 20 amphorae containing olive oil, only small quantities of continental pottery were reaching the site. A few storage vessels from other regional sources, such as the Malvern area, were represented, and probably arrived as containers for other commodities. Broad parallels were noted with other contemporary military assemblages from the midlands, for example the 'Belgic' influence in some of the forms. A number of parallels was also found with specific military assemblages, for example from Longthorpe (Dannell and Wild 1987), Wroxeter and Mancetter (Timby *et al.* in press), and Kingsholm (Darling 1977).

### **9.2: Environmental data**

Little environmental analysis has been undertaken to date at Metchley forts. Analysis of charred plant remains from the 1997 excavations has provided corroborative information assisting in the interpretation of the associated features and feature groups. Equally importantly, this analysis has provided useful information concerning

the range of cereals processed in this location, and also about the surrounding flora. Species identification of charcoal fragments found in archaeological contexts can assist in the reconstruction of the surrounding landscape and can also provide information concerning woodland management (e.g. coppicing).

Further important information can be derived from waterlogged deposits, often found in the bases of ditches and other deeply-cut features such as wells. Analysis of the assemblages of insect remains and pollen can also assist in the comprehension of the surrounding environment.

Examination of buried soil profiles (surviving for example beneath fort and annexe ramparts) can also help develop our understanding of the fort's environment. Analysis of soil micromorphology can assist in the detailed interpretation of deposit types, the nature of their deposition, and also contribute information concerning the ground conditions within the fort's immediate surrounds.

Waterlogged ditch fills and buried soils possibly surviving under lengths of rampart may be found in Zones 1 and 3-5 (Maps 2 and 4).

## **10.0: SURVIVAL AND SIGNIFICANCE BY PHASE (Maps 1-6)**

This section of the report is arranged to provide an assessment of the survival and significance of deposits associated with each of the main phases of activity represented at Metchley. Assessment is based upon the criteria defined in 'The New Approach To Appraisal' (English Heritage 1998) hereafter TNATA, together with a consideration of the broader, research potential of the forts and other archaeological features and deposits, and their amenity value.

When considering the potential survival of areas within the forts no account is taken of zones destroyed by canal or railway construction, or of those areas previously archaeologically excavated in detail. Areas previously excavated, where there remains some potential for further archaeological investigation, are included.

When considering the further academic potential of the site, account should be taken of the limitations of the data provided by the pre-1970 excavations at the site. Approximately 12% of the interior of the Phase 1-2 fort was excavated up to that date, and additional trenching of the defences was also undertaken at that time. However, certain scientifically-based techniques of archaeological analysis, applied routinely to current excavations, were not fully developed during the 1960s. Consequently, the full potential of certain information, most notably concerning the environment, the patterns of military supply, and the nature of ironworking activities, was not then collected.

### **10.1: Prehistoric (Maps 3-4)**

Evidence of burnt mounds of prehistoric date may be anticipated within Zones 6-8, 11 and possibly 12. Other evidence of prehistoric activity may be provided by scatters of

flint artifacts found within Roman contexts and in the topsoil. The possible location and extent of this group of artifacts is difficult to predict. The form and significance of the burnt mounds are summarised below following the criteria in TNATA as follows:

#### DEFINITION

- Form. The sites mainly survive as upcasts of heat-shattered stone set in a matrix of charcoal-rich soil.
- Survival/condition. The areas where burnt mounds are most likely to be located are areas of potentially medium archaeological survival. It is possible that the mounds could also survive as above-ground features. Any above-ground features would be especially vulnerable to damage. Damage to below-ground deposits would include the desiccation of waterlogged soils. It is possible that prehistoric features could have survived beneath the fort ramparts and beneath pebbled surfaces which could have protected the earlier features and deposits from later disturbances.
- Complexity. Burnt mounds may be associated with possible trough-pits, and contemporary, waterlogged stream-channel-deposits, which could provide information about the contemporary environment. As demonstrated by the results of salvage recording in Zone 8 during 1988-9, a typical feature of burnt mounds is their clustering (Jones 1988, 1989).
- Context. The burnt mounds were located adjacent to streams and their valleys. No trace of the streams and the associated valleys is presently visible, due to modern dumping.
- Period. Burnt mounds are the principal site types of prehistoric date in Birmingham and also in parts of the surrounding areas.

#### SIGNIFICANCE

- The scale it matters/ significance. Regional. Evidence of prehistoric activity in the Birmingham area is largely confined to burnt mounds and chance finds of metalwork.
- Rarity. Burnt mounds are arguably the most important source of information for the prehistoric period in the Birmingham area.
- Amenity value. The identification of further burnt mounds could provide the opportunity for public display and presentation of this aspect of prehistoric archaeology, and also to contribute towards the wider appreciation of the multi-phase nature of occupation and activity at the site (i.e. prehistoric, Roman and post-medieval).

#### **10.2: Significance of the Roman forts (Maps 2 and 4-5)**

The particular significance of the forts lies in its contribution to the wider appreciation of comparatively-early Claudian fort layouts and the evidence provided by large-scale archaeological investigation for the nature of its garrison, and the suggested changes in its composition. Metchley has also provided evidence of temporary structures of types rarely identified within a military context, which are associated with the suggested function of the site as a stores depot in Phase 2B. Metchley can also

contribute towards an understanding of the patterns of early military deployment in the midlands and beyond. For example, the excavated evidence has suggested the presence of cavalry *ala* within the Phase 1, and possibly also the Phase 3, garrisons. An association with a legionary vexillation may also be suggested by elements of the barrack-block ground-plans, and the recovery of wall-sided mortaria, usually associated with the XIVth legion. It may be suggested that a legionary vexillation could have been responsible for overseeing the construction of the Phase 1 fort. Although the sequence of military activity is comparatively clear, the dating evidence is presently fairly limited. Another important contribution of the Metchley forts to the broader study of early military archaeology lies in the analysis of early patterns of military supply (Hurst 1985).

In addition to the four main military phases of activity, the newly-identified fort defences suggest that a maximum of three further phases of military activity may be represented at the site. These presently unphased forts have been provisionally attributed to Phase 4 in this report, pending detailed analysis. A total of seven military phases may therefore be represented at the site. This new data reinforce the value of Metchley to contribute on a national and regional basis to the study of Roman military deployment in the second half of the 1st century AD.

Probably the most important recent discovery at Metchley was the identification of a *vicus*, located to the west of the forts, during trial-trenching in connection with the proposed hospital development (Map 4, Fig. 13). The pre-Flavian date of the *vicus* and the absence of significant later disturbances suggest the potential for the recovery of a near-complete ground-plan, which would be of considerable academic importance particularly considering its suggested early date. The previous evidence for such a *vicus* mainly comprised an unstratified group of copper alloy objects.

The forts and associated *vicus* are also the most important component of the multi-phase landscape, which also includes the evidence for prehistoric and post-medieval activity.

### **10.3: Phase 1-2 forts (Maps 2-6)**

#### **10.3.1: Potential preservation of defences (Maps 2, 4-5)**

The western side of the forts is probably the best preserved overall, being located in areas of high potential survival (Zone 4), medium survival (Zone 3), and low survival (Zone 3). The northern defences are also relatively well preserved, being located in areas of predicted high (Zone 4) or medium (Zone 4) survival. The extreme eastern end of this side of the defences was cut by the Elan Aqueduct (Zone 4). The eastern defences are mostly located in areas of high survival (Zone 5, Zone 1). Part of this side, in the area of Vincent Drive (Zone 5), is an area of low predicted survival. The southern defences are probably the least well preserved. They are located in areas of low predicted survival (Zones 2 and 3). The *porta principalis sinistra* has been dug away by the canal and railway cutting. The *porta principalis* is located in an area of low predicted survival (Zone 2). The *porta principalis dextra* (Zone 3) and the *porta decumana* (Zone 4) are both located in areas of medium survival.

The potential preservation of areas outside the Phase 1-2 fort defences is described in Section 8.0 above, by zone.

### 10.3.2: Potential preservation of internal features

The potential survival of archaeological features and deposits in the *retentura* is varied. Some areas of high preservation are located in the left (Zone 4) and right *retentura* (Zones 4 and 5). The areas of predicted high archaeological survival in the right *retentura* and the adjoining eastern *intervallum* space are located in Zones 4 and 5. Other areas in the *retentura* have either a medium potential for archaeological survival (Zone 4, including areas previously archaeologically-excavated) or a predicted low level of archaeological survival (Zones 3 and 5).

The potential survival of archaeology in the central range is also varied. Archaeological survival within parts of the left side of this part of the fort interior is anticipated to be high (Zones 3 and 4). A similar, or possibly even better, level of survival may be anticipated on the right side of the central range (Zone 5). The remaining areas within the central range are considered to be either of medium survival (Zone 3) or low survival (Zones 3 and 5).

The *praetentura* is the least well preserved area of the Phase 1-2 fort interior overall. The area of potential medium survival is located on the left side of this part of the fort interior (Zone 3). Potential survival over the remainder of the *praetentura* is predicted to be low (Zones 2 and 3).

### 10.3.3: Aspects of key research potential

The areas of the highest research potential associated with the Phase 1-2 fort comprise the following:

#### 1) The defences

- Areas where waterlogged deposits may be anticipated in the base of the ditches, which could contribute to an understanding of the fort environment. These areas are impossible to predict on the present evidence.
- The locations of the potentially surviving fort gates, most notably the *porta principalis dextra* (Zone 3). Recent investigations have confirmed that greater quantities of pottery were deposited close to the ditch terminals, providing a larger sample for dating, and more significantly for the analysis of patterns of military supply, including the cross-comparison of the military material with the pottery derived from the *vicus*.
- The unexcavated junctions between the Phase 1-2 defences and the annexes, which could further elucidate the defensive sequence (e.g. Zones 4 and 11).

#### 2) Fort interior

- Areas where sufficiently-large segments of the internal layouts of the barrack-blocks may survive, which could help elucidate the size and composition of the garrison and also to detail any changes in its composition (e.g. in Phase 2A). In particular, the further examination of the part-excavated double barrack-block and



the investigation of the location of a possibly similar building in the right *retentura* should be considered as a priority because of the potential of this building to provide important information concerning the layout of comparatively-early Claudian forts.

- Areas where further investigation could elucidate the industrial functions of the fort (e.g. ironworking). Although possible ironworking features have been identified by previous excavation, sampling for small metallic residues was not undertaken, and consequently the nature of the activity (smithing, smelting etc.) is not understood.
- The central range, since few details of its internal arrangement have been provided by excavation to date. In particular, a fuller examination of the fort's granaries could provide important information concerning the size of the garrison and also regarding this key aspect of military supply.

#### 10.3.4: Assessment

##### DEFINITION

- Form. The fort is defined by its defences – comprising double ditches, a rampart, and additional, outer defences. It is also defined by the internal structures – mainly the remains of timber-framed buildings, with associated pebble surfaces. The evidence for industrial activity, including the partially excavated *fabrica* (Area 2, Fig. 11), the extensive hearth-pits and ovens and associated industrial deposits are also important. The finds, mostly pottery, provide the primary source of dating, and a database of the patterns of trade. The environmental data can contribute towards our understanding of the contemporary environment and the military diet.
- Survival/condition. Excavation has demonstrated that the defences and the internal features belonging to this fort survive in good condition over extensive areas. Areas of significant size within the *retentura* and the central range may be predicted to contain deposits of high or medium survival. Archaeological survival in the *praetentura* is generally more limited. A notable feature of parts of the fort interior (e.g. Zone 2, Area 2; Zone 3, Trench B2) is the evidence for stratified deposits. Stratified deposits are also anticipated in Zones 3 and 5.
- Complexity. The Phase 1 fort defines the first stage in the complex military history of the site. It is also related to the contemporary *vicus*. Internally, the Phase 1 fort is represented by the original building-plans, although later additions to the buildings could have taken place subsequently in this phase, in Phase 2A, or in both. A number of different timber-framed building types, including two distinct types of barrack-blocks, granaries, store-buildings and workshops, has been uncovered. Evidence of other features possibly associated with ironworking have also been uncovered.
- Extensive investigation within the fort interior has provided a detailed understanding of this unusual, early Claudian layout.
- Context. Although the Phase 1-2 (and Phase 3) forts and their environs are heavily built-up, it is nevertheless possible to appreciate the relationship between the site, the natural topography, and the Bourn Brook which may have provided a water supply.

- Period. This is a comparatively-early Claudian fort, comparable with others on the continent and with a limited number of partly-excavated forts in Britain. Few contemporary, early-Claudian military forts can be dated with confidence in the midlands.

## SIGNIFICANCE

- The scale it matters. The fort has the potential to contribute on a national basis to the wider understanding of early military deployment and fort planning.
- Significance. The site is especially important because of the evidence it provides for early fort planning. The large-scale investigations in the fort interior have provided important insights into the possible composition of the garrison. Equally important is the evidence for reconstruction of the buildings, which may be linked to a change in function, at least in part, or in the composition of the garrison.
- Rarity. Evidence of such an extensively-excavated early Claudian layout is relatively unusual in a British context. The evidence for the extensive remodelling of the fort's internal buildings is also of particular importance. The ground-plan of the partly-excavated double-barrack-block is without a close British parallel. The structural remains of this phase comprise beam-slots for timber-framed buildings, beaten-earth and pebbled floor surfaces, and horizontal destruction deposits, and as such are potentially highly vulnerable to shallow disturbances.
- Amenity value. The Phase 1-2 fort also has a value for the public presentation of the site, particularly because its internal layout has been extensively investigated.

### 10.4: Phase 2A/B annexes (Maps 2-6)

#### 10.4.1: Potential preservation (Maps 2, 4-5)

The reconstructed northwestern corner and the western side (both Zone 7) of the northern annexe are located in areas of predicted high archaeological survival, as is the extreme southeastern corner of the annexe (Zone 4). Most of the eastern and northern defences of this annexe and a large part of its interior are located in areas of predicted low survival (Zones 4 and 7).

It may be assumed that the eastern annexe extended along the full length of the eastern side of the Phase 1-2 fort, although this cannot presently be proven. Part of its eastern defences and interior is located in an area of high potential survival (Zone 5). Part of this side and the annexe interior is located in an area of medium survival (Zone 2, University Road West). The remainder of this side is located in an area of predicted low survival (Zone 5, Vincent Drive). The northern side of this annexe is located in areas of both high and low predicted survival (both Zone 4).

The defences and interior of the southern area are located in areas of predicted low survival (Zones 2 and 3).

The potential preservation of areas outside the annexe defences is described in Section 8.0 above by zone.

#### 10.4.2: Aspects of key research potential

- Further detailed investigation of the annexe interiors could provide details of their internal layout and also possibly of their function, and could contribute to an understanding of the function of the Phase 2A fort overall.
- Based on the excavated evidence from the eastern annexe, the *intervallum* areas of these annexes could be of particular importance, potentially elucidating the nature of the industrial processes being undertaken in these areas.

#### 10.4.3: Assessment

### DEFINITION

- Form. The northern, eastern and southern annexes are represented by re-cut ditched defences and above-ground ramparts. The eastern annexe alone is associated with internal features – comprising hearth-pits, ovens and possibly contemporary outer defences. The annexe ditches contain charred plant remains and pottery which can contribute to the development of site chronology and the understanding of patterns of military supply.
- Survival/condition. The southern annexe defences and interior are generally sited in areas of predicted low archaeological survival. The northern annexe is located in areas of high, medium and low survival. The eastern annexe is located in areas of high-medium potential survival. The reconstruction of the northwestern corner of the northern annexe may have protected associated features such as ovens and hearth-pits from disturbance.
- Complexity. The annexes form an important part of the military occupation of the site. Possibly forming open storage areas, the annexes could be associated with an early use of the site as a stores depot, possibly preceding Phase 2B. Use of the annexes could also have been contemporary with the continued occupation of the *vicus*. The different width of the eastern annexe as opposed to the northern and possible southern annexes, could suggest a difference in function. The eastern annexe was probably contemporary with the northern and southern annexes, although the former was cut on a slightly different alignment. The eastern annexe was later re-defined in Phase 3, and subsequently in the post-medieval period.
- Period. Annexes are typical military features of the mid-late-1st-century in the midlands and beyond.

## SIGNIFICANCE

- The scale it matters. The reconstructed part of the northern annexe is a Scheduled Ancient Monument. With the exception of the Scheduled Area, the annexes may be considered to be of national/regional importance.
- Significance. Further investigation of the annexes could detail their function and contribute towards a broader understanding of the overall military function of the site. Nationally, comparatively few large-scale investigations have been undertaken within annexe interiors.
- Rarity. Although the existence of annexes at other forts (e.g. Greensforge, Kinvaston) has been confirmed by aerial photography, the three potentially contemporary annexes at Metchley and their possible association with structural (and possibly functional) changes within the Phase 1 fort interior are perhaps without clear excavated parallels from the midlands. The annexe defences are generally less substantial and are therefore more vulnerable to modern disturbance than the fort defences. Any internal features such as ovens and hearth-pits could also be affected by comparatively shallow modern disturbances.
- Amenity value. The reconstructed northwestern corner of the Phase 2A northern annexe is an important feature in the modern landscape. The annexes could contribute further to the public presentation of the full sequence of Roman military activity at the site.

### 10.5: Phase 2B fort interior (Maps 2-6)

#### 10.5.1: Potential preservation (Maps 2, 4-5)

The potential for the survival of Phase 2B internal features, including buildings, fenced compounds and ironworking features, is generally similar to that of the internal features of the Phase 1-2 fort (see above), although the Phase 2B fort was not laid out in the usual military manner. However, the slighter internal features associated with the suggested use of the site in Phase 2B as a stores depot will tend to survive better in areas where the overlying Phase 3 rampart and its collapse has provided protection from later truncation (e.g. Zone 4, Areas 3-4, Fig. 10, Zone 5); this could also be the case beneath modern dumping. Because of the predicted high level of survival of parts of the Phase 3 eastern defences (Zone 5), the preservation of Phase 2B internal features is predicted to be particularly high in this sector of the fort interior. A high level of survival of the Phase 2B internal features may be predicted towards the western *intervallum* space of the fort (Zone 4), outside the areas previously examined by area excavation.

#### 10.5.2: Aspects of key research potential

Since it is not possible to provide a predictive model of the Phase 2B fort layout based on the limited excavated evidence from the site and the few published parallels, it is difficult to identify the key areas of potential for further study. However, the following aspects of potential may be suggested:

- The irregular nature of the plan of the buildings and other features suggests that only the examination of large areas of high and medium survival may elucidate the overall function of the site, and also the layouts and functions of the individual buildings and other features represented.
- The relatively shallow nature of the structural remains of this period and the important evidence for a sequence of Phase 2B activity suggests that further investigation should target areas of high potential for survival.
- The investigation of the central range of the fort, where administrative buildings may be found, is also a priority, since no details of the administrative buildings of this (or other phases) are known.

### 10.5.3: Assessment

#### DEFINITION

- Form. The associated internal features - comprising a timber-framed store building, a possible stables/grooms' quarters, temporary sheds, fenced enclosures, ovens and hearths probably associated with ironworking - are diverse.
- Survival/condition. The extent of the Phase 2B fort interior is the same as that of the Phase 1 fort (discussed above) with the exception that the internal remains of the Phase 2B fort are less substantial, and thus more vulnerable to disturbance.
- Complexity. The Phase 2B stores-depot forms an important chapter in the military history of the site. The Phase 2B fort has particular value in being associated with both earlier and later military occupation of the site and also possibly with a contemporary civilian settlement.
- Period. Such irregularly-constructed temporary buildings are only occasionally found in a military context (e.g. Derby, Wilderspool) in the 1st-century.

#### SIGNIFICANCE

- The scale it matters. The rarity of such features belonging to a probable military stores-depot suggests the remains are of national importance.
- Significance. Further understanding of the layout and function of the individual features could contribute more widely to an appreciation of similar structures located in a military context. More widely, it is possible that the further investigation of the contemporary features could elucidate the supply function of the site.
- Rarity. Evidence of such irregularly-planned structures of temporary nature within a military context is exceptionally rare, especially within the midlands. The number of metalworking, or probable metalworking, features is also an unusual and a significant feature of the Phase 2B fort. As is noted above, the remains of the Phase 2B fort are less substantial than those of the preceding Phase 1 fort and are for that reason more vulnerable to disturbance.

- Amenity value. The potential value of evidence from this phase of military activity to contribute to the public interpretation of the site should be acknowledged.

## 10.6: Phase 3 fort (Maps 2-6)

### 10.6.1: Potential preservation (Maps 2, 4-5)

The potential for the preservation of the Phase 3 fort defences is overall quite high. The potential level of preservation along the western defences is high (Zone 4), medium (Zone 3) and low (Zone 3, including Vincent Drive). The predicted level of preservation along the northern defences is high (Zone 4) and medium (Zone 4, including areas previously archaeologically investigated). The potential survival of the eastern defences is mostly predicted to be high (Zones 4 and 5), although a small area of predicted low preservation (Zone 5, Vincent Drive) is also recorded. The southern defences are located wholly in areas of low potential preservation (Zones 2 and 3). The partly-excavated *porta decumana* (Zone 4) and the *porta principalis sinistra* (Zone 3) are located in areas of medium potential for survival. The remaining gates were dug away by the canal and railway cutting.

For the purpose of assessing the archaeological potential of the Phase 3 fort interior it is assumed that this fort conformed to the usual military layout, although this cannot be confirmed.

A number of relatively small areas within the *retentura* and the adjoining *intervallum* spaces may be assessed as having high potential for archaeological survival (Zones 4 and 5), the larger areas being located on the left side of this part of the fort interior. Two larger, contiguous areas within the *retentura* (Zone 4, including area previously archaeologically-excavated) both have a medium potential for archaeological survival. Much of the right *retentura* in the area of the modern roundabout and Vincent Drive and across the projected alignment of part of the Elan aqueduct (Zones 3 and 5) may be predicted to be areas of low potential for archaeological survival.

The left side of the central range is partly located in areas of predicted high archaeological potential (Zones 3 and 4). Both areas are substantial in size, and archaeological preservation in both is anticipated to be especially good because of recent overlying built-up deposits. One area adjoining the eastern *intervallum* within the right side of the central range is also an area of predicted high archaeological preservation (Zone 5). The remaining areas within the central range are assessed as being either of medium (Zone 3) or low survival (Zone 3).

The *praetentura* is probably the least well preserved area of the fort interior, as has been noted above in relation to the Phase 1-2 forts. No part of the *praetentura* is located within areas of high potential for archaeological survival. A small part of the *praetentura* is located in area of medium survival (Zone 3). The majority is located in areas of low predicted archaeological survival (Zone 3).

The potential preservation of areas outside the Phase 3 fort is described in Section 8.0 above, by zone.

#### 10.6.2: Areas of key research potential:

- Areas which could provide information concerning the contemporary fort environment, for example by the examination of buried soils and waterlogged fills from ditch and other features.
- Areas which could contribute towards an understanding of the size and nature of the garrison.
- Areas which could contribute towards an understanding of the layout of the central range of the fort.

#### 10.6.3: Assessment

##### DEFINITION

- Form. The Phase 3 fort is represented principally by the ditched defences, re-cutting of the earlier defences, and by the earlier Phase 3 turf rampart, later reconstructed in timber. It is also associated with groups of hearth-pits and ovens located in the *intervallum* areas. The associated buildings are relatively few - comprising a granary and a possible cook-house.
- Survival/condition. As noted above, the defences (particularly the eastern and western sides) have a largely high potential for survival. Areas of significant size within the *retentura* and central ranges may be assessed as of high or medium survival. Archaeological survival in the *praetentura* is more limited. The survival of the Phase 3 rampart (especially within Zone 5) may contribute significantly to the survival of earlier, underlying features.
- Complexity. The fort is associated with a range of features relating to the construction of the defences in turf and their reconstruction in wood, in addition to internal features. Internally the fort provides evidence of cooking including a possible cook-house, possible ironworking and grain storage. Perhaps the most important attribute of this fort is the evidence for the construction and re-construction of its rampart.
- Period. Roman military occupation in the midlands and elsewhere is characterised by forts of similar size and construction.

##### SIGNIFICANCE

- The scale it matters. The Phase 3 fort is of national importance. It could contribute towards an understanding of the changing nature of the military occupation of the site and, on a wider canvas, to the appreciation of patterns of Roman military deployment.
- Significance. The Phase 3 fort has a particular value as being one of a sequence of forts occupying the site. It has a particular importance in being associated with a re-occupation of the site, and also perhaps through being the latest military activity on the site which has been investigated in detail

at Metchley. If proven, the existence of a contemporary civilian settlement would add further academic significance to the fort.

- Rarity. Although comparatively little is known about this fort, in particular concerning its internal arrangement, certain details of its construction are unusual. In particular, the use of a timber revetment for the western and northern rampart, and a rearward support structure along part of its northern side, are all atypical features of Flavian forts in Britain. The limited evidence for internal structures could indicate that some of the internal buildings may have been founded upon ground-fast sleeper beams, in which case their remains would be especially vulnerable even to shallow sub-surface disturbances. Equally, any above-ground traces of the rampart could be destroyed by limited disturbance, as may be traces of other structural features, such as ovens and hearths. Although in places the Phase 3 internal features may be overlain by protective destruction deposits, and also by collapsed rampart material, the features and deposits belonging to earlier phases of military activity have been sealed by earlier destruction deposits as well as by later occupation deposits. The remains of the Phase 3 fort may therefore be considered to be especially vulnerable.
- Amenity value. The potential of this latest fort to contribute to the public presentation and interpretation of the site should be acknowledged.

#### 10.7: *Vicus* (Maps 2-6, Fig. 13)

Evidence of a *vicus* was located by trial-trenching in connection with the proposed hospital development outside the western defences of the fort complex, to the south of Vincent Drive (Jones 1999c). Further, artifactual evidence of possible civilian occupation was found to the north of Vincent Drive during trenching in 1963 and 1999. This evidence comprised a group of copper alloy objects identified as probably civilian in association (found in 1963), and a quantity of pottery of 'native' origin found in 1999.

##### 10.7.1: Key research themes

- The opportunity to investigate one of the potentially earliest *vici* in the midlands, comparatively unaffected by later Roman or subsequent disturbances.
- The recovery of a complete ground-plan, or a near-complete ground-plan of the *vicus*.
- The opportunity to investigate the relatively-undisturbed zone around the *vicus*, which might provide evidence of associated features such as field systems, a cemetery, and roads.
- Comparison of the data from the early forts and *vicus*, to elucidate the symbiotic relationship between the military and civilian elements, in particular by comparison of the evidence provided by the pottery for military supply.
- Comparison of the structural and artifactual evidence from the *vicus* with the Phase 2B fort.



### 10.7.2: Potential preservation (Map 5)

The *vicus* identified by trial-trenching is an area with a predicted high level of potential preservation (Zone 11). The land to the south of the *vicus* is an area of predicted medium preservation (Zone 11).

### 10.7.3: Assessment

#### DEFINITION

- Form. The *vicus* was represented by pebble surfaces, associated *in situ* occupation deposits, drainage and boundary ditches and possible fence-lines, represented by post-hole alignments. The *vicus* extended over an area of approximately 0.7ha. The *vicus* may also be represented more widely by spreads of finds, including pottery and copper alloy objects, located to the north of Vincent Drive.
- Survival/condition. Despite some disturbance by modern dumping, the *vicus* area is located in an area of predicted high survival. Adjoining areas to the south may have been significantly affected by dumping, where a medium level of survival may be predicted.
- Complexity. The Metchley *vicus* is represented by a variety of feature types, and by pottery, including imported fine-wares. The various alignments of drainage and boundary ditches recorded suggest re-planning of its layout. The *vicus* would have been under military control, and it forms an integral part of the military occupation of the site, probably associated with military Phases 1-2.
- Context. The *vicus* was located on a natural plateau to the east of the forts, which still remains visible despite extensive modern dumping. The *vicus* was also sited here to take advantage of water supply from the adjoining streams, which have been infilled by dumping although their former course is represented by belts of mature trees. With the exception of the reconstructed northwestern corner of the northern annexe, the forts are not visible as above-ground features, although the steep, west-facing scarp forming part of the eastern boundary of Zone 11 follows the approximate line of the western fort defences.
- Period. Trial-trenching suggests the *vicus* may be dated to the pre-Flavian period, which could suggest that Metchley was one of the earliest *vici* in the midlands.

#### SIGNIFICANCE

- The scale it matters. As a substantially-complete *vicus* of notably early date, the site may be considered to be nationally important. It also offers the potential to study the *vicus* and contemporary forts as part of a single research project. Study of interaction between the Roman military and civilian communities in dependant settlements has been acknowledged as an academic priority by English Heritage (English Heritage 1997, 49, H1). The Society for the Promotion of Roman Studies (1985, Priorities for the

Preservation and Excavation of Romano-British Sites) has noted that ‘the interaction between the military enclave on the Pennines and elsewhere needs further exploration. This approach, treating fort, associated settlement and its immediately associated field systems as a single entity is almost totally lacking (4.2.2.1), and that ‘there is a need for research-orientated strategy for a study of such settlements, irrespective of rescue threats or otherwise’ (4.2.2.4).

- **Significance.** The site is important as contributing to the interpretation of the adjoining forts through analysis of the structural and artifactual evidence. The *vicus* provides the opportunity for the recovery of a near-complete ground plan. Its comparatively small size suggests the importance of comparison with larger *vici*, such as at Wall.
- **Rarity.** The *vicus* is the earliest settlement of Roman date in the Birmingham area, and also the earliest archaeologically-investigated settlement within the city. Few such potentially early *vici* have been investigated in the midlands. The opportunity to recover a near-complete ground-plan of the *vicus* is very unusual, since most such sites have been at least in part built-over or plough-truncated. The features within the *vicus* are less substantial than the military features, and as such are more vulnerable to disturbance. If the timber-framed buildings within the *vicus* were set on ground-fast beams, their remains would be very vulnerable to disturbance.
- **Amenity value.** The *vicus* provides an opportunity for public presentation and interpretation in its own right. It also forms an important constituent of the Roman landscape.

#### **10.8: Post-medieval features (Map 2)**

Evidence of the post-medieval landscape is more fragmentary and difficult to assess. Remains of features associated with the use of the area as part of a hunting park may be found, including evidence for the possible re-use of Roman military features for game pens, as has been suggested for the eastern annexe above. In this context it should be noted that the canal and railway are important survivals of the late-18th-early-19th-century landscape. Evidence of post-medieval land-use is also important in the context of the study of landscape development over time. These post-medieval features may be considered to be of regional or local importance.

There are no listed buildings currently within the study area.

#### **10.9: National importance**

**The areas of national, or regional importance within and adjoining the fort complex are defined on Map 6.**

**Based on the evidence for potential archaeological survival and potential archaeological significance, it is considered that the following Zones/areas within or immediately adjoining the fort complex may be considered to be of national importance:**

<b>ZONE 1</b>	
<b>ZONE 3</b>	
<b>ZONE 4</b>	
<b>ZONE 5</b>	
<b>ZONE 7</b>	<b>Scheduled Ancient Monument</b>
<b>ZONE 11</b>	<i>Vicus</i>

## **11.0: ARCHAEOLOGICAL MITIGATION (Maps 6-7)**

### **11.1: Introduction**

At present it is difficult to define the main effects of the proposed new hospital scheme, since full details of its layout, the associated service roads, the proposed plaza, and service routes are not available. Information concerning the anticipated depths of the new build and the associated works is also not available.

### **11.2: Scheme effects and mitigation, areas of national importance**

**Based on national policy guidance (PPG 16) and local government policy (Policy 8.36 and others) policies, there is a presumption in favour of the physical preservation of archaeological deposits within these areas (see Section 7.1 above) and their settings. Additionally, it should be noted that Zone 7 includes part of the Scheduled Ancient Monument (also within Zone 4). No development is permitted within the scheduled area without written permission from the Secretary of State for Culture, Media and Sport, and any development proposals within the immediately-surrounding areas would also require consultation with the Secretary of State, via English Heritage.**

The northwestern corner of the northern annexe is a Scheduled Ancient Monument. In addition to the survival of below-ground-features, this part of the fort defences has an added amenity value, in that it includes a reconstructed length of the fort rampart and ditched defences. However, the integrity of the reconstruction has been damaged by the cutting of a modern path. The setting of the Scheduled Ancient Monument can be, and in this instance, is an issue with the current proposals for development. English Heritage have identified in correspondence two concerns relating to the setting of the Scheduled Ancient Monument. The first relates to the ability to appreciate the scale of the Roman fort complex which could be enhanced by sensitive surface treatments and openness in the plaza area or diminished by new building. This relates to views to the south and west of the Scheduled Ancient Monument. The second aspect of setting is that of the fort in the landscape. The Scheduled Ancient Monument is at the highest point of the fort complex in the northwest corner and views from it to the northwest, to the west across the valley (Plate 4), and to the south along the line of the western defences (Plate 5) are an important element of the setting and can be protected and should be enhanced within the plaza scheme.

The northwestern corner of the Phase 1-2 forts (also within the Scheduled Area) is an important viewpoint, providing views to the east along the northern Phase 1-2 defences, and to the south along the line of the western defences of the same fort. Similarly, the main viewsheds from the northeastern corner of the Phase 1-2 forts lie to the west, along the line of the northern fort defences, and to the south along the line of the eastern fort defences. These viewpoints contribute towards an appreciation of the topographic setting of the Phase 1-2 forts as the main Roman military monument, and also to a sense of scale of the military complex as a whole.

Beyond the scheduled area it is clear that some of the archaeological deposits can be considered to be of national importance (Map 6). Both national policy guidance and Birmingham City Council planning policy expect archaeological remains of national importance to be preserved *in situ*.

Exceptionally, development proposals within areas of national importance (whether scheduled or not) may possibly be permitted if the applicant is able to demonstrate that the proposed development will cause no sub-surface intrusion to the monument, either directly or indirectly.

This can be demonstrated by design details which demonstrate that:

- there will be no disturbance of the topsoil/subsoil horizon by the development, including associated disturbances caused by services, accesses and landscaping.
- there will be no direct/ indirect disturbance caused to the buried archaeology by the movement of heavy plant/ by contractors' construction compounds, etc. during construction.
- the proposed development will not increase load-bearing upon the buried archaeology, leading to compression and sinkeage (especially in waterlogged deposits).
- the proposed development will not have the effect of lowering the groundwater table/ desiccating waterlogged deposits.

Design details must specify that a sufficient depth of overburden/topsoil be left on the site to act as a 'buffer' between the buried archaeological deposits and the movement of heavy plant and machinery during development.

Geotextile membranes may be usefully employed to separate new deposits from others.

### **11.3: Scheme effects and mitigation, other areas**

In other areas within the study area presently identified as being of archaeological importance, or potential archaeological importance (but not presently identified as of national importance), field evaluation would also be required in advance of the consideration of development proposals. The results of field evaluation may indicate that parts of these areas are also of national importance, and therefore preservation *in situ* of archaeological deposits would be required.

Alternatively, where archaeological remains are not considered to be of national importance preservation 'by record' may be acceptable to the Local Planning Authority. However, it must be emphasised that preservation *in situ* is always the preferred option. Preservation 'by record' would normally involve detailed excavation and recording of archaeological deposits and features (including artifact collection and the sampling of appropriate deposits for environmental analysis) prior to development, followed by the implementation of a programme of post-excavation analysis of the stratigraphic data, the finds and environmental evidence, as approved by the Local Planning Authority, leading to the publication of the results in an approved archaeological journal. In some cases the results of field evaluation might suggest that a watching brief, undertaken to monitor development groundworks, may be an appropriate alternative, with an appropriate contingency for further, more detailed salvage recording, if appropriate. Such a watching brief would again be followed by an agreed programme of post-excavation analysis, leading to publication of the results.

#### **11.4: Summary of the main scheme effects**

The main effects of the proposed development are summarised in Table 7, taking into account the proposed mitigation measures. The scale of the hospital development is such that it could have a severely detrimental effect on archaeological remains. But, more positively, the development provides an exciting opportunity to protect some of the archaeological remains intact (preservation *in situ*), to increase public awareness of the forts and *vicus*, and also to further established archaeological research objectives through excavation (preservation by record) in other areas.

**TABLE 7: Summary of the predicted main effects**

<i>Area affected</i>	<i>Effect</i>	<i>Impact</i>
Northwestern corner, northern annexe	Removal of intrusive path	Small positive
	Repair to rampart reconstruction	Small positive
	Provision of new adjoining public path and public interpretation panel	Small positive
	Demolition of RRPPS and thinning of trees to provide better appreciation of setting and views across fort.	Large positive
Prehistoric remains west of Roman fort	If any remains are located by trial-trenching, they will be excavated once area is accessible.	Small positive
Vincent Drive and area to north	Preservation of archaeology <i>in situ</i> beneath the plaza. Re-alignment of Vincent Drive to the south.	Large positive
Civilian settlement south of Vincent Drive	If preservation <i>in situ</i> is not possible, the remains will be excavated in advance of development, and the results published.	Moderate adverse
Fort defences and interior south of Vincent Drive	Remains will be excavated, and the results published.	Moderate adverse

Overall, the beneficial effects of the repair, and better access to the reconstructed part of the Scheduled Ancient Monument, the better appreciation of the fort's setting, and the preservation *in situ* of over one-third of the fort interior in the plaza area are to an extent balanced by development of other areas of the fort and in the associated settlement. Although the remains of the civilian settlement would not be preserved *in situ*, the research potential of this site for the study of an early, comparatively-undisturbed *vicus* should not be underestimated.

Overall the effect of the proposed hospital development may be considered to be a high/moderate beneficial impact.

Details of the mitigation strategy are provided in Section 11.0.

### **11.5: Archaeological standards and monitoring by Local Planning Authority**

All archaeological work would be undertaken in accordance with the Code of Conduct of the Institute of Field Archaeologists, and would follow the appropriate Standards and Guidelines of the Institute.

In all cases where further archaeological work (e.g. excavation, watching brief, and post-excavation study) was required in advance of development, the nature of the fieldwork and post-excavation analysis to be undertaken as a condition of planning approval would be as specified in the relevant Archaeological Brief prepared by the Planning Archaeologist, and as set down by the archaeological contractor undertaking the work in a detailed Written Scheme of Investigation which would require the prior

approval of the Planning Archaeologist before implementation. All stages of the archaeological process (e.g. evaluation, excavation and post-excavation study) would be monitored regularly by the Planning Archaeologist to ensure compliance with the Archaeological Brief and the detailed Written Scheme of Investigation.

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## 13.0: REFERENCES

- Atkins, R. 1992. *Vincent Drive, Birmingham: An Archaeological Evaluation 1992*. BUFAU Report No. 212.
- Barfield, L. H. and Hodder, M. A. 1989. Burnt Mounds in the West Midlands: Surveys and Excavations, in Gibson, A. (ed) 1989.
- Barfield, L. H., Hodder, M. A. and Jones, A. E. forthcoming. *The Burnt Mounds of South Birmingham*.
- Barton, I. M. 1958. Further Excavations at Pennocrucium, near Stretton Bridge. *Transactions of the Birmingham and Warwickshire Archaeological Society* 74, 6-9.
- Bestwick, J. D and Cleland, J. H. 1974. *Metal-Working in the North-West* in Jones, G. D. B. and Grealey, S. 1974, 143-158.
- Bidwell, P. 1985. The Roman Fort of Vindolanda. *English Heritage Archaeological Report* No. 1.
- Booth, P. 1987. Sutton Coldfield Pottery Kiln. *West Midlands Archaeology* 30, 75.
- Booth, P. 1994. The Excavations in the Context of the Roman Town, in Mahany, C. (ed). 1994. Roman Alcester. The Southern Extra-Mural Area. 1964-66 Excavations. Part 1 Stratigraphy and Structures. *Council for British Archaeology Research Report* No. 96.
- Booth, P. 1996. Warwickshire in the Roman Period: A Review of Recent Work. *Transactions of the Birmingham and Warwickshire Archaeological Society*, 100, 25-58.
- Breeze, D. 1972. Excavations at the Roman Fort of Carrawburgh. *Archaeologia Aeliana*, 4th Series, 1, 81-144.

Breeze, D. and Dobson, B. 1974. *Fort Types as a Guide to Garrisons: A Reconsideration*. In Birley, E. B., Dobson, B., and Jarrett, M. G., (eds.). *Roman Frontier Studies*, 1969, Cardiff, 13-20.

BUFAU 1999. *Written Scheme of Investigation. University Hospital Birmingham NHS Trust. Metchley Roman Forts and adjoining Areas. Desk-Based Assessment*. BUFAU.

Burnham, B. C. and Wachter, J. 1990. *The Small Towns of Roman Britain*.

Buteux, V. and Hurst, D. 1996. *Archaeological Assessment of Droitwich, Hereford and Worcester*. Field Section, County Archaeological Service, Hereford and Worcester County Council.

Chatwin, P. B. 1914. *A History of Edgbaston*.

Crickmore, J. 1984. Romano-British Urban Settlements in the West Midlands. *British Archaeological Reports, British Series* 127.

Dannell, J. P. and Wild, J. P. 1987. Longthorpe II: The Military Works-Depot: An Episode in Landscape History. *Britannia* Monograph 8, 133-168.

Darling, M. J. 1977. Pottery from Early Military Sites in Western Britain in Dore, J. and Greene, K (eds). *Roman Pottery Studies in Britain and Beyond*. *British Archaeological Reports, Special Series* 30, 57-100.

Davies, J. L. 1980. Roman Military Deployment in Wales and the Marches from Claudius to the Antonines, in Hanson, W. S. and Keppie, L. F. J. (eds) *Roman Frontier Studies 1979. Papers Presented to the 12th International Congress of Roman Frontier Studies*. *British Archaeological Reports, International Series* 71.

Davison, D. P. 1989. The Barracks of the Roman Army from the First Century to the Third Century AD. *British Archaeological Reports, International Series* 472.

Dickinson, B. forthcoming. *The Samian* in Jones, A. E. forthcoming a.

Dool, J. 1986. Derby Racecourse. Excavations in the Roman Industrial Settlement, 1974. *Derbyshire Archaeological Journal* CV 155-221.

Dore, J. N. and Gillam, J. P. 1979. The Roman Fort at South Shields. Excavations 1875-1975. *Newcastle Society of Antiquaries, Newcastle Upon Tyne Monograph Series*, No. 1.

Ellis, P. 1989. Roman Chesterfield. Excavations by T. Courtney 1974-1978. *Derbyshire Archaeological Journal*, CIX, 51-130.



Esmonde Cleary, A. S. and Ferris, I. M. 1996. Excavations at the New Cemetery, Rocester, Staffordshire, 1985-1987. *Transactions of the Staffordshire Archaeological and Historical Society* 1993-4, XXXV.

English Heritage 1997. *English Heritage Archaeology Division. Draft Research Agenda*. April 1997.

Evans, J. 1999. *The Pottery* in Jones, A. E. 1999a.

Frere, S. S. and St. Joseph, J. K. 1974. The Roman Fortress at Longthorpe. *Britannia* 5, 1-129.

Frere, S. S. and St. Joseph, J. K. 1983. *Roman Britain from the Air*.

Frere, S. S. and Wilkes, J. J. 1989. Strageath. Excavations within The Roman Fort 1973-1986. *Britannia Monograph* No. 9.

Garton, D. 1988. Dunston's Clump and the Brickwork Field Systems at Babworth, Nottinghamshire 1981. *Transactions of the Thoroton Society* XCI, 16-73.

Gibson, A. (cd.) 1988. Midlands Prehistory. *British Archaeological Reports*, British Series 204.

Glasbergen, W. 1972. *De Romeinse Castella Te Valkenburg ZH, Opgravingen 1962*. Groningen.

Gould, J. T. 1968. Excavations at Wall, Staffordshire 1964-5 on the Site of the Roman Forts. *Transactions of the Lichfield and South Staffordshire Archaeological and Historical Society* 8, 1-8.

Gould, J. 1993. Further Thoughts on Letocetum. *Transactions of the South Staffordshire Archaeological and Historical Society* 33, 1-6.

Gould, J. 1998a. Letocetum. An Early Vexillation Fortress. *Britannia* 28, 350-2.

Gould, J. 1998b. *Letocetum. The Rise and Decline of a Roman Posting Station*. Privately printed.

Green, H. J. M. 1975. Roman Godmanchester in Rodwell, W. J. and Rowley, R. T. (eds.) *The Small Towns of Roman Britain. British Archaeological Reports*, British Series 15, 183-210.

Green, S. *et. al.* forthcoming. *The Coarse Pottery* in Jones, A. E. forthcoming a.

Hancocks, A. forthcoming. *The Area 6 Pottery* in Jones, A. E. forthcoming a.

Hartley, K. forthcoming. *The Mortaria* in Jones, A. E. forthcoming a.

- Hewitson, C. 1999. Dudley No. 2 Canal, An Assessment. Post-Graduate Project, University of Birmingham.
- Hinchcliffe, J. and Williams, J. II. and F. 1992. Roman Warrington. Excavations at Wilderspool 1966-9 and 1976. *Brigantia Monograph* No. 2.
- Hobley, B. 1969. A Neronian-Vespasianic Military Site at the Lunt, Baginton, Warwickshire, *Transactions of the Birmingham and Warwickshire Archaeological Society* 1966-7 83, 65-129.
- Hobley, B. 1973. Excavations at 'The Lunt' Roman Military Site, Baginton, Warwickshire, 1968-71, Second Interim Report, *Transactions of the Birmingham and Warwickshire Archaeological Society*, 85, 1971-73, 7-92.
- Hobley, B. 1975. The Lunt Roman Fort and Training School for Roman Cavalry, Baginton, Warwickshire. *Transactions of the Birmingham and Warwickshire Archaeological Society* 87, 1-50.
- Hodder, M. A. 1980. An Earthwork Enclosure in Sutton Park, West Midlands. *Transactions of the Birmingham and Warwickshire Archaeological Society* 89, 166-70.
- Hogg, A. H. A. 1968. The Excavations at Pen Llystyn. *Archaeological Journal* 125 101-192.
- Hogg, A. H. A. 1979, A Gazetteer of the Evidence. *British Archaeological Reports*, British Series.
- Hughes, H. V. 1959. A Romano-British Kiln Site at Perry Barr. *Transactions of the Birmingham and Warwickshire Archaeological Society* 77, 33-9.
- Hurst, H.R. 1985. *Kingsholm*. Gloucester Archaeological Reports Vol I.
- Hutton, W. 1783. *A History of Birmingham*.
- Johnson, A. 1983. *Roman Forts*.
- Jones, A. E. 1988. *Metchley, Birmingham: An Archaeological Evaluation 1988*. BUFAU Report No. 46.
- Jones, A. E. 1989. *Metchley, Birmingham: An Archaeological Evaluation 1989*. BUFAU Report No. 74.
- Jones, A. E. 1995a. *West Car Park, University of Birmingham. A Desk-Top Study 1995*. BUFAU Report No. 384.01.
- Jones, A. E. 1995b. *Genetics Field, University of Birmingham. A Desk-Top Study 1995*. BUFAU Report No. 385.01.

Jones, A. E. 1996. *West Car Park, University of Birmingham. An Archaeological Evaluation 1996*. BUFAU Report No. 384.02.

Jones, A. E. 1997. *Archaeology*, in Environmental Resources Management. Proposed New Hospital at Selly, Oak, Birmingham, Scoping Study of Environmental Issues, September 1997.

Jones, A. E. 1998a. *Teaching Resource Centre, University of Birmingham. A Desk-Based Assessment 1998*. BUFAU Report No. 567.

Jones, A. E. 1998b. *Genetics Field, University of Birmingham. An Archaeological Evaluation 1998*. BUFAU Report No. 385.03.

Jones, A. E. 1999a. *Genetics Field, University of Birmingham, Archaeological Investigations. Post-Excavation Assessment*. BUFAU Report No. 385.04.

Jones, A. E. 1999b. *University Hospital NHS Trust, Archaeological Evaluation 1999, Areas A and B*. BUFAU Report No. 617.03.

Jones, A. E. 1999c. *University Hospital NHS Trust, Archaeological Evaluation 1999, Area C*. BUFAU Report No. 617.02.

Jones, A. E. 1999d. *Metchley Roman Forts. University of Birmingham. An Archaeological Assessment 1999*. BUFAU Report No. 590.

Jones, A. E. 1999e. *Teaching Resources Centre, University of Birmingham. An Archaeological Evaluation 1999*. BUFAU Report No. 567.01.

Jones, A. E. 1999f. *Vincent Drive and University Road West, University of Birmingham: Archaeological Watching Briefs 1999*. BUFAU Report No. 589.

Jones, A. E. forthcoming a. Roman Birmingham, Volume 1. Metchley Roman Forts, Excavations 1963-4, 1967-9 and 1997. *Transactions of the Birmingham and Warwickshire Archaeological Society*.

Jones, A. E. forthcoming b. Greensforge, Staffordshire. Archaeological Investigations in the Civilian Settlement 1994. *Transactions of the Staffordshire Archaeological Society*.

Jones, A. E. in preparation a. Roman Birmingham, Volume 2, Metchley Roman Forts, Excavations 1998-9. Archaeological Investigations 1998-9. *Transactions of the Birmingham and Warwickshire Archaeological Society*.

Jones, A. E. in preparation b. *Further Excavations at Metchley Roman Forts, 1999: Genetics Field and Medical Academics Building. A Post-Excavation Assessment*. BUFAU Report No. 567.03.

- Jones, G. D. B. and Grealey, S. 1974. *Roman Manchester*.
- Jones, G. D. B. and Wild, J. P. 1968. Brough on Noe. *Derbyshire Archaeological Journal* LXXXVIII, 89-93.
- Jones, M. J. 1975. Roman Fort Defences to AD 117. *British Archaeological Reports* 21.
- Lyon, F. and Gould, J. T. 1964. A Section Through the Defences of the Roman Forts at Wall, Staffordshire. *Transactions of the Birmingham and Warwickshire Archaeological Society*, 79, 1960-1, 11-23.
- McCord, N and Tait, J. 1980. Excavations in the Northern Annex of the Roman Fort at Camelon, near Falkirk, 1961-3. *Proceedings of the Society of Antiquaries of Scotland* 109, 151-165.
- Magilton, J. 1980. The Coleshill Romano-Celtic Temple. Some Reflections and New Discoveries. *West Midlands Archaeology* 23, 27-39.
- Manning, W. H. and Scott, I. R. 1979. Roman Timber Military Gateways in Britain and on the German Frontier. *Britannia* X, 19-61.
- Margary, I. D. 1973. *Roman Roads in Britain*.
- Maxfield, V. A. 1986. Pre-Flavian Forts and their Garrisons. *Britannia* 17, 59-72.
- Pitts, L. and St. Joseph, J. K. 1985. Inchtuthil: The Roman Legionary Fortress. Excavations 1952-1965. *Britannia Monograph Series*, 6.
- Pretty, K. 1969. Metchley 1964 Excavations. *Typescript in archive*.
- Recce, R. forthcoming. *The Coins*, in Jones, A. E. forthcoming a.
- Richmond, I. A. 1968. *Hod Hill Vol. 2. Excavations carried out between 1951 and 1958 for the Trustees of the British Museum*.
- Round, A. A. 1983. Excavations at Wall, Staffordshire 1968-72. Wall Excavation Report No. 12. *Transactions of the Staffordshire Archaeological and Historical Society* 23, 1-67.
- Round, A. A. 1993. ... A Response. *Transactions of the South Staffordshire Archaeological and Historical Society*, 1991-2, 4-6.
- Rowley, R. T. 1967. Metchley Camp Cottages: Interim Report. *West Midlands Annual Archaeological News Sheet* 10, 4-5.
- Rowley, R. T. 1968. Metchley, Birmingham: Interim Report. *West Midlands Annual Archaeological News Sheet* 11, 10-11.

- Rowley, R. T. 1969. Metchley Roman Fort, Birmingham: Interim Report. *West Midlands Annual Archaeological News Sheet* 12, 24-5.
- St. Joseph, J. K. and Shotton, F. W. 1937. The Roman Camps at Metchley, Birmingham, *Transactions of the Birmingham and Warwickshire Archaeological Society* LVIII, 68-83.
- Scott, K. 1984. Mancetter Village. A First Century Fort. *Transactions of the Birmingham and Warwickshire Archaeological Society* XCI, 1-24.
- Sommer, C. S. 1984. The Military Vici in Roman Britain. Aspects of their Origins, their Location and Layout, Administration, Function and End. *British Archaeological Reports*, British Series 129, Oxford.
- Timby, J., Evans, J., Darling, M. J., and Faiers, J. E., in press, *The Pottery*, in Ellis, P. The Roman Baths and Macellum at Wroxeter: Report on the Excavations by Graham Webster, 1955-85. English Heritage.
- Todd, M. 1991. *The Coritani*.
- VCII. 1901. *Victoria County History of England: Warwickshire Vol 1*.
- Webster, G. 1954. Further Excavations at the Roman Forts at Metchley, Birmingham. *Transactions of the Birmingham and Warwickshire Archaeological Society* 72-4, 1-4.
- Webster, G. 1981. *Rome Against Caratacus*.
- Welfare, H. and Swan, V. 1995. *Roman Camps in Britain: The Field Archaeology*. RCHME.
- Wheeler, H. 1986. Derby North West Sector Excavations. *Derbyshire Archaeological Journal* CV, 39-153.
- White, R. and Barker, P. 1998. *Wroxeter. Life and Death of a Roman City*.
- Whitcomb, D. B. 1962. A Note on the Excavation of the Roman Fort at Dodderhill, Droitwich, 1961-2. *Transactions of the Worcestershire Archaeological Society* 39, 55-58.
- Willis, S. (ed.) 1997. *Research Frameworks for the Study of Roman Pottery*. Study Group for Roman Pottery.

## APPENDIX 1: Glossary of terms used

All definitions after Johnson (1983, 34-5). Note: plural forms in square brackets.

### Internal roads and the fort layout

*Central range*. The central third of the fort interior. Housed the administrative buildings of the fort, including the headquarters building (*principia*), the commanding officer's house (*praetorium*), granaries, and possibly a hospital.

*Intervallum*. An open space between the rear of the rampart and the built-up part of the fort interior. Contained cookhouses, latrines, ovens and hearths.

*Praetentura*. The front third of the fort interior, running from the *via principalis* to the front gate. Contained barrack-blocks, stables and store-buildings.

*Retentura*. The rear third of the fort interior, from the *via quintana* to the rear gate. Contained barrack-buildings, stables and store-buildings.

*Via decumana*. The internal street running from the *principia* to the rear (northern) gate (*porta decumana*). Aligned north-south at Metchley.

*Via praetoria*. The internal street running from the *principia* to the front (southern gate at Metchley), the *porta praetoria*.

*Via principalis*. The main internal street, at Metchley running east-west, leading to the eastern (*porta principalis sinistra*) and western (*porta principalis dextra*) gates of the fort.

*Via sagularis*. Road within the fort interior, running around the outside of the *intervallum* space.

*Via quintana*. Internal street dividing the central range from the *retentura*.

*Fabrica [fabricae]*. Workshop for repair or small-scale manufacture of tools and weapons.

### Barrack-block components

*Arma [armae]*. Outermost room within a *contubernium*, used for equipment storage.

*Contubernium [contubernia]*. Two rooms within men's quarters, usually occupied by eight men.

*Papilio [papiliones]*. Innermost room of *contubernium*. Used for sleeping.

Special *contubernium [contubernia]*. Often the end *contubernium*, adjoining the officers' quarters. Used for the storage of equipment.

### Military units. Auxiliary units.

*Ala quingenaria*. Commanded by *Praefectus*. Comprises 16 *turmae*.

*Decurio*. The commander of a *turma* (Decurion).

*Principales*. The junior officers of a cavalry *turma*. Comprising the *duplicarius* and *sesquiplicarius*.

*Turma [turmae]*. Cavalry unit, consisting of 32 troopers, possibly including two junior officers, the *principales*.

*Cohors quingenaria peditata*. Infantry unit. Commanded by *praefectus*, and organised into six centuries (of 80 men), giving a total of 480 men.

*Vicus*. Civilian settlement located outside fort gates, but under military control. Often continues in existence after military abandonment of the site.

## **APPENDIX 2: Specification (Birmingham City Council)**

### **BIRMINGHAM CITY COUNCIL**

#### **DEPARTMENT OF PLANNING AND ARCHITECTURE**

#### **University Hospital Trust Development Options: Plaza scheme, off Vincent Drive, and Central/Battery scheme, off Gibbins Lane, Birmingham** **Design Brief for *archaeological desk-based assessment***

### **1. Summary**

*Sites being considered for development schemes by the University Hospital Trust include part of the site of a Roman fort and the lines of its access roads, and may also include other archaeological remains. This brief is for an archaeological desk-based assessment of both potential development sites, to inform design of development proposals and to identify requirements for in-situ preservation or for further assessment by field evaluation in advance of consideration of development proposals.*

### **2. Site location and description**

The Plaza scheme site is bounded by Metchley Lane on the west, Vincent Drive on the south and the northern edges of the present Queen Elizabeth Hospital and Women's Hospital on the north. It is currently occupied by various buildings, grassed areas, roads and car parks, at various levels. The Central/Battery scheme site is bounded by Harborne Lane on the west, the Bourne Brook on the north, the canal and railway on the east and the former line of a canal on the south. It is currently occupied by allotments and waste ground. These two sites are separated by an area of waste ground sloping down from Vincent Drive to the Bourne Brook and extending to University Road West and the railway in the east. The archaeological desk-based assessment is required for both scheme sites and the area between them.

### **3. Planning background**

The details and extent of proposed developments are not yet known, but the developments are likely to consist of new buildings with associated access roads and landscaping. In advance of any development proposal affecting archaeological remains, the City Council will require an assessment of its archaeological implications, in accordance with Policy 8.36 of the City Council's Unitary Development Plan and government advice in Planning Policy Guidance Note 16, "Archaeology and Planning". The assessment must consist of a desk-based assessment, as described in this brief, and a field evaluation consisting of excavated trenches. Following the assessment, development proposals may need to be modified to ensure in-situ preservation of archaeological remains or, if this is not feasible, further archaeological recording will be required in advance of commencement of development. Where the archaeological remains are of national importance, there will be a presumption in favour of in situ preservation. The Plaza scheme site contains a scheduled ancient monument (West Midlands 1) which is therefore considered to be of national importance, and there may be

other nationally important archaeological remains in the proposed development sites.

#### **4.Existing archaeological information**

The Plaza scheme site includes the northern part of a Roman fort(SMR 02005/20140); the area between the Plaza and Central/Battery sites includes more of the fort, including its western gate and a road approaching it; and the Central/Battery scheme site may include the line of a Roman road, recorded at Harborne Bridge(SMR 05676). The dates of the fort's construction and occupation, and the form of its defences and some of its internal buildings, are known from its representation on early maps and from various excavations undertaken since the 1930s. Recent excavations and desk-based assessments in advance of development have revealed features beyond the known defensive lines. Excavations on the east side of the fort in 1998 and 1999 revealed a hitherto unknown defensive line defining an annexe and an evaluation on the south side of University Road West showed that this ditch continued around the south-east corner of the fort. A desk-based archaeological assessment of the whole of the Roman fort site considered the likely survival and significance of its archaeological remains and identified areas of the fort likely to contain archaeological remains of national importance. These areas include part of the Plaza scheme site and part of the area between the Plaza and Central/Battery sites. Excavations on the site now occupied by the Psychiatric Hospital revealed prehistoric burnt mounds(SMR 01682) and post-medieval remains.

#### **5.Requirements for work**

The desk-based archaeological assessment is required to define the likely extent, survival and significance of archaeological remains in both scheme sites. This will identify requirements for in-situ preservation or for further assessment by field evaluation by excavated trenches in advance of consideration of specific development proposals. The field evaluation may identify requirements for further in-situ preservation and may identify areas in which further archaeological recording will be required in advance of development if in-situ preservation is not feasible. The desk-based archaeological assessment will augment and expand on those already carried out as part of recent developments by the University of Birmingham, in particular an assessment of the whole of the Roman fort site which included the part of the fort on Hospital Trust land but did not include site inspections or information about modern services on this part of the site.

#### **6.Stages of work**

The extent, survival and significance of archaeological remains of the fort and its surroundings are to be assessed by site inspection and a search of published and unpublished written records, illustrations and maps, and archaeological and geotechnic records. The attached guidance note provides information on local sources. The archaeological desk-based assessment must include the following:



- (i) The whole of the Plaza scheme and Central/Battery sites and the area in between them, ie bounded by the northern edges of the present Queen Elizabeth Hospital and Women's Hospital on the north, Vincent Drive, University Road West and the railway and canal on the east, the former canal line on the south, and Harborne Park Road and Harborne Lane on the west;
- (ii) Detailed information on existing services and their archaeological implications;
- (iii) Assessment of the implications of variations in existing ground levels on archaeological remains;
- (iv) Identification of zones of archaeological potential across the whole area defined in (i) above.

### **7. Staffing**

The archaeological desk-based assessment is to be carried out in accordance with the Code of Conduct, Standards, Guidelines and practices of the Institute of Field Archaeologists, and all staff are to be suitably qualified and experienced for their roles in the project. It is recommended that the project be under the direct supervision of a Member or Associate Member of the Institute of Field Archaeologists.

### **8. Written Scheme of Investigation**

Potential contractors should present a Written Scheme of Investigation which details methods and staffing. It is recommended that the proposal be submitted to the City Council's Planning Archaeologist before a contractor is commissioned, to ensure that it meets the requirements of the brief.

### **9. Monitoring**

The archaeological desk-based assessment must be carried out to the satisfaction of the Director of Planning and Architecture, Birmingham City Council, and will be monitored on his behalf by the Planning Archaeologist. At least five working days notice of commencement of the assessment must be given to the Planning Archaeologist, so that monitoring meetings can be arranged.

### **10. Reporting**

The results of the archaeological desk-based assessment are to be presented as a written report, containing appropriate illustrations and a copy of this brief. A copy of the report must be sent to the Planning Archaeologist.

### **11. Archive deposition**

The written, drawn and photographic records of the archaeological desk-based assessment must be deposited with an appropriate repository within a reasonable time of completion, following consultation with the Planning Archaeologist.

## **12.Publication**

The written report will become publicly accessible, as part of the Birmingham Sites and Monuments Record, within six months of completion. The contractor must submit a short summary report for inclusion in *West Midlands Archaeology* and summary reports to appropriate national period journals.

**DIRECTOR OF PLANNING AND ARCHITECTURE**

**BIRMINGHAM CITY COUNCIL**

Date prepared: 22 June 1999

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### **APPENDIX 3: Sources consulted**

#### Maps (Reference Library, Birmingham)

- 1701 Deeley plan of Edgbaston Estate
- 1718 Sparry plan of Edgbaston Estate
- 1813 Sketch of Metchley Park farm. Box 11, Calthorpe Documents
- 1827 Tithe map, Edgbaston parish
- 1852 Tithe map, Edgbaston parish
- 1857 Blood's map of Birmingham
- 1890 Ordnance Survey map, First Edition, 25 inch/mile
- 1904 Ordnance Survey map, 25 inch/mile
- 1917 Ordnance Survey map, 25 inch/mile

#### Map (Archive Section, Reference Library, Birmingham)

- 1792 Plan of Worcester and Birmingham Canal

#### Photographs, University of Birmingham, Heslop Room, University Library. General photographs of University

#### Photographs, Cambridge University Collection

Vertical and oblique views of fort site, taken in the 1960s

#### Excavation archives

Archives of 1964, 1967, 1968, 1969, 1996-7, 1998 and 1999 excavations (and evaluations)

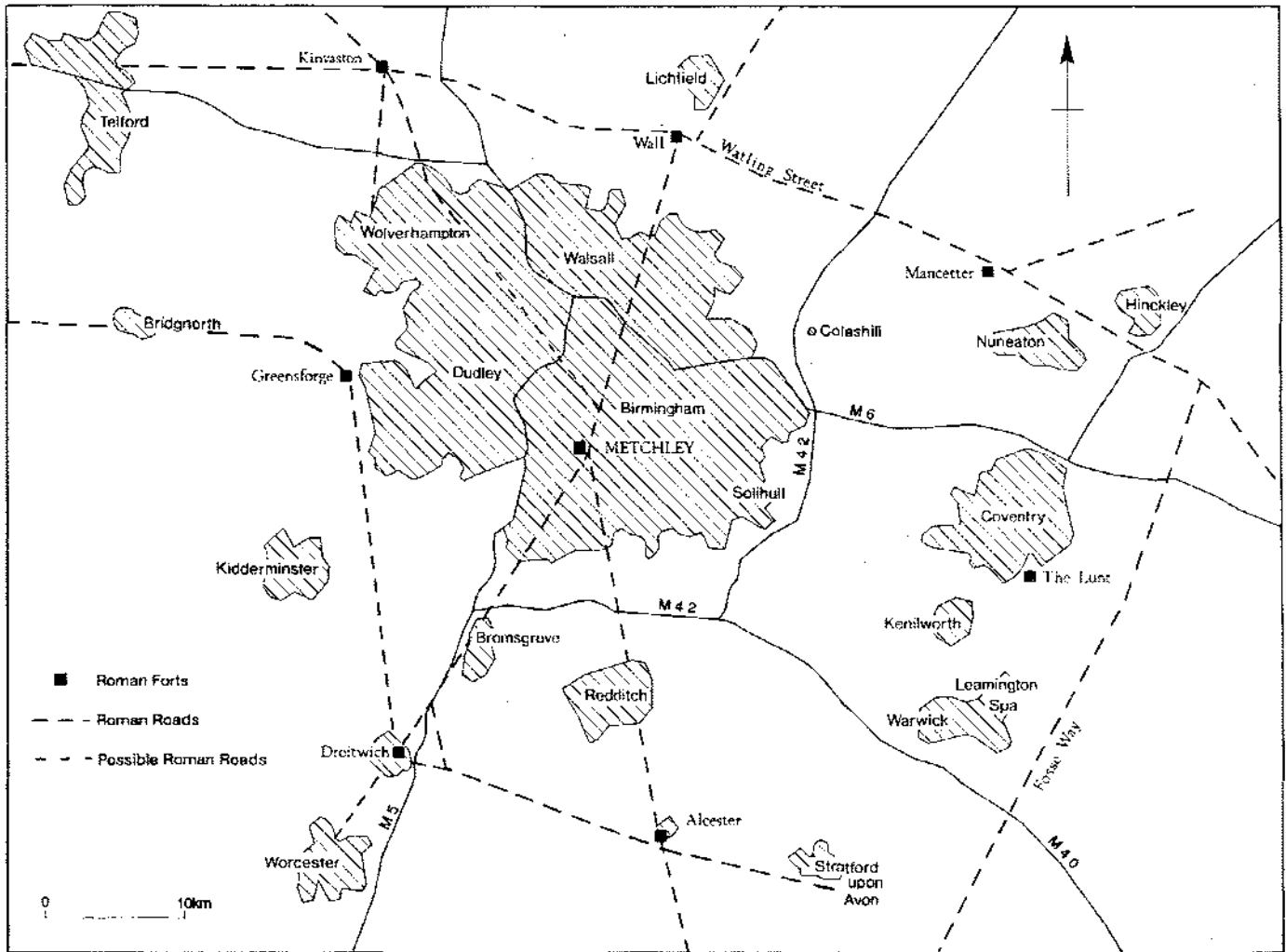


Figure 1

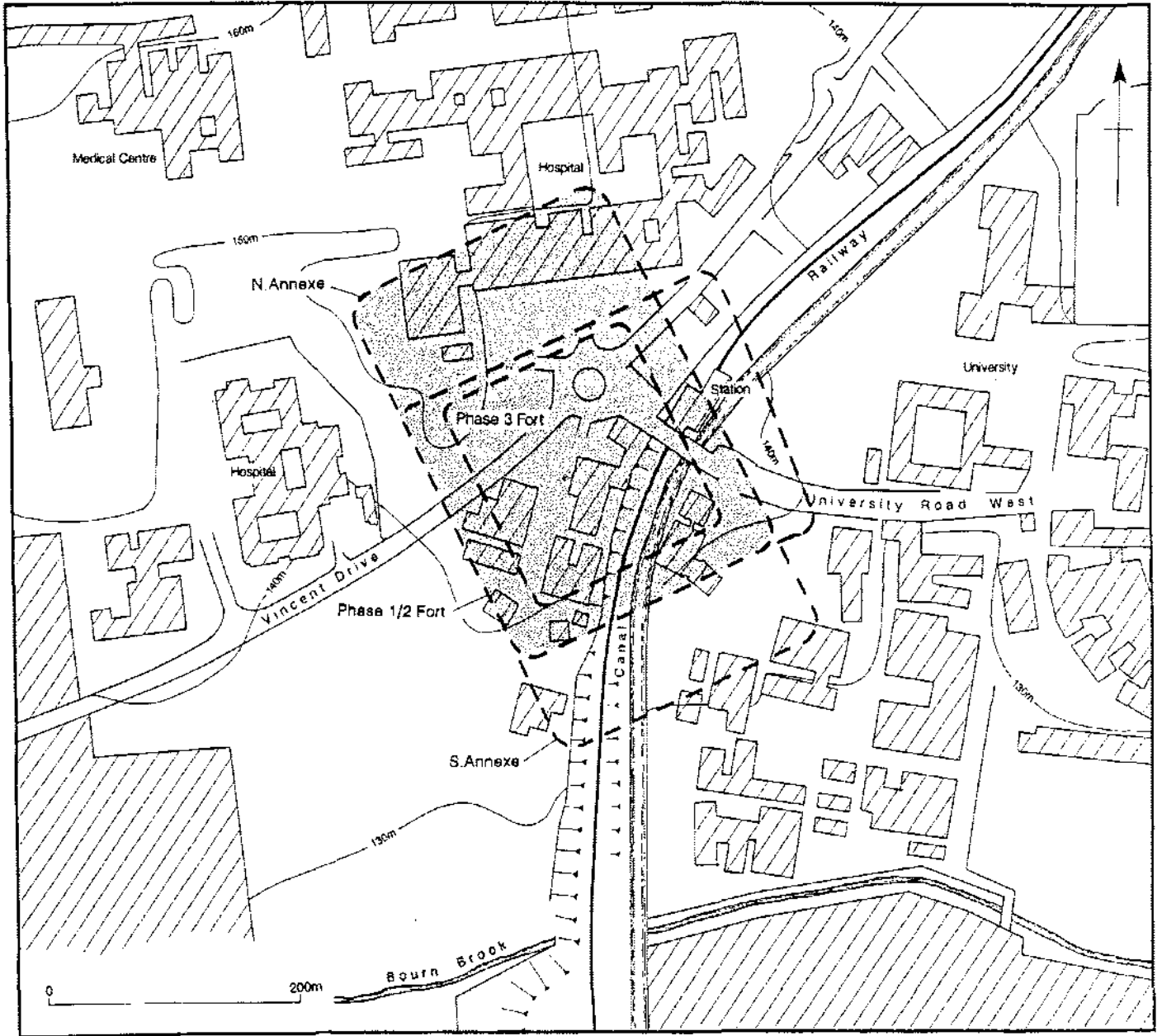


Figure 2

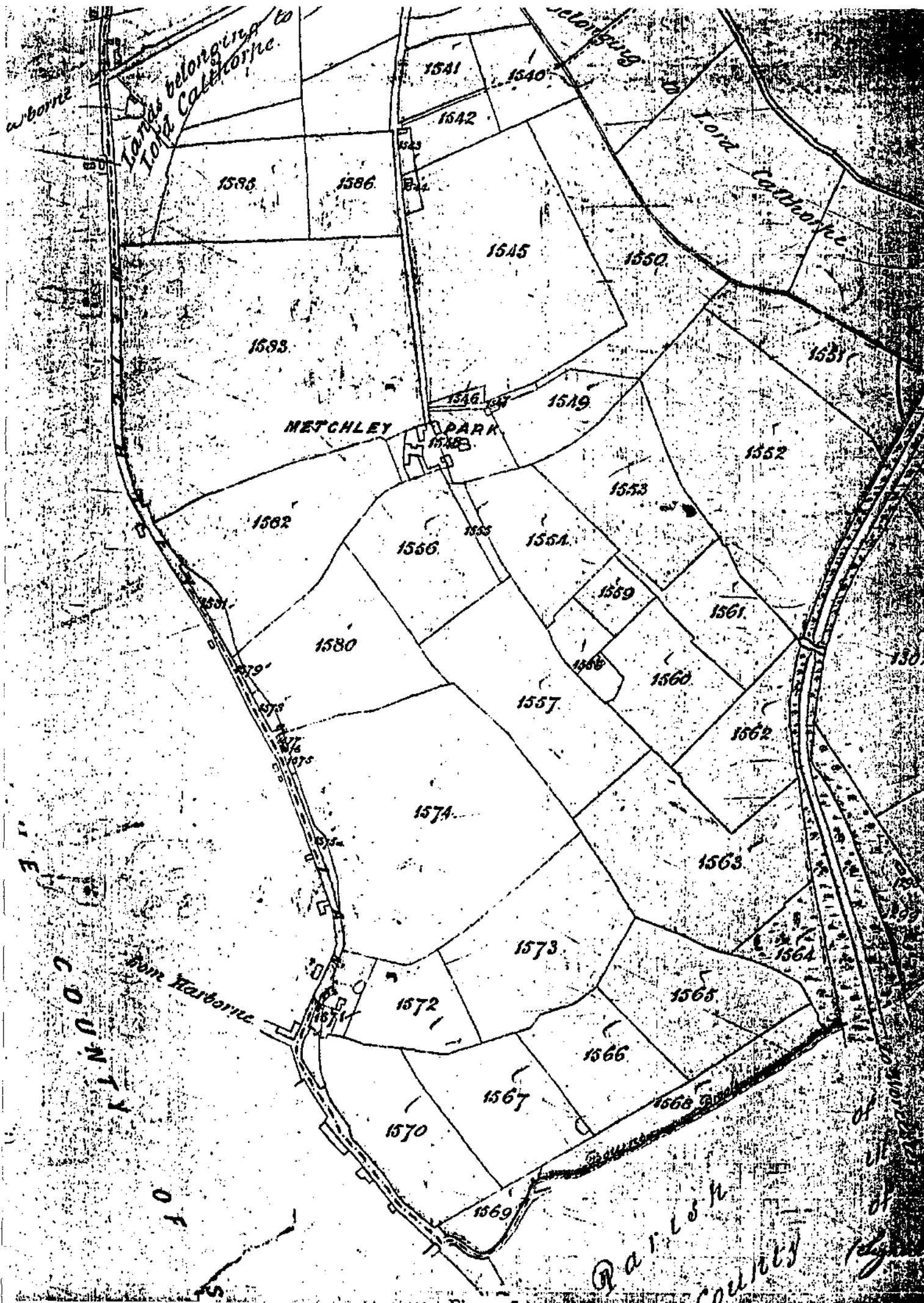


Figure 5

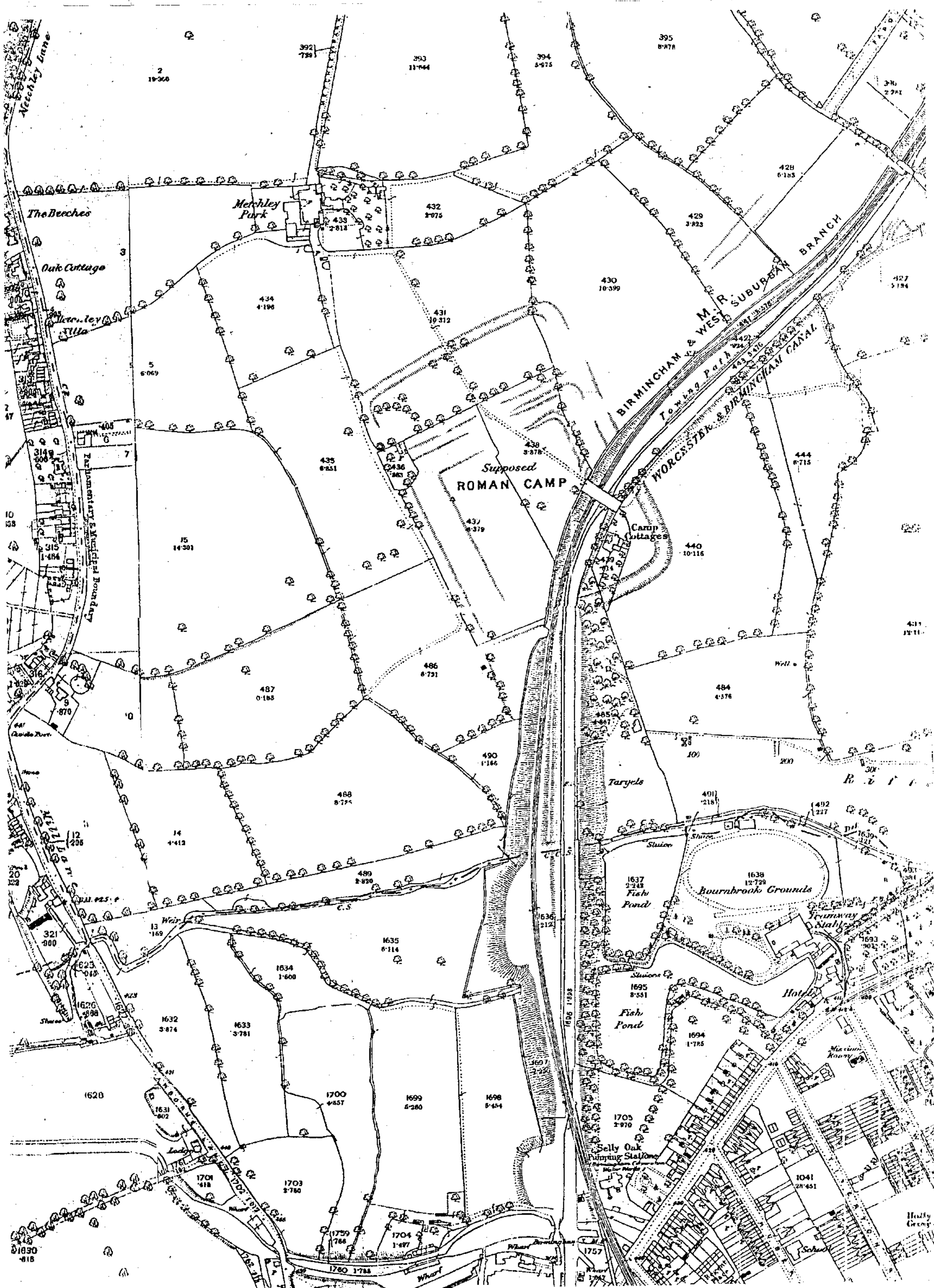


Figure 6

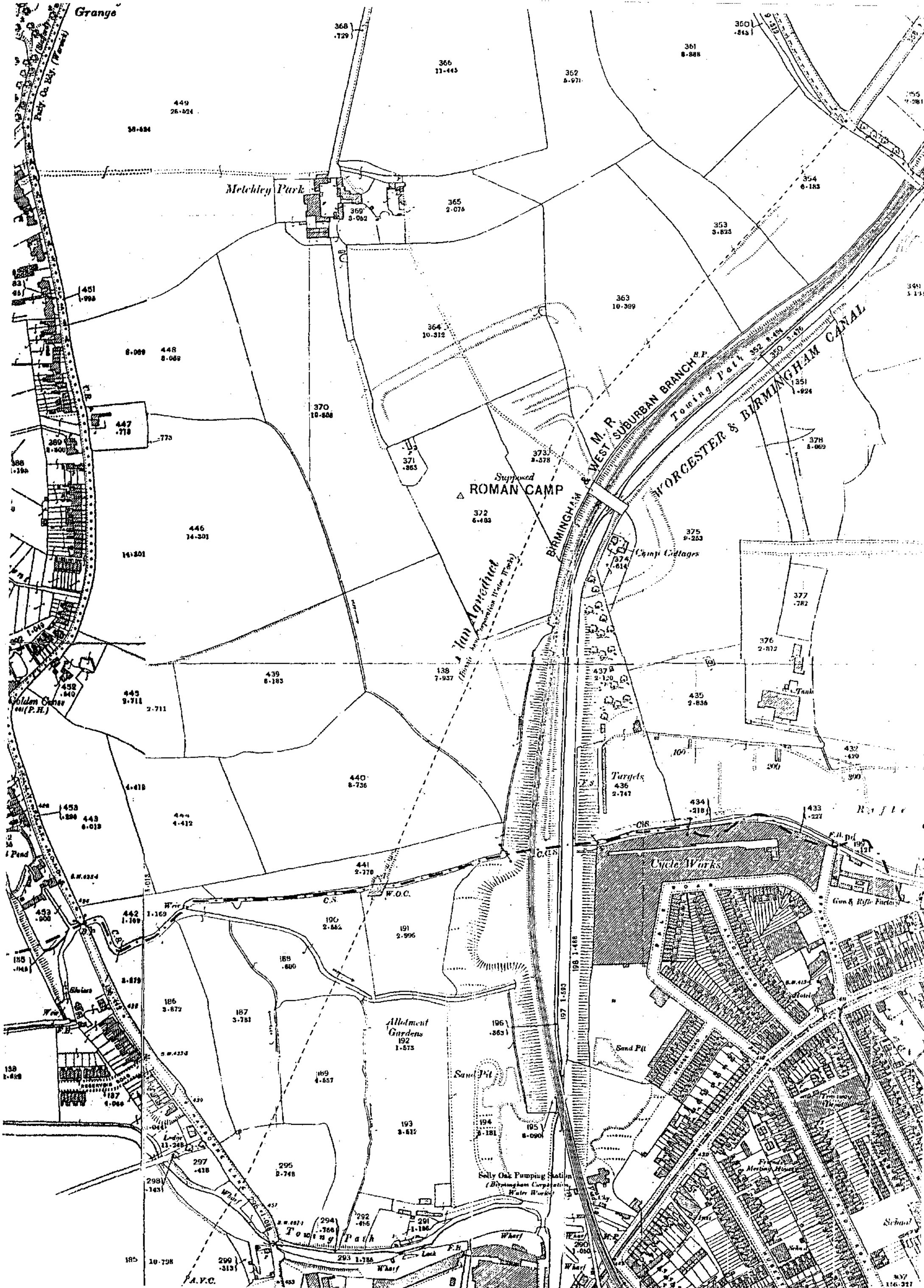


Figure 7



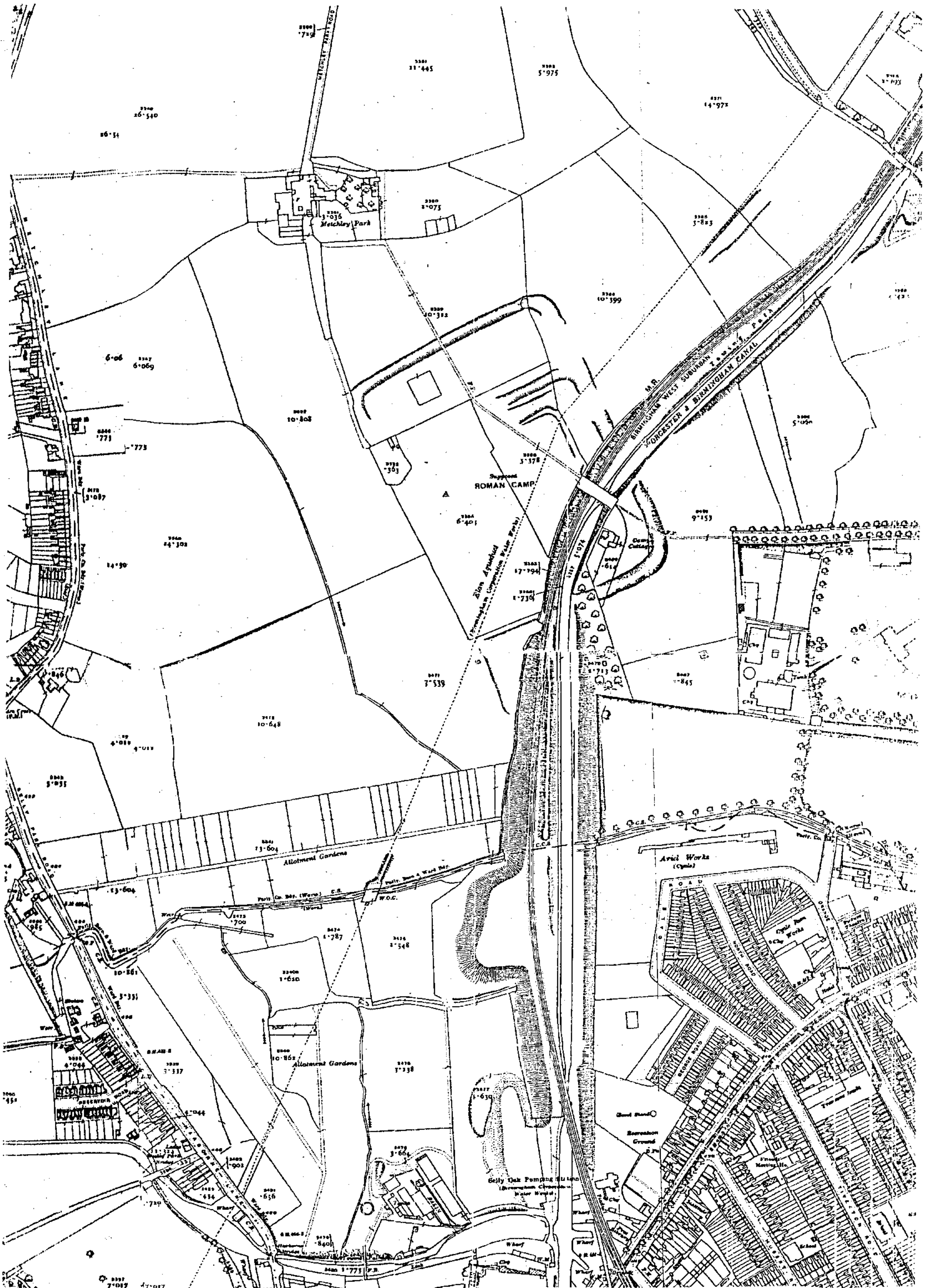


Figure 8

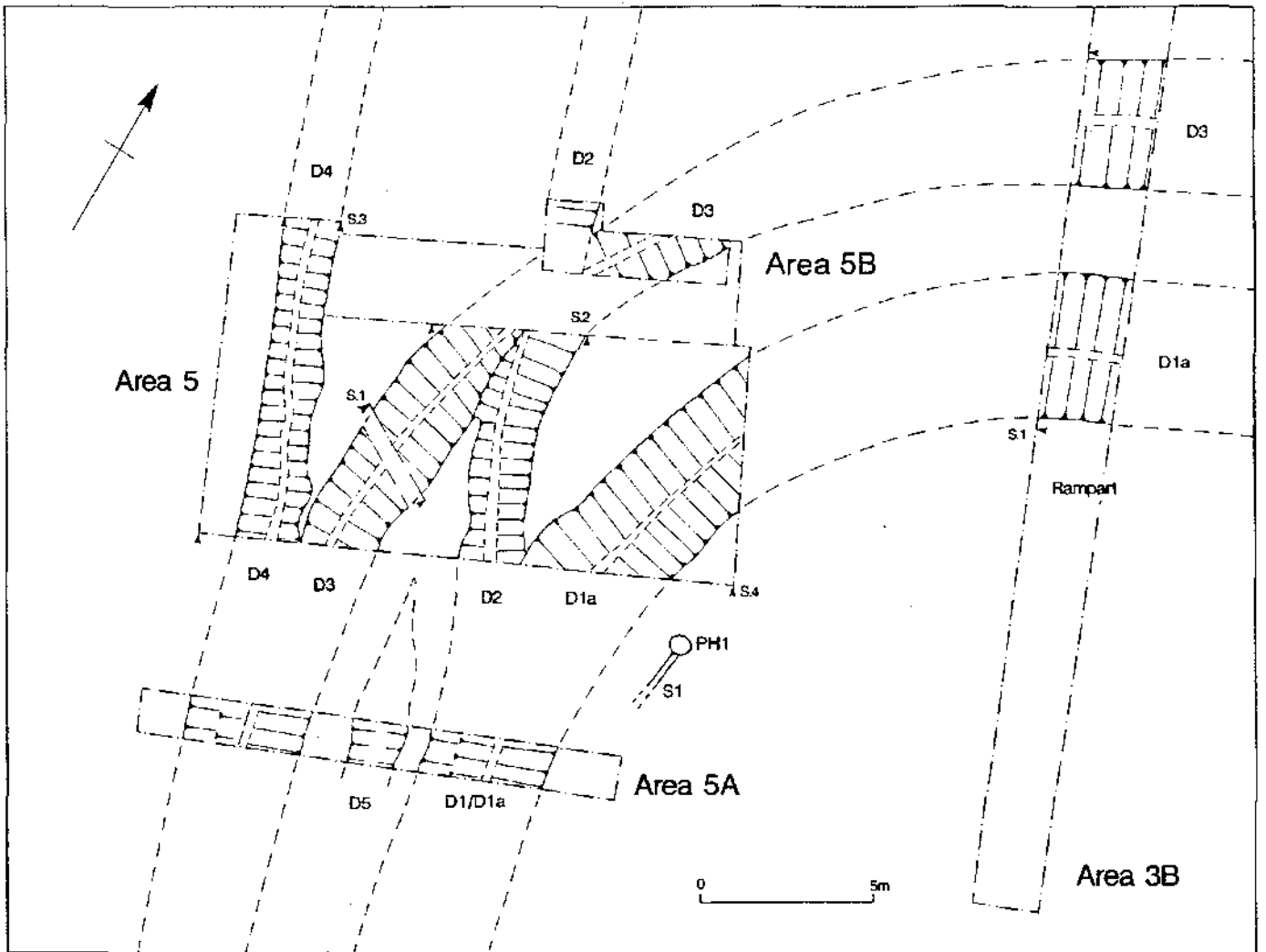


Figure 9

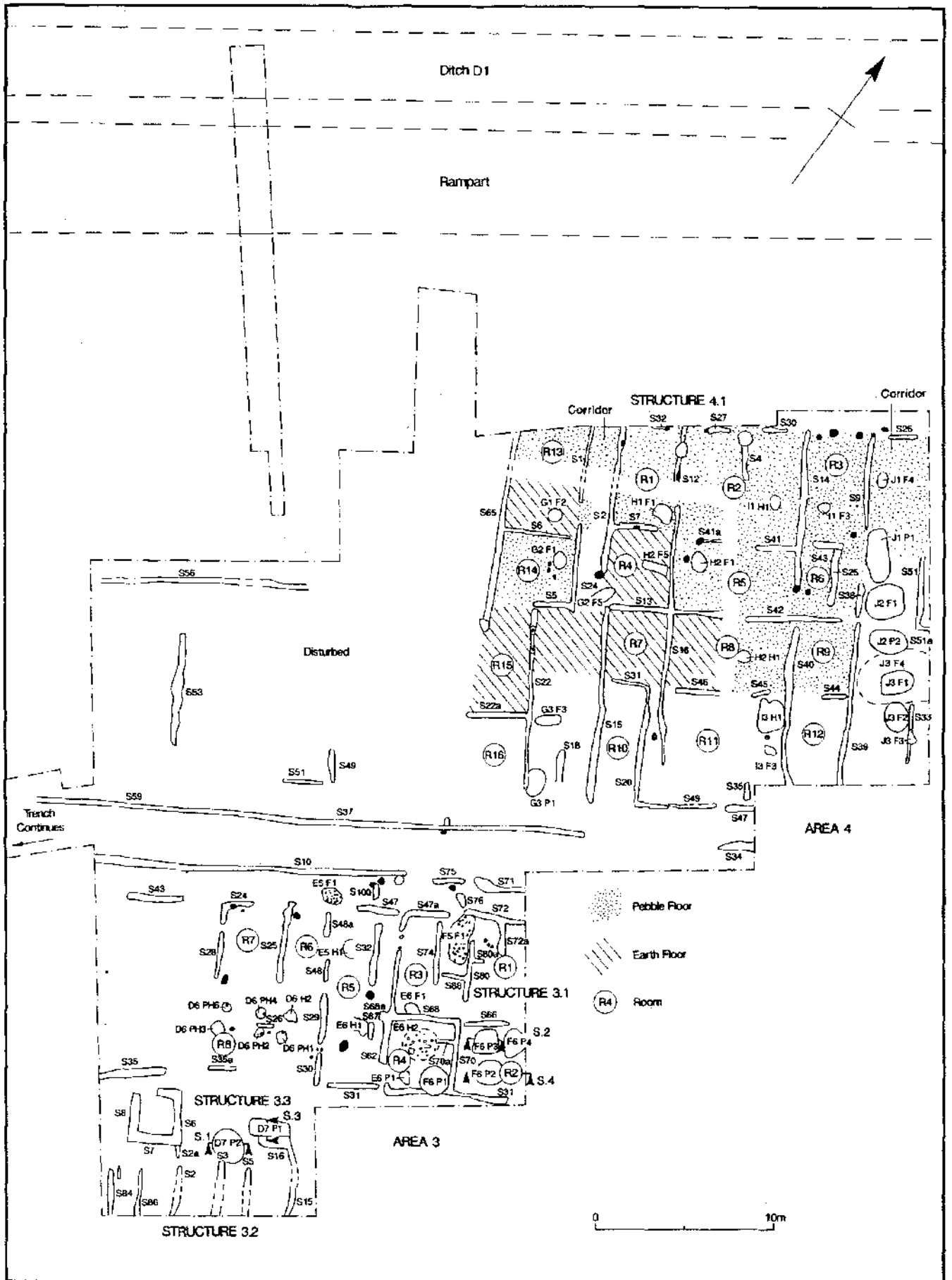


Figure 10

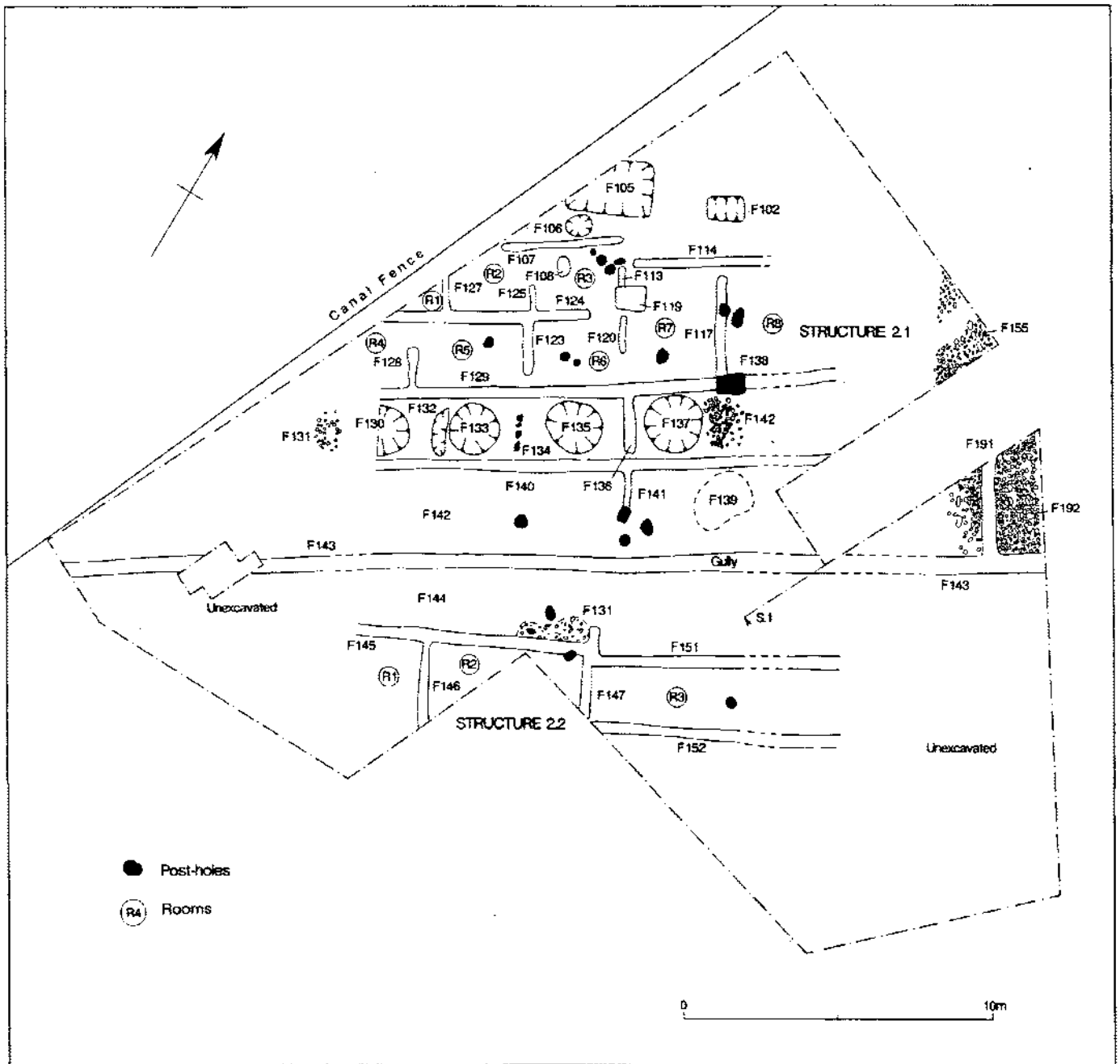


Figure 11

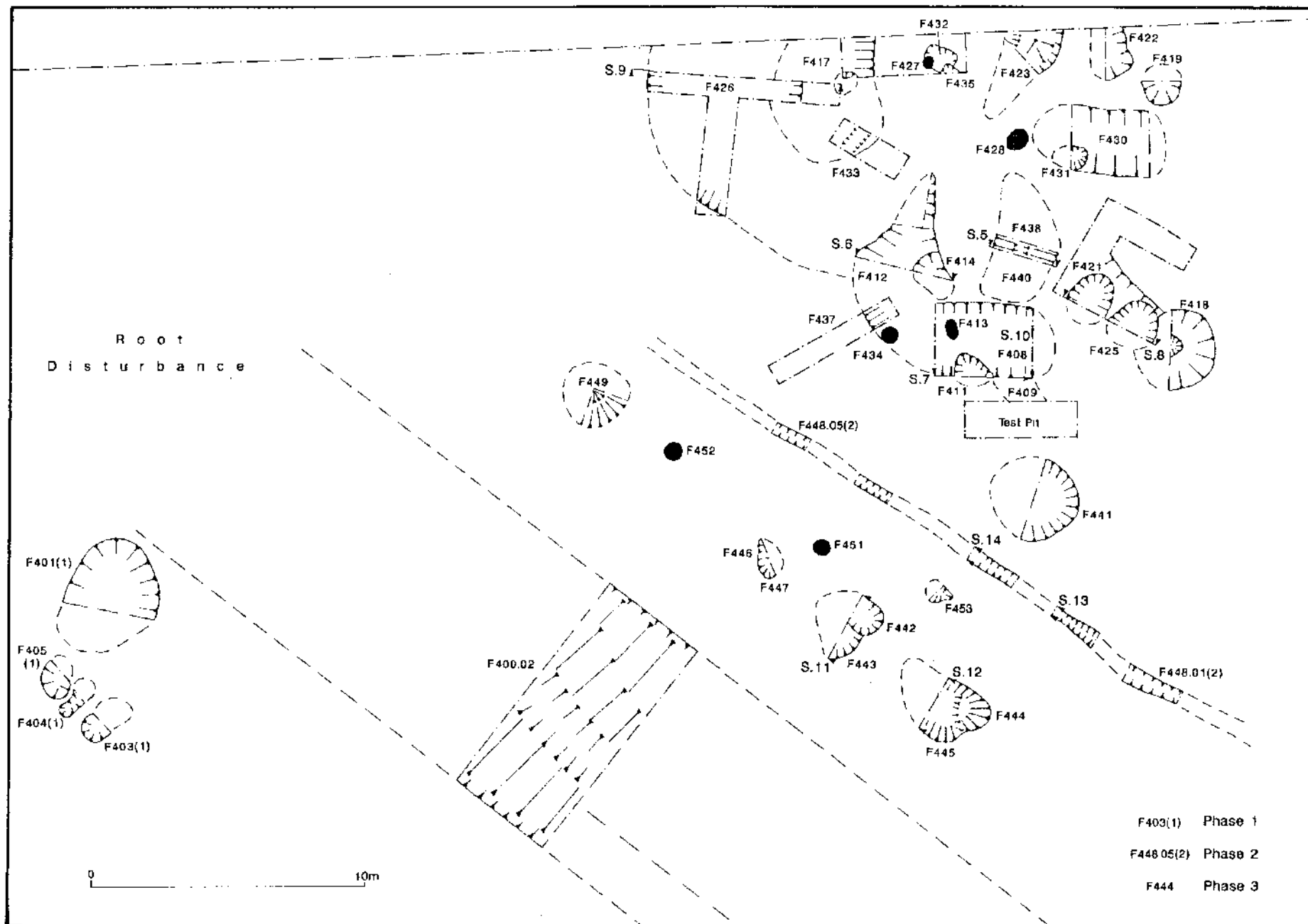


Figure 12

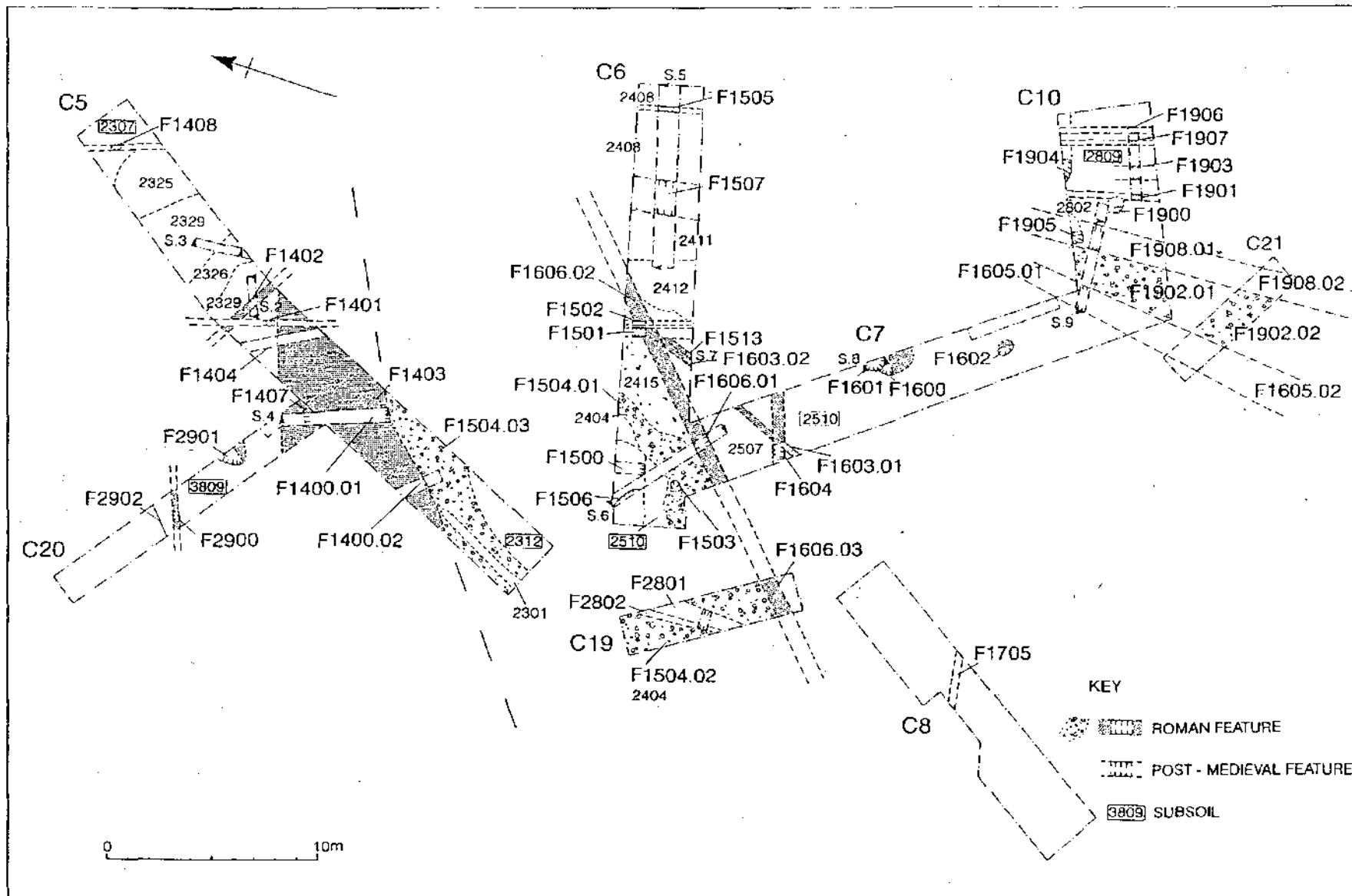


Figure 13

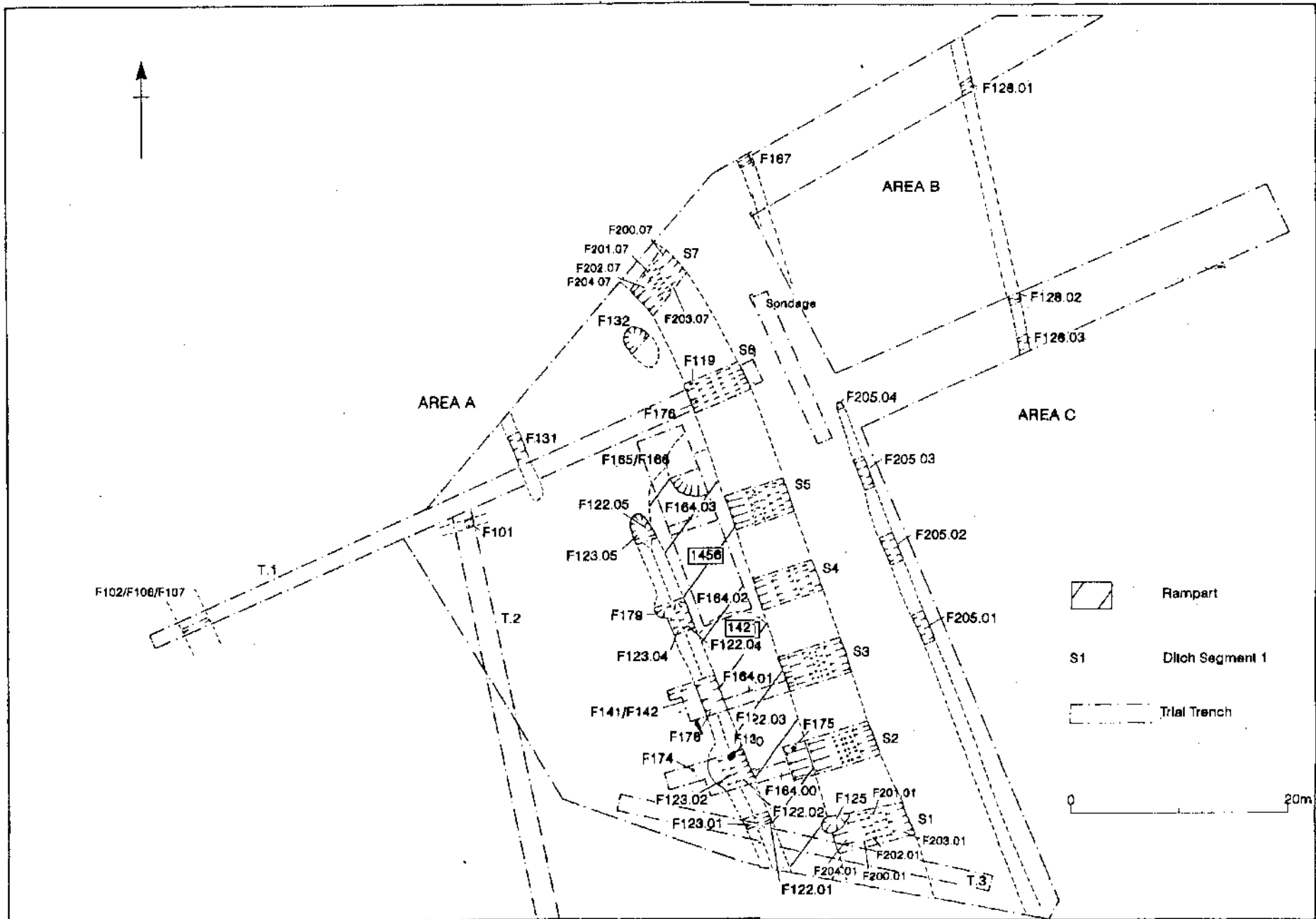


Figure 14

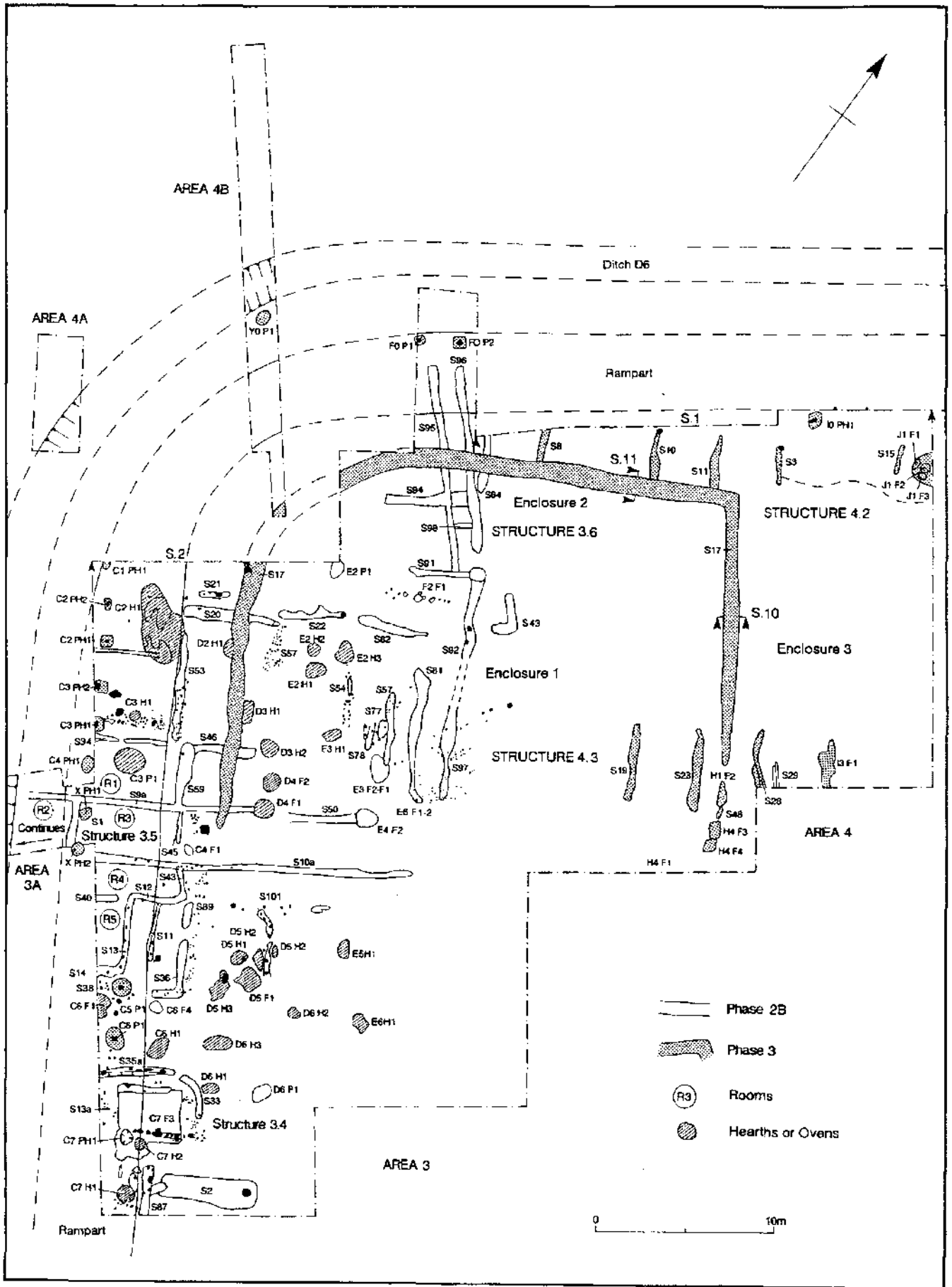


Figure 15



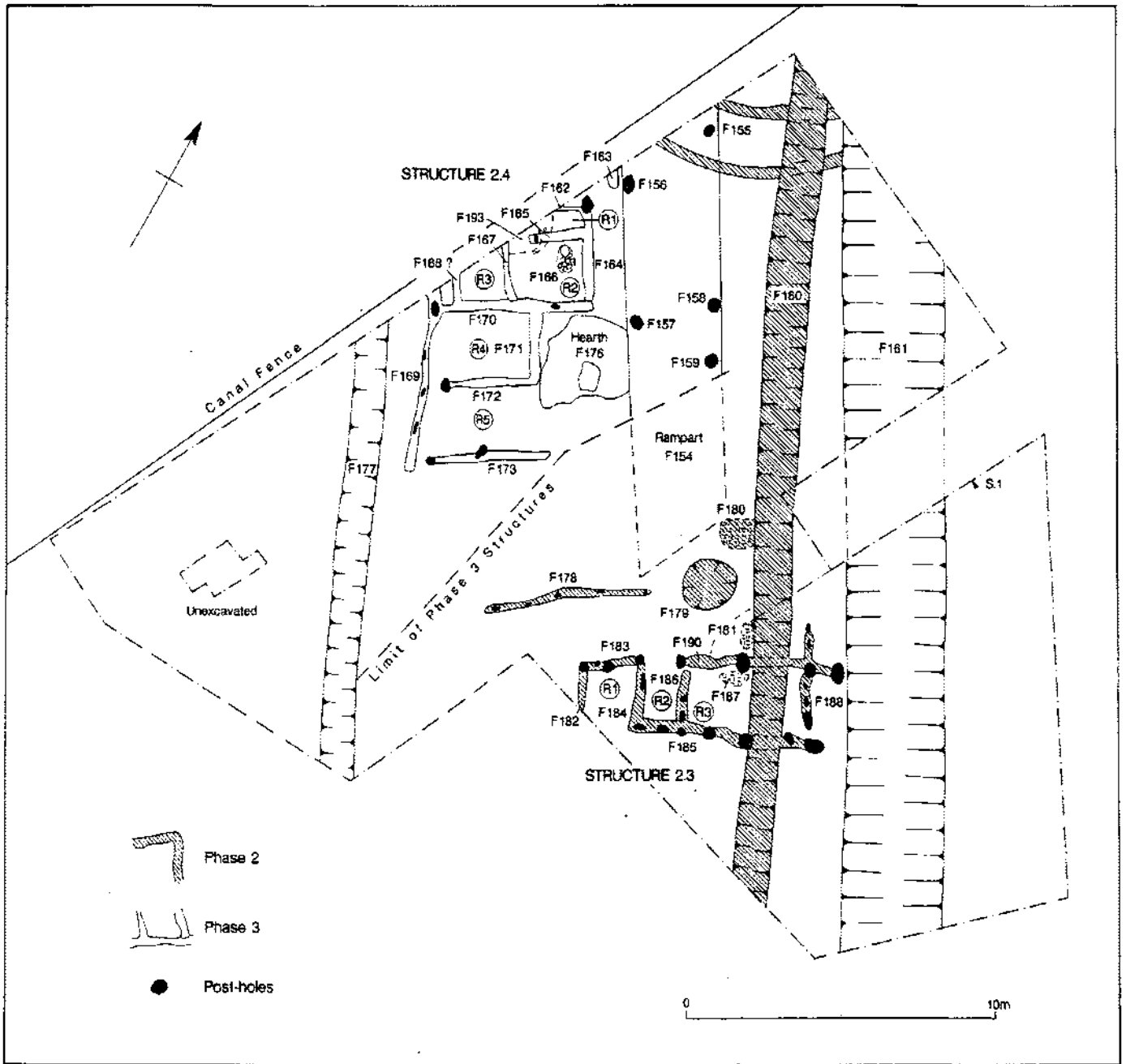


Figure 16

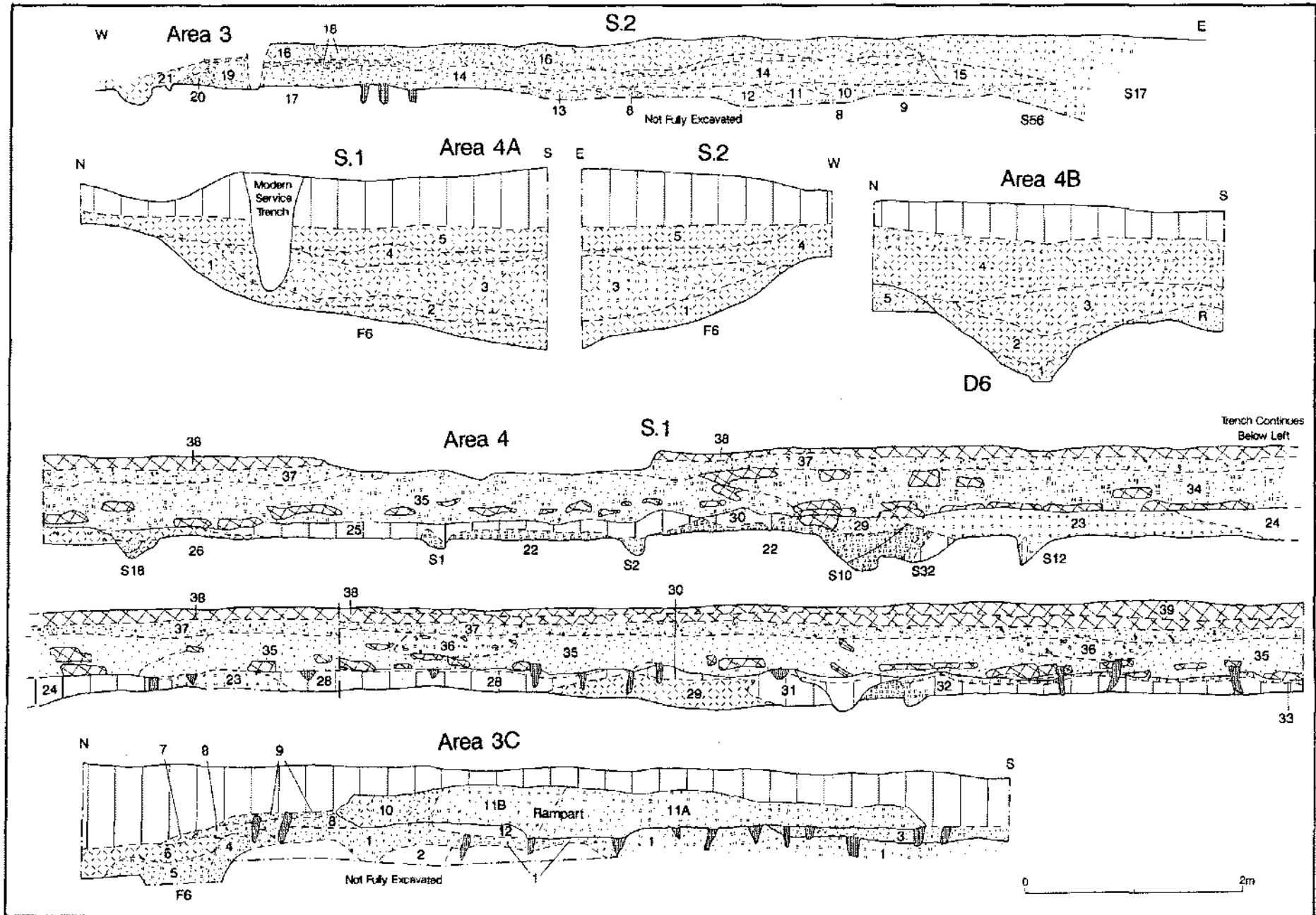


Figure 17



Plate 1

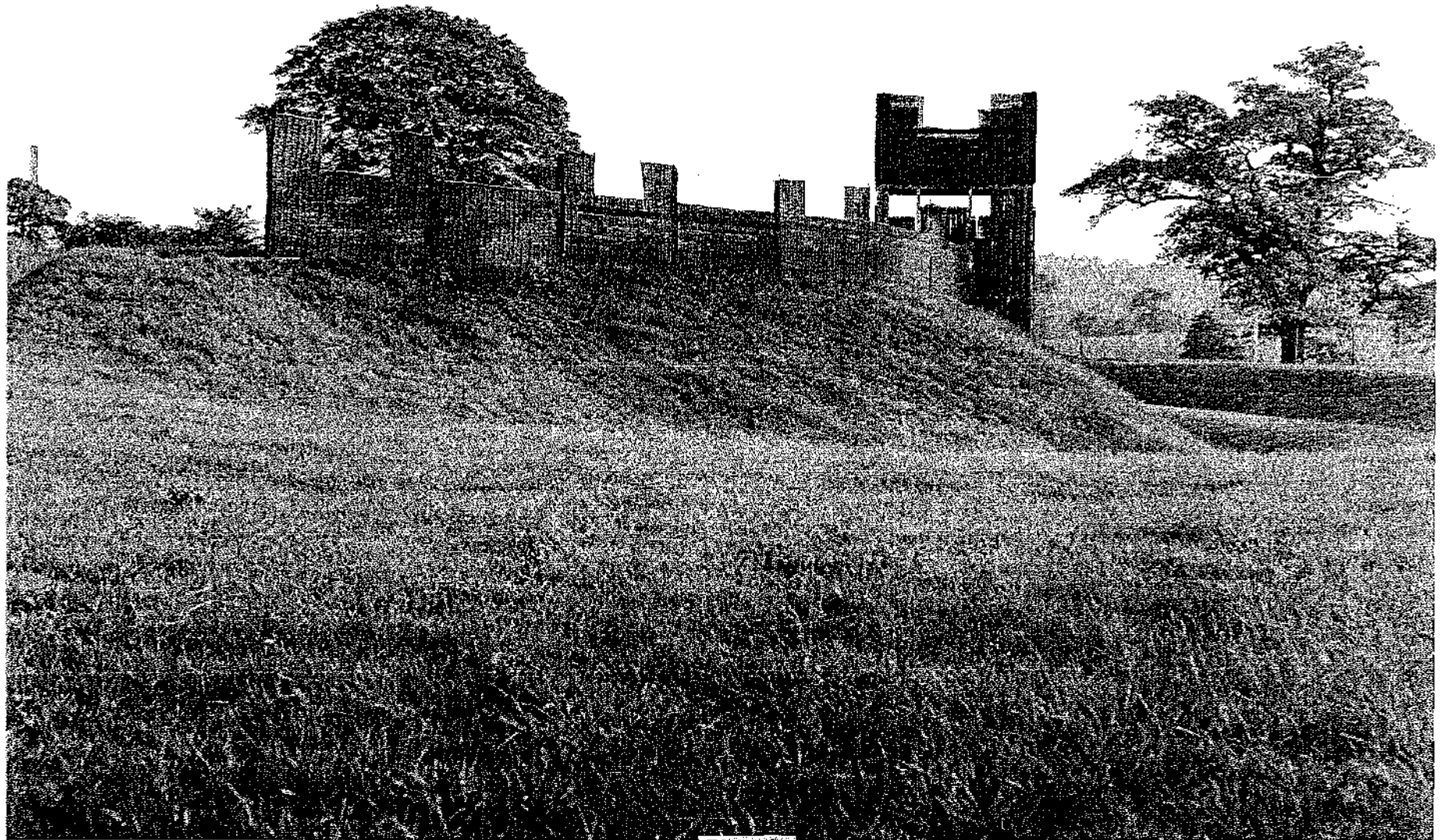


Plate 2

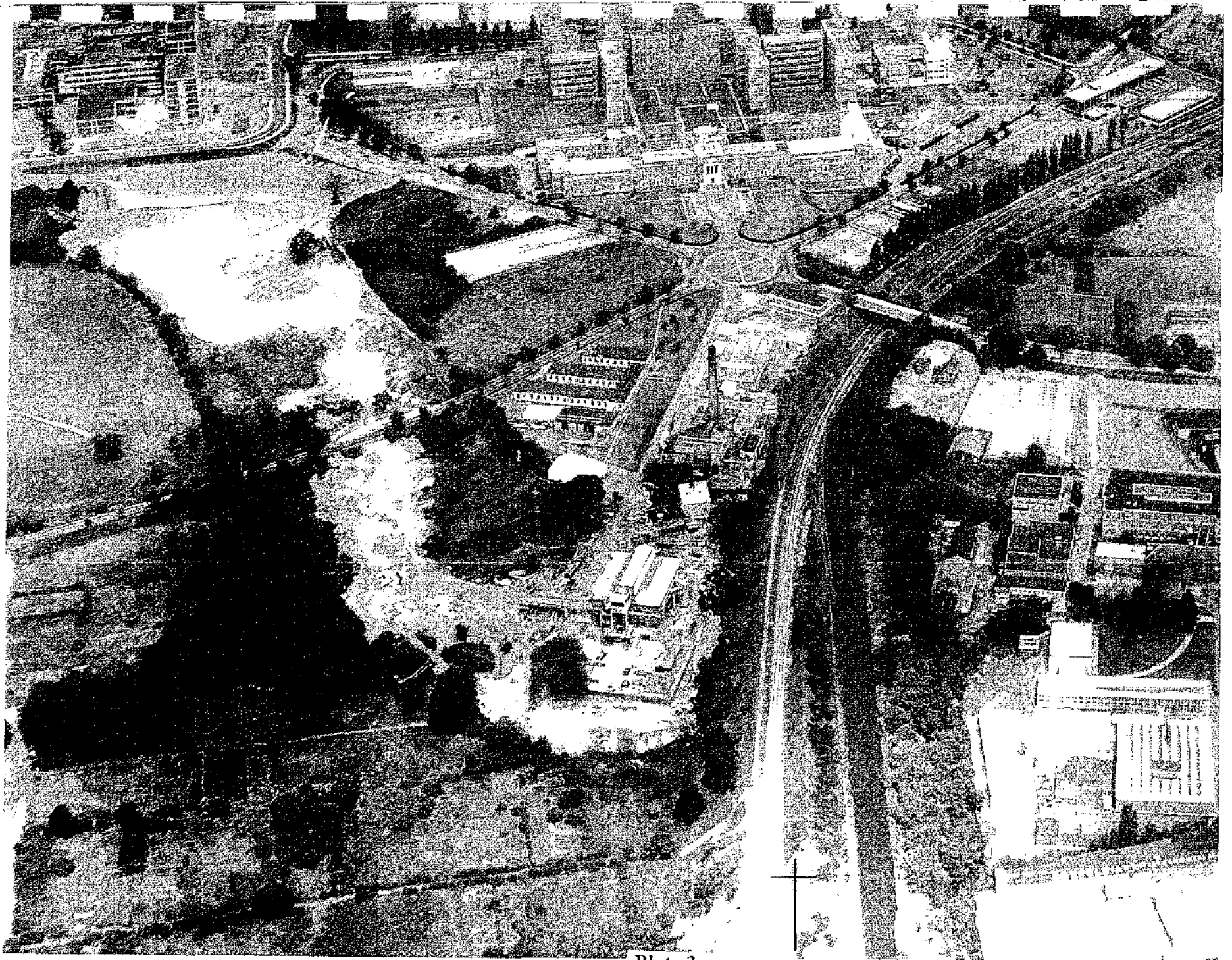


Plate 3



Plate 4



Plate 5



Plate 6



Plate 7



Plate 8



Plate 9



## Key - Maps 2 - 7

	Study area boundary
	Zone number and boundary (Map 2)
	Scheduled Monument
	Archaeological sites as labelled (Map 3)
	Waterways (Map 3)

	Areas of archaeological investigation
	Areas of archaeological evaluation for hospital development
	Phase 1-2 fort
	Phase 2A/B annexes
	Phase 3 fort
	Phase 4
	<i>Vicus</i>

## Key - Map 5

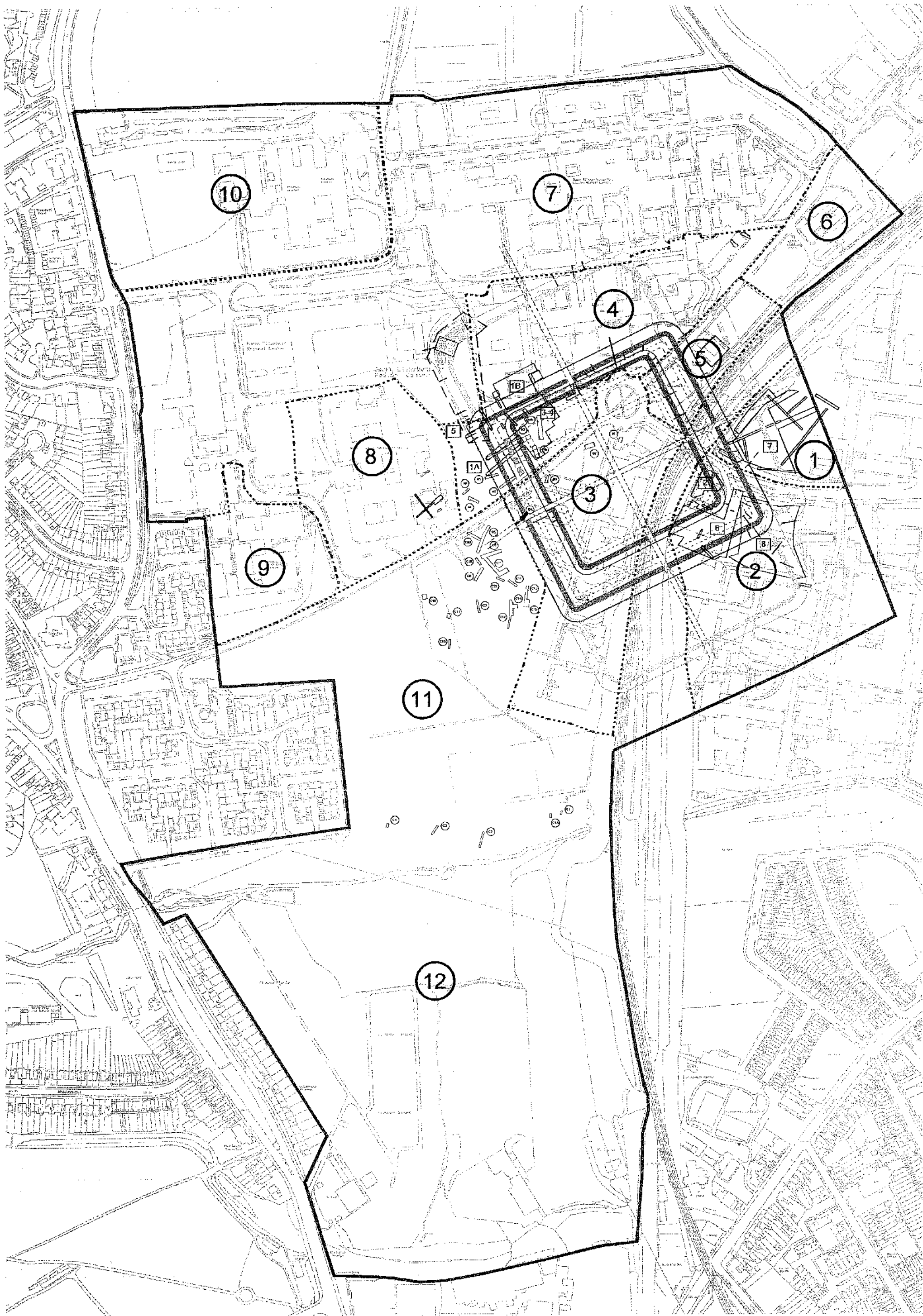
	Potential level of archaeological survival - high
	Potential level of archaeological survival - medium
	Potential level of archaeological survival - low
	Area fully excavated

## Key - Map 7

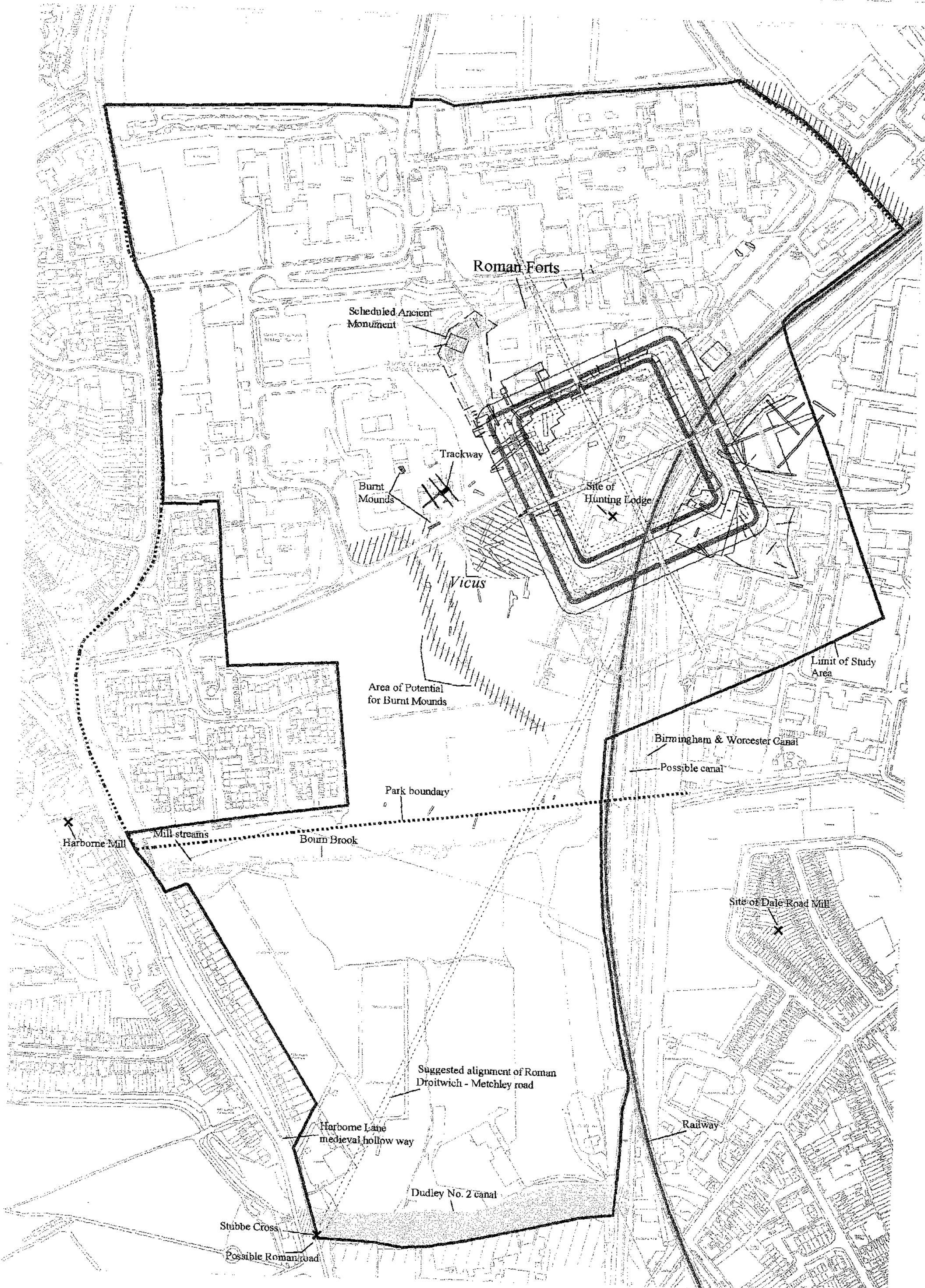
	Preserve <i>in situ</i>
	Excavation
	Excavation / salvage recording
	Key viewpoints and cones of view

## Key - Map 6

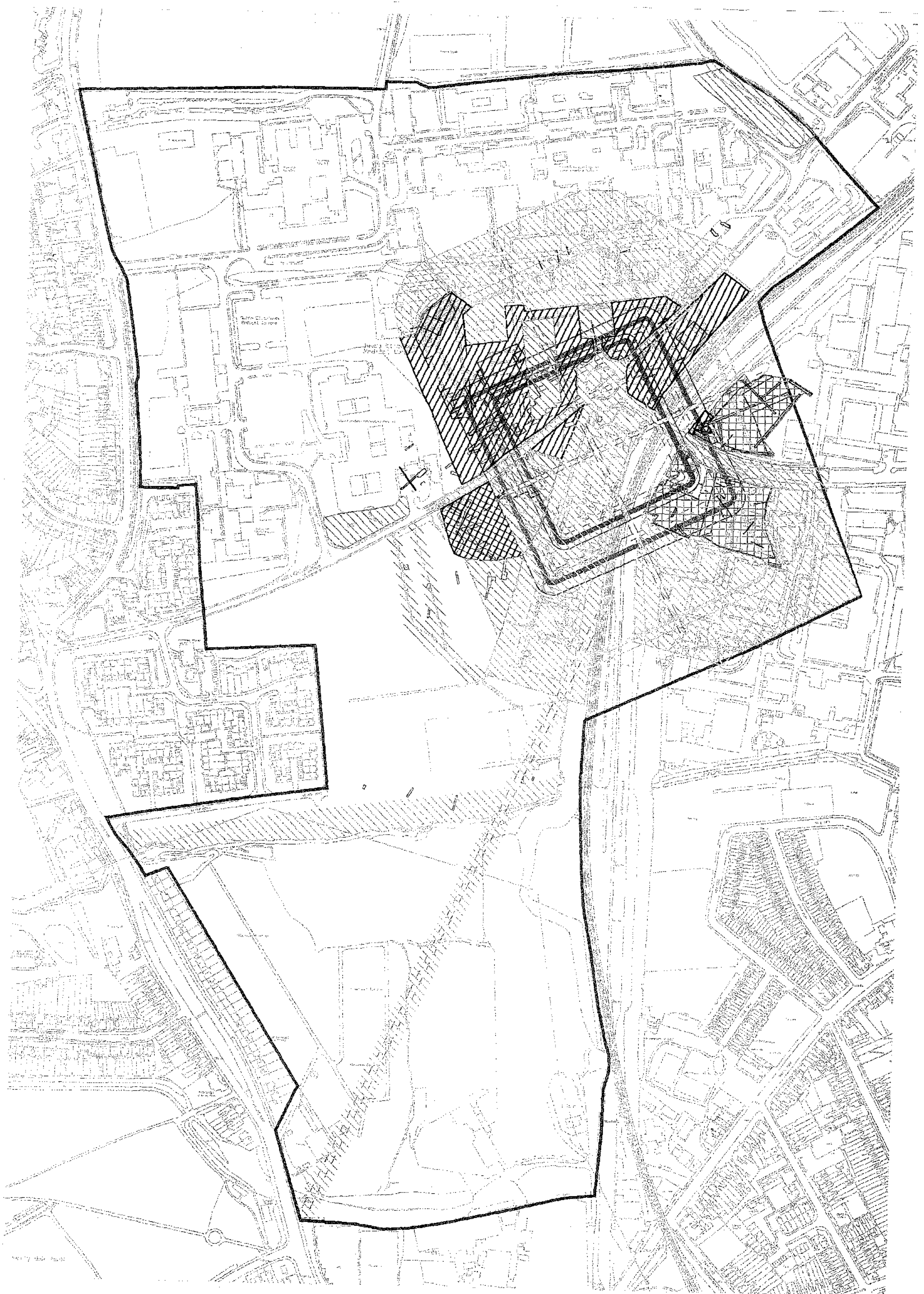
	National importance
	Regional / local importance



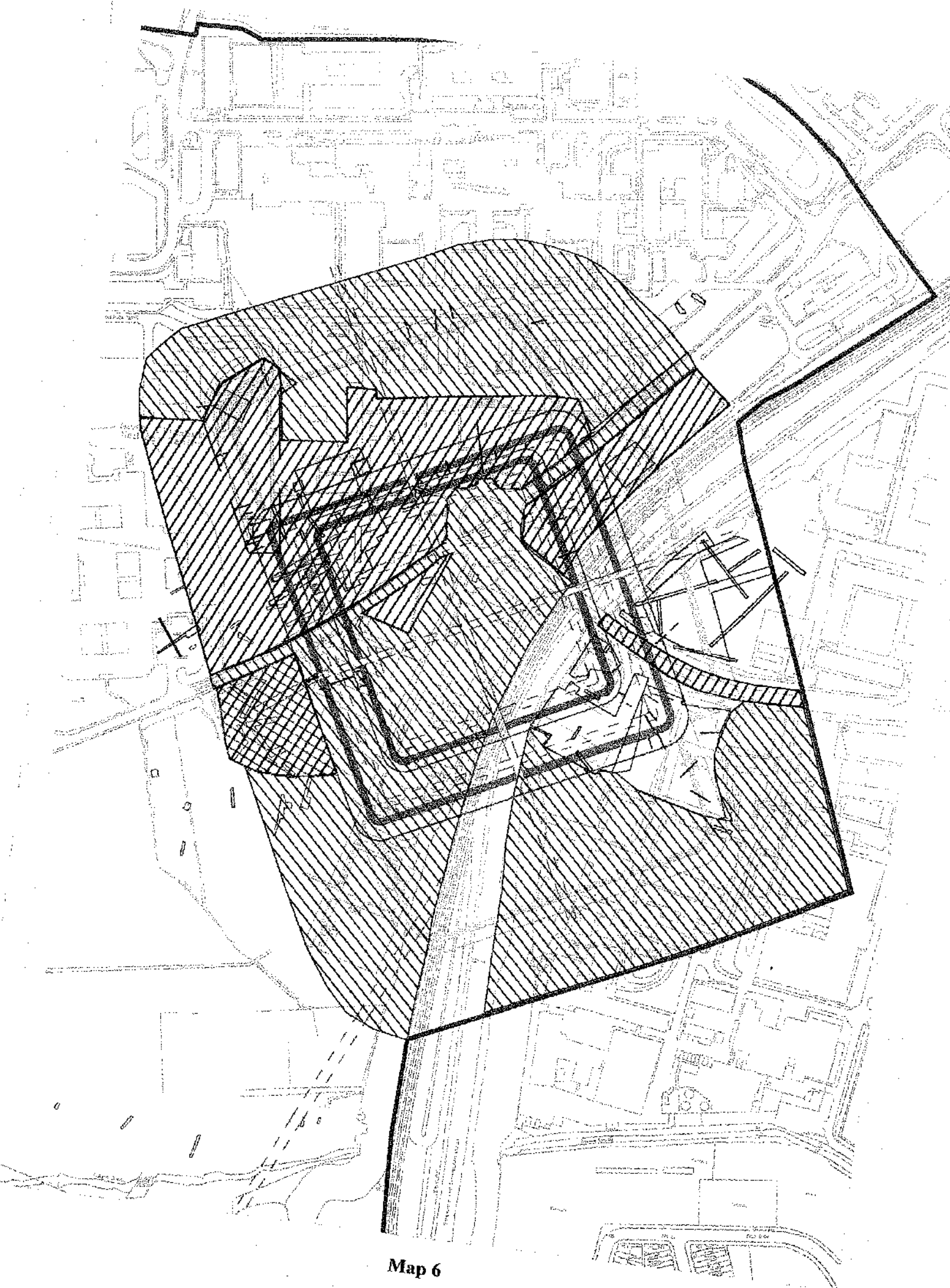
Map 2



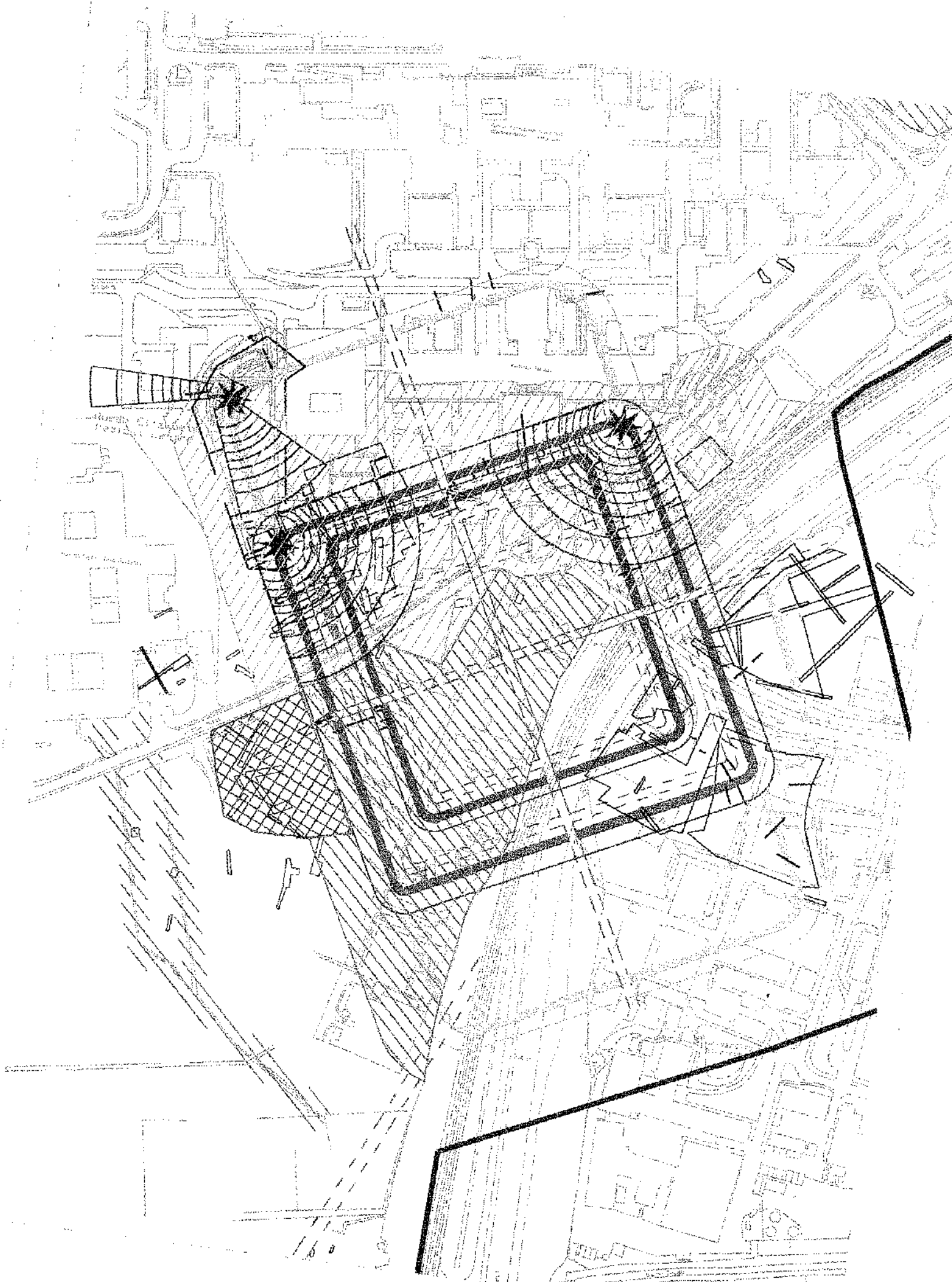
Map 3



Map 5



Map 6



Map 7